

KNOWLEDGE

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OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

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LEADERS, PEERS and FAMILIES are charged with the PROTECTION of SOLDIERS both ON and OFF duty.



SAFETY-SENSE: WHERE CAN I GET SOME?

A total safety culture within an organization can be defined as a culture in which individuals: hold safety as a value; feel a sense of responsibility for the safety of their fellow Soldiers, civilians and Family members, as well as themselves; and are willing and able to act on the sense of responsibility they feel toward those around them. That is, individuals must have the skills and tools necessary and be supported by their Leaders to go “beyond the call of duty” on behalf of the safety of themselves and others in their formations.

If Leaders are committed to safety, they must have a highly visible presence to express that support. How do you, as a Leader, demonstrate care and concern for the Soldiers, civilians and Family members in your charge in order to influence their behavior in a positive way? What kind of approach will have the highest level of success? In his recent Safety Update, Chief of Staff, U.S. Army (CSA), Gen. Casey asked every Leader to take a holistic look at their command environment and find ways to influence our Soldiers, Family members and civilians to use

composite risk management.

Recently, our Army has experienced a slight rise in the off-duty accidental losses while also seeing a downward trend of on-duty accidental loss. Why is that? Direct Leader involvement and engagement has proven time and again to make the difference and, for our on-duty challenges, it has clearly been proven again. Leaders must take this engagement one step further, though, by taking an active interest in what their Soldiers are doing with their time off and by helping their Soldiers identify potential high-risk activities or behaviors that could cause serious injury or loss of life.

Peers play a large role in how Soldiers develop their sense of what's right or wrong. Peers are just one of the three groups that influence our Soldiers on a daily basis; they can keep a situation from getting worse or leading to disaster. Soldiers are influenced by their friends, their “battle buddies,” and need to be brought into the fold of the “Band of Brothers and Sisters.” A source of many great safety messages can be found in our BOSS Safety Factor program (available online

<https://crc.army.mil>). Soldiers must know what right looks like and develop their own “safety sense” by learning how to think. Leaders can help, along with the tools found on our site. The end state of this line of thinking will produce a desired – and needed – cultural shift in the way safety is viewed.

When Soldiers, civilians and Family members are habitually involved in a unit's safety effort, there is a greater sense of ownership and pride. Leaders, in close cooperation with Families and communities and peers taking care of their own (the Band of Brothers and Sisters), build safer environments for our Army, both on and off duty. Leader's Corner is a great place to find the tools to build a successful environment for our Soldiers to operate and can be found at <https://crc.army.mil/leaderscorner/>.

Leaders, peers and Families are charged with the protection of Soldiers both on and off duty. This responsibility can seem daunting for some by taking them well out of their comfort zone. The U.S. Army Combat Readiness/Safety Center hosts a myriad of tools available online at <https://crc.army.mil> that will assist

Leaders to successfully and safely complete their mission both on and off duty, while mitigating the harmful effects of risk. The CSA encourages leaders to “get creative” and solicit the support of Families and the community to help the Army save lives. Peers, Families and community members can find information on protecting their loved ones while they are off duty in the Family Engagement Kit and the BOSS Safety Factor program found on the USACRC Web site. With these tools, and the support of Leaders, Family members and the local community, our Army will maintain the strides made on duty, drive down the off-duty accident occurrences and continue to keep us Army Strong.◀

Army Safe is Army Strong!

William T. Wolf
Brigadier General, USA
Commanding



U.S. ARMY COMBAT READINESS/SAFETY CENTER

<https://crc.army.mil>

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Mission statement: USACRC supports our Army by collecting, storing, analyzing, and disseminating actionable information to assist Leaders, Soldiers, Families, and Civilians in preserving/protecting our Army's combat resources.

We welcome your feedback. Please e-mail comments to safe.knowledge@conus.army.mil.

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How'd Your Army Do?

Fiscal 2008 End-of-Year Review

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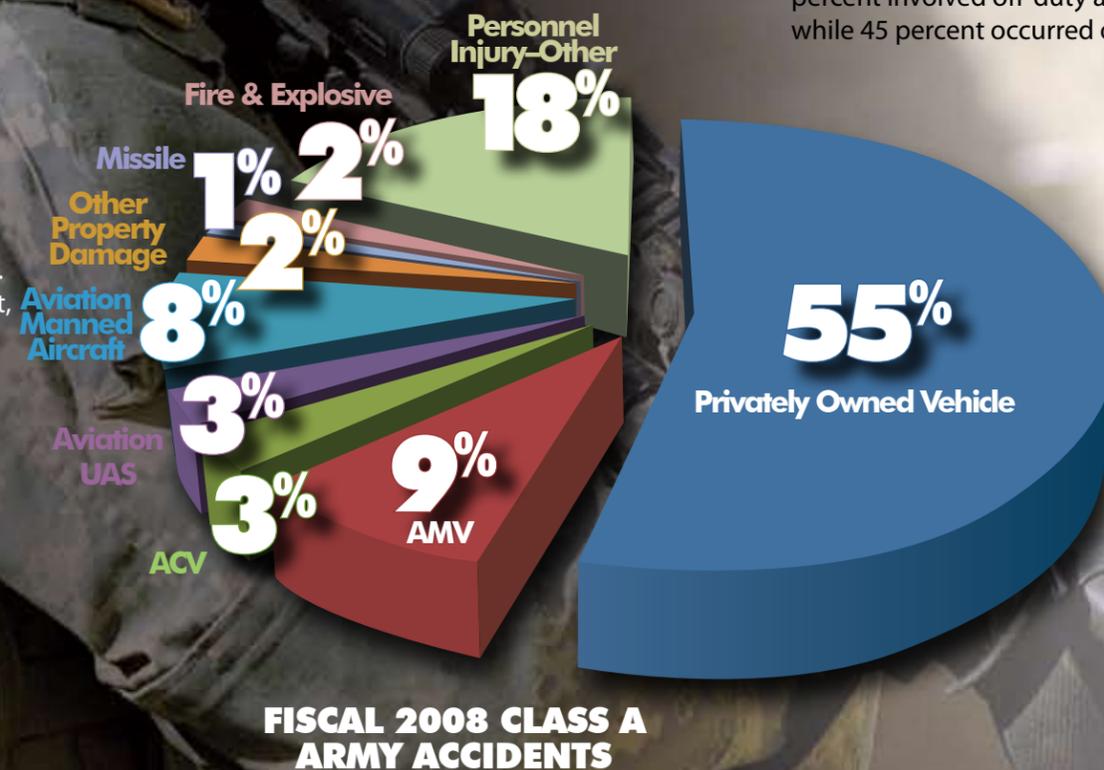
The Army made many positive strides in reducing Class A accidents and Army military fatalities during fiscal 2008. On the ground, Army Motor Vehicle (AMV) and Army Combat Vehicle (ACV) accidents were both down compared to fiscal 2007. There was also a significant reduction in Army aviation accidents. Unfortunately, the good news doesn't include privately owned vehicle (POV) and motorcycle accidents and fatalities, which continue to be problem areas for the Army.

During fiscal 2008 (as of Oct. 18, 2008), the Army experienced 242 Class A accidents resulting in 210 Army military fatalities. Overall, these accidents were down 5 percent from the 254 experienced for the same time period in fiscal 2007. Fatalities were also down 15 percent from the 247 experienced last year.

Class A Accidents

Breaking down the accidents into percentages shows the role

POVs play in the overall figures. As seen in the chart to the right, POVs accounted for 55 percent of the total Class A accidents in fiscal 2008, far eclipsing the second most common cause, Personnel Injury-Other (PI-O), which accounted for 18 percent. Following that, AMV accidents accounted for 9 percent and manned aircraft aviation accidents accounted for 8 percent of Class A Army accidents.



Class A Army Military Fatalities

The Army military fatality picture is similar. As seen in the graph to the right, POV accidents accounted for 62 percent of the fatalities, followed by PI-O accidents at 18 percent, AMV accidents at 9 percent and aviation accidents at 6 percent.

The following is a further breakdown of the Army ground, aviation and POV Class A accidents and fatalities during fiscal 2008. However, information on the accidents experienced during this time frame is still filtering into the U.S. Army Combat Readiness/Safety Center (USACRC), so the statistics, figures and findings may change in the coming months.

GROUND

Personnel Injury-Other*

There were 44 Class A PI-O accidents in fiscal 2008, resulting in 37 fatalities. These numbers were down from the 56 accidents and 51 fatalities the previous year. Of the fiscal 2008 PI-O accidents, 55 percent involved off-duty activities, while 45 percent occurred on duty.

Off-Duty PI-O

During fiscal 2008, 24 Class A off-duty PI-O accidents resulted in 22 fatalities, which was 12 fewer accidents than for the same time period last year. Negligent discharges with handguns killed six Soldiers. Five Soldiers fell to their deaths during fiscal 2008, including one from a beach condo balcony, one from the balcony of a local night club, two while hiking and one while sport parachuting. Water-related accidents killed three Soldiers; one Soldier drowned while swimming, one drowned after jumping into the water from a bridge and one was found drowned in a swimming pool. Overall, off-duty water-related fatalities decreased by 80 percent in fiscal 2008.

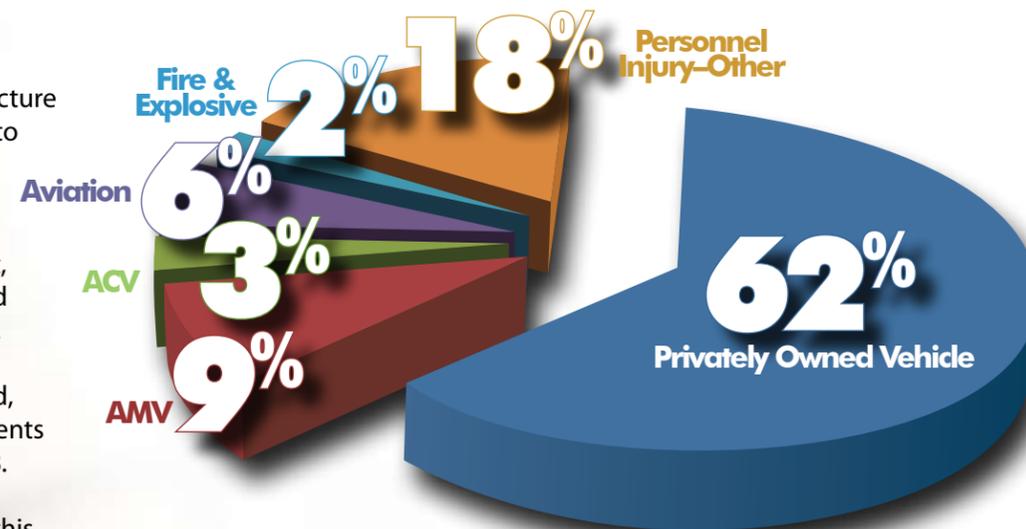
Three Soldiers were struck and killed by trains during fiscal 2008.

In addition, one Soldier died when his backhoe overturned on a slope, one Soldier died after suffering a head injury while skateboarding, one Soldier died after being knocked down in a boxing match, one Soldier died of smoke inhalation in a fire in a private construction trailer and one Soldier was electrocuted in a shower.

On-Duty PI-O

There were 20 Class A on-duty PI-O accidents and 15 fatalities in fiscal 2008, compared to 20 Class A accidents and 17 fatalities the previous year. The most frequent activity involved in these fatalities was weapons handling, with four deaths resulting from negligent discharges and two from friendly fire. Three vehicle-related fatalities involved Soldiers being pinned between, under or by vehicles. Three

FISCAL 2008 ARMY MILITARY FATALITIES



FYI

Overall, fatalities during the 2008 101 Critical Days of Summer Campaign increased by 18 percent from last year. Privately owned vehicle (POV) fatalities increased 45 percent, while personnel injury fatalities decreased by 46 percent. During this timeframe, the largest increase of POV fatalities occurred in sedans (63 percent), while motorcycle fatalities increased by 26 percent. However, water-related fatalities decreased by 63 percent for the same time period the previous year.

physical training (PT)-related fatalities involved running; one Soldier was performing shuttle sprints, one was participating in organized PT and one had just completed the run portion of the Army Physical Fitness Test. Eight of the fiscal 2008 on-duty PI-O fatalities occurred during support of Operation Iraqi Freedom (OIF) or Operation Enduring Freedom (OEF).

Army Motor Vehicle

There were 22 Class A AMV accidents during fiscal 2008, resulting in 19 fatalities. This is down from 29 accidents and 37 fatalities the previous year. Of the fiscal 2008 accidents, 15 occurred during OIF/OEF and resulted in 14 fatalities.

Tactical vehicles accounted for 86 percent of the AMV accidents and 89 percent of the fatalities during fiscal 2008. Of the 19 tactical vehicle accidents, 11 involved the HMMWV. These HMMWV accidents accounted for 10 of the 19 fiscal 2008 AMV fatalities. This is four fewer accidents and eight fewer fatalities than the previous year. Nine of the 11 fiscal 2008 HMMWV accidents

occurred during OIF/

OEF, resulting in eight fatalities.

The M1114 accounted for five of the 11 HMMWV accidents and five of the 10 fatalities. This is a 44-percent decrease in accidents and a 58-percent decrease in fatalities from fiscal 2007. The M1151 accounted for four accidents and three fatalities, while the M997 and M1025 each accounted for one accident and one fatality. Seven of the fiscal 2008 HMMWV accidents involved rollovers, four of which involved the M1114 and three involving the M1151.

Army Combat Vehicle

There were eight Class A ACV accidents during fiscal 2008, resulting in seven fatalities. This is down significantly from 19 accidents and 11 fatalities during the previous year. This decrease is primarily due to a large drop in Bradley Fighting Vehicle accidents from 12 in fiscal 2007 to none in fiscal 2008. Six of the fiscal 2008 Class A accidents, which

resulted in all seven of the ACV fatalities, occurred during OIF/OEF.

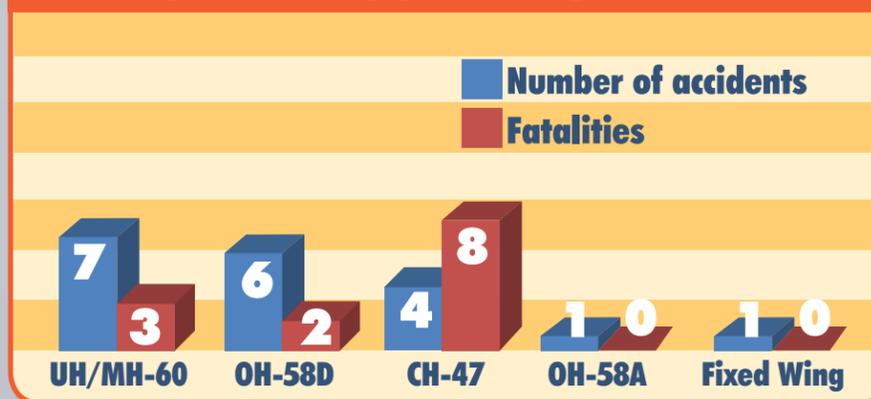
Three of the ACV accidents involved M1117 Armored Security Vehicles (ASV) and three involved Mine Resistant Ambush Protected (MRAP) vehicles. Six of the seven ACV fatalities resulted from the three MRAP vehicle rollover accidents. Two of the MRAP accidents involved vehicles rolling into canals, resulting in five of the six fatalities. The remaining ACV fatality resulted from an M1117 ASV rollover. A Stryker and a Field Artillery Ammunition Support Vehicle were both involved in rollover accidents while towing disabled vehicles, resulting in Class A damage and a permanent total disability injury, respectively.

Explosive and Fire

There were four Class A explosive and fire accidents during fiscal 2008, resulting in four fatalities. This is the same number of accidents but two more fatalities than experienced during the same time period the previous fiscal year. Three of these accidents occurred during OIF.

One explosion and fatality involved a Soldier picking up unexploded ordnance during police call. The other explosion and fatality occurred when static electricity from the rotors of a helicopter caused blasting caps from a cache to detonate. A Family quarters' fire resulted in the death of one Soldier, and another Soldier died as a result of a third country national fuel tanker fire.

FISCAL 2008 CLASS A MANNED AIRCRAFT ACCIDENTS



AVIATION Manned Aircraft

Fiscal 2008 proved to be a banner year for aviation safety. There were 9 fewer Class A fixed-wing/rotary-wing accidents and 24 fewer Soldier fatalities in fiscal 2008 than during the previous year.

The Class A fixed-wing/rotary-wing accident rate decreased 52 percent from 2.56 in fiscal 2007 to 1.22 accidents per 100,000 flying hours in fiscal 2008. There were 19 Class A manned aircraft accidents in fiscal 2008, 32 percent less than were reported last fiscal year. These accidents claimed the lives of 13 Army Soldiers and cost more than \$99 million. Fifty-three percent of the accidents and 77 percent of the fatalities occurred in Iraq and Afghanistan.

As can be seen in the chart above, the aircraft involved in most of the accidents were the UH-60 Black Hawk, OH-58D Kiowa

Warrior (KW) and CH-47D Chinook helicopters. More than half of the Army fatalities occurred in one CH-47D accident. Despite the fact that the AH-64 Apache was one of the most frequently flown aircraft types in fiscal 2008, there were no Class A accidents in this aircraft. Summaries of selected accidents follow in the article.

There were three brownouts involving two Black Hawks and one KW. All occurred during landings in unimproved areas in Iraq and Afghanistan. Two of the accidents resulted in the aircraft striking the ground, causing severe damage to the aircraft. In the other, a Soldier was killed when he exited the aircraft before touchdown and fell about 30 feet during a night troop insertion mission.

Materiel failures caused three accidents: an uncommanded yaw during touchdown in a C-12 fixed-wing aircraft, an engine failure

DID YOU KNOW?

The USACRC has developed a number of tools to help Soldiers and Leaders manage risks and prevent accidents. To access these tools, visit our Web site at <https://crc.army.mil>.





in an OH-58A and an OH-58D full authority digital electronic control (FADEC) failure.

Two accidents occurred during KW maintenance test flights (MTFs). In both cases, the maintenance test pilots (MTPs) were performing autorotation rpm checks as part of their MTF. In one case, the FADEC failed during the autorotation check and there was no response from the crew. Data downloaded from the memory cards indicate the maintenance pilot continued as if he had full power available and eventually lost control due to low rotor rpm. Both occupants suffered fatal injuries. In the other case, the throttle was not advanced before 500 feet AGL,

resulting in low rotor rpm and a hard landing which destroyed the aircraft and injured the crew.

Aviation Accident Summaries

Two KW training accidents occurred when the pilots exceeded the aircraft's maneuver limitations during combat maneuvering flight and lost control of the aircraft.

The CH-47D fleet encountered two sling load operation accidents. In one case, the load was blown over by the aircraft's rotor wash, killing a ground crew Soldier. The other case involved inadvertent load release with Class A damage to the load.

One UH-60A crashed during a U.S. Air Force re-enlistment incentive flight. Six occupants (Army and Air Force) suffered fatal injuries, five passengers required hospitalization and the aircraft was destroyed.

A UH-60A was destroyed during run-up for flight as a result of a fuel leak and subsequent fire while conducting a crashworthy external fuel system fuel-transfer check.

A CH-47D crashed in Iraq,

killing five crewmembers and two passengers. At publishing time, the investigation into this accident was ongoing.

PRIVATELY OWNED VEHICLE

When it comes to losing Soldiers to preventable accidents, the biggest challenge remains POVs. This classification includes sedans, pickup trucks, vans, all-terrain vehicles, sport utility vehicles and motorcycles. Year after year, more Soldiers are killed in POV crashes than in all other Army ground accidents combined. Unfortunately, this year is no exception. While all of the fiscal 2008 statistics are not yet in, the trend shows an increase in POV accidents even while other accident numbers are declining.

As of Oct. 18, 2008, 130 Soldiers have been killed in POV accidents, compared to 67 from all other ground accident types. And the increase from fiscal 2007 is significant. During fiscal 2008, POV accidents jumped by 20 from the previous year – an 18-percent increase. As might be expected, fatalities also rose with 21 more Soldiers dying – a 19-percent increase. Contrast these numbers to the overall 6-percent decrease



MOTORCYCLE TYPE CLASS A POM ACCIDENTS

Motorcycle Types	Fiscal		Increase/Decrease
	2007	2008	
Sport	29	37	+8
Cruiser	6	7	+1
Not Reported	3	7	+4
Total	38	51	+13

in Army accidental fatalities during fiscal 2008 and the magnitude of the POV problem becomes evident.

This year, motorcycles led the way in POV Army military fatalities with 51 Soldiers being killed. The increase was particularly steep with sportbikes, which increased by eight from fiscal 2007 and accounted for 73 percent of this year's motorcycle deaths.

Seat belts and helmets are the first line of defense against injury and death in an accident. Nevertheless, 32 Soldiers – three more than last year – chose not to wear their seat belt or helmet and paid with their lives.

Analysis of the fiscal 2008 Class A POV accidents showed that 105, or 81 percent, could

be placed into one of three categories: failure to stay in the lane, the "other guy" and Soldiers performing extremely unsafe and indisciplined acts on the roads.

Soldiers failing to keep their vehicle in its lane caused 68 accidents. These accidents primarily occurred when the Soldier's vehicle drifted left across the centerline and collided with oncoming vehicles, ran off the right side of the road and overturned or struck stationary objects.

The actions of the "other guy" resulted in 22 accidents. In these accidents, the "other guy" committed unsafe actions such as going the wrong way on a divided highway, running red lights and stop signs or crossing the centerline into the Soldier's lane.

Soldiers committing unsafe and indisciplined actions on the road caused 15 accidents. These acts include street racing; running red lights, stop signs and railroad crossing gates; passing in no-passing zones; and driving at speeds more than 100 mph.

Conclusion

Although the overall data for fiscal 2008 shows little change when compared to last year's numbers, there were improvements in all major areas except POV. Reducing these accidents will require increased Leader and Soldier integration of composite risk management and actions to reduce indiscipline

CLASS A POV ACCIDENTS

	Fiscal		Increase/Decrease
	2007	2008	
Class A Accidents	112	132	+20
Army Military Fatalities	109	130	+21

and high-risk behavior.

Fostering a positive safety climate and culture that extends into off-duty activities and personal behavior and adopting a band-of-brothers attitude will produce immediate benefits in your element. When you are with other Soldiers during on- or off-duty hours, be a Leader and a role model. Don't tolerate indiscipline and high-risk behavior.◀

*Personnel Injury-Other accidents are Army accidents that involve injury to personnel not covered by any other accident type.

Editor's Note: These statistics are current from the Army Safety Management Information System as of Oct. 18, 2008. The fiscal 2007 statistics describe accidents reported as of Oct. 18, 2007. Delayed reports and follow-up details on preliminary reports could change the statistics, figures and findings.

OFF-DUTY CLASS A POV ACCIDENTS

Vehicle Types	Fiscal		Increase/Decrease
	2007	2008	
Motorcycle	38	51	+13
Sedan	38	48	+10
ATV	2	4	+2
Van	2	4	+2
Jeep, SUV	15	13	-2
Truck	14	10	-4
Total	109	130	+21

SEAT BELTS AND HELMETS NOT WORN

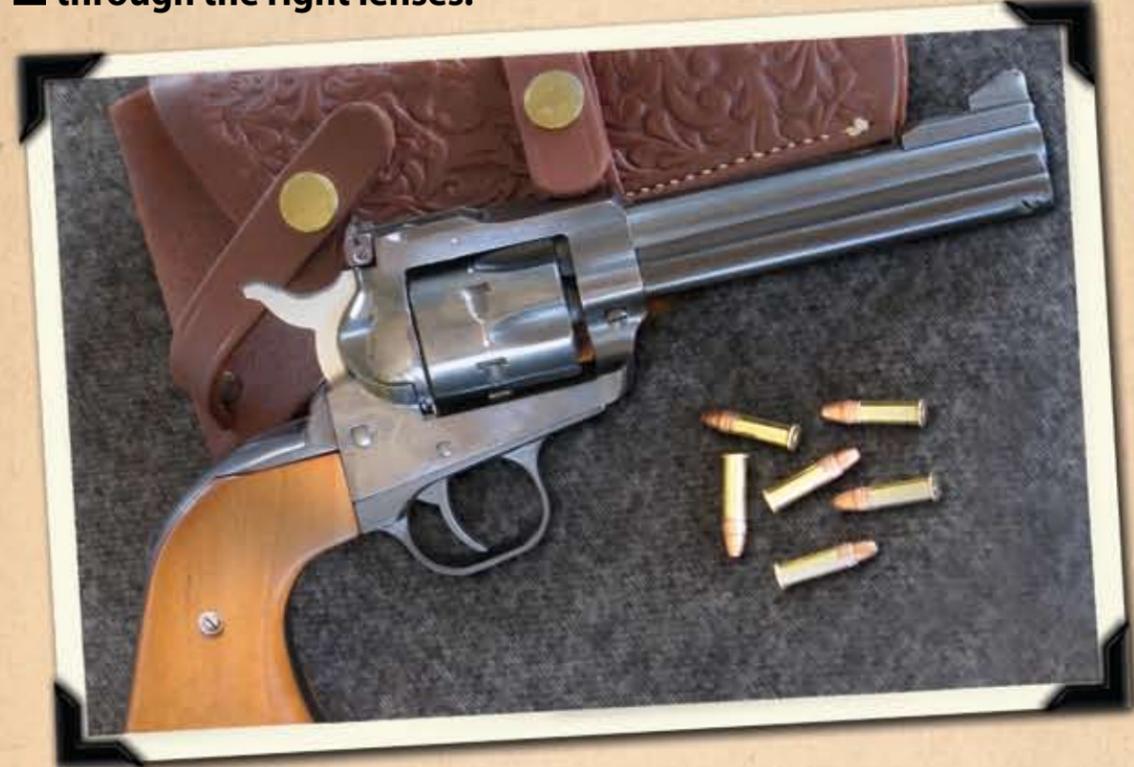
Army Military Fatalities	Fiscal		Increase/Decrease
	2007	2008	
Helmets not worn	5	10	+5
Seat belts not worn	24	22	-2
Total	29	32	+3



A Memory I'll Never Forget

CHIEF WARRANT OFFICER 4 THOMAS FRENCH
2nd Battalion, 224th Aviation Regiment
Virginia National Guard
Sandston, Va.

believe you must learn lessons from certain events in your life. Life-changing circumstances can become blessings when viewed through the right lenses.



When I was about 4 or 5 years old, my grandfather showed me his gun collection. He worked on the railroad and gun collecting was his hobby since returning home from World War II. His collection was his prized possession. One day, he told me I could have a gun for my very own and gave me a .22-caliber revolver that resembled a six shooter from the Old West. My grandfather explained how to clean and maintain the gun, as well as how to safely handle it. He warned me that it was

important to not pull the trigger when there were no bullets in the pistol because it could break the firing pin. My grandfather was a big man who always demanded respect but also gave me a lot of love. I looked up to him and always wanted to please him, so I obeyed his warning. Fast forward a decade to when I was 14 years old. It was a sunny day and I was preparing to go groundhog hunting on the farm. Hunting was a regular activity on the weekends. My

friends and I would hunt until we either ran out of bullets or got hungry. Before hunting, I would always clean and oil my rifle and pistol to make sure they would not get rusty or malfunction. As I was cleaning my pistol, I heard one of my best friends, Kevin, walking up to my back porch. Now, in what can only be explained as a juvenile lack of judgment, I suddenly thought about scaring Kevin. I decided to go out onto the deck and catch him by surprise. I walked out just

as Kevin was stepping onto the porch and, without explanation, pointed my pistol at him. Of course, I was just kidding and only wanted to scare him. I still remember seeing the stunned expression on his face as he saw the pistol pointing at him. As he looked at me, I thought, "Maybe I'll pull the trigger just to show him the gun is unloaded and I was not about to place him in danger." At that point, for some unknown reason, I thought about what my grandfather had told me about pulling the trigger of my pistol on an empty chamber and breaking the firing pin. In that split second, I lowered the pistol and released the trigger without pulling it. We walked back into my house and I asked Kevin if I had scared him. He said I caught him by surprise, but he knew I was just kidding. We laughed and put on our boots and jackets and got ready to go hunting. I grabbed my rifle and pistol and a box of .22-caliber bullets to load my weapon. To this day I don't remember what Kevin saw on my face when I opened the cylinder and saw the pistol had been loaded all along. In that instant, my whole life flashed before my eyes. I thought about my friendship with Kevin and my own dreams and desires for the future. I thought of Kevin lying on the ground dead because of my stupidity. How would I explain the accident to our parents? I even thought about going to prison for taking another person's life due to my negligence. It's a memory I'll never forget. I sometimes think back to that day and what it was that kept me from pulling the trigger. I thank my grandfather for making the type of impression that would cause a split-second memory which prevented a tragedy. I also think of the other impressions he made on me that have guided my life in a positive way. I don't think you can measure the impact of a powerful role model. In my case, though, it saved my friend's life.◀

FYI
Whether on the range or a hunting trip, always THINK weapons safety:

- T**reat every weapon as if it's loaded.
- H**andle every weapon with care.
- I**dentify the target before you fire.
- N**ever point the muzzle at anything you don't intend to shoot.
- K**eep the weapon on safe and your finger off the trigger until you intend to fire.

ARE YOU A SHARP SHOOTER?

RANGE & WEAPONS SAFETY TOOLBOX

<https://crc.army.mil/rangeweaponssafety>



The Range & Weapons Safety Toolbox is a collection of resources to help commanders and leaders establish and maintain an effective range and weapons safety program.

CHECK IT OUT TODAY!

 
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The ABC'S of ORM

MAJ. EARL W. BURRESS JR.
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Editor's note: Whether you're a Soldier, Sailor, Airman or Marine, risk is inherent in your warfighting duties. Winning in combat involves thinking, planning and performing better than the enemy. It also means avoiding the risks that can take you out of the fight as effectively as an enemy bullet. The five steps of composite risk management (CRM) provide the Soldier an effective "body armor" against needless accidents and losses. The Air Force has chosen to use the Army's concept of risk management, modifying it with an additional step and titling it operational risk management (ORM). Just as CRM works on the ground for Soldiers, ORM works in the air for Airmen. The following article is intended to show how the principles of risk management transcend across the services.



The flock scattered as Train 74 began rolling down the 12,000-foot runway. The swarm of birds narrowly missed the left side of the cockpit as the lumbering U.S. Air Force C-130 Hercules accelerated past 60 knots. The engineer stated, with an edge of frustration in his voice, "I think we might have had a bird strike." The crew rejected the takeoff and the aircraft rolled out and taxied clear of the runway.

The crew began debating if the aircraft had experienced a bird strike or simply a near-miss. The discussion was short. The aircrew members knew there was only one appropriate response for a suspected bird strike. Within minutes they had shut down the aircraft and began conducting the time-consuming bird strike inspection. If they had been at their home station, the need for the inspection would not have been in question; however, the crew had a number of factors threatening to cloud their judgment.

First, the crew was not at a C-130 base with dedicated Herk maintainers. Second, the

crew was weary from flying four months of combat missions while struggling to adapt to an ever-changing schedule. Third, the crew was suffering from "get-home-itis" as they attempted to take off on the final 30-minute sortie of their 51st — and final — mission of the deployment. Finally, the flight engineer had been forced to deal with a number of unusual issues throughout the deployment and had simply run out of patience. Despite these pressures, the crew shut down and the flight engineer began the inspection in grim silence. A dead bird was found on the runway a few minutes after maintenance

delivered the engine stand. At this point, the aircraft commander was beginning to question their ability to safely complete the day's mission. The Air Mobility Command crew had completed a formal operational risk management (ORM) assessment before takeoff, as a matter of routine; however, conditions had changed significantly as the mission progressed. The combination of fatigue and frustration now posed a greater risk than the sporadic small-arms and surface-to-air-missile activity that had been reported in the area over the last few months. The crew's sour attitude and the significant



changes in the mission timeline were indicators that it was necessary to reexamine the risk associated with the situation. Before boarding the aircraft, the crew conducted a “time-critical” ORM assessment and determined it was safe to complete the mission. This assessment was triggered by a change in attitude and/or mission that was recognized by the crew.

The time-critical ORM model is used to manage risks that emerge during mission execution. Sometimes, however, aircrews may fail to recognize situations that require the application of the time-critical ORM process. There are four simple triggers used to identify the need to conduct a time-critical ORM assessment. These triggers, shared by the aircraft commander and crew, establish a set of common criteria which can help eliminate time-critical

ORM based purely on an aircraft commander’s “hunches” or “gut feelings.” If the situation goes unnoticed, however, a change could go undetected until the situation gets overwhelming to the crew. An acronym for the four situations triggering the time-critical ORM process is “ABCS.”

Change of Attitude

A – The “A” represents a change in attitude. This frequently manifests itself when the aircraft commander or mission commander makes an unpopular decision or when aircrew members are overcome by events. The attitude change manifests as anger, sarcasm, frustration or silence. The significant trigger is the change in personality that the individual displays. This often manifests itself when a crewmember employs a crew resource management (CRM)

tool such as the “knock it off” call. A personality change, an increase in tension within the crew or employment of a CRM tool can be used as a trigger to indicate the need for an ORM reevaluation. The reevaluation can lead to mission continuation, modification or even cancellation.

Big Mission Changes

B – The “B” represents big mission changes. Maintenance delays, significant weather, routing changes, target changes, relevant human factors and personnel changes are factors that qualify as big mission changes. These factors can increase the risk and approval level on the ORM worksheet if they occur before flight.

Checklist Discipline

C – The “C” represents checklist discipline. Checklist discipline

“ POOR DISCIPLINE makes it IMPOSSIBLE to determine if ERRORS are FATIGUE-RELATED or just BUSINESS as usual. ”

is a tool to identify fatigue and triggers a reevaluation of ORM. Challenge and response or communication errors may be an indication of fatigue or distraction. This trigger will only work if the aircrew members practice good checklist and communication discipline day to day. Poor discipline makes it impossible to determine if errors are fatigue-related or just business as usual.

This is Stupid

S – The “S” represents “this is stupid.” This is stupid is an ORM tool that can

manifest itself in a number of ways. The most obvious occurs when a crewmember objects to a situation by saying “This is stupid!” or “This is a bad idea!” Military aircrews are made up of “Type A” personalities who will often lean forward when trying to accomplish the mission. While a crew is working to overcome big mission changes, the “this is stupid” objection may leak into conversations by using phrases such as “Is this the best idea?” or “Is there a better way to do this?” The crew may be, in essence, saying “This is stupid” without even

realizing they are saying it. When this type of language creeps into discussions, it should serve as a trigger for the crew to reevaluate ORM.

One critical task for all operations is minimizing risk. Every military plan must make this a priority. It is a part of every mission and a basic responsibility of commanders. Minimizing risk — eliminating unnecessary risk — is the responsibility of everyone in the chain of command. The acronym, ABCS, is a tool anyone can use. The tool is intended to give Soldiers who have concerns with any part of the mission the ability to identify the need for the initiation of a time-critical ORM.◀

SNOOZIN', AND LOSIN'

CHIEF WARRANT OFFICER 2 EDWARD MCKIVER
Flight Company, 2nd Battalion, 29th Infantry Regiment
Fort Benning, Ga.

“**DRIVING** any distance **WHEN** you are **TIRED** is just as **DANGEROUS** as driving under the **INFLUENCE** of **ALCOHOL.**”

There I was, a 19-year-old Soldier literally a blink away from disaster and saved only by the grace of God. The year was 1993 and I was a 19K Armor crewman stationed in Vilseck, Germany. My unit had deployed to Kuwait for Exercise Intrinsic Action during the fall of that year. We were basically a guard-duty force sent to Kuwait to train with the Kuwaiti army and provide additional security after Operation Desert Storm.

I remember it being a very trying time because, except for basic and advanced individual training, it was the first time in my young life I had been deprived of so many things I had enjoyed for so long. Fortunately for me, I was in a unit with guys I had known in basic training. This made the misery of being a private first class in a combat arms unit more bearable. My friends and I could

not wait to get back to Germany and catch up on our partying. We arrived back in Germany on a Wednesday. I remember the Soldiers' Families greeting us and our company commander giving a speech highlighting the things we had accomplished, followed by a safety brief. As a young Soldier, I had little interest in the speech; I was only concerned about

being dismissed. My friends and I had already discussed our game plan for the week, so the word "dismissed" was, for us, the command of execution to party. Within 30 minutes we showered, got dressed and were ready to go. My father was stationed in Germany before I graduated high school, so I already had my license to drive. This put me ahead of many of my buddies

who were still trying to pass their driver's test. The unfortunate part of being the only one in your group with a license is you automatically become the designated driver. We partied hard Wednesday and Thursday nights and planned to party into the weekend.

Friday night, my battle buddy and I went to a club a couple hours away from our base. About 2 a.m., we left the club and headed back to Vilseck, knowing the drive home would be tough at that time of the morning. My battle buddy wasn't much

help on the drive due to the fact he'd enjoyed a few too many German beers. However, I wasn't concerned about the distance. I had driven it before and felt confident I could do it again.

Although I didn't feel sleepy as I drove, I knew I would sleep well when we got back to the barracks. That's when it happened – without warning, I fell asleep behind the wheel. I felt the car vibrating and woke up on the opposite side of the road. The car had drifted across the lanes and onto an embankment. Upon realizing what was

going on and hearing my buddy scream, I overcorrected. We went across the road and onto an embankment on the right side of the highway, which brought the car to a complete stop. After getting out and assessing the damage, we realized that we could still drive the car and continued back to our base.

Upon driving the remaining five miles to the post, the military police (MP) stopped us and asked us a few questions about the damage and debris hanging from the car. The officer explained

that even though he could tell I hadn't been drinking, he would still have to give me a sobriety test. We were taken to the MP station and were each told to write an official statement regarding what happened. The MP's only concern at that time was to ensure we were not involved in a hit-and-run accident or some other violation of the law.

My buddy and I spent about five hours at the station while the MPs verified our statements with the German police. Finally, we were allowed to leave. That night,

my lack of rest, poor decision making and overconfidence in my ability to drive tired almost cost us our lives.

You always hear how important it is not to drink and drive. However, that's not the whole story. As I learned, driving any distance when you are tired is just as dangerous as driving under the influence of alcohol. The simple fact is, if you don't get adequate rest before you drive, you may – after the accident – be resting eternally.◀



Peer to Peer

Make a
MOVIE
save a life

- 1) Post your video on any social network site (Army YouTube, YouTube, Facebook, MySpace, etc.) during the competition period (Sept. 30, 2008 to March 31, 2009).
- 2) E-mail to Safe.P2FVideo@conus.army.mil or call commercial: 334-255-1390, DSN: 558-1390, to have your video entered in the competition. You must provide your name, age, phone number or e-mail address, and a link to the video.
- 3) All entries must be submitted no later than 11:59 p.m. Central Time on March 31, 2009.
- 4) A panel will judge video entries and select finalists. Finalists will be notified by e-mail or telephone.

For more information and contest rules for Peer to Peer, go to <https://crc.army.mil/videocompetition>.



Giving the Finger

SGT. ROBIN SAYLER
Montana Army National Guard
Helena, Mont.



The day started out normally. I went to work as an operator of a HEMTT fueler for an aviation unit. When I arrived, I called a friend and wished her a happy anniversary. Little did I know this would also become an anniversary for me. Unfortunately, it's not one I care to celebrate.

As a fueler with an aviation unit, my job was to conduct thorough preventive maintenance checks and services (PMCS) of my HEMTT first thing every morning. I would then test the aviation fuel to ensure water was not present. The HEMTT I was assigned to work on belonged to another state's National Guard and was on loan to my unit. To say this piece of equipment was in bad shape would be an understatement.

Having completed the PMCS, I turned my attention to testing the fuel. Being a short Soldier, I was accustomed to using the truck ladder as my personal stepping stool to reach the fuel valves. During my 13 years as a fueler, I had done this many times. On this vehicle, however, the ladder was damaged and the hinge points had a gap, even in the open position.

After reaching up and opening the valve, I started to descend the ladder. As my weight shifted on the ladder, the middle finger on my right hand slipped into the gap. I felt a sharp pain as my

finger was crushed. I was quickly taken to the hospital, but the injury to my finger was so severe the surgeon had to amputate the tip down to the first joint.

Freak accident? A one-in-a-million possibility, right? That's what I thought until I received a call one day from a fellow fueler. He had just left the emergency room with the same injury. Needless to say, I was shocked and naturally curious, so my first question to him was simple: Was the ladder damaged? The answer, believe it or not, was "yes." Two injuries a little more than a year apart, caused by damaged ladders on HEMTT fuel trucks.

The moral of the story is Soldiers must continue to conduct proper PMCS. As they do, they need to ensure the safety pin is in place to secure ladders properly and replace damaged equipment such as ladders. Both of these ladders were probably damaged while the vehicles were in use with the ladders in the down position. It is very important to remember to stow your vehicle ladders in accordance with the operator's manual when they are not in use and any time you are going to move the vehicle. Take it from me – you may be saving yourself or one of your fellow Soldiers from a serious injury.◀



FYI

The National Stock Numbers (NSN) for the ladder retention pin hardware are as follows:

- Wire rope** NSN 4010-01-162-9825
- Clevis pin** NSN 5315-01-197-0608
- Ladder clip** NSN 5340-01-155-3590

Accidents don't just happen. They are caused by not paying attention and not thinking of what can go wrong before it goes wrong. In the AH-64D community, we're having a recurring problem with people cutting their hands and fingers in the right aft avionics bay. This is one of those stories.

Caught Red Handed

CHIEF WARRANT OFFICER 2 MARK LEWIS
A/1-2 AVN (ATK) ASO
2nd CAB, 2nd ID
Camp Eagle, South Korea

The axial flow fan is located in the right aft avionics bay of the AH-64D and circulates air to keep the aircraft's radios cool. The fan is completely guarded in the front, but not in the rear. It is an everyday occurrence for Soldiers to reach around the back of the fan while looking for cannon plugs or some other component and pull back a nub.

This type accident happened in my unit about 10 months ago. One of our crew chiefs was filling MODE 4 codes and had unplugged the cannon plug to the axial flow fan in an effort to not cut his hands. After finishing the job, he reconnected the cannon plug and continued to reach around the back of the fan to make sure nothing else was loose or disconnected. Sure enough, the fan took a chunk out of his right index and middle fingers.

Fortunately, the incident did not involve any bone fragments or fractures, and stitches were not necessary. However, the accident alarmed the battalion and got me thinking. After talking to my platoon sergeant, I discovered this type accident occurs often. Instead of a couple of finger cuts, Soldiers



“ This has **HAPPENED** in my battalion within the **LAST YEAR**, as well as **OTHER UNITS** in the Army over the **PAST FIVE YEARS**. My question is **WHY?** ”

have lost entire fingers. This has happened in my battalion within the last year, as well as other units in the Army over the past five years. My question is why?

Installing a screen over the back side of the fan to match the front would be a simple fix to a simple problem. Out of all the safety measures implemented into such a complicated helicopter, surely a screen over a razor-sharp fan would (or should) be installed.

As a short-term fix, I immediately briefed all flight line Soldiers,

officers and enlisted, on the dangers of the axial flow fan and how the blades are not protected. However, I wanted to get the word out to the field before the next Soldier cuts or, worse, amputates his hand. Safety measures should be established to prevent these type accidents. I suggest a wire mesh screen attached to the back of the fan would completely alleviate the problem. Although safety shouldn't have a monetary price affixed to it, a screen would be a very inexpensive solution.◀

DEER IN HEADLIGHTS

1ST SGT. LYNETTE STREITFIELD
Operational Support Airlift Agency
Fort Belvoir, Va.

Venison is great – as long as you don't bag your buck with a Yamaha!

It was still dark at 5:15 a.m. as I rode home from Arlington, Va., where I'd pulled my night-shift gig in the National Guard Bureau watch cell. I was wearing my battle dress uniform and Matterhorn boots along with an "armored" Tour Master cold-weather riding coat with reflective tabs on the sleeves. I was also wearing my full-face helmet. I had just scooted through the "mixing bowl" on Interstate 95 south and knew there were a lot of big rigs behind me.

I was about 500 feet from the exit for Fort Belvoir, riding in the right lane on a section of the road that was poorly lit. I was just about home free when I suddenly saw a gray mass in front of me. Whatever it was, it didn't seem to know what it wanted to do. I had traffic in the lane next to me, so there was nowhere for me to go but straight. As I prepared for

the impact, I thought, "Well, here goes!" The last thing I remember hearing was the sound of crunching plastic.

When I came to, I was lying on the highway, unable to move. I knew right away I'd fractured my left clavicle. Suddenly, two people were lifting me out of the roadway. The pain of being lifted under my arms was so excruciating I passed out again.

When I came to, someone was steadying my head while someone else was checking my lower extremities for injuries. Because my helmet's chin strap was choking me, we broke a cardinal rule regarding motorcycle accidents and removed my helmet.

As it turned out, one of the people who pulled me out of the highway was a Marine en route to Quantico. He'd seen the whole thing and told me I'd nearly been run over twice while lying in the road. He'd crossed three lanes of some of the most dangerous

traffic in America to get to me. Truckers speed through that area like they've got a hot date waiting at the weigh station in Dale City.

Looking back, I'm not sure any amount of training could have prepared me for this kind of event. While I'd figured I would see deer along the smaller side roads I took getting to work, I never expected to see one on the interstate. That just shows you'll never know when Bambi will get a death wish. The only thing I had going for me that morning was my personal protective equipment (PPE). My helmet bore the brunt of my hitting the road, and I received replacement cost (plus) to get a new one – which I did.

I came away from the accident with severe whiplash, a fractured left clavicle that required two surgeries and a totaled motorcycle. I was also out of work almost five months. But at least I was alive.

After the accident, I ordered a new Yamaha FJR-1300 and had it delivered. As soon as I was healthy enough, I got back on the road and started riding again.

That's the beauty of wearing proper PPE. When the unexpected happens, you get a chance to survive, get back on a bike and ride again. And that sure beats the alternative.◀



Get current information to help **YOU** and **YOUR BATTLE BUDDY** be **ARMY SAFE**



U.S. ARMY COMBAT READINESS/SAFETY CENTER

<https://crc.army.mil>



A new look for the **USACRC** Web site

COMING SOON!



ARMY STRONG

Ever Heard of Workplace Safety?

VICKI ARNESON-BAKER
G5, Plans and Programs
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

Editor's note: In an effort to keep Knowledge relevant to our readers' needs, we're introducing a new column titled "At Work." This column is dedicated to workplace safety and will highlight Occupational Safety and Health Administration (OSHA) issues/policies, Army trends, new equipment and resources. The goal is to keep readers informed about workplace hazards and how to mitigate or eliminate those hazards.



What Will Take Me or My Buddy Out of the Fight?

By now, most Soldiers should be familiar with composite risk management (CRM). We continue to tackle combat hazards and off-duty accidents; however, we often overlook the hazards within our workplace. If I asked you if an improvised explosive device, an Army Combat Vehicle rollover accident or a privately owned vehicle accident could take you or a buddy out of the fight, what would you say? You would quickly say "yes." But what if I asked you about a frayed electrical cord, toxic chemicals, climbing ladders, lead paint or lifting heavy objects? Could those workplace hazards take you out of the fight? You bet they can — and they have!

What is Workplace Safety?

Workplace safety is about preventing injuries and protecting the health of Soldiers, Department of the Army civilians and contractors by ensuring safe and healthy workplaces. It's about protecting the Army's most valuable asset — you! By protecting Army personnel, workplace safety programs assist units and commanders in getting the job done and completing the mission.

Each duty day brings its own set of unique hazards to the workplace. Because of our daily routines, it's easy to get complacent and not recognize these hazards. A proactive workplace safety program reduces risks by identifying hazards and developing control measures before accidents occur. It also looks at the relationship between employees, their duties, equipment and tools, and working environment.



The workplace safety program manages the following hazards:

- Chemical (toxic, flammable, corrosive, explosive)
- Electrical (shock/short circuit, fire, static, loss of power)
- Ergonomics (strain, human error)
- Slips, trips and falls (condition results in slip or trip from heights or on walking surfaces — poor housekeeping, uneven surfaces, exposed ledges)
- Fire/heat (burns and smoke inhalation)
- Mechanical (vibration, chaffing, materiel fatigue/failure, amputations)
- Noise (hearing damage, inability to communicate, stress)
- Radiation (X-rays, microwave towers for radio or TV stations, wireless technology, paint analyzers)
- Visibility (lack of lighting or obstructed vision that results in error or injury)
- Weather (snow, rain, wind or ice that increases or creates a hazard)
- Materiel handling (forklift traffic, cranes)

- Power tools (vibration, guarding, sharp edges, flying objects)
- Other hazards (improperly stored objects falling upon workers, or injury to a body part when action causes contact with a surface, such as when a screwdriver slips)

Does Workplace Safety Apply To Me?

Bottom line – yes! The goal of the Army’s workplace safety program is to prevent accidents and injuries by complying with OSHA standards and effectively using CRM. This program specifically targets Soldiers and civilians performing noncombat roles during training, contingency operations, field operations and garrison and industrial operations.



“A proactive **WORKPLACE SAFETY** program **REDUCES** risks by **IDENTIFYING** hazards and **DEVELOPING** control measures **BEFORE ACCIDENTS** occur.”



What Army Regulations Govern Workplace Safety?

Army Regulation 385-10, Part III, *Supporting the Garrison and Industrial Base*, explains the Army policy and responsibilities for implementing OSHA programs. In addition, other guidelines can be found in Department of the Army Pamphlet 385-10, *Army Safety Program*, Chapter 14, *Workplace Safety Programs*.

Continue to read “At Work” each month as we explore the workplace hazards that can affect you and your job. Learn what you can do to mitigate or eliminate those hazards from your workplace. Remember, safety is not an expense; it is an investment in preserving our combat resources.◀

Editor’s note: If you have a workplace safety story you’d like to share, please send it to us at safe.knowledge@conus.army.mil.

the Little Orange Dot That Could

JOHN A. SPARKMAN
U.S. Army Aviation Technical Test Center
Redstone Arsenal, Ala.

This past summer marked my 30th anniversary of being an Army aviator. Back in the summer of 1978, I was in flight school at Fort Rucker, Ala., and struggling through the usual trials and tribulations of a warrant officer candidate student aviator. Flying the TH-55, I experienced the agony of the first hover attempts, the ecstasy of the solo flight and the solo wings ceremony. I also recall the sweet smell of Av-Gas out on the ramp at Hanchey Army Airfield.

Has it really been that long? My, how time flies. We had rugged Vietnam veterans for instructor pilots and colored ball caps denoting the class and phase of training we were in. The air was fresh and clean. Laverne & Shirley was on the television, as well as The Incredible Hulk. Animal House and Midnight Express played at the movie theaters and Bad Company and Eddie Money rocked the AM radio.

Here's a memory that really sticks with me. I can't tell you how powerfully it has stayed with me throughout all my years as an Army aviator and in my post-

retirement years in support of aviation. It's the little orange dot.

The U.S. Army Safety Center used to issue us this little orange dot and instructed us to place it on the face of our wristwatches. It was an otherwise innocuous little circle of orange stick-um that we wore on our timepieces to remember to do things safely.

We were young, foolish and even giddy. We viewed everything handed to us in those days with a blind acceptance and a full-throttle joy. We accepted the "Safety Dot" as part and parcel of joining the community of Army pilots, and we stuck it on





our Timex or Casio with ignorant pride, the same way we wore our two-piece Nomex® flight suits with slightly off-kilter exuberance. We had crooked collars, half-hitched Velcro™ and clumsy boot-blossoms. We were young, dumb and full of rudderless energy.

That Safety Dot connected us somehow, though, to the seniors and elders, throughout flight school and the first few years in the field. Through each period of instruction, crew briefings, mission executions, field problems, after-action reviews

and trips to the club or ‘Ville for beers and fellowship — that little orange dot connected us.

In short order, we became somewhat self-aware and self-reliant. We made pilot in command and went from followers to Leaders. And somewhere in there, the Safety Dot became something more than an affectation or appliance. It was a constant reminder of how professionals do things.

Just as we were about to finish the preflight inspection and climb aboard to pull the trigger, that little orange dot would catch our eye. We would pause and ponder the ins and outs of the flight or mission we were about to undertake. “Am I truly squared away?” “Have I left anything to chance?” “Is there anything left unsaid with regard to my teammates and/or co-pilot?” “Have I really thought this thing through?”

“Can I honestly say that I am not rushing something and thereby forgetting something important?”

All this happened in just a second, of course. Usually, the rumination over that little orange dot amounted to little or nothing. Occasionally, though, the Safety Dot was the gentle wake-up call that led us to some overlooked detail that we then corrected and, as a result, completed our mission safely and professionally.

After a few years, of course, the Safety Dot went the way of the dinosaurs. It died and was viewed by many as the ad campaign of a regime long since retired. By all accounts, Lear Siegler Services, Inc. (LSI) Primary Division safety manager (Ret) Bob Cooper breathed life back into the Safety Dot program in the 1990s. To this day, Bob Beaman, LSI director of safety, briefs every Initial Entry Rotary Wing class at Fort Rucker on the importance of flight safety and issues each flight student their own Safety Dot.

I’d like to offer this thought; it’s time to bring back the Safety Dot Army-wide. It’s a constant reminder to never cut corners

when you’re rushed or in a hurry. The U.S. Army Aviation Technical Test Center is engaged in the business of flight testing. We fly hours and hours in support of the larger test effort to bring the very best equipment, helicopters, airplanes, systems, weapons, black boxes and countermeasures to the modern warfighters. We plan, produce PowerPoint briefings, conduct teleconferences and phone conferences, fly, test, write, report and go a mile a minute supporting this organization’s mission. Everything needs to be tested “now” (and yesterday is even better). The very success or failure of the warfighting effort depends on this thing we’re about to strap on and lift into the air in the next 10 minutes, no less!

You are warfighters. You plan, brief, execute and fly many thousands of hours in support of the Global War on Terrorism. You work long hours, you’re thousands of miles from your Families and you get very little sleep. You fly convoy cover and answer 911 calls from the ground troops. The very success or failure of the mission depends

on how quickly you can strap into that helicopter, get the engine(s) started and swiftly bring your weapons and assets to the fight. How fitting would it be that you glance down at your wristwatch right before you hit the starter button and see this little orange dot? It’s a trigger for us to remember to do things safely — a constant reminder of how professionals do things. Join me in paying tribute to those long departed and those who are just now considering going to flight school and earning those silver wings. Place the Safety

Dot on your wristwatch. Heck, put it on your PDA or Blackberry. Just put it somewhere where it will catch your eye. Let that little orange dot be your reminder of exactly who is our biggest customer — the warfighter. We owe it to them to carry on this tradition of excellence.

I’m proud to wear these wings, I’m proud to wear this orange Safety Dot and I’m proud to be a part of this incredible team. Go forth and do great things!◀

“The **SAFETY DOT** became something **MORE** than an **AFFECTATION** or **APPLIANCE**. It was a **CONSTANT REMINDER** of how **PROFESSIONALS** do things.”



Seat Belts

– They Gotta Work!

MARK ARNOLD
U.S. Army Medical Materiel Development Activity
Fort Detrick, Md.

It was a beautiful 60-degree day late in December 2004. Such warm weather was unusual in Maryland at that time of year, so I filled out a leave slip and headed home to finish my Christmas shopping.

I was doing 50 mph in my Ford Ranger pickup on a rural highway when a car pulled out from a side road just as I was about to enter an intersection. I struck the car and, afterward, tried unsuccessfully to regain control. I then spun around and went backward up an embankment. I just closed my eyes and held on as the truck rolled over and came back down the embankment. When I opened my eyes,

I saw sparks from the hood grinding on the road, so I shut my eyes again until everything got quiet. When the truck finally stopped, I was hanging by my seat belt and noticed

blood dripping onto the truck's headliner. It came from a scrape on my left shoulder – the only injury I suffered. But things could have ended much differently.

About two weeks

earlier, I was cleaning my truck and decided to replace the driver-side seat belt buckle, which occasionally released without my pushing the button. Since we never used the center seat

belt, I decided to use its buckle to replace the faulty one on the driver's seat belt.

The few minutes it took me to replace the worn out driver-side buckle ended up saving my life. When the truck overturned, it rolled onto the driver side before landing on its roof. Without that seat belt, I'd have been

thrown from my truck and crushed by it.

My truck was totaled, but I collected my auto insurance – something the other driver did not have. The "insurance" that really counted, however, was having a reliable seat belt. Without that, my family would have collected my life insurance.◀

“ I just CLOSED MY EYES and HELD ON as the TRUCK ROLLED over and came back DOWN the embankment. ”

SEAT BELT RECALLS

As the author observed, seat belts that don't work properly can't provide passengers the needed protection. While most seat belts function as advertised, occasionally there are defects which require manufacturers to recall specific year and model vehicles and provide a safe remedy. The National Highway Traffic Safety Administration (NHTSA) has issued the following seat belt recalls:

- 2006–2007 Mitsubishi Endeavor
NHTSA Recall Number: 08V02200
- 2006 Chevrolet Express/GMC Savana
NHTSA Recall Number: 08V-238
- 2008 Toyota Highlander/Highlander Hybrid
NHTSA Recall Number: 08V-181
- 2008 Pontiac Solstice/Saturn Sky
NHTSA Recall Number: 07V-449
- 2008 Mercedes C-Class
NHTSA Recall Number: 07V-454
- 2007 Nissan Armada
NHTSA Recall Number: 07V-449
- 1995–1998 Kia Sephia/Sportage
NHTSA Recall Number: 02V-216
- 2000–2001 Ford Focus (station wagons and three-door vehicles)
NHTSA Recall Number: 00V-418

For more detailed information on these and other vehicle safety recalls, visit NHTSA's Web site at <http://www.nhtsa.dot.gov/> and click on Recalls, Defects and Complaints Databases under "Quick Clicks."



LOST

AVIATION



CLASS C
 The aircraft experienced separation of the vertical empennage step and handhold during flight, resulting in the component contacting the tail rotor, L510 panel and the No. 6 driveshaft.



CLASS A
 The aircraft was Chalk 3 in a flight of four when it impacted the ground, fatally injuring all seven crewmembers onboard and

destroying the aircraft. A post-crash fire ensued.



CLASS C
 The aircraft contacted a goalpost on rollout after landing to a soccer field in dust conditions.



CLASS C
 During a maintenance test flight, the aircraft experienced an engine failure and the crew executed an autorotation to the ground. Post-flight inspection indicated spike knock damage.



CLASS C
 Post-flight inspection revealed damage to all four main rotor blades (MRBs) as a result of contact with the ALQ-144 during flight.



CLASS B
 The aircraft's main rotor system made contact with a tree. Four MRBs sustained damage, requiring depot-level repair.

DID THE CREW COMMUNICATE EFFECTIVELY?

CLASS C

Inspection revealed stabilator damage and indication of MRB contact with the ALQ-144. Ground contact is suspected to have occurred, causing the damage during the prior mission.



CLASS B

The aircraft exceeded in-flight engine temperatures and torque following demonstrated stall power recovery.



CLASS B

The UAS experienced ENG FAIL during flight. The air vehicle operator (AVO) deployed the recovery chute; however, the UAS was recovered with damage.

The UAS overflew the pendants and arresting net during landing and impacted a HESCO barrier and concertina wire.



CLASS C

The AVO lost computer link with the UAS shortly after takeoff. The UAS continued in an uncommanded ascent and heading and has not been located to date.

GROUND



CLASS A

A Soldier serving as the gunner in a Mine Resistant Ambush Protected (MRAP) vehicle suffered fatal injuries in a rollover. The driver had swerved to avoid a collision

with another vehicle and then overcorrected, causing the MRAP to overturn.



CLASS A

A Soldier was killed when he was ejected from an M1151 HMMWV that struck a tractor-trailer.

A Soldier suffered fatal injuries when he lost control of his M1025 HMMWV during rainy conditions and crashed into several trees and a culvert. The Soldier was partially ejected and pinned by the vehicle. He was wearing a seat belt.



CLASS A

A Soldier was killed when the .40-caliber handgun he was handling discharged and a round struck him in the head. The Soldier was at a private residence with three other Soldiers when the accident occurred.

DO YOUR SOLDIERS UNDERSTAND THEY MUST INTERVENE WHEN THEIR COMRADES ARE PUTTING THEMSELVES OR OTHERS IN HARM'S WAY?

A Soldier was killed when a fire broke out in his quarters.

A Soldier died after collapsing while participating in shuttle sprints during physical training.

A Soldier on permanent change of station (PCS) leave suffered fatal injuries when he fell from a balcony at a night club.

ARMY AIRCRAFT LOSSES

Fiscal 2002 to Present
as of Dec. 2, 2008



AH-64A/D	11/51
U/MH-60A/L	10/29
C/MH-47	8/19
OH-58D	11/28

TOTAL 40/127

ARMY GROUND LOSSES

Fiscal 2009
as of Dec. 4, 2008



AMV	4/4
ACV	2/1
PERSONNEL INJURY <small>includes weapons-handling accidents</small>	5/5
FIRE/EXPLOSION	1/0
PROPERTY DAMAGE	0/0

TOTAL 12/10

■ A lone Soldier was using some newly purchased gear during a recreational climb when he fell to his death. After being reported missing by his unit the next day, the Soldier's body was located by search and rescue personnel.

REGARDLESS YOUR EXPERIENCE LEVEL, THERE IS ONE SIMPLE RULE: NEVER CLIMB ALONE.

■ A Soldier suffered fatal injuries when he fell from a ladder. The Soldier was attempting to release an overhead door jamb when the door cable snapped free and jarred the ladder.

■ A Soldier was competing in a morale, welfare and recreation-sponsored boxing tournament when he collapsed on the mat. He was evacuated to a local medical center, where he later died. The Soldier was wearing the required protective headgear during the match.

DRIVING



CLASS A

■ Three Soldiers riding as passengers were killed and a fourth critically injured when the driver lost control of his vehicle, left the road and struck a tree. The driver, who was also a Soldier, had been drinking heavily before getting behind the wheel and was speeding at the time of the accident. The driver, who was wearing his seat belt, survived

the accident with minor injuries. This accident was investigated by the U.S. Army Combat Readiness/Safety Center and an in-depth story will be presented in the February 2009 issue of *Knowledge*.

DO YOUR SOLDIERS UNDERSTAND THE DANGER OF RIDING WITH A DRIVER WHO HAS BEEN DRINKING?

■ A Soldier, with another Soldier as a passenger, went off the road and entered a sideways skid. The vehicle then rolled several times until it came to rest on its roof. The driver, who was wearing his seat belt, climbed out of the vehicle to summon help for his passenger. The passenger, however, had been unbelted and was trapped inside the vehicle and died. Alcohol and excessive speed played a part in this accident.

■ A Soldier was driving his car at night when he struck a 5-gallon drum of hydraulic fluid on the road, lost control and crashed.

The Soldier was trapped inside his vehicle, which caught fire, and died.



CLASS A

■ An out-of-control vehicle in the oncoming lane swerved across the road and struck a Soldier on his motorcycle, pinning him against a guard rail. The Soldier was evacuated to a local medical center, where he died of his injuries.

■ A Soldier was operating his sportbike at high speed when he collided with a vehicle ahead of him. The Soldier had completed Army-approved Motorcycle Safety Foundation (MSF) training, was wearing his helmet and personal protective equipment (PPE) and was a participant in his installation's motorcycle mentorship program. At the time of the accident, the Soldier was accompanied by an NCO riding on a separate motorcycle.

POV DRIVING LOSSES
Fiscal 2009

as of Dec. 4, 2008 Class A accidents/Soldiers killed

CARS	9/9
SUV/JEEP	4/4
TRUCKS	0/0
MOTORCYCLES	3/3
PEDESTRIAN	4/4
OTHER*	1/1

21 TOTAL DEATHS

Fiscal 2008: **19** 3 year average: **17**

*Includes: vans and ATVs

BEYOND MOTORCYCLE TRAINING AND SAFETY PROGRAMS, THE DECISION TO RIDE RESPONSIBLY ULTIMATELY RESIDES WITH THE RIDER. A HUNDRED GOOD DECISIONS BY A RIDER CAN BE CANCELED BY A SINGLE BAD ONE.

■ A Soldier was operating his BMW motorcycle when he rear-ended a slower-moving car, went off the road, struck two trees and was killed. The Soldier was on PCS leave.

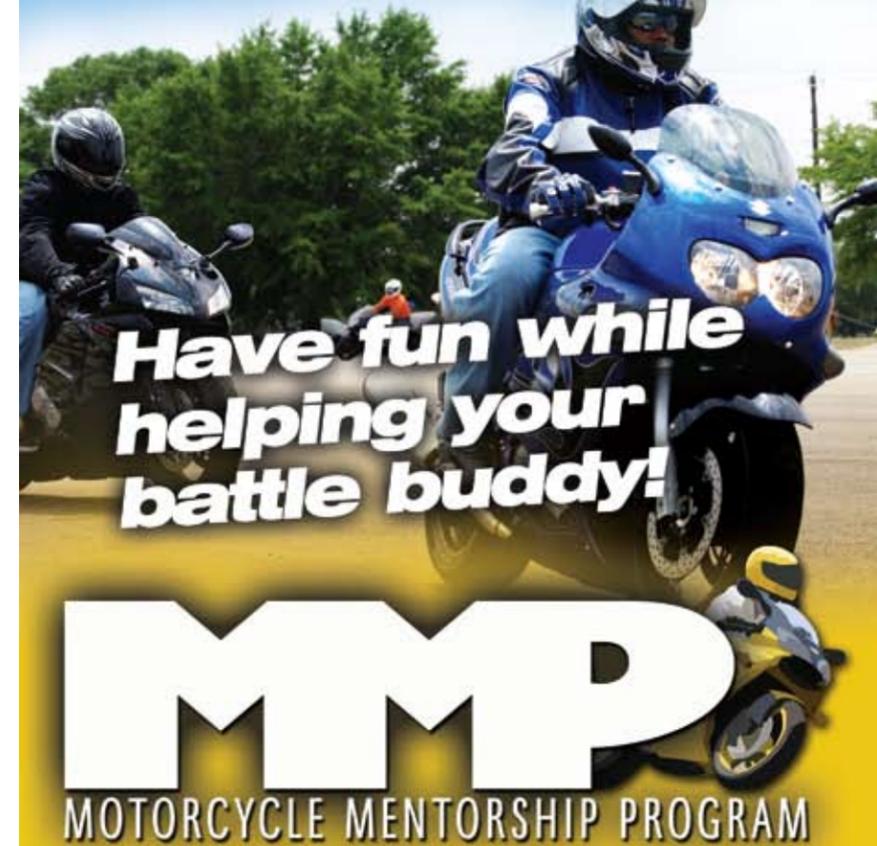
■ A Soldier home on midtour leave was operating a borrowed motorcycle when he struck a van that turned in front of him. The Soldier had not received MSF training, nor was he wearing a helmet.

CLASS B

■ Two Soldiers were operating a motorcycle when they hit gravel on an S-turn, veered across the road and struck an oncoming vehicle. Both riders were thrown 40 to 50 feet and injured. The operator fractured his left forearm, wrist and leg – injuries that may lead to a permanent partial disability. The passenger was released after outpatient treatment. The Soldiers had left a unit organizational picnic before the accident and were wearing their helmets and PPE, with the exception of proper riding boots.



■ A Soldier on PCS leave was killed in an accident involving an all-terrain vehicle (ATV). The Soldier was riding as a passenger on an ATV designed only to carry an operator when it struck a stump. Both the operator and Soldier were thrown off the vehicle. The Soldier, who was not wearing a helmet or PPE, was evacuated to a local medical center, where he later died. Alcohol played a role in this accident.



Have fun while helping your battle buddy!

MMP
MOTORCYCLE MENTORSHIP PROGRAM

Mentoring can be fun and set up in various ways. Here are a few examples:

- Unit-level one-on-one mentorship
- Unit-level riding groups
- Private organization
- Combination unit program and private organization at the installation level
- Non-appropriated fund instrumentality

Check out the USACRC MMP Web site for some examples of active mentoring programs:



<https://crc.army.mil/mmp/>



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Family

engagement kit

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play time**

**When going out, having fun also means
being responsible. Help your buddy out.**

**DON'T HESITATE
DESIGNATE!**



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KNOWLEDGE

VOL 3 FEBRUARY 2009

OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY



ANATOMY OF A TRAGEDY

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THERE WHEN YOU NEED IT

p. 30



ARMY STRONG



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IS ARMY STRONG

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Plus: pull-out posters

An **IMPORTANT** and **CRITICAL** point to **REMEMBER** is users of **TRiPS** are 6.5 times **LESS LIKELY** to be in a **FATAL** POV **ACCIDENT** than **non-TRiPS** users.



THE LITTLE THINGS

Spc. Wilkerson had just returned from a tour in Iraq, completed the required reintegration training and was now ready to take his much-anticipated block leave with his Family. After making several trips to load the family SUV, all preparations were completed and the Family was ready for their 13-hour trip to the Sunshine State to visit relatives and relax. As everyone was buckling their seat belts, Wilkerson asked his wife if she had the directions and was ready to assume her "navigator" duties for the long trip. She quickly said, "No, I don't. Didn't you complete our TRiPS planning when you submitted your leave form? That's where we always get our directions." Wilkerson was speechless and shook his head in disbelief. He knew he had forgotten this important step in their vacation planning.

Unfortunately, the Army has seen a rise in privately owned vehicle (POV) accidents during the first quarter of fiscal 2009. Most of these accidents involve either poor judgment or indiscipline which contributed to the loss of a Soldier and, in some cases, also claimed the lives of innocent civilians. Often during our hurried

schedules, the little things that are not routinely performed become forgotten or overlooked. When it comes to driving a POV, this can lead to an accident. So, how do we ensure our Soldiers remain vigilant and cognizant of the little things? The answer resides within the roles of our noncommissioned officers and Families.

Noncommissioned officers are our Army's first line of defense in supervising Soldiers' on-duty and off-duty activities. They enforce standards and provide essential guidance and mentoring for our Soldiers by demonstrating the Army values in their everyday lives. Likewise, through their sharing of lessons learned and best practices, noncommissioned officers can influence Soldier actions before an incident occurs by ensuring on-duty and off-duty composite risk management (CRM) tools are not overlooked and forgotten.

What's equally important is Family members becoming actively engaged in the business of keeping Soldiers safe by being a "home-front battle buddy." The Army recognizes that the strength of the Soldier comes from the strength of their Families, and engaged

Families can positively impact a Soldier's decision-making process. Their involvement in completing the online TRiPS process at <https://safety.army.mil> allows Family members to participate in the risk assessment process and, subsequently, risk mitigation. An important and critical point to remember is users of TRiPS are 6.5 times less likely to be in a fatal POV accident than non-TRiPS users.

I ask you to involve your Soldiers' Family members in your organizational activities as often as practicable. Encourage them to take a look at the tools available in the Family Engagement Kit, which is located on the USACRC Web site. The kit provides the resources Families need to understand the risks facing our Soldiers, meet the challenges of off-duty safety and lend a hand in the identification

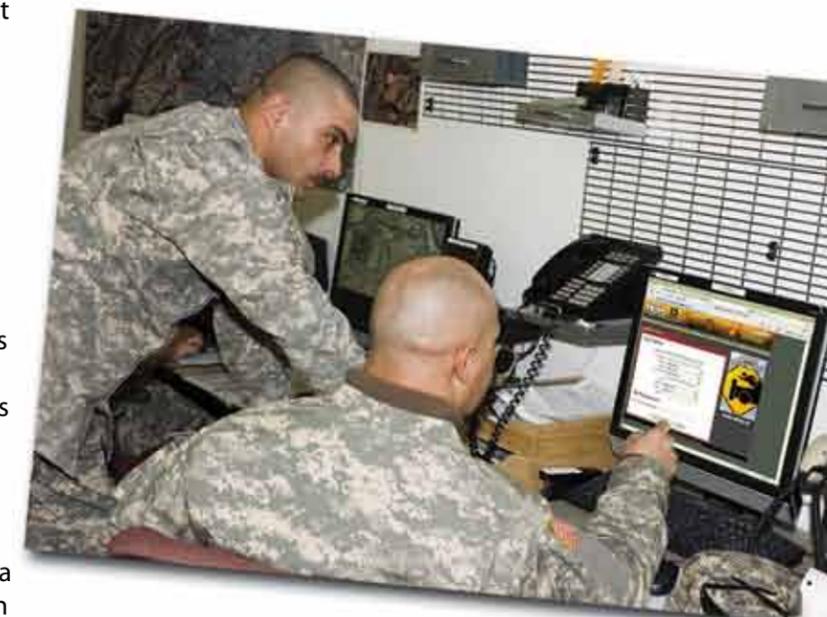
of off-duty hazards that may go overlooked.

I ask each of you to remain vigilant about safety and apply CRM to all daily activities, both on and off duty. The little things, when not properly taken into account, can quickly become overwhelming and, if not properly factored in, fatal. I thank each of you for

your efforts and ask for your continued help in protecting our most vital resource – our Soldiers.

Army Safe is Army Strong!

WILLIAM T. WOLF
Brigadier General, USA
Director of Army Safety



U.S. ARMY COMBAT READINESS/SAFETY CENTER
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Mission statement: USACRC supports our Army by collecting, storing, analyzing, and disseminating actionable information to assist Leaders, Soldiers, Families, and Civilians in preserving/protecting our Army's combat resources.

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ANATOMY OF A TRAGEDY

BOB VAN ELSBERG
Driving Task Force
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

As a magazine writer, I normally don't see pictures of accident victims, but this time was different. I looked at the computer screen and froze. A young woman lay slumped in a vehicle's right-front passenger seat – her face cut and blood stains on her shoulder and seat belt.

Her badly cut right arm hung out her damaged door, which had been close to the point of impact when the vehicle spun off the road and slammed into a tree at nearly 60 mph. Soot from a controlled burn had covered the tree's trunk. Now it smudged her face and right shoulder – heartbreaking testimony to her last few moments.

I clicked again. A young man in a brightly striped shirt sat in the middle of the backseat. His head was resting against the seat's top – the vehicle's roof crushed down upon him. The headliner in front of him was smeared with blood. With his mouth open and his eyes closed, he appeared to be in a deep sleep. If only it could have been that.

Once more I clicked. A white sheet partially covered a Soldier lying near the vehicle. His nose and mouth were bloody and his eyes, half closed, stared into nowhere. He'd been thrown from the vehicle and landed in a bed of pine needles. I'd looked at his picture in the memorial program. His smile made him look like he had the world by the tail. He was a motivated young Soldier who served on unit funeral details to honor the fallen. Now, sadly, he had become one.

I pondered what it meant for these three to die in their teens. How do you measure what they lost? What would they give to change a decision and live another 60 or 70 years? But that choice had swiftly and unexpectedly slipped away from them. And they will never have it again.

I clicked to look at the vehicle. I could barely recognize it as a

large sport utility vehicle (SUV). The impact had crushed most of the right side – in some places as deep as 18 inches. The roof was so badly crushed rescuers had to cut it off to reach those inside.

I stopped clicking. Instead, I asked myself, "How on earth – or maybe in hell – did this happen?"

Peeling Back the Onion

Accidents are rarely random, unrelated events. Therefore, it's important to look at what happened and ask, "Why?" Let's

begin peeling back the onion by returning to the weekend of this accident to see what contributed to this tragic event. To respect the privacy of the Soldiers and their Families, the Soldiers have been given fictional names.

The Weekend

It was a Friday going into a normal two-day weekend. The battalion commander and his command sergeant major gave a safety briefing to the Soldiers during a formation held that



afternoon. Additional safety talks from company commanders and first sergeants emphasized the key points – don't drink and drive and be respectful in your personal relationships. The message was fairly standard – one which many Soldiers could easily recite. (Is this a routine that sounds familiar to you?)

Spc. Randy Chambers missed the safety briefings that afternoon. Busy with an administrative job in his unit, he wasn't released until 7 p.m. But before he left, his supervisor gave him a safety talk. Chambers then headed to his barracks room, where he relaxed and played video games until after midnight. He then crashed and slept until about 11:30 a.m. When he woke up, he grabbed some lunch and headed back to his room to play video games with his friend, Pfc. Derrick Wilson. It was just after midnight when they talked another friend, Pfc. Tonya Ellison, into driving them to a club in Chambers' SUV. She agreed and had another friend, Spc. Tony

Martinez, follow in her car.

Ellison was too young to drink and chose to wait outside the club in her car with Martinez. When the club was raided about 3 a.m., Wilson and Chambers ran out and jumped into the SUV. Before Ellison could stop them, they sped off, going too fast for her and Martinez to catch up. Fortunately, both vehicles made it back safely to the barracks and the Soldiers went to their rooms.



The Accident

It was about noon on Sunday when Chambers woke up. He ate snacks, drank and played video games well into the evening. Wilson and Ellison came to his room that evening, but Ellison left about 10 p.m. after Wilson repeatedly asked her to drive the three of them to a club.

Chambers and Wilson quickly headed downstairs to the parking lot where Chambers kept his SUV.

As they passed a picnic table in front of the barracks, three other Soldiers – Pfc. Angela Metcalf, Pfc. Michelle Harris and Pfc. Michael Harmon – asked if they could tag along. Chambers agreed, and they all piled into his SUV. Metcalf sat up front and buckled herself in. Harmon, Wilson and Harris piled into the backseat, choosing not to wear their seat belts.

Chambers pulled out of the parking lot and headed onto a road that would take them off post. After stopping for a red light at an intersection, Chambers

hit the gas, accelerating to at least 60 mph – well above the 35-mph speed limit.

As he raced down the eastbound lanes, something flew through the open driver-side window and hit Chambers in the face. As he was momentarily distracted, his SUV began drifting toward the right shoulder. Realizing he was about to go off the road, he cut left on the steering wheel. But he cut too hard and sent the SUV spinning counterclockwise across the road into the westbound lanes. The tires, still under power, left rubber "shudder" marks across the white-painted road markings.

The SUV careened rear-first across the westbound lanes, hitting the curb first with the right-front wheel and then the rear wheel. The impact popped the vehicle above the curb. The SUV's front pivoted sharply to the right as the vehicle hurtled toward the trees. The shoulder dropped away and the SUV became airborne and began rolling to the right. Less than a quarter-second later, it smashed into a large pine tree, impacting just behind the right-front tire. The SUV pivoted around the tree, crushing the vehicle's right side between the front and back wheels and destroying Metcalf

and Harmon's survivable space. Still trying to roll to the right, the vehicle's roof caught the tree and crushed down upon Wilson. The rear wheel then caught the tree and caused the SUV to rebound, spinning violently to the right and ejecting Harmon.

The Aftermath

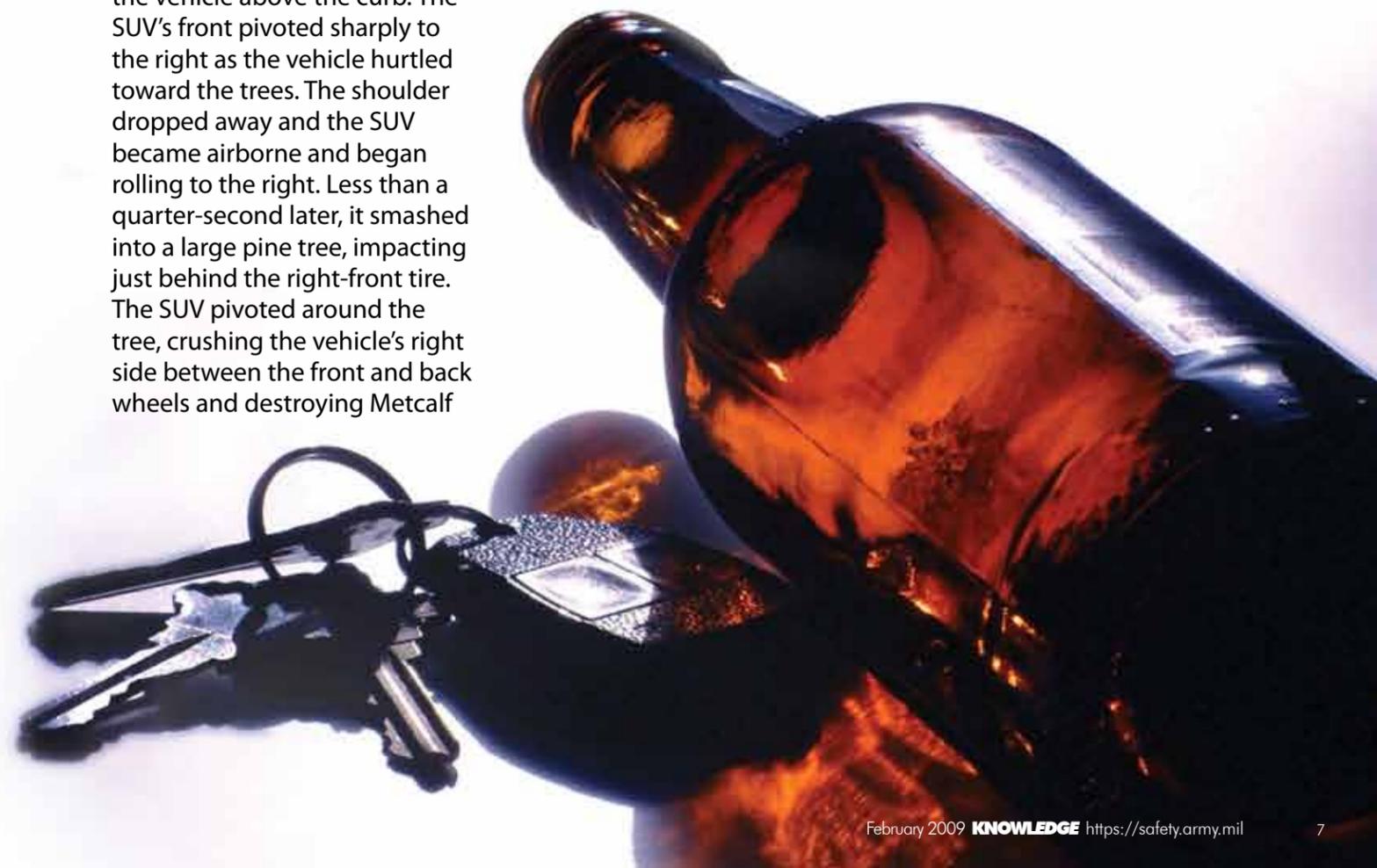
Chambers had only minor injuries. He tried to open his door, but it was stuck. A passing motorist saw the accident, called 911 and helped Chambers out of the vehicle. Chambers checked Metcalf, Wilson and Harmon and found them unresponsive. He heard Harris moaning in the back of the truck, but she was trapped inside the crushed vehicle, lying in the cargo area with her legs over the backseat. First responders helped Chambers

to the curb, where he could be treated by medical personnel. Post emergency medical services personnel arrived quickly and, after assessing all the victims, focused their efforts on saving Harris. After cutting the roof off the vehicle, they removed her and transported her for treatment. She survived, but possibly with permanently disabling injuries – a hard reality for any 19-year-old woman.

Why?

Why did this accident happen? When you look closely, you find several factors.

First, Chambers chose to drive when he was intoxicated and fatigued. That combination severely impaired his judgment and rendered him incapable of safely handling his vehicle.



Second, Chambers was overconfident in his driving abilities and showed indiscipline by speeding. His use of alcohol impaired not only his skills but also his judgment and he wound up killing three Soldiers and crippling a fourth. Whatever the legal actions taken against him, he will live with the memory of what he did that night.

Third, there were the passengers who rode with him. While Metcalf buckled up in the front seat, none of the three backseat passengers chose to wear a seat belt. How often had they heard about the importance of wearing seat belts in surviving accidents? Nor did Chambers ensure they buckled up before taking off. As the driver, he was responsible to make sure that happened. While the survivable space for Metcalf, Harmon and Wilson was destroyed during the accident, the backseat position where Harris sat was not. However, because she was unrestrained, she flailed about inside the SUV, increasing the severity of her injuries.

Lessons Learned

Remember how the unit's Soldiers described their weekend safety briefings? The prominent safety message was don't drink and drive. There's a reason why that message is stressed. Perhaps it is best expressed in the words of a former Virginia state trooper who watched helplessly as a drunken sergeant slammed into a concrete barrier in 2001.

"When you drink alcohol – from the very first sip – it affects your judgment," he said. "Before



it changes your physical hand-eye coordination, it affects your reasoning and your thought process. If you've had a few drinks and you're walking out to your car telling yourself, 'I can make it this time,' remember you're talking to a drunk."

The passengers were responsible to wear their seat belts – but that wasn't their only responsibility. They had a responsibility to evaluate the driver's condition and ask themselves whether riding with him was a wise choice. Before getting into someone else's vehicle, look at the driver and ask yourself, "Would I be willing to accompany them in combat if they were in this condition?" If not, why accompany them in a car? In either situation, your life is in their hands. Then take it one

step further. If you wouldn't trust them with your life, don't just walk away so they can drive off and kill themselves or others. Confront them tactfully. If need be, take away the keys. Sure, they may get angry at the moment, but later

they'll be grateful to be alive. At the core of the onion, everyone involved in this accident was responsible for safety in some way. When everyone starts taking that responsibility, stories like this will end.◀◀



BATTLE BUDDIES FOR LIFE

BOB VAN ELSBERG
Driving Task Force
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

It's no secret Leaders can't be with their Soldiers 24 hours a day in garrison. There are times when the only wall keeping a Soldier from making a deadly mistake is another Soldier. Yet, even peers can be Leaders if they have the advantage of a few extra years of life. The experience provided by those years can be, like "body armor," a useful tool to keep a younger Soldier out of a casket. A 22-year-old specialist who knew the three Soldiers lost in the story "Anatomy of a Tragedy" spoke of the role more experienced Soldiers can play in preventing such tragedies.

"If I had been out there that

night, I would not have let them go," he said. He explained he would have kept them from getting in the car with an intoxicated driver – no matter what it took.

Getting involved in situations like that is like being a battle buddy in combat. But stepping into that role takes a conscious decision backed up by action. However, as in battle, there is strength in numbers. To be effective, the specialist explained, these more experienced Soldiers need to develop a strong working relationship and support each other when the need arises.

"We need to get to know each

other a little bit more," he said. "I know if a couple more of us were outside ... I think it (the accident) could have been prevented."

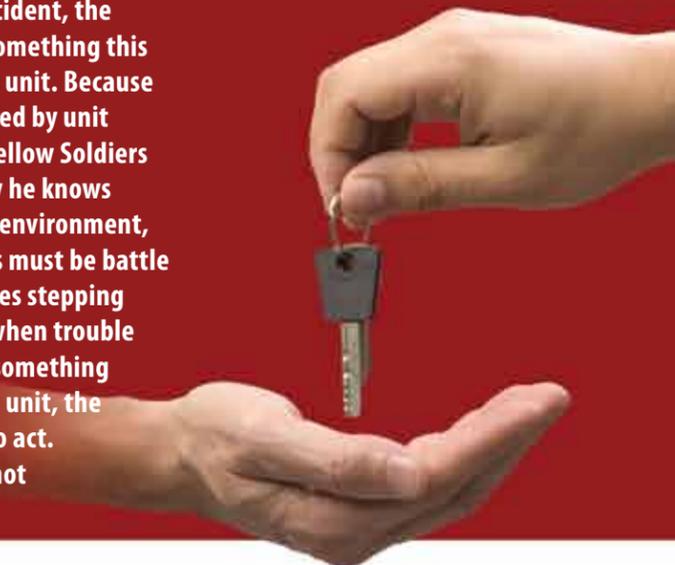
There is a strong argument to be made for his suggestion of peer Leaders helping prevent accidents. Working together, they can influence younger Soldiers who lack the age and experience to realize the trouble they're getting into. Because these peer Leaders work and live with Soldiers, they are in a good position to know who might be at risk. Beyond that, they are more likely than unit Leaders to be in a position to intervene while there is still a chance.

Unfortunately, there can be no

turning back the clock on this fatal accident – only the chance to learn from it and carry those lessons into the future. Before this accident, the specialist didn't believe something this tragic could happen in his unit. Because safety was strongly stressed by unit Leaders, he believed his fellow Soldiers got the message. But now he knows different. In the barracks environment, just as in combat, Soldiers must be battle buddies – and that includes stepping into the role of a Leader when trouble arises. If ever faced with something like what happened in his unit, the specialist is determined to act.

"If I'm out there, it's not

going to happen," he said. "I'm getting in the middle of it. I'll do everything I can to stop it."◀◀





Home on the Range

1ST SGT. (RET) SEAN O'BRIAN
Installation Safety Office
Fort Jackson, S.C.

Editor's note: Although the author originally wrote this story several years ago, his ideas on range safety are still relevant and can save Soldiers' lives.

Throughout my Army career, I picked up a few things that have been effective for me. I wish I could say I came up with them all on my own, but I was fortunate enough to serve with excellent Soldiers, and I have shamelessly stolen all their good ideas. I hope these ideas might help you run a safer, more effective range.

First and foremost, you must go through the range certification process at your installation to ensure you're up to speed on everything particular to your installation, the range and the weapons systems you're using.

• **Talk to range control.**

These are the smart folks when it comes to range operations; they do it full time. Normally, we only deal with them when we pick up the range packet or when we're trying to clear the range at the end of training. Don't just do the minimum coordination required to get the range up and running; take the time to talk to range control cadre members who manage that particular range. You will find the majority of these guys take pride in what they are doing and have a genuine desire to help you operate a successful range.

• **Don't ignore the guys in civilian clothes.** We often tend to look right past these guys. You're costing yourself the opportunity to learn something.

Some of these guys have been involved with these ranges longer than any of you have been wearing green. If you can't learn something from somebody with that kind of experience, then you aren't trying hard enough.

• **Learn from others.**

Talk to units that have run that range recently. Find out what kind of problems they encountered. If things went well, see if you can incorporate their plan into your training. If they produced a "chicken noodle hoagie," find out what happened and implement countermeasures to ensure it doesn't happen to you. I was in one unit where it was a requirement to contact the last unit that had fired on that range. Makes sense to me.

• **Plan, plan, plan.** Work your pre-range checklist. It is really embarrassing when the range is "hot" and the unit is ready to go, but they have to sit in the bleachers and cool their heels while you send the HMMWV back to the billets to get the critical

item you forgot to bring. (Been there, done that, had the one-way conversation with the boss later on!) If you have a good plan, it will help you to conduct a smooth operation – without having to vigorously exit your own "fourth point of contact" at the last minute.

• **Haste is not the same thing as efficiency.** If you're trying to get an eight-hour range done in four hours, then you're taking shortcuts somewhere and setting up yourself and your unit for failure. Do it right and do it in a controlled manner. Don't inhibit safety or training due to time-management issues.

• **Brief and rehearse your range detail.** Everybody from line safeties to the ammunition point detail should know exactly what they're doing before the unit is lined up ready to shoot. Just because you know what you want them to do and how you want them to do it doesn't necessarily mean they know it – unless you have adequately communicated it to them. Osmosis

has limited effectiveness in a range setting. Proper briefings and rehearsals will save you time and headaches once you get there.

• **Prepare and rehearse your range safety briefing.** Put your briefing together and use cue cards, flip charts or whatever else you need to provide a comprehensive safety briefing. "Hip shots" have the potential to omit vital information that the firers need.

• **Be prepared for emergencies.** Have primary and alternate range control/casualty evacuation frequencies memorized, written down and set on your radios. Have backup communications available. Talk to your on-range medic and make sure he/she is on the ball and has the medical knowledge and supplies to deal with any possible emergency. Obviously, you hope you will have no need for a medical response during your range, but hope is not a course of action and you want to be able to keep a bad situation from getting worse in case you have an accident.

• **Do the prep work.** You should be competent in all aspects of every weapons system you'll be using on the range. You do need to have the appropriate field manuals (FM) and technical manuals available on the range, but it shouldn't be the first time you have opened them. If you are conducting a range with weapons that you do not use on a regular basis, consider talking to a unit that does. Conducting a demolitions range? Why not pick up the phone and talk to the engineers, explosive ordnance disposal and/or the Special Forces guys and get some hot tips on how to do it right? Small-arms range? Run down the street and talk to the grunts. You may even be able to talk some of these guys into coming down to your unit and conducting classes for you. Teamwork is not just a concept and it shouldn't stop at your front door.

• **Train Soldiers on the basics.** A good marksmanship program will begin long before the Soldiers arrive on the range. The appropriate 23-series FM and the Soldier's Manual of Common Tasks – Warrior Skills will get you started in the right direction. It's sort of like driving a car. You wouldn't take someone out to road test before they had received classes and written testing, would you? Think about it.

Here's the bottom line. If your range is properly executed, then safety and realistic training should be able to co-exist, with one reinforcing the other. That should be your goal. <<



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ARMY SAFE IS ARMY STRONG

Close Call in AFGHANISTAN

CHIEF WARRANT OFFICER 3 ELMER H. BAYER III
A Company, 6th Battalion
101st Aviation Brigade
Fort Campbell, Ky.

Editor's note: In Army aviation, a lot of time and effort is devoted to assessing aircraft accidents while trying to determine what caused them. This is done so other Army aviators can learn from those lessons without having to experience them firsthand. There are also lessons to be learned from experiences that have a happy ending, those that could have ended in disaster but didn't. The following story is about two of those aircrews that made a critical decision to land their aircraft and delay a mission instead of continuing in hazardous conditions with potentially devastating results.

On Feb. 21, 2008, we were assigned a mission to conduct a VIP transport from Forward Operating Base (FOB) Asadabad (ABAD), to Naray, to Monti and then to Bagram Airfield (BAF), Afghanistan. With the flight plan filed and weather predicted to be good for the mission, we conducted an air mission brief and then individual aircrew briefs.

In Chalks 1 and 2 were UH-60 crews, with the air mission commander (AMC) flying lead. I was the pilot in command (PC) in Chalk 2. We departed on time that morning and the flight to ABAD was uneventful. We noticed the ceiling was dropping and a cloud layer was forming above the valley. The aircrews went into the ABAD tactical operation center (TOC) and received a weather briefing for the next leg of the

flight to FOB Naray. The weather was reported as better than three miles visibility with more than a 2,000-foot ceiling. The flight departed from ABAD to FOB Naray and landed without incident. The VIPs departed for their meeting and the aircrews met to discuss the weather. The weather in the valley from where we came appeared to be deteriorating. We again called the FOBs to check the weather on the return flight and were

given good weather. After the VIPs returned to the aircraft, we headed toward Monti. FOB Monti was a brief stopover; however, while we were there, it began to rain. The VIPs departed for their meeting and the aircrews met again to discuss the weather and route home. When the VIPs returned, the flight departed for BAF. During the return flight, about 15 miles north of FOB Jalalabad Airfield (JAF), we again attempted

communications to assess the current weather. We made multiple calls to JAF tower without making contact. We also attempted contact with Shadow TOC by satellite communications (SATCOM) and through text messaging on Blue Force Tracker (BFT). Saber operations answered the SATCOM call and gave a weather brief of 6,000 meters visibility and a 2,000-foot ceiling at BAF. Based on the weather brief and the current conditions we were flying in – five miles visibility and a 3,000-foot ceiling – we decided to continue the flight.

Visibility and ceiling remained constant for most of the return flight. About 14 miles from BAF, snow began to fall and the free air temperature gauge read right at 4 C. We turned on the anti-ice equipment and continued toward Bagram. Roughly a minute later, we entered what seemed to be a white wall of thick snowflakes. The visibility and ceiling rapidly dropped, so we made the call to slow the flight and descend. We were at an altitude of about 300 feet with 70 knots indicated airspeed (KIAS) when the flight encountered an instant drop in visibility to about 200 feet.

Chalk 2 was about two rotor disks behind

Chalk 1, with both aircraft having sight of the ground. The AMC spotted a road and made an immediate left turn to land there. As lead entered the left turn, we, in Chalk 2, lost sight of him. At this point, we decided to make an immediate right-hand descending turn to maintain separation from Chalk 1. We proceeded down a small valley at about 50 feet and 20 to 30 KIAS, lowering our altitude and slowing the airspeed to keep the terrain visible.

We tried multiple attempts to contact lead on the secure radio, but we were unsuccessful. After what seemed like an eternity, even though it was only about two minutes, we made contact with lead over the UHF guard radio. We reestablished secure

communications and began coordinating a linkup plan. The AMC then passed the grid of their current location. We slowly worked our way back to the road where Chalk 1 had landed. We landed about 30 meters behind them and shut down. After landing, we made contact with division main and Shadow TOC via SATCOM, where quick reaction forces (QRFs) were alerted and a ground convoy assembled and dispatched.

At the scene, a security detail for the VIPs was set up. There were only three security guards, so we made the decision to supplement the guards with members of the aircrews. We dismounted two of the M240 machine guns from the aircraft, positioned them at the

front and rear of the aircraft on the road and established a perimeter. We took turns pulling guard and warming up in the aircraft. It was wet and cold, and the temperature was dropping toward 0 C.

Almost immediately after landing, a crowd of local nationals gathered nearby. There were about 30 people on the side of the hill to our left, with 15 to 20 more on the opposite side. Vehicles began to approach from our front and rear on the road. After about three hours, the QRF arrived. The QRF took command of the VIPs and the aircrews stayed overnight with the remainder of the QRF and aircraft. It was a long, cold night. There was not enough fuel to keep the aircraft auxiliary power unit running for heat because

we needed to conserve fuel to get back to the FOB when the weather lifted.

We maintained communications with Task Force Shadow TOC, division main and numerous other elements throughout the night. About noon the following day, Shadow TOC launched two UH-60s and an AH-64 from BAF, which arrived shortly thereafter. Two new crews were dropped off to fly the aircraft back and we returned to BAF without incident.

Lessons Learned

Flying is always serious business. If we are going to fly an aircraft in marginal weather, we better be proficient in our flying abilities, adhere to standing operating procedures (SOPs) and have strong aircrew coordination skills and the proper radios to communicate with the TOC for updates on potentially hazardous weather conditions.

In combat, we push ourselves and our aircraft to support the troops on the ground, complete the mission and protect the occupants onboard. Although it could have been much worse, it wasn't. Here are some of the lessons we learned.

•Update established SOPs to reflect the following:

- Notify all aircraft of inclement weather via the multi-user Internet relay chat.

- Develop a means of notifying all BFT-outfitted aircraft with an ALCON message to anyone flying.

- Incorporate EDM text checks into radio check procedures.

- Use high-frequency text as another means of notifying aircrews of potentially hazardous weather conditions.

- Place repeater stations that will allow aircrews to receive current automatic terminal information service

information from airfields.

- Carry external communications (e.g., cell phones, smaller radios with antenna, coax cable and extra batteries when aircraft power is shut down). The PRC-1796 can also be used.

Sometimes communications can be a challenge because of terrain, distance and weather. Although we obtained a valid weather briefing from a military forecaster and weather updates at every stopover, we still had problems staying ahead of the weather because of our radios. It was both crews' decision to land the aircraft instead of continuing when the conditions did not allow it. These crews came home safely by staying ahead of the aircraft and weather, remaining calm, thinking clearly, executing good judgment and working together, which culminated in a happy ending.◀

“ **FLYING** is always **SERIOUS** business. If we are going to **FLY** an **AIRCRAFT** in marginal **WEATHER**, we better be **PROFICIENT** in our flying **ABILITIES**, adhere to **STANDING** operating **PROCEDURES** (SOPs) and have **STRONG** aircrew **COORDINATION** skills . . . ”

NO TAPE PLEASE!

PAMELA J. PROPER
Public Affairs Office
U.S. Army Joint Munitions Command
Rock Island Arsenal, Ill.

In September 2007, a Soldier lost his arm when a grenade detonated as he attempted to remove tape from the safety pin and fuze. Two other Soldiers in his squad were also seriously injured in the incident.

Every day, a Soldier somewhere will tape the safety pin and lever of a freshly issued hand grenade. Sometimes he will tape the safety pin to keep it from clanging. Sometimes he will tape a grenade to his combat vest. Sometimes he will tape the grenade for no other reason than that was what he was told to do.

According to Larry Baker, a Forces Command explosives safety and range manager, taping isn't necessary.

"To the best of my knowledge, there is no evidence in the history of the M67 hand grenade to suggest that it requires taping and there is no evidence that a Soldier needs to tape it because of inherent safety issues," Baker said.

And Baker should know; he has nearly 30 years of experience in the ammunition business, which started when he was drafted during the Vietnam War.

"In Vietnam, we could not tape a grenade because tape just won't stick in the jungle," Baker said. "There is a perception which exists in the Army today that Soldiers need to put tape on a hand grenade and that perception has become a reality. It is commonplace."

According to Baker, there is no real reason to tape a grenade because the Army now has grenade pouches for Soldiers to transport them. These pouches eliminate the possibility of the grenade getting snagged on something or becoming entangled.

Baker said there were problems in the past with one specific explosive, the MK141, a diversionary, nonfragmenting hand grenade. It was a Navy- and Marine Corps-unique item used mostly by Special Forces in Afghanistan. Even though the Army no longer issues this grenade, it was the catalyst for the practice of taping grenades. Now, Baker said, Soldiers tape everything.

Taping is especially problematic during munition turn-ins. Every unit that completes a rotation in Afghanistan or Iraq is required to turn in unused ammunition, which is then inspected. That's when the situation gets dicey.

"Some of these grenades are turned in and all the ammo handler can see is a ball of tape," Baker said. "He doesn't have X-ray vision. He can't see if the pin is secure. There is no way of knowing what is under all that tape."

From a supply standpoint, there is also a chance that lot numbers are pulled off with the removal of tape. Once those numbers are gone, the ammunition becomes unserviceable. Ammunition experts say tape also leaves a sticky residue on grenades, and it takes a lot of time to remove tape, which makes the inspection process more lengthy than needed.



With some 900,000 grenades currently in service, Baker said taping exposes ammo handlers to unnecessary risks.

The Army issued two safety alerts in 2007. Then, after the incident in September 2007 in Al Asad, Iraq, the U.S. Army Joint Munitions Command (JMC) issued an Ammunition Information Notice on the safety risk of taping grenades. By the way, the Soldier who was permanently injured in that incident was removing tape from an M3A2. Had it been an M67, Baker said the Soldier

would have been killed.

In an effort to address the perception in the field that current safety mechanisms are inadequate, the Army will soon introduce a confidence clip. The clip goes between the M213 fuze and the M67 grenade body. The U.S. Army Infantry School at Fort Benning, Ga., is the proponent for the hand grenade clip, which was tested at the Soldier Battle Lab.

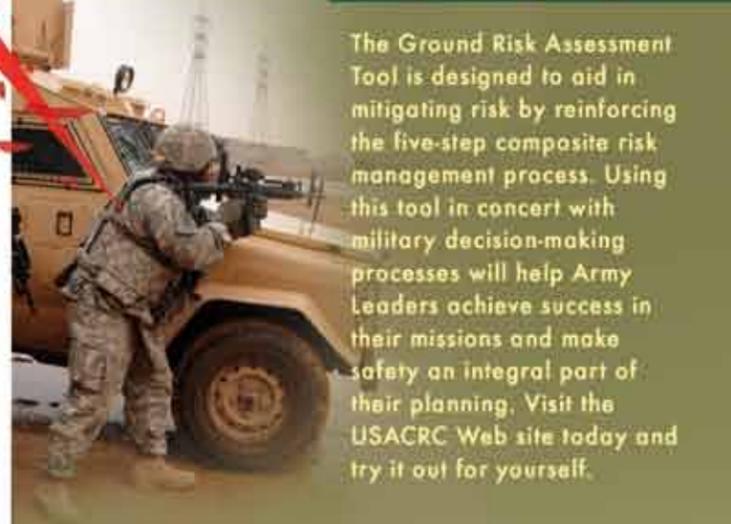
The JMC began retrofitting existing stockpiles of M67s with the clip in December. The remaining stockpile is scheduled to be retrofitted between January 2009 and June 2011. Beginning in March, all new M67 hand grenades produced will include the confidence clip. Army ammunition experts are optimistic this new feature will increase Soldier confidence in their armament and equipment and negate the perceived need to tape grenades.◀



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Caught by a Haboob

CHIEF WARRANT OFFICER 4 GLENN SIEGRIST
5th General Support Aviation Battalion, 158th Aviation Regiment
12th Combat Aviation Brigade
Ansbach, Germany

Just when you think you have it made in the shade as you're pulling sweet duty in Kuwait for a week or two, along comes a haboob that turns your ordinary night vision goggle (NVG) flight into one for the books.

Our unit, Company B, 5/158th General Support Aviation Battalion (GSAB), "Big Windy," was tasked to send three CH-47D helicopters from Iraq to Kuwait May 9, 2008, to transport Soldiers, Airmen and Seamen to and from Camp Bucca, Iraq. Most crews would assess this as a simple mission because they had performed it many times since Camp Bucca was established.

After arriving at Udairi Army Airfield, the crews spent the next few days going about their normal routine of preparing their aircraft, coordinating services, briefings and submitting flight plans.

On day five of the mission, the flight was going as planned.

The flight of three Chinooks was on their fourth turn back from Camp Bucca. The standardization pilot from Big Windy was giving me an instrument evaluation in the lead aircraft. In Chalk 2, we had the highest risk crew since this was only the pilot in command's (PC) second flight as PC. In Chalk 3, bringing up the rear, we had an instructor pilot (IP) and the platoon leader.

As we took off on the fourth turn of the night, I thought our visibility had diminished to the west and mentioned it to my left-seater. He agreed and called Chalk 2 to get a weather update. We got a thumbs-up on the weather (sky-clear, visibility-9999), so we continued to

Bucca. We arrived for our fourth offload of passengers and, within 10 minutes, we were on our way back to Udairi for our fifth and final turn.

Throughout the evening, I had practiced instrument approaches into the airfield to complete my instrument evaluation. At 20 miles out, we broke off from the formation, started to climb to 2,000 feet and contacted Udairi Ground Controlled Approach (GCA). During the climb, we listened to the other two aircraft talk back and forth about how suddenly the visibility had lessened. I could still see the lights at Udairi some 15 miles away. However, within 30 seconds, we lost visual contact with those lights and, 20 seconds later, could not see the stars above us. I immediately announced I was inadvertent instrument meteorological conditions (IIMC) and went to the instruments for real. We had the advantage since we were set up for instrument flight already, so the transition for us was quick and panic-free.

The other two aircraft were not having such a good time. Chalk 2 was losing visuals on Chalk 1 at 450 feet above ground level (AGL). A crewmember suddenly announced he was experiencing vertigo and becoming spatially disoriented (SD). The problem



FYI

What is a Haboob?

A haboob is a type of intense sandstorm commonly observed in the Sahara desert (typically Sudan), as well as across the Arabian Peninsula, throughout Kuwait and in the most arid regions of Iraq. Haboob winds in the Arabian Peninsula, Iraq and Kuwait are frequently created by the collapse of a thunderstorm. During thunderstorm formation, winds move in a direction opposite to the storm's travel, and they will move from all directions into the thunderstorm. When the storm collapses and begins to release precipitation, wind directions reverse, gusting outward from the storm and generally gusting the strongest in the direction of the storm's travel.

was he never announced what station he was calling from (i.e., right door gunner, left door gunner). This caused confusion with the pilots in the front seats as to who was SD. The crew finally figured out it was not the pilots up front with SD; it was a crewmember in the back of the aircraft. Nevertheless, not 10 seconds later, the IP on the controls experienced SD and had to transfer the flight controls to his co-pilot. By then, the co-pilot who took the controls had lost visual contact with lead and the ground and, consequently, announced he was IIMC.

Chalk 1 was just about to do the same when the tower at Udairi airfield turned up the runway lights to full bright, enabling the lead aircraft to gain a visual on the runway. (The control tower had cut off the lights for us since we were using NVGs due to washing out of the runway on landing.)

My aircraft was vectored on downwind five miles east of the airfield at 2,000 feet mean sea level (MSL). Life was looking good

“ We **TUNED INTO** the final controller’s frequency and **LISTENED** like concerned parents **WATCHING** the driveway for their teenagers to **COME HOME** after their first night out with the family car. ”

for us. My left-seater pulled out Volume 7, *Approach Plates*, for our area and tuned in the TACAN for ALI AL SALEM AB, OKAS, in case we didn’t break out of the dust storm while on approach into Udairi. The approach went well, as it should have, having two instrument examiners at the controls. I have to say our situation was very controlled compared to the first time this happened to me back in 1998 in Korea. That’s another story I’ll have to share one day.

By now, the other aircraft had climbed to 1,700 feet MSL and was vectored behind us to bring it around for the 360-degree precision approach into Udairi. We contacted the final controller,

who started us on a descent within seconds of establishing communications with him. We had a tailwind of 30 knots, so I slowed down the aircraft to keep from having a high rate of descent while on the glide path. At one point, we were falling out of the sky at 1,000 feet per minute just to stay on glide path. This was too quick, so I gradually reduced my airspeed to put the aircraft in a safer rate of descent. I asked my left-seater to take the controls when he had visual with the runway. At 700 feet MSL, we broke out – only 100 feet above decision height for a missed approach. The left-seater announced he had a visual on the landing environment

and took the controls, landing the aircraft abeam Charlie taxiway. We taxied off the active and turned into parking.

We tuned into the final controller’s frequency and listened like concerned parents watching the driveway for their teenagers to come home after their first night out with the family car. We sat there listening to the controller transmit heading adjustments to the pilots as the second aircraft made its way through the haboob: “On glide path, on course, three miles from touchdown, on glide path, on course.” At one mile, with the help of NVGs, we could see the aircraft break out from the haboob and land safely to runway 36. All back safe and sound! I was proud of the crews that night. They all did as they were trained and brought their aircraft and buddies back home for more Global War on Terrorism missions.

Lessons Learned

1. IIMC Break-up Plan. Always brief a good IIMC break-up plan when flying NVGs in a desert environment. We did these briefings before every flight and they turned out to be excellent lessons for the junior crewmembers. They also

reinforced why we conduct thorough briefings for every mission, no matter how routine or mundane the task may seem.

2. Crew Mix. Just because you throw an IP into the crew mix to plus-up the crew for risk mitigation doesn’t mean he will be a player when the chips are down. When the IP in Chalk 3 gave the controls to his co-pilot, the survival of the whole crew was placed in the hands of the “weakest link.”

A side note to all aviation trainers: Ensure you’re holding everyone to the standard; just good enough is never good enough. Go the extra mile while training. You might not be around to see your hard work pay off, but you can bet there will be smiles on the faces of the crewmembers’ Families when their Soldier gets off the bus after a deployment. One day, that aviator may have the lives of all onboard in his hands while the “high-time” guy is trying to find his “fourth point of contact” with both hands.

3. Experience. From a distance, I sensed bad weather coming and, as an air mission commander, should have turned the flight around and waited for the weather to pass. Given my experience in operating in the desert environment and knowing that weather forecasting can be a best guess at times in Kuwait and southern Iraq, I should have gone with my gut feeling and not gotten caught up in the “just-one-more-turn-and-we-are-done” mindset.

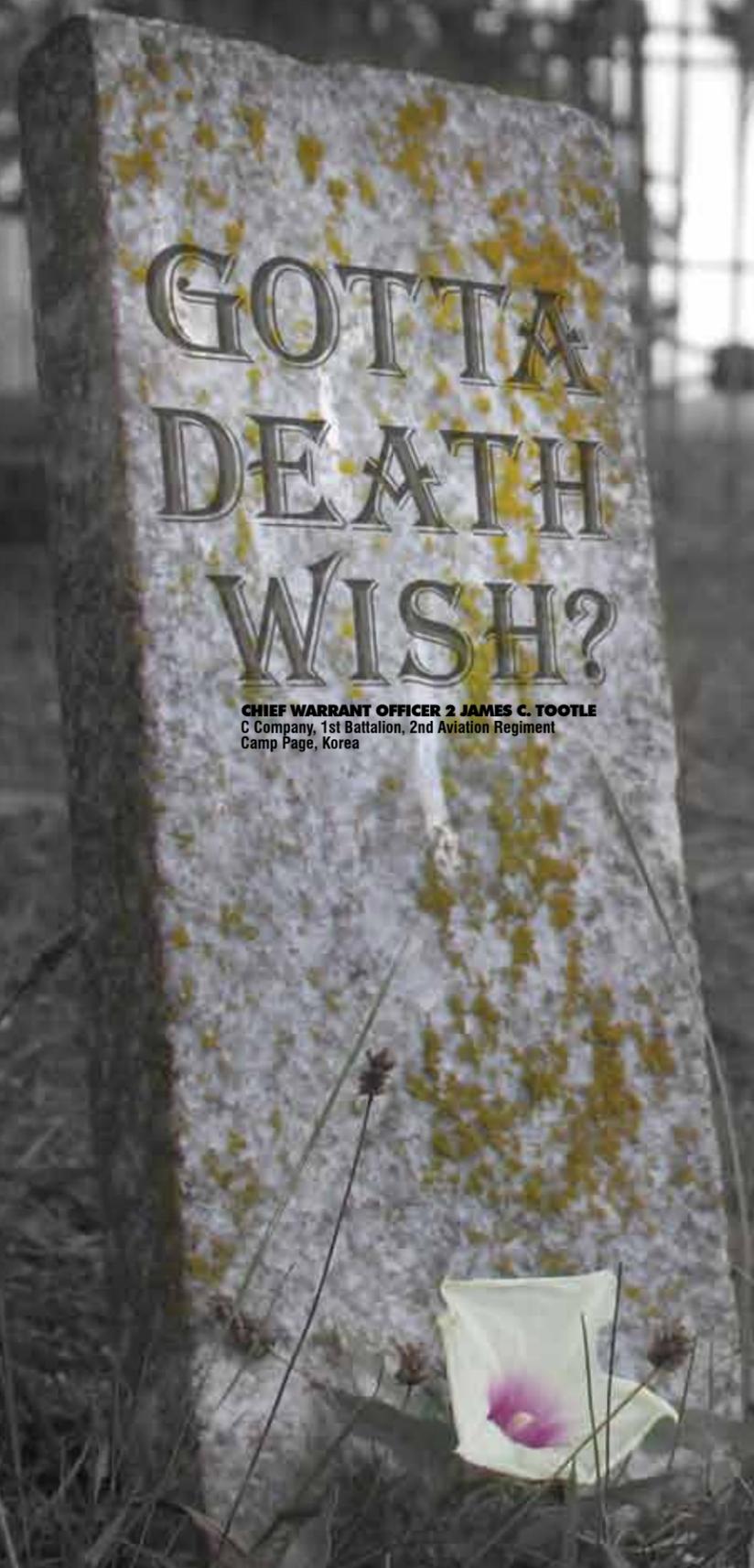
There are some things that cannot be trained, and only experience can teach you. Slow down and double-check your work if time permits. With

15-month deployment tours, we certainly were not short on time. During debrief, all crewmembers acknowledged at some point they had suspected reduced visibility. Remember the old adage: If you’re thinking it, chances are some of the other crewmembers are too. Say something!

4. IIMC Training. We were fortunate we had been operating in the area of responsibility (AOR) around Udairi for a week and most of us had the opportunity to perform approaches into the airfield. Given the lack of IMC training conducted in the AOR in Iraq, things could’ve turned out quite differently had this not been the case. Trainers should continue to look for opportunities to train instruments. I know it’s difficult to find time with heavy mission loads and threat; however, the extra effort could save lives in the future.

5. Committed is Committed. Once I announced I was IIMC and going to instruments, there should have been no second guessing. A few of our crewmembers in the back were continuing to call out when they saw a ground light flicker or a star above. This did not bother me; but with a more junior crew onboard, the temptation could exist for some to quit flying instruments and try to return to visual meteorological conditions (VMC). Trying to regain VMC has been a major contributing factor in many of the IIMC deaths Army aviation has experienced in the last 10 years. Crews should be briefed that once pilots are on the instruments, talk should be kept to a minimum so pilots can focus their attention on flying the aircraft.◀





GOTTA
DEATH
WISH?

CHIEF WARRANT OFFICER 2 JAMES C. TOOTLE
C Company, 1st Battalion, 2nd Aviation Regiment
Camp Page, Korea



“ In what **SEEMED** like **SLOW MOTION**, I saw his **BACK TIRE** start to **WOBBLE**. ”

As a kid, I had two dreams. My first was to become a pilot and fly. My second dream was to have a motorcycle. After starting flight school at Fort Rucker, Ala., I was finally able to afford a bike, so I bought a Kawasaki Ninja® ZX-6R. It was my first bike and I thought I would use it to learn on. I found a group of more experienced riders with bikes and interests similar to my own who could give me guidance on riding. Riding with a bunch of buddies was fantastic! I was thinking, “This is great; this is what I have always wanted to do!” Then we had some new riders join us, which is when things started getting interesting.

It was a Saturday and we were on our way to Panama City Beach, Fla. The eight of us were at the last stoplight before heading south out of Enterprise, Ala., which is about 90 miles north of the beach. The most experienced rider was at the head of the group with one of the new guys. When we got the green light to turn left, they took off like bats out of hell.

As I rode down the highway, I noticed the rider next to me was primarily focused on her MP3 player. She was riding unpredictably – slowing down, speeding up and swerving – so I decided to back off and keep her in front of me. When I looked ahead, I noticed the lead rider had done a wheelie going up

the hill and was way ahead of the rest of us. At the time, I was still accelerating through 65 mph as I tried to keep up with the rest of the group.

I looked ahead to see how the female rider was doing and noticed the second guy in the formation was now doing a wheelie up a hill. In what seemed like slow motion, I saw his back tire start to wobble. The front wheel came down with the handlebars slamming from side to side as the bike began a high-speed head shake. In an instant, the bike went down and slid up the hill in a cloud of metal, plastic and fiberglass pieces.

I got on the brakes, pulled over and stopped on the side of the road. The female driver



was still playing with her MP3 player and reacted too late to avoid the crumpled motorcycle lying in the middle of the road. As her front tire hit the deformed bike, she flew head-first over the bike's handlebars and landed on her back.

After the excitement subsided, we checked the condition of the fallen riders. The "stunt dummy" wasn't wearing a jacket, so he had road rash over a large portion of his body and his T-shirt and jeans were

shredded rags. His bike was a mangled, twisted piece of metal with fiberglass and plastic pieces spread over a hundred meters. Fortunately, he was wearing his helmet, which was smashed, cracked, scratched and gouged. All in all, he was lucky to walk away. The female rider had only a minor patch of road rash on the small of her back. It wasn't life threatening, but it was enough to remind her of what happens when you don't pay attention while riding.

This was an eye-opening experience for me. It was the first accident I had ever seen and it showed me how riders need to respect a two-wheeled machine that can outdrive most of them. Since then, I have never been tempted to ride without the proper equipment and have been a lot more careful as I ride and maintain my bike.

This accident didn't deter me from riding, but it taught me a lesson. It showed me the importance of riding safely, staying within my abilities and always remaining alert. After all, I have seen the dramatic results when people don't!◀◀

NEW LOOK, GREAT INFORMATION



TIPS FOR A SAFE RIDE

The author of the previous article showed how things can go wrong during a group ride. The following tips can help your group's ride be both safe and successful.

New Riders

New riders should be handled differently than established regular riders within a group. After all, we ride in groups because we're familiar with how each other performs, which allows us a margin of safety. The term "SEE," which is taught in all Motorcycle Safety Foundation (MSF) courses, can be used. Regular riders in a group should "See" the skills and attitudes of new riders, "Evaluate" those skills and "Execute" by discussing their strengths and weakness with them. If the new riders are

offended, they may not be the right match for the group.

Keep Your Distance

The author's decision to distance himself from the MP3-distracted rider was a classic example of putting time and distance between a rider and a potential accident. If he hadn't, he could have been part of this crash, possibly injuring himself and worsening the injuries of the other riders.

Don't Multitask

Multitasking on a motorcycle, such as fiddling

with an MP3 player, is asking for trouble. Riders must constantly watch the road and traffic around them so they can quickly react to problems. In addition, riders need both hands on the handlebars to effectively control their motorcycles.

High-speed Wobbles or "Head Shakes"

It appears the wobble was caused by the rider doing a wheelie, not some mechanical problem with his motorcycle. When a motorcycle is forced into a stunt, it tries to return to its natural position as soon as possible. Many professionals call a motorcycle's natural position – which is upright and traveling in a straight line – its "happy place." When a wobble

sets in, many riders panic and lock their arms, causing the bike to wobble, or head-shake, more violently. Sometimes the motorcycle will eject the errant rider and return to its happy place before falling over as its speed decreases. In such cases, the motorcycle has effectively gotten rid of the problem – the rider – and corrected itself.

Saving Your Hide

Tests show you don't have to slide very far in a pair of jeans before the road wears through the fabric and starts working on your hide. Select clothing designed to protect you in a crash. The simple rule of thumb is, "Dress for the crash, not for the ride."



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ATTENTION TO DETAIL

SGT. 1ST CLASS CASEY T. REEVES
Gunnery Branch
Directorate of Training, Doctrine, Combat Development and Experimentation
Fort Knox, Ky.

Attention to detail is an important skill that must be used in all aspects of personal and military life. When detailing your personal vehicle before a night out on the town, you probably pay special attention to ensure the tires are shiny, you've got two coats of wax on the body and the carpet is clean. You might even hang a new pine tree air freshener from the rearview mirror. So why not carry that attention to detail over to weapons maintenance and safety?

Over the past year, there have been numerous reported instances of M2 machine guns exploding. These incidents are not a result of Soldiers using restricted or faulty ammunition, or of a malfunctioning weapon. Rather, the weapons exploded as a result of Soldiers using the incorrect procedures and the wrong gauge when performing headspace and timing.

Recently, a Soldier was injured while firing his M2 machine gun during training at the National Training Center, Fort Irwin, Calif. The investigation into this incident revealed the Soldier used the headspace and timing gauge for the M3P Avenger machine gun instead of the gauge for the M2 machine gun. There is a distinct difference in both the size and thickness of the two gauges: the M2 gauge is shorter and thicker than the M3P gauge.

All Soldiers and Leaders must ensure the appropriate gauge is used when setting headspace and timing. Also, all unit supply sergeants and armorers must verify the appropriate gauge is issued with the machine gun.

Leaders and Soldiers can get so focused on the mission that they sometimes fail to ensure certain steps and procedures are done properly. Unfortunately, this assumption often leads to mistakes being made, equipment being damaged and Soldiers being injured or killed. It is imperative Leaders consistently adhere to the established procedures and ensure they are using the proper equipment to prevent injuries to personnel and damage to weapons.◀



FYI

Soldiers and Leaders must ensure the appropriate gauge is used when setting headspace and timing on their weapons. The following are the National Stock Numbers (NSN) for the M2 and M3P headspace and timing gauges:

M2 - NSN 5220-00-535-1217
M3P - NSN 5280-13-116-6359



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- 3) All entries must be submitted no later than 11:59 p.m. Central Time on March 31, 2009.
- 4) A panel will judge video entries and select finalists. Finalists will be notified by e-mail or telephone.

For more information and contest rules for Peer to Peer, go to <https://safety.army.mil/videocompetition>.

THIS IS IT!

CHIEF WARRANT OFFICER 2 MARTY JEWELL
Mississippi Army National Guard
Jackson, Miss.



“This is it,” the other pilot said as I took the flight controls and entered an autorotation to the best crash landing spot – a 2,000-foot rock cliff! I knew if we continued this autorotation, we were going to crash.

In July 2007, the Soldiers in my unit said goodbye to their Families in Jackson, Miss., and flew to Camp Atterbery, Ind., Germany and then into Kosovo.

The night before the flight had been a restless one for me. I didn't know why, but I was uneasy about something. Because of that uneasiness, I looked over the UH-60A Black Hawk extra carefully during the preflight inspection.

Before the six-ship air mission briefing, I read through the preflight checklist a second time and then we all gathered and briefed as a crew. Despite my preflight and crew briefing, I still had a strong feeling something was wrong. We had flown a lot together and our crew had grown closer since the beginning of our mobilization. I'd never done this before as a crew, but I asked the crew if we could take a minute to pray for God to watch over us. Shortly afterward, we departed Dubrovnik, Croatia, as Chalk 5 in the flight.

Everything was going fine

until our flight path crossed a large cliff before proceeding over the Adriatic Sea. That's when it happened. We suddenly lost power on the No. 1 engine. I attempted to fly the aircraft over land as quickly as possible; however, the rotor drooped while in a sharp left-hand turn. I entered autorotation to restore the RPM, but also feared we had lost power on the No. 2 engine.

Once the low-rotor horn stopped blaring, I checked to see if "she" could still fly! I slowly pulled in the collective, slowing our rate of descent, and realized we still had power to fly. We flew the aircraft at the calculated single-engine airspeed, making slow, shallow turns up the side of the cliff and climbing to about 1,000 feet above ground level (AGL). With the aircraft still flying and seemingly stabilized, we started looking for open fields to make a forced landing.

On this day, we had a third pilot riding as a passenger in the rear

who had a headset, so I delegated him and the other pilot to handle the checklist and advise me on the emergency. I overheard the senior crew chief direct the more junior crew chief to continue to look for open fields and other traffic.

I continued to fly the aircraft and adjusted my flight path to set me up nicely if I were forced to autorotate to the open fields below us. I was also aware of the 30-knot crosswind and was mentally trying to calm myself down

“EVERYTHING was going **FINE** until our **FLIGHT** path **CROSSED** a large **CLIFF** before **PROCEEDING** over the **ADRIATIC SEA**. That's when it **HAPPENED**. We **SUDDENLY** lost **POWER** on the **NO. 1 ENGINE**. ”

before making any radio calls.

I declared an emergency with Dubrovnik tower and

requested fire and rescue assistance. I felt more comfortable when I observed the pilot in the back reading the checklist and continuing to communicate in a positive, calm manner to my co-pilot.

As I listened to the crew discuss the emergency procedures, I took note of the radio calls from air traffic control (ATC) and other aircraft; nevertheless, my main focus was to fly the aircraft and evaluate if we were still safe to fly.

The crew determined the No. 1 engine had failed to the low side; however, power was restored after all three pilots read the checklist and verified the proper engine power control lever. We conducted a roll-on landing and taxied to parking without further incident. The other members of the flight, after a short delay, continued on to Kosovo.

Despite a thorough maintenance inspection, ground runs, hover checks and test flights, the maintainer was not able to duplicate the problem; therefore, the helicopter was returned to service.

Lessons Learned

After many hours of reflection, I realized some of the things we did poorly and other elements where we excelled.

Positive

- Our crew had established a good team relationship by having open and positive communications, maintaining the standard of using the checklist and emphasizing good working habits before we needed them in the emergency.

- We prioritized tasks and divided workloads. Flying the aircraft is the No. 1 task; all other things are subordinate. Because we had trained and practiced sharing workloads in the past, the crewmembers picked up workloads and sequenced their words and actions into group problem-solving.

- Declare an emergency – it does not cost you any money! Declaring the emergency with tower freed me of making a lot of decisions, thereby decreasing our workload.

- After losing the engine, we conducted correct emergency procedures while the third pilot diagnosed the problem with the No. 1 engine using the -10 as instructed by me. I'm not suggesting that all UH-60 crews have an additional pilot in the rear of the aircraft to observe and correct emergencies. My thought process was to use all possible resources available during an emergency.

Negative

- Instead of establishing single-engine airspeed and taking a moment to evaluate the situation, we tried to maintain altitude. Having 120 knots indicated airspeed and turning left aggressively resulted in main rotor droop. My lesson learned: Never make a bad situation worse!

Summary

There's no way to be totally prepared for every emergency situation, but there are ways to significantly improve your odds of surviving one. Managing risks wisely helped me deal with the fears of losing an engine in flight while over water. For me, I know the habits I've developed, standards I abide by and judgments I make on every flight, no matter how exciting or boring these flights may be, largely determine my success or failure when an emergency occurs.◀

TIP

If circumstances allow, call for help! Whatever the situation, one rule always applies: Fly the aircraft! Troubleshoot, talk to ATC, calm the passengers – do whatever you have to do. Just remember that it's all for naught if you lose control of the aircraft in the process.



THERE WHEN YOU NEED IT

VICKI ARNESON-BAKER
G5, Plans and Programs
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

As you pry off the battery cap, you realize you're not wearing eye protection. Sure, you've heard about the dangers of battery acid splashing into the eyes, but that always happens to the "other guy." Before you have time to blink or turn your head, it's now happened to you. Are you prepared for this type of emergency?

Emergency eyewash stations are designed to irrigate and flush the eyes in case of contact with hazardous chemicals. A chemical splash to the eyes can be especially dangerous; in fact, some chemicals can penetrate the eye within seconds. It is extremely important to immediately flush out the chemical before it causes severe damage or blindness.

Do You Need an Eyewash Station in Your Workplace?

The Occupational Safety and Health Administration (OSHA) has a general requirement which requires

employers to provide an eyewash station as part of OSHA's medical and first aid standard: "Where eyes or body of any person may be exposed to injurious corrosive materials, suitable facilities for quick drenching or flushing of the eyes and body shall be provided within the work area for immediate emergency use." (29 CFR 1910.151(c)).

So How Do You Know if You Need an Eyewash Station?

You will have to review the Material Safety Data Sheets (MSDS) for all the chemicals you have in your workplace and determine if they're

corrosive. Corrosive materials include acids with a pH less than 2.5 and alkalis with a pH greater than 11.0.

Eyewash Station Requirements

Since most eyewash stations often go unused for months, sometimes even years, it's extremely important they are maintained in proper working condition in case of an emergency. If not, the consequences could cost you your eyesight. While OSHA offers the requirement to provide an emergency eyewash station, it does not provide specific instruction on their installation, operation and maintenance.

Many organizations turn to American National Standards Institute (ANSI) Z358.1, *Emergency Eyewash and Shower Equipment*, which provides detailed information regarding the installation and operation of these stations. In fact, Technical Bulletin (TB) 385-4, *Safety Requirements for Maintenance of*

Electrical and Electronic Equipment, requires eyewash stations to meet these requirements. In addition, guidelines are also provided in Department of the Army Pamphlet 40-506, *The Army Vision Conservation and Readiness Program*, appendix G.

Here are some basic emergency eyewash guidelines you should be aware of:

- **Close enough to the hazard.** In most cases, eyewash stations should be located within 10 seconds of the hazard; however, for strong acids/caustics, the eyewash station may need to be within a few feet (such as battery charging stations).

- **Unobstructed access.** Ensure access is direct and nothing in the area will prevent easy access when vision is reduced by something in the eyes. For example, doors and mop buckets are considered obstructions. Eyewash stations should also be located on the same level as the hazard (i.e., no stairs)

and in well-marked areas.

- **Quick activation.**

The valve must activate within one second and remain on without further use of the hands.

- **Clean.** Use dust covers that easily pop off when an eyewash station is activated to protect the heads from airborne contaminants.

- **Test frequently.**

Inspect and activate stations weekly to verify proper operations.

Additional information on the installation, such as flow rate, and other requirements can be found in ANSI 358.1. Remember to always follow the manufacturer's instructions.

All employees who are exposed to chemicals in the workplace should be trained on the location of emergency eyewash stations, how to activate them and how to flush the eyes with water for a minimum of 15 minutes before and, if possible, while transporting the injured individual to an optometrist or ophthalmologist.◀

FYI

Contact your local safety office or industrial hygienist to assist you with identifying eye hazards, surveying your worksite and selecting proper eye protection. For more information, check out the following resources:

- Tri-Service Vision Conservation & Readiness Program: <http://chppm.apgea.army.mil/doem/vision/>
- U.S. Army Optometry: <http://usachppm.apgea.army.mil/doem/vision/army/>
- DA Pam 40-506, *The Army Vision Conservation and Readiness Program*
- Authorized Protective Eyewear List: <https://peosoldier.army.mil/pmseq/eyewear.asp>
- OSHA's Eye and Face Protection Web site: www.osha.gov/SLTC/eyefaceprotection/
- OSHA's Eye and Face Protection eTool: www.osha.gov/SLTC/etools/eyeandface/
- National Society to Prevent Blindness: www.preventblindness.org



IN THE BLINK OF AN EYE

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More than 2,000 eye injuries occur daily in American workplaces. In the blink of an eye, you, too, can suffer an injury if you're not wearing proper protective equipment.

Eye protection is a crucial part of any workplace safety program, as workers are exposed to a variety of working conditions. According to the Occupational Safety and Health Administration (OSHA), one of the primary causes of eye injuries is the failure to wear proper eye protection for the job.

Of course, some people just don't like to wear safety glasses and goggles. One complaint is goggles tend to fog up. Fogging happens when sweat vaporizes and coats the inside of the lens. If you have this problem with goggles and glasses, wear a handkerchief or sweatband around your forehead to keep perspiration out.

Another complaint is eye protection devices are uncomfortable, but usually this is because they don't fit properly. Make sure you have the device properly adjusted for the correct fit or simply get another that fits better. You can see a lot better out of a properly fitted eye protection device than you can out of a glass eye.

Be smart and use eye protection when on the job, especially in high-risk areas such as the rifle range, boiler plant, machine shop and motor pool or when performing high-risk jobs such as welding, carpentry, grinding, mechanic work and machining metal. Like all safety devices, eye protection is there for you and your eyes. Wear it. What do you have to lose ... other than your vision?◀

DID YOU KNOW?

According to the American National Standards Institute, workplace eye injuries are a leading cause of eye trauma, vision loss and blindness. According to the American Academy of Ophthalmology, nearly 90 percent of all eye injuries could've been prevented by using the right kind of protective eyewear.

DON'T SHOOT YOUR EYE OUT

Editor's note: The following article was originally published in the September 2008 Naval Operational Medical Lessons Learned Newsletter.

Two recent All Army Activity messages have been published regarding the management of penetrating eye trauma and laser eye safety. When penetrating eye trauma caused by missile fragments or other shrapnel is diagnosed or suspected, there are two elements of care that are of paramount importance. These elements are explained in the Army surgeon general's message below.

Military combat eye protection (MCEP) can effectively prevent or mitigate severe eye injury; however, complacency leads to unnecessary ocular trauma, loss of vision and blindness. From Jan. 7 to May 8, 2008, 261 warriors sustained 339 eye injuries in combat (joint theater trauma registry). Only 5 percent of the 261 warriors were known to be wearing protective ballistic eyewear at the time of their injury. During this period, 92 percent of eye injuries were battle-related.

Improvised explosive devices accounted for 61 percent of the eye injuries, and significant eye injuries constituted 8.2 percent of all injured warriors admitted to level three medical treatment facilities. In February 2008, eye injuries were a disproportionately high percentage of medical evacuations at 31 percent (10 injuries), reversing a downward trend in eye injury evacuations since July 2007 (15 percent of medical evacuations; 32 injuries).

In all situations that pose more than minimal risk for eye injury, commanders must direct Soldiers to wear MCEP specified in the authorized protective eyewear list (APEL). Anecdotal reports suggest that Soldiers continue to purchase and wear non-APEL eyewear in moderate- and high-risk situations. Commanders should verify that post exchanges in their areas of operation

carry only APEL items or ensure the distinct separation of APEL and non-APEL eyewear, in accordance with the AAFES managers' guide and store planogram, including signage. In addition, commanders must re-emphasize that contact lenses are not to be worn in the field, as they greatly increase the risk of corneal ulcer and severe injury.

Theater ophthalmologists go to extreme lengths to save injured eyes, but success depends on several factors: extent of initial injury, initial treatment at the scene and prompt medical and surgical treatment. If a penetrating eye injury is noted or suspected (as evidenced by lid or facial injury, bleeding in or around the lids, or eye or lid swelling), medical personnel must do the following:

- Perform a rapid field test for visual acuity. Tape a rigid eye shield over the



Comprehensive guidance and instructional materials for commanders, Soldiers, logisticians and clinicians on MCEP topics are available on Army Knowledge Online at <https://www.us.army.mil/suite/page/533920>.

eye(s). The recommended item is Shield Eye Surg Fox, 12s, NSN 6515-01-449-1016. Appropriate substitutes are Eye Shield Patient Optical, 12s, NSN 6540-01-347-1053, or Shield Eye Surg Goffman, 50s, NSN 6515-01-253-8165. At least three rigid eye shields should be carried by all 68W combat medics and requisitioned through normal MEDLOG channels.

Topical antibiotics should not be applied to an unrepaired open-eye injury. Pressure dressings (either head or ocular) must never be applied to an unshielded eye, as it may convert an open eye injury in which vision can be saved to one where total blindness occurs due to extrusion of globe contents.

Timely administration of antibiotics is paramount to preventing dangerous eye infections after penetrating wounds. Because theater ophthalmologists routinely administer systemic antibiotics promptly, routine administration of oral antibiotics by 68W combat medics is not recommended solely to prevent eye infections. However, if operating remotely in an isolated region, or if evacuation to theater definitive care is expected to take longer than three hours, administration of systemic antibiotics should be considered (if available, not contraindicated and if oral administration would not cause retching or vomiting). Specifically, 750 mg of Levofloxacin or 400 mg of Moxifloxacin can be administered orally at the time of initial treatment (recommended items: Levofloxacin 750mg, NSN 6505-01-487-6727, or Moxifloxacin Hydrochloride 400mg, 5S NSN 6505-01-516-3201).

If oral Moxifloxacin is unavailable or cannot be administered safely, casualties should receive intramuscular or intravenous antibiotics as soon as possible. Both the Fox rigid eye shield and oral Moxifloxacin have recently been added to the 68W surgical instrument and supply set individual, NSN 6545-01-534-6145, LIN U65480.

For more information, contact Col. Robert A. Mazzoli, ophthalmology consultant to the surgeon general, at (253) 968-1760, DSN 782-1760, or e-mail robert.mazzoli@us.army.mil.

HOW I BLEW UP THE KITCHEN

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be OK," and then turned on the steam again. What happened next will never be forgotten by either of us. Apparently, in my efforts to line things up, I'd loosened the filter in its recess. The steam shot it loose, slamming it on top of the carafe and spraying grounds in all directions. I immediately jumped back. I was getting "fraggged" by the scalding-hot grounds. I wasn't

about to go over and try to turn off the machine. I'd already had surgery to remove foreign objects from my eyes when I was younger. I wanted to keep that a once-in-a-lifetime experience. Mom and I backed away from the cappuccino maker until it finally sputtered out. I looked at mom. Her eyes were as big as saucers. She'd never touch that thing now! It was my job to clean up the mess. Coffee grounds had gone into places in the kitchen I didn't even know existed! But at least they didn't go into my eyes. However, I learned a lesson. Situational awareness – paying attention to details – counts in both kitchens and combat!◀

» FYI

The Home Safety Council® is a national nonprofit organization dedicated to preventing home-related injuries – accidents that result in nearly 20,000 deaths and 21 million medical visits each year. For information on topics ranging from kitchen safety to fall prevention, please visit their Web site at www.homesafetycouncil.org.



It all started off with the comment – "It sure looks like a good cappuccino morning ..."

It was early on a December morning and the thermometer nailed to the tree in my parents' front yard showed a nippy 28 F. It was one of those mornings where a steaming cup of cappuccino seemed like an excellent way to knock off the chill.

Mom had a cappuccino maker. It was one of those easy-to-use models. However, she'd never quite gotten comfortable with it. I think it went back to her younger days when her pressure cooker blew up. Therefore, the cappuccino maker sat in quiet solitude next to her trusted drip coffee maker until I came to visit. Knowing she liked cappuccino, I'd make her a cup each morning. Mom typically watched the process with great interest – but always from a discrete distance.

I headed into the kitchen one morning to make our cappuccinos. I topped off the

filter with espresso grounds and filled the carafe with water, which I then poured into the cappuccino maker. I thought, "Hmm ... plenty of coffee equals strong flavor – plenty of water equals lots of steam."

I turned on the cappuccino maker, but got temporarily distracted. Suddenly, I heard coffee squirting onto the countertop. When I looked at the cappuccino maker, I realized I hadn't quite gotten the carafe directly beneath the filter. I rushed over, turned off the machine and cleaned up the mess. Fortunately, I'd caught my mistake quickly and there was still enough steam to make our cappuccinos. I deftly maneuvered the carafe and filter so everything "seemed" lined up. It felt great to have "saved the day."

I looked at mom reassuringly and said, "See, everything will

USE A LITTLE KITCHEN SAFETY



Ever since mankind learned how to cook with fire, people have been getting burned in the kitchen. Here are some tips from the Home Safety Council® to keep you from "cooking your goose."

- Be sure to read the operator's manual for each kitchen appliance prior to use.
- Always stay in the kitchen while cooking on the range, especially when frying food.
- Keep things that can burn, such as dishtowels,

- paper or plastic bags and curtains, at least three feet away from the range top.
- Keep grease from building up on the range top or inside the oven or toaster oven.
- Before cooking, roll up sleeves and use oven mitts. Loose-fitting clothes can touch a hot burner and catch fire. If clothes do catch fire, practice "Stop, Drop and Roll" by dropping immediately onto the ground and rolling over back and forth to put out the flames.

- Cool the burned area with cool water and seek medical attention for serious burns.
- Always turn pot handles toward the back of the range to prevent small children from reaching and pulling down a hot pan.
- Keep pans, hot beverages and trays that have just come out of the oven away from the edge of counters so that children are not able to reach them.
- Hot liquid and food burns often occur when children pull hanging tablecloths or

- placemats. Use tablecloths and decorations with care.
- Food cooked in a microwave can be dangerously hot. Remove the lids or other coverings from microwaved food carefully to prevent steam burns. Always test microwaved food for heat before giving it to children.
- When cooking, keep a close eye on children and pets and keep them away from the range at all times.



LOST

AVIATION



CLASS B

The aircraft sustained an overtorque of 143 percent as the crew recovered from a short-final approach with an attempted "go-around."



CLASS C

The aircraft encountered an undetermined object strike. Post-

flight inspection revealed damage to all four main rotor blade tip caps and two tail rotor blades.



CLASS C

A rotor droop occurred during an autorotation power recovery, resulting in the left skid contacting the ground. During the attempted recovery, the aircraft indicated an overtorque.

THE PILOT-IN-COMMAND MUST REMAIN AWARE OF THE AIRCRAFT'S ALTITUDE AND POSITION DURING THE MANEUVER TO ANTICIPATE THE POWER OF RECOVERY PORTION FOR TERMINATION AS DESCRIBED IN THE ATM.

UAS



CLASS C

The UAS crashed from about 180 feet above ground level (AGL) during Soldier training. It was recovered with damage.



CLASS B

A series of in-flight anomalies occurred during flight. Emergency procedures were initiated after the air vehicle operator received a GENERATOR FAIL indication. The chute deployed and post-crash system components were recovered.

CLASS C

The UAS experienced an engine failure during flight. The recovery chute deployed and the system was recovered with damage.

GROUND



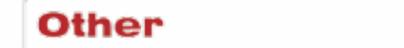
CLASS B

A civilian suffered a permanent partial disability when the Mine Resistant Ambush Protected (MRAP) vehicle he was riding in overturned. The Soldier driving the vehicle was negotiating a turn in wet road conditions when the accident occurred. The driver was not injured, and personal protective equipment (PPE) use was not reported.



CLASS A

A Soldier was killed when the M1151 he was driving overturned. The Soldier overcorrected after swerving to avoid a local national vehicle that cut in front of him. Three other Soldiers in the vehicle received non-life-threatening injuries.



CLASS A

A Soldier was killed when the government-owned vehicle he was driving was struck at an intersection by a civilian pickup truck that had the right of way. The Soldier was wearing his seat belt.



CLASS A

A Soldier was fatally injured while ground guiding a unit shipping container onto an M1075 Palletized Load System for transport. The 20-foot container separated from the crane and fell onto the Soldier.

CLASS A

A Soldier was refueling an MRAP vehicle when a fire ensued, resulting in burns to more than 60 percent of his body. The fire reportedly started after a cigarette lighter was used for illumination to determine the fuel level.

ARMY AIRCRAFT LOSSES

Fiscal 2002 to Present
as of Jan. 7, 2009



AH-64A/D	11/51
U/MH-60A/L	9/28
C/MH-47	8/19
OH-58D	11/29

TOTAL 39/127

ARMY GROUND LOSSES

Fiscal 2009
as of Jan. 9, 2009



AMV	5/7
ACV	2/1
PERSONNEL INJURY <small>includes weapons-handling accidents</small>	6/6
FIRE/EXPLOSIVE	1/0
PROPERTY DAMAGE	0/0

TOTAL 14/14

■ A Soldier severed an artery in his arm when he attempted to go through a sliding glass door he did not realize was shut. He was taken to a local medical center, where he later died.

■ A Soldier collapsed about 20 minutes into a make-up physical fitness test run. The Soldier was unresponsive during paramedic treatment and later died.

DRIVING



CLASS A
 ■ A Soldier on permanent change of station leave was driving his sport utility vehicle (SUV) when he rear-ended a motorcycle, went off the road and struck a tree. The SUV then caught fire and the Soldier was fatally injured. Seat belt use was not reported.

■ A Soldier on leave was riding in the rear seat of an SUV when the civilian driver, who was intoxicated, crashed into a utility pole. The Soldier was pronounced dead at the scene. Seat belt use was not reported.

■ A Soldier was riding in her privately owned vehicle (POV) when the driver, another Soldier, lost control and rolled the vehicle several times. The Soldier-passenger was not wearing her seat belt and was ejected during the crash. The driver and passenger were both transported to a local medical center, where the passenger was pronounced dead. The driver survived with minor injuries.



CLASS A
 ■ A Soldier was one of a group of three riders traveling at high speed when he drifted off the right side of the road, overcorrected and struck the rider in front of him. He then went off the left side of the road and struck a utility pole. The Soldier, who had attended the required Motorcycle Safety Foundation training and was wearing a Department of Transportation-approved helmet, died at the scene.

LEADERS - DO YOUR RIDERS UNDERSTAND THRILLS ARE TEMPORARY BUT DEATH IS PERMANENT?

PEDESTRIAN

CLASS A
 ■ A Soldier was killed when he dismounted his tactical vehicle during movement, walked into the roadway and was struck by a POV.

The Soldier was not using reflective PPE or a flashlight.

WHAT EQUIPMENT DOES YOUR SOP REQUIRE FOR SOLDIERS TO CONDUCT GROUND GUIDE OR ROAD GUARD DUTIES?

■ A Soldier was killed when he stopped his POV on the side of the roadway, walked into traffic and was struck by another vehicle, which fled the scene. Alcohol was a factor in this accident.

■ A Soldier was crossing a street during hours of darkness when he was struck by a pickup truck. The Soldier was taken to a local medical facility, where he later died. The intoxicated driver fled the scene but was located and charged with manslaughter.

■ Two Soldiers were crossing an interstate after dark to get to a restaurant when one was struck by a POV and killed.

POV DRIVING LOSSES
 Fiscal 2009

as of Jan. 9, 2009 Class A accidents/Soldiers killed

CAR	13/13
SUV/JEEP	4/4
TRUCK	2/2
MOTORCYCLE	7/7
PEDESTRIAN	4/4
OTHER*	1/1



31
TOTAL DEATHS
 Fiscal 2008: **31** 3 Year average: **29**

*Includes: vans and ATVs

TRAVEL RISK
TRIPS
 PLANNING SYSTEM
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Wouldn't you like to prevent the loss of personnel and equipment?

Don't you want to protect your combat power?

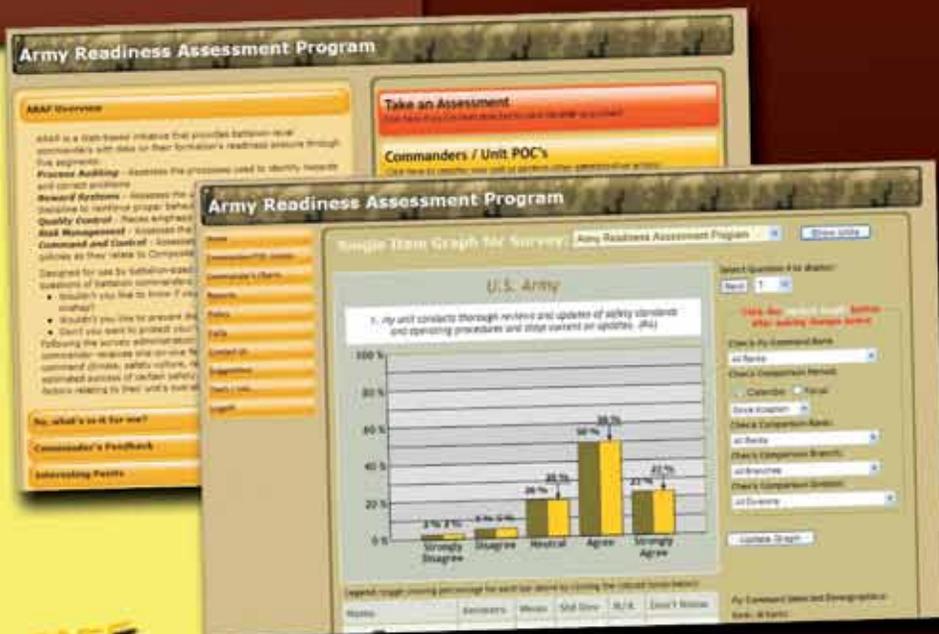
ARAP

ARMY READINESS ASSESSMENT PROGRAM

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ARMY SAFE IS ARMY STRONG

KNOWLEDGE

VOL 3 MARCH 2009

OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

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ARMY STRONG.



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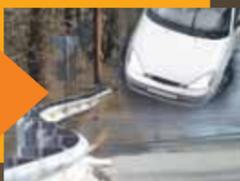
**ARMY SAFE
IS ARMY STRONG**



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DISPELLING MOTORCYCLING MYTHS

Bike Week – the unofficial launch of the riding season – kicked off Feb. 27 at Daytona Beach, Fla. Anticipating the new riding season, many of our Soldiers, Family members and civilians are gearing up to take to the open road. As I travel in this job, there are several statements I hear motorcycle riders repeating throughout the Army. Some of those are myths and some are facts. Before you let the wind fly through your hair, I would ask you to consider a few things.

1. Motorcycles are cheaper than cars. — True. But you wouldn't look as cool driving a new car that only cost \$11,000 as you would on the bike for the same price. However, you must figure in the cost of insurance for the average 24-year-old rider on a sportbike at \$175 to more than \$500 per month. Then, if you "ride like you stole it" 50 percent of the time, that will cut your gas mileage and increase tire wear by a third. With those expenses factored in, now you're in the same monthly price range as a Jeep or Honda Civic.

2. Motorcycles are safe – it's the "other guy" that causes accidents. — False. Although "cage drivers" (operators of four-wheeled vehicles) do pose a risk and are responsible for many accidents with motorcyclists, the "other guy" was at fault in only five of 51 Army fatalities in fiscal 2008.

3. Motorcycling provides freedom. — True. Motorcycling can provide freedom and escape. It's just you and the road as you motor along, leaving your problems behind. But know the potential cost of that freedom. According to the National Transportation Safety Board, "Motorcyclists represented 2 percent of the traffic on America's highways in 2007, but they represented 12 percent of highway fatalities."

4. Army rules don't apply off post. — False. A lawful order applies on and off duty, as well as on and off post. There are no military installations that allow service members to ride without the required

personal protective equipment (PPE) outlined in Army Regulation (AR) 385-10. This applies to National Guardsmen both on and off duty and regardless of individual state laws. Army reservists also are required to wear PPE whenever they are in a duty status. However, you're a Soldier 24/7, and it would help build the case to get the same benefits as active duty personnel if the same rules are applied across the board.

5. If I have an accident, TRICARE will pay for it. — True. However, if a Line of Duty determination, as covered in AR 600-8-4, finds misconduct on your part by not wearing your PPE, you could be held liable for your medical bills. In addition, you are still subject to local laws and the uniform code of military justice on top of that.

6. I've ridden on and off for years and don't need to take any training. Heck, I could teach the course. — False. You may have ridden in the past; however, bike designs, handling characteristics and power-to-weight ratios have changed. Besides, if you're that knowledgeable, maybe you could share your experience with other riders through your local Motorcycle Mentorship Program.

7. Soldiers should be restricted from riding motorcycles, just like professional athletes are during their game season. — False. Although some Leaders have advocated this, all it would do is drive motorcyclists underground and

outside the gates, where we would have even more issues. In reality, we need to bring more high-energy and thrill-seeking activities and events back to installations, where we can ensure Soldiers, Families and civilians can enjoy these activities safely. Skateboarding, skydiving and riding ATVs, motorcycles and personal watercraft is no more dangerous than horseback riding when supervised. However, these activities aren't often found on post.

8. The dealership will help me pick the right bike for me. — False. Reputable dealers will help you pick a bike; however, they are in the business of selling motorcycles. Most dealers will not refuse to sell you a motorcycle because they know if they don't you will shop elsewhere. Many first-time buyers purchase more bike than they're ready for – one that fits their ego, not their level of riding experience. Get with your Motorcycle Mentorship Program or, better yet, attend the Motorcycle Safety Foundation's Basic RiderCourseSM. There, experienced riders with your best interests in mind will help you select the bike that's best for you.

9. Thrill-seeking and high-risk behavior is killing Soldiers. — False. Indiscipline is the No. 1 killer of Soldiers. On duty, we lost 54 Soldiers to accidents last year, including those serving in two combat theaters. I think you would all agree that requires high-risk behavior. Off duty, we lost 154 Soldiers to accidents, 130

“**BEING** an **EDUCATED** and **EXPERIENCED** rider is one of the **BEST** things **YOU** can **DO** to **PROTECT** yourself.”

FROM THE CSM



of which were privately owned vehicle (POV) fatalities. A large percentage of these POV accidents were the result of indiscipline or lack of experience. Speeding, loss of control and not wearing protective gear (i.e., seat belts and helmets) were the major causal factors in these fatalities.

10. Those getting killed on motorcycles are 18 years old and have just returned from Iraq. — False. For the last two years, Leaders have led the way in motorcycle fatalities. To be more specific, specialists and staff sergeants age 22 to 33 led the way in Army motorcycle fatalities. More than 80 percent of these fatalities involved indiscipline (speeding) and loss of control while riding a sportbike. When it comes to sedans, younger Soldiers age 17 to 24 accounted for 74 percent of the fatalities. Of that group, nearly half were either speeding or not wearing their seat belt.

Know the facts and use them to make positive risk decisions. Being an educated and experienced rider is one of the best things you can do to protect yourself. Also, a word of advice: slow down. Don't be in a big hurry to get into an accident. “

Tod L. Glidewell

Tod L. Glidewell
Command Sergeant Major
U.S. Army Combat Readiness/
Safety Center

RESPECT THE WEATHER

LT. COL. BRUCE A. LAMBERT
U.S. Air Force
Washington, D.C.

I know pilots receive training on the dangers of thunderstorms, as well as I know weather forecasters and briefers pass on the necessary hazards forecast for the pilots' risk management assessment. Yet, some pilots still think they can safely fly through thunderstorms or use their radar to navigate their way through thunderstorms. Being in Air Force (AF) Weather, I have seen my share of pictures of hail-damaged aircraft pilots decided to fly through a thunderstorm. As aviators, we must take thunderstorm safety seriously.

»» DID YOU KNOW?

According to the National Weather Service –

- About 45,000 thunderstorms occur each day around the world.
- The United States experiences about 100,000 thunderstorms annually, of which, about 10 percent are classified as severe.
- A typical thunderstorm is about 15 miles in diameter and lasts about 30 minutes.
- Lightning strikes the Earth 25 million times per year.



Introduction to Thunderstorms

Almost every second, on average, a lightning strike between the ground and a cloud occurs in the United States. More than 100 lightning strikes take place every second above Earth where over 44,000 thunderstorms are occurring at any given moment, which presents a significant hazard to aviation and ground operations. Therefore, there is a good chance you'll encounter a thunderstorm within the next month or two. During that encounter, you will face the many and powerful

hazards of a thunderstorm, including strong winds and windshears, heavy precipitation, lightning, hail and tornadoes. Are you ready?

The weather forecaster's definition of a thunderstorm is pretty basic, yet misunderstood by many. A thunderstorm is any local storm with lightning and thunder produced by a cumulonimbus cloud, usually producing gusty winds, heavy rain and, sometimes, hail. However, the only official criterion a weather observer uses to identify a thunderstorm is thunder. That's all, just thunder,

according to the handbook published for observers.

Cumulonimbus clouds are vertical columns of cloud mass with rain descending from them, which could potentially be thunderstorms. But technically, until the first thunder is heard, it is not a thunderstorm.

Avoiding the Thunderstorm in Flight

Thunderstorms are laden with a myriad of unacceptable environmental hazards to aviation. In simpler terms, avoid thunderstorms while flying your aircraft. But how do you do that? The first

technique is the old "see and avoid" concept. Look out of the cockpit for signs of convective activity. The

Radar will not sense the following: small cloud droplets, fog, ice crystals or small, dry hail or graupel

“The WEATHER FORECASTER'S DEFINITION of a THUNDERSTORM is pretty BASIC, yet MISUNDERSTOOD by many.”

Federal Aviation Administration's Guideline For Aircraft Reflectivity				
From FAA Advisory Circular 0045C				
VIP Level*	Echo Intensity	Precipitation Intensity	Rain rate (in/hr) in stratiform clouds	Rain rate (in/hr) in convective clouds
1 green	Weak	Light	less than 0.1	less than 0.2
2 yellow	Moderate	Moderate	0.1 - 0.5	0.2 - 1.1
3 red	Strong	Heavy	0.5 - 1.0	1.1 - 2.2
4 red	Very Strong	Very Heavy	1.0 - 2.0	2.2 - 4.5
5 red	Intense	Intense	2.0 - 5.0	4.5 - 7.1
6 red	Extreme	Extreme	more than 5.0	more than 7.1

*VIP Level refers to the Video Integration Processor, which interprets the reflected energy and provides a location and color to the return for display on the monitor.

following is a short list of things to look for that give evidence of convective turbulence, lightning, hail, downbursts, microbursts and severe windshears:

- Anvil cloud form approaching
- Darkened color to clouds
- Churning vertical clouds
- Vertical clouds that are growing

The next step is to use the weather radar (if you have one) while airborne. Not every weather hazard in a thunderstorm is visible on weather radar. Since the radar is dependent on the return of reflected electromagnetic radiation, the ability of a particular hazard to reflect the beam will have a direct impact on what we can sense. See the Federal Aviation Administration's (FAA's) guideline for aircraft reflectivity on page 6.

(granular snow pellets). This list is significant for three reasons. First, if you are using your weather radar to scan your flightpath for weather that is out of visual range (150 to 200 NM), you may paint a group of individual cells and conclude you could visually circumnavigate them. In reality, you may be facing a wall of clouds with embedded thunderstorms. Second, the low reflectivity of the surrounding clouds may not show up on the radar, creating the false impression that there is a "hole" in the clouds. Finally, the anvil portion of a thunderstorm does not appear on radar since it consists primarily of ice crystals.

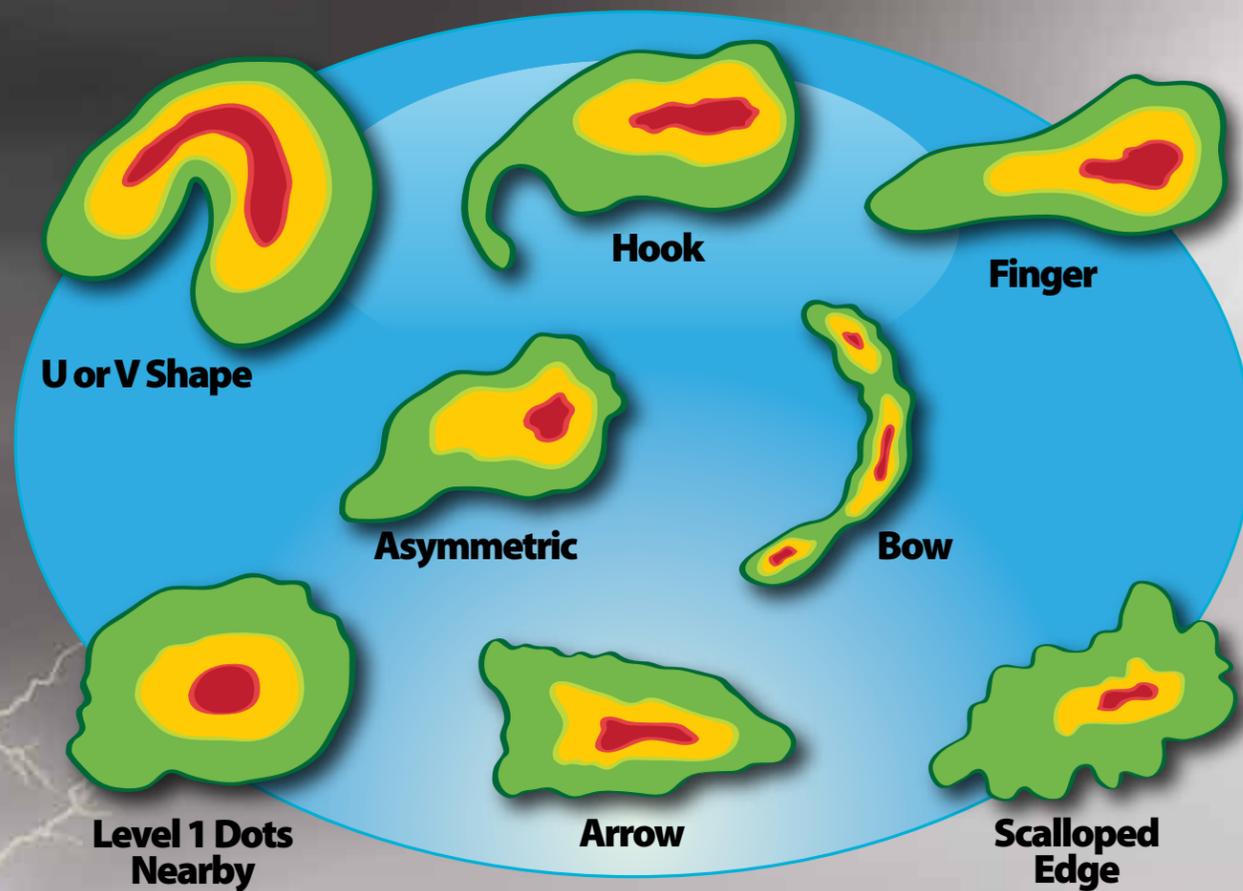
Since radar is our primary method of sensing thunderstorms, it is important to know how each type of precipitation affects what the radar displays. The chart

of reflectivity from least reflective precipitation to the most reflective precipitation shows us that "bigger and wetter" is more reflective than "smaller and drier." (See graphic on page 8.)

Depending on the precipitation type and its movement, recognizable thunderstorm patterns will show where the hazards are. It's important to know what to avoid on our radar screens.

■ Avoid a target with a dry intrusion (drier air being sucked into the thunderstorm) giving it a V or U shape. There are several reasons for this. Severe thunderstorms have dry air mixing in the middle altitudes which can create an intrusion. Hail rising and descending in a thunderstorm would also appear as a missing area cut out from the storm.

■ Avoid a target with a hook or bow shape. Hook



shapes are indicative of rotations taking place within severe thunderstorms. This is a strong clue to ground weather observers that hail and tornadoes are possible.

- Avoid a target with protruding “fingers.” Like a hook, a finger shows strong possibilities for tornadoes and hail.

- Avoid a target with an asymmetric coloring and shape. Remember, severe storms created by windshears aloft will tilt to one side. This gives shapes and colorings that are not even or concentric.

- Avoid a target with an arrow shape. Again, this is

indicative of a storm with tilt and the possibility of severe hazardous weather.

- Avoid a target with scalloped edges. Scalloped edges show turbulent motions taking place within the cloud. There is also a good chance for hail here.

- Avoid a target with changing shapes. Rapidly growing shapes show rapid motions taking place within the cloud. Turbulence will almost always take place under these conditions.

- Avoid a target storm with a few Video Integration Processor (VIP) Level 1 dots showing nearby. Many times, hail falls outside of

the thunderstorm. Checking the winds at altitude and correlating it to the side of the storm that hail will fall should help identify that potential hazard.

Flying Techniques to Remember

Publications from the FAA and USAF give aviators numerous tips and techniques to help with that occasional encounter with a thunderstorm – some of which are important enough to repeat again.

- Don’t fly over thunderstorms. Storms can grow rapidly through your altitude, producing

severe turbulence. Also, hail can shoot through the top of the thunderstorm in clear air above and fall downwind.

- Don’t fly under the anvil, where hail damage and lightning can occur.

- Don’t fly into virga, where turbulence is likely.

- Avoid all thunderstorms by 20 miles or more since lightning and hail have been known to extend that far from the clouds.

- Weather warnings are for thunderstorms defined as “severe.” These storms produce three-quarter-inch hail, tornadoes or 50-knot wind gusts. A lot of damage can occur in thunderstorms that are not flagged by warnings or a SIGMET (significant meteorological report).

If you have to penetrate:

- Go straight. Don’t turn around.

- Avoid the altitudes with temperatures of plus/minus 8 C.

- Don’t chase altitude. Hold your attitude and watch airspeed.

- Use all anti-icing equipment.

- Turn all lights in the cockpit on full and lock shoulder harnesses.

Conclusion

Thunderstorms are one of nature’s most hazardous phenomena. They can impact aviation from windshears, lightning, heavy precipitation, tornadoes and severe turbulence to hail. Knowing how to recognize and avoid thunderstorms and their hazards is one of the most important lessons of aviation weather training. Think safety and fly safe.◀◀

NEW LOOK, GREAT INFORMATION



U.S. ARMY COMBAT READINESS/SAFETY CENTER

<https://safety.army.mil>

Visit our new Web site to find easily accessible information and tools that can assist you in keeping our Band of Brothers and Sisters

ARMY SAFE



Got an Attitude?

CHIEF WARRANT OFFICER 2 JAMES J. MCDEVITT
 Company B, 1st Battalion, 135th Aviation
 Missouri Army National Guard
 Whiteman Air Force Base, Mo.

I can remember it like it was yesterday – the day I nearly killed myself and my best friend while driving to a favorite turkey hunting spot.

My friend and I worked for a concrete construction company that usually gave us the day off during bad weather. On this particular day during the height of Missouri's turkey season, it was pouring rain. We were anticipating the boss letting us off for the day and were eager to be released so we could go hunting. After about 15 minutes, we received the word, "No work today."

We always prepared for these moments, especially during hunting seasons, and had all the necessary equipment ready for an expeditious move out. We jumped into my Toyota Tacoma pickup and took off like a shot.

a crucial time because it sets the pace and gives either the hunter or the hunted the upper hand. Once the male, or "Tom" turkey, gets together with a hen, it's tough to call him to you because he already has what he wants.

On our way to the hunting spot, we crossed a bridge over a swollen creek. We were amazed at how high the water was compared to normal. We traversed this road often, so we knew the water was sure to be just as amazing farther ahead at the low-water crossing. Little did we know! So we pressed on.

When we arrived, it was unbelievable – like something

it – I can make it!" attitude and drove a little farther, testing the depth as we went. My friend, who typically taunted others to "go for it" – especially when it wasn't his vehicle – was silent.

We were now more than halfway across the rushing water, which was three-quarters the way up my door. At that point, we were committed – there was

no turning back. We had almost made it across when the truck began shifting and sliding with the rushing water. My friend nervously said, "Dude, hit the gas!" I barked back, "Dude, I've got it floored!" However, the truck couldn't move any faster because the rear tires were floating. Fortunately, at the last possible moment, the tires grabbed and we made it to

the other side. We both let out a sigh of relief and my friend said, "Holy crap, dude! We made it, but don't ever do that again!" We made up our minds to take the long way home and never to try crossing high water again.

The point of this story is to avoid having a "Screw it – I can make it!" attitude toward taking needless risks. Life is too short and

too many people care about you to afford that kind of attitude. Do at least a mental risk assessment on everything you do – even the things you do in your normal, daily life. And remember to watch out whenever somebody with a cocky attitude says, "Screw it – I can make it!" That means someone is about to get hurt or killed. Try not to be that someone.◀◀

I had a 'SCREW IT – I can make it!' ATTITUDE and drove a little FARTHER, TESTING the DEPTH as we went.

It was getting close to daylight, so we were in somewhat of a hurry to beat the turkeys off the roost. We wanted to be set up in position before the turkeys flew down out of the trees where they'd spent the night. This was

out of the movie "Deliverance." I hesitated as I eased the front tires into the water. As I did, I thought about how the hunting spot was only 100 meters on the other side and how long it would take to go around. I had a "Screw



ARE YOU ALL WET?

Just because "Pontiac" and "personal watercraft" (PWC) both start with a "P" doesn't mean they're equally good at handling water. While PWC are designed to run swiftly on water, cars are designed to run swiftly on asphalt. Before trying to part the waters with your ride, take a look at the information below from the National Oceanic and Atmospheric Administration.

- Water weighs 62.4 pounds per cubic foot and normally

flows downstream at 6 to 12 mph.

- When a vehicle stalls in the water, the water's momentum is transferred to the car. For each foot the water rises, 500 pounds of lateral force is applied to the car.

- Two feet of water will carry away most automobiles. The biggest factor is buoyancy. For each foot the water rises up the side of the car, the car displaces 1,500 pounds of water – essentially, your car

weighs 1,500 pounds less. Drive a Nissan Altima? Do the math. At a curb weight of 3,112 pounds, a couple feet of water is all it will take to have it "tippy-toeing" on its tires. With 1,000 pounds of water pressure "nudging" it along, your car could end up going where it has never gone before.

- Think you can't get in trouble out in the dry southwest? Ever heard of arroyos? Those are water-carved gullies or normally dry creek

beds. In some places, roads – both paved and unpaved – run across arroyos. During heavy rains, these can rapidly fill with fast-moving water. For example, researchers monitoring an arroyo in Arizona saw it go from clear to flash-flood conditions in less than a minute.◀◀

REDUCING THE

ROLLOVER RISK

DARYL LUSK
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Introduction of the Mine Resistant Ambush Protected (MRAP) family of vehicles has reduced battlefield casualties caused by improvised explosive devices (IEDs) and landmines. Because of expedited fielding of the MRAP fleet, however, not all potential hazards and risks were known to project managers or fielding teams. Therefore, it is imperative Leaders incorporate lessons learned when supervising the operation of these vehicles.

The fielding of the MRAP family of vehicles occurred in response to an urgent operational need identified by commanders on the battlefield to better protect crews from IEDs, mine blasts, small-arms fire and other threats. These armored vehicles are much larger than the up-armored HMMWVs most Soldiers are familiar with driving and have different steering, handling and maneuverability characteristics. Without proper driver's training, operating MRAP vehicles can be a challenge for Soldiers.

Most MRAP rollover accidents can be attributed to the vehicle being used on narrow, unstable, poorly constructed roads and driven too fast for road conditions. Many roads are unimproved and elevated and run along water

irrigation canals. Some of these roads are barely wide enough for the smaller and lighter up-armored HMMWV to travel safely, so they pose an increased risk to the larger and heavier MRAPs.

Commanders and Leaders in Iraq have implemented guidelines and controls to mitigate the risk of MRAP rollovers based on lessons learned and feedback from other units. Some of the more common guidelines follow:

- Rehearse and execute rollover drills.
- Emphasize crew coordination, particularly in identifying and reacting to hazards.
- Perform route recons to ensure weight classification of bridges, as well as height and width restrictions.
- Alert the entire crew

when operating near canals and waterways.

- Conduct driver's training; ensure operators and crews are well-trained.
- Use ground guides when necessary and feasible.
- Maintain speeds appropriate for road conditions.
- Enforce seat belt and gunner restraint system use.
- Perform risk assessments that address all obstacles along the route of travel and actions at obstacles.
- Do not attempt to cross unrated bridges or canal crossings.
- Use caution when crossing bridges or canal crossings; expect the unexpected.
- Periodically inspect all culverts and bridge foundations to check for unsafe conditions such as damage, tampering and IEDs.

• Report all unsafe crossing points to unit engineers so repairs can be coordinated.

- Ensure roadways are solid, particularly after rains.
- Avoid operating vehicles too close to the shoulder of the road.
- If possible, use more experienced drivers during limited visibility or when operating on dirt roads along waterways.
- Know the weight classification of your vehicle.
- Leaders must ensure drivers are familiar with the capabilities and limitations of their assigned vehicles and assist them in identifying road hazards.

MRAP vehicles were designed to save Soldiers' lives and offer greater protection against enemy threats than ever before. However, Leaders must ensure all personnel who ride in these vehicles receive safety and egress training and are familiar with the characteristics and limitations of the MRAP. Only then will Soldiers truly be Army Safe and Army Strong!◀◀

READY FOR THE RISK?



GRAT

GROUND RISK ASSESSMENT TOOL

<https://safety.army.mil>

GRAT is easy to use and provides users with accident hazard and control information and assists them in producing an automated CRM worksheet (DA Form 7566) for their mission, task, or activity. Users can save, e-mail, edit or print the worksheet.

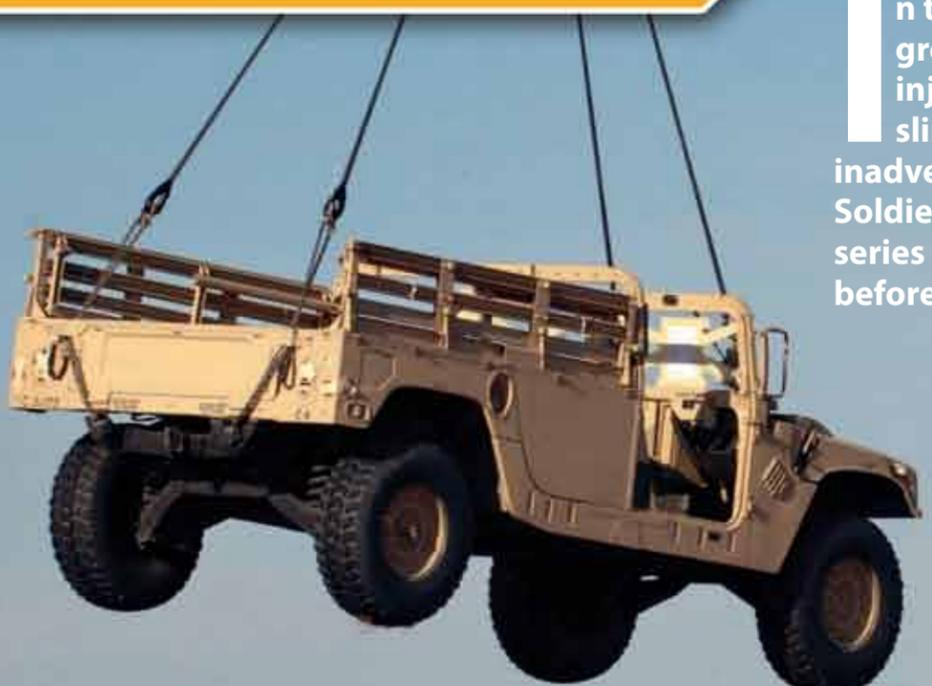




THE DANGERS OF UNIQUE LOADS

COMPILED BY THE KNOWLEDGE STAFF

In this accident scenario, a ground crewmember was fatally injured when a helicopter sling load was released and inadvertently rolled over the Soldier. As with most accidents, a series of critical errors were made before the one that took a life.



The mission involved the air movement of a stripped-down aircraft fuselage from one location to another, simulating a downed aircraft recovery (DAR) operation. The fuselage had been used as a fire response trainer in one of the local motor pools. When the fuselage was positioned for the DAR, the crane crew set it up in the same way as in the motor pool with four 18-inch steel tent pegs and four 10,000-pound cargo straps set atop eight 2.5-ton truck tires. The setup was intended to help stabilize and accommodate the boat-shaped bottom of the hulk.

The first critical error took place when the company commander failed to inform the chain of command – notably, the proper approval authority for high-risk

“ IF the CREW had USED the PROPER MANUAL for rigging the low-density load, they’d have REALIZED they LACKED the PROPER EQUIPMENT for the mission. ”

missions – they were going to conduct a nonstandard, low-density, unique load. As a result, the mission wasn’t identified as a high risk for the aircrew and ground crew on the risk assessment worksheet.

Lack of crew experience was the second mistake. The hook-up team was comprised of a staff sergeant, specialist, corporal and private. None of them had rigged a sling load in 10 years – if ever.

The unit’s third critical error was deploying without a complete set of up-to-date publications. If the crew had used the proper manual for rigging the low-density

load, they’d have realized they lacked the proper equipment for the mission.

Another error occurred when the air and ground crews failed to conduct a thorough rehearsal of the necessary actions to take in the event of an emergency. Consequently, they failed to assess the pickup zone before executing the mission. The pickup zone consisted of soil softened by the recent melting of winter snows. Because of this, the steel tent pegs pulled out of the ground and allowed the fuselage to roll three complete turns. Additionally, the tires the fuselage was sitting on



ONLY the most **EXPERIENCED** personnel **SHOULD** attempt to **RIG** and **INSPECT** a unique load.

paragraph 1-2, states: "Unique sling loads are equipment carried on a one-time or low-frequency basis, such as telephone poles, artillery targets or barrier material. The lack of sling load certification in itself does not preclude a commander from carrying a unique load. Due to the lack of rigging procedures, unique loads should be considered high-risk loads. Each service is responsible for determining its policy on carrying unique loads. The movement of unique loads should be approved by the high-risk approving authority. The name and rank of the approving authority should be printed in the bottom right corner of the remarks block on DA Form 7382-R (Sling Load Inspection Record). Only the most experienced personnel should attempt to rig and inspect a unique load. When possible, static lift the load prior to flight."

were 14 inches wide. This raised the center of gravity and gave way when the load shifted.

Field Manual (FM) 10-450-5, *Multiservice Helicopter Sling Load: Dual-Point Load Rigging Procedures*, paragraph 1-5, states: "Low-density equipment with low weight and large surface areas (flat surfaces), such as shelters, empty trailers, pallet loads, boat-shaped items and empty fuel or water drums, are likely to become extremely unstable when flown during sling load operations – even at low airspeeds – and should be flown with extreme caution."

In addition, FM 4-20.197, *Multiservice Helicopter Sling Load: Basic Operations and Equipment*,

Another oversight the unit made was they deployed without the long lines that would have been safer to use when lifting this type load. Since they did not have that option, they had to position personnel on top of the load to conduct the hookup of tandem lines and disconnect the tie-down straps from the top tie-down points of the fuselage. When the helicopter

maneuvered into position over the fuselage, the hook-up crew connected the tandem lines and removed the right-side tie-down straps. The hook-up crew was not familiar with the aircrew's flight procedure once they released the load because they had not rehearsed the mission with the hook-up crew. When the straps were released, the load became unsteady and rocked back and forth longitudinally.

A member of the aircrew saw the load rock and immediately called for an emergency release of the slings. The pilot of the aircraft then proceeded with his briefed maneuver for a failed hookup and slid off the load. However, when the aircraft lifted, the load was blown over by the rotor wash and started to roll. A Soldier was thrown into the path of the rolling load and crushed.

Conclusion

The takeaway from this accident scenario is that missions should always have a valid and accurate risk assessment with the approval of the proper risk authority. Units cannot be overly prepared for contingency operations and must consult their higher authority when a change of mission occurs. In addition, units should not conduct missions they are not properly equipped to execute. The depth and accuracy of planning relates directly to mission success.

Composite risk management (CRM) should be used for all missions to ensure the commander with the proper approval authority is involved in the decision-making process. The desire for mission accomplishment should never supersede the Army's established methods for mission success via safety through engaged leadership and risk management. For assistance with CRM, go to <https://safety.army.mil> and click on the Composite Risk Management tab for guidance, tools and publications to assist you in safely accomplishing your mission.



Peer to Peer

Make a MOVIE save a life

- 1) Post your video on any social network site (Army YouTube, YouTube, Facebook, MySpace, etc.) during the competition period (Sept. 30, 2008 to March 31, 2009).
- 2) E-mail to Safe.P2PVideo@conus.army.mil or call commercial: 334-255-1390, DSN: 558-1390, to have your video entered in the competition. You must provide your name, age, phone number or e-mail address, and a link to the video.
- 3) All entries must be submitted no later than 11:59 p.m. Central Time on March 31, 2009.
- 4) A panel will judge video entries and select finalists. Finalists will be notified by e-mail or telephone.

For more information and contest rules for Peer to Peer, go to <https://safety.army.mil/videocompetition>.

WARNING!

TOXIC



WHAT'S YOUR POISON?

FRANK MCCLANAHAN
G5
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She didn't expect to find her favorite juice in the plastic bottle under the kitchen sink. Normally, Mommy keeps the sweet red beverage in a different-looking bottle in the refrigerator. But it was surely the same juice she loved. All she knew was that she had been playing hard and was hot and very thirsty. She wanted the juice badly, but Mommy was distracted with a phone call in the other room. She figured she was a "big girl" now and could get her own juice without bothering Mommy. Boy, wouldn't Mommy be surprised!

HAZARD

A child consumes a household cleaner or toxic substance, thinking it's a familiar beverage because it's similar in appearance; a woman mixes chlorine bleach and ammonia to get the bathroom sparkling clean, but creates toxic gas; a man falls to the ground, violently ill, while spraying his yard with insecticide that was absorbed through his skin because he wasn't wearing the prescribed protective equipment. Most of us have either read or heard about tragic accounts such as these, and they happen more frequently than we might realize.

According to www.poisonprevention.org, poison control centers nationwide receive more than 2 million reports of poisonings each year. More than 90 percent of these incidents occur in the home, and the majority of nonfatal poisonings occur in children below the age of 6. What may surprise you, though, is poisoning is one of the leading causes of death among adults.

In an effort to warn Americans about the dangers of poisonings and how to prevent them, Congress established National Poison Prevention Week in 1961, which traditionally occurs the

third week of March. This year's campaign runs March 15 – 21.

With the right advice, poison-proofing a home and protecting the health and well-being of loved ones can be a simple process. Do you know the rooms in your home that are most likely to contain poisonous materials? Here are some ideas on where to begin your home inspection and what you should look for:

• **The kitchen.** This is where you're most likely to find drain cleaner, oven cleaner, detergents and alcoholic beverages.

• **The bathroom.** If you open the door to the vanity cabinet, you probably have toilet bowl cleaner, nail polish and polish remover, mouthwash and other cosmetic items and medications stored here. This is also where many homeowners store chlorine bleach and ammonia, which, as discussed earlier, creates a hazardous gas when mixed together.

• **The bedroom.** This is where you're most likely to find medications.

• **The garage.** Many garages contain pesticides, rust remover, gasoline, antifreeze, motor oil, lamp fuel and degreaser, along with other hazardous materials such as paint thinner.

Now that you have taken the critical first step in identifying the areas where poisonous materials are most likely to be found, here are some safety tips provided by the Consumer Product Safety Commission (CPSC) to further assist in poison-proofing your home and protecting your loved ones:

- Ensure all household chemicals and medicines are kept out of sight and out of reach. This can be accomplished by installing child-proof latches on cabinets located in the kitchen and bathroom.
- After administering medication from a child-resistant container, be sure to close it securely. Although some products come in

- child-resistant blister cards, which avoid the need to re-secure, be sure to keep these medications locked up.
- In the event of a poisoning, call 800-222-1222 immediately. This toll-free number will help put you in touch with the poison control center in your state. America's poison control centers are open 24 hours a day, seven days a week.
- When hazardous products are in use, never let young children out of your sight, even if you must take them along when answering the phone or doorbell.
- Be sure to store items in their original containers.

- Keep the original labels on all product containers and read the labels thoroughly before using to ensure information on correct use and dosage is clearly understood.
- Never place decorative lamps and candles that contain lamp oil in locations where they're accessible to children. Lamp oil can be toxic if ingested.
- Never administer medication in a dark or dimly lit room. Always turn on the light to ensure you are dispensing the correct dosage.
- Avoid taking medicine in front of children. Also, always refer to medicine as

- "medicine," not "candy."
 - Clean out the medicine cabinet periodically and safely dispose of unneeded and outdated medicines. However, never flush medicine down the toilet (see Don't Flush It! below).
- For more information on what you can do to poison-proof your home, please visit the American Association of Poison Control Centers at <http://www.aapcc.org/DNN/>; the Poison Prevention Campaign Organization at <http://www.poisonprevention.org/>; and the CPSC at <http://www.cpsc.gov/>.



DON'T FLUSH IT!

Unused or out-of-date medications should never be flushed down the toilet. According to the California State Board of Pharmacy, a recent study revealed that 80 percent of U.S. streams contain small amounts of human medicines. Sewage systems cannot remove these medicines from water that is released into lakes, rivers or oceans, and fish and other aquatic animals have shown adverse effects from the polluted water. Small amounts of medicine have

- even been found in drinking water.
- To properly dispose of medications at home, follow these steps:
 - Keep medicine in its original child-resistant container. Scratch or mark out the patient information on the label.
 - Place water into the container with solid medications such as pills or capsules. Then add something nontoxic and unpalatable such as sawdust, kitty litter, charcoal or powdered spices like cayenne pepper.
 - Close the container lid and seal it tightly with packing or duct

- tape. If discarding blister packs of unused medicines, wrap them in multiple layers of duct tape.
- Place medicine containers in durable packaging that does not show what's inside, such as a cardboard box. Then place the package in the trash close to garbage pickup time.
- Some pharmacies also have a medicine "take-back" program. Ask your pharmacist if your pharmacy participates in this program.

Source: California State Board of Pharmacy.



SAVED by the HELMET

Ever have a day where everything starts great and then turns to crap?

I was riding my Kawasaki YZF 600R to work on a February morning back in 2007. The temperature was a bit cool – about 47 F – so I was wearing my Joe Rocket Ballistic winter suit. I had a 35-mile ride and was enjoying it. The night before, I'd finished my

last progression flight and was now Readiness Level (RL) 1 rated. I was also getting promoted to chief warrant officer 2 that morning, so it was shaping up to be a good day.

However, as someone once said, "The best-laid plans of mice and men ..."

I hadn't gone five miles when I saw a car in the oncoming lane signaling with its left blinker. I expected the worst, so I rolled off

the throttle, expecting the driver to turn in front of me. I was surprised when he stayed put, so I rolled on the throttle and accelerated to between 55 and 60 mph. Well, wouldn't you know it, right then the driver turned in front of me! At 60 mph, I was covering 88 feet per second. With only about 60 feet dividing us, I ran out of room very quickly. I just had time to say, "Oh, crap!" before T-boning the car.

CHIEF WARRANT OFFICER 2 BOBBY FITZMAYER
Bravo Company, 4th Battalion, 3rd Aviation Regiment "Blackhearts"
Fort Stewart, Ga.



When my bike struck the car, I went flying and took out a window with my head. I then flipped over the car and landed about 30 feet down the road. There was a truck behind me when this happened, and the driver saw everything. Although I initially blacked out, I must have recovered quickly. The truck driver said by the time he stopped and got to me, I was on my feet brushing off myself and asking him how badly my bike was damaged.

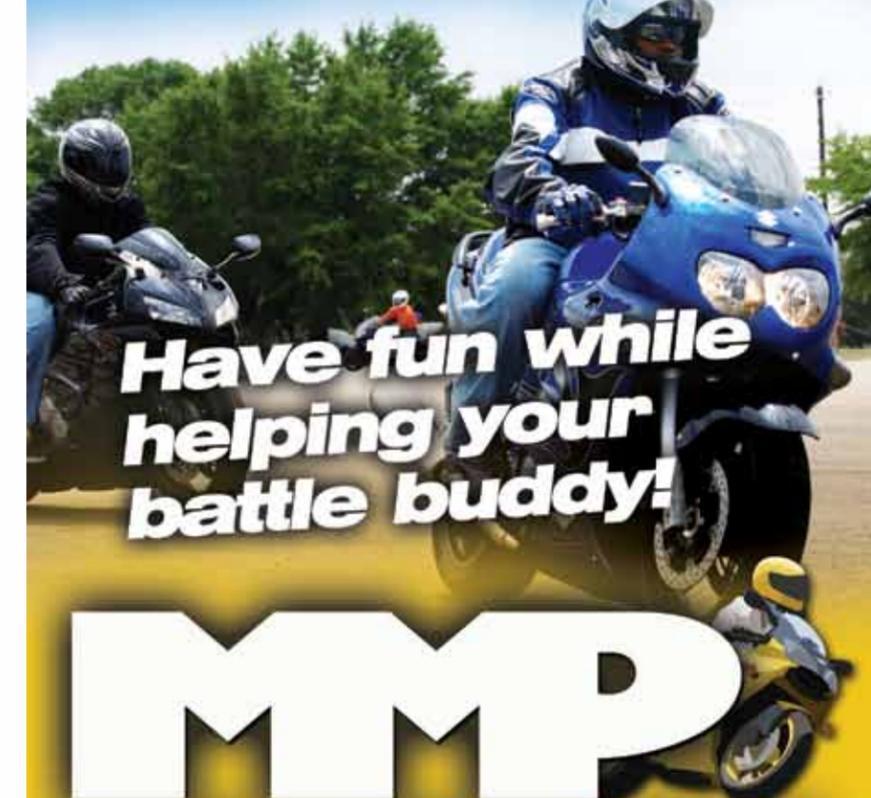
The bike was totaled and I probably looked just as bad. I'd broken my right humerus (upper arm), broken and dislocated my right wrist, sprained my left wrist and bruised my pelvis. And that wasn't the worst of it! I'd also damaged just about every nerve from my right shoulder to my right hand, with my radial nerve being the worst. It was 10 months before I was able to raise my right arm. Almost a year and a half after the accident, I still couldn't move my right hand. My repeated surgeries have left me with a titanium rod running the length of my humerus, a screw in my wrist and a 13-inch scar running down my arm from exploratory nerve surgery at Duke University Medical Center, Durham, N.C.

In May 2008, I got more bad news. My broken humerus hadn't healed and I'd need surgery to insert a metal plate and screws. Also, my wrist would require three more surgeries. Needless to say, my flying days are probably over.

Still, as serious as those injuries sound, they could have been much worse. Despite the force of the impact, my protective gear did its job, protecting me from road rash, scrapes and cuts. I still have my jacket, which is still completely usable. My full-face Arai helmet did its job when I took out that window. I didn't suffer a headache, a sore jaw or even a loose tooth.

There is no substitute for the personal protective equipment specially designed for riders. I can't understand why anyone would want to ride wearing only a half-shell helmet, T-shirt, pants and no gloves. I'd rather dress so I'm always prepared for the worst. If that means being a little uncomfortable because of the temperatures, so be it. I'd rather be a little hot and sweaty because of my leather jacket than comfortable in a T-shirt with my arms completely unprotected should I crash. I don't even want to think of how bad my injuries would have been had I not been wearing my gear.

There is a saying among riders that goes, "Dress for the crash – not for the ride." As I found out the hard way, there is a lot of wisdom in that saying.◀



Have fun while helping your battle buddy!

MMP

MOTORCYCLE MENTORSHIP PROGRAM

Mentoring can be fun and set up in various ways. Here are a few examples:

- Unit-level one-on-one mentorship
- Unit-level riding groups
- Private organization
- Combination unit program and private organization at the installation level
- Non-appropriated fund instrumentality

Check out the USACRC MMP Web site for some examples of active mentoring programs:



<https://safety.army.mil>



ARMY SAFE IS ARMY STRONG

SETTING the STAGE for SUCCESS

CHIEF WARRANT OFFICER 4 CHRISTOPHER D. VOLKERT
 Ground Task Force
 U.S. Army Combat Readiness/Safety Center
 Fort Rucker, Ala.

Because of their size and weight, modern military vehicles must be operated with caution by properly trained and licensed crews. These crews must also be supervised by Leaders knowledgeable of the characteristics and limitations of their equipment, as well as the capabilities and limitations of the Soldiers who operate it.

COORDINATED crew **ACTIONS** and effective **COMMUNICATION** can **GO** a **LONG** way **TOWARD ENSURING** the **SAFETY** of the **CREW** and the **ACCOMPLISHMENT** of the **MISSION.**

We've all heard the clichés and catchphrases – “Haste Makes Waste,” “Drive to Arrive” and “Speed Kills.” These words of wisdom came to be for a reason. If taking an in-depth look at accidents involving tactical military vehicles, one would find that operator errors, including excessive speed for the road conditions, would quickly rise to the top of the list of causal and contributing factors. This fact should prompt Leaders and Soldiers to consider what is more important: getting there as quickly as possible or getting there safely.

Drivers and crews must constantly exercise situational awareness when operating this equipment. Up-armored vehicles are unforgiving of driver errors. When driving at speeds too fast for the road or terrain conditions, abrupt inputs

to steering, braking or acceleration may greatly increase the chance of the driver losing control of the vehicle. Collisions with other vehicles in the convoy, local national vehicles or obstacles on the roadway can also result from driving too fast for conditions.

During Operation Iraqi Freedom/ Operation Enduring Freedom, rollover accidents – especially those involving HMMWVs and Mine Resistant Ambush Protected (MRAP) vehicles – have resulted in many fatalities. In several of these cases, an abrupt steering maneuver while traveling at too great a speed resulted in a rollover. Accident avoidance is about having enough time to react to hazards. At higher speeds, reaction times are reduced. All too often, this results in catastrophic damage to equipment,

injuries to personnel or, more tragically, the needless loss of life. Drivers and crews can have a positive impact by remaining aware of their surroundings and communicating important information to the driver and vehicle commander.

checking that all crewmembers and occupants are in the proper uniform, wearing seat belts and ensuring gear is secured makes a difference. Rehearsing rollover drills and other emergency actions helps the crew react quickly and

DID YOU KNOW?

Enemy tactics, techniques and procedures used in Iraq and Afghanistan during the Global War on Terrorism have necessitated add-on armor and ballistic protection to military vehicles, making them heavier and bulkier. The up-armored variants of the HMMWV – M1151s, for example – now

weigh nearly 12,000 pounds, virtually double the weight of their leaner and more agile M998 ancestors. Variants of the Mine Resistant Ambush Protected (MRAP) vehicle can weigh more than 22 tons and have a higher center of gravity than most vehicles.

FYI

ROLLOVER PREVENTION IS ALL ABOUT CONTROL

Crew Coordination – Driver, senior occupant, gunner and passengers know their responsibilities; remain vigilant; and identify and communicate potential hazards. Conduct rehearsals!

Observe your surroundings. Be aware of bridge limitations, low-hanging power lines, soft-shouldered roads and the presence of culverts, canals and ditches.

Never drive the vehicle beyond its limitations. Avoid abrupt steering, excessive acceleration and panic braking.

Training – Conduct mission briefings, rollover drills and crew coordination refreshers before every mission.

Reduce speed in turns and on wet or unimproved surfaces.

Organize all equipment; ensure everything is securely stored and tied down to avoid projectile hazards in the event of an accident or rollover.

Leaders ensure only properly trained, qualified and licensed personnel operate vehicles and equipment. Enforce the use of restraints and personal protective equipment.



EVERY person in **EVERY SEAT** or position **IN** the **VEHICLE** has a vested **INTEREST** in looking out **FOR** the **SAFETY** of the **ENTIRE CREW.**

By doing so, potential hazards can be identified and avoided.

Crewmembers that are focused on what is going on around them and communicating what they see are, in effect, taking care of their battle buddy. Every set of eyes is required to compensate for the restricted visibility resulting from ballistic windows. No one should just be “along for the ride.”

Leaders can also make a difference. Little things such as

appropriately should the need arise. During the mission, Leaders must actively supervise the driver and assist in identifying potentially weak road shoulders, obstacles and other potential dangers.

The truly concerned Leader will also make adjustments and corrections as needed and not be hesitant in telling the driver to slow down. This ensures the vehicle is being operated safely based on the current conditions. By ensuring drivers are properly trained and licensed, equipment is regularly and properly maintained, each member of the crew completely understands his or her responsibilities and that disciplined driving is practiced, Leaders set the stage for safe completion of the mission.

LOOKING OUT FOR MY SON



JOHN KOLKMAN
G3
U.S. Army Combat Readiness/Safety Center
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Who says you can't keep an eye on your kids when they're off somewhere driving?

I was at an auto parts store a couple years ago, looking for an easy way to clear the trouble codes you get when your car's caution lights come on. I was looking at some code scanners when one display caught my attention. The information said that by plugging their chip into my car's onboard diagnostics (OBD) port, I could continuously record my car's driving and engine performance.

Hmm ... it suddenly occurred to me that this could have other possibilities. As a father of a 16-year-old boy who'd just gotten his license, I could use the chip to monitor his driving when I wasn't with him. I bought the chip and the associated software package and went home. Following the instructions, I loaded the software onto my computer and installed the chip in our Dodge Neon. I could set the parameters I wanted to monitor, so I set it to record hard braking, rapid acceleration, maximum speeds and the time and date of any high-speed incidents.

I'd given the Neon to my son to drive to church events and

work. I told him about the chip and that I'd be checking it every other week. I also told him the chip would record being removed – basically “rat him out” – so I never had any problem with that.

After a couple of weeks, I downloaded the first bit of data. It showed a lot of hard braking and accelerating – all things new drivers do while gaining experience. Each time I downloaded the data, we'd discuss his driving habits. I was pleased to see there was less of the hard braking and accelerating. However, one day my eye caught something else on the computer. I saw where the Neon had twice exceeded 90 mph! I did a double take on the computer screen. I wondered how this could be – my son seemed to be doing so well at driving safely.

I have to say, this scared me. I checked the calendar and saw the speeding incidents happened about 9:10 p.m. on a Wednesday. At that time, he was driving home from church on a winding country road with a 45-mph speed limit!

Fortunately, I had some time

to cool down before he and his mother came home. I'd told him there would be consequences if he drove recklessly.

Having previously worked as an accident investigator for the U.S. Army Combat Readiness/Safety Center, I'd seen enough fatal vehicle crashes to last a lifetime. While I hated to deal harshly with my son, I knew if I didn't he could wind up dead one day.

Moments later he strolled through the door with his mother. It was “game on” as I sat him down and asked if he had anything to tell me. He gave me the deer-in-the-headlights look and said, “No, sir.” He then looked at the car chip lying on the table next to the computer and saw the screen. He said, “I guess I know what you're asking about, Dad.” I showed him the two instances where he'd been speeding and asked him to explain. He shrugged his shoulders, apologized and said he didn't know what to say. I scolded him for a few minutes and then sent him to his room while his mother and I contemplated what to do next.

We decided this required some serious discipline. I got on the Internet and downloaded a

preliminary loss report (PLR) from work that showed where a Dodge Neon went out of control, struck a tree sideways at 94 mph and was torn in half. Accident investigators found the driver had suffered a 50-G sideways force that ruptured his heart, liver and right kidney and then threw him 183 feet down the road. I also got statistics on speed-related crashes from the National Highway Traffic Safety Administration's (NHTSA) Web site. In addition, I downloaded graphic pictures of what happens to a human body during a violent crash.

A few hours later, I called him to come down from his room. I showed him the PLR and the crash pictures of the Neon. I showed him the NHTSA speeding fatality statistics for his age group and the grisly accident photos. We talked about what it would be like for us – his family – to have an Alabama state trooper tell us he died in a crash. We told him how hard it would be to have to go to the hospital morgue to identify his body. We talked about the

sadness we'd feel for the rest of our lives every time we walked by his room or saw his pictures.

By the time my wife and I finished, we were all in tears. I took away his driver's license for two months. It was hard for me to do that, but I knew I had to drive the point home about his reckless driving. Although it was hard, it was the right thing to do.

That was a couple years ago and I still check the chip. There's a big difference these days. My son has become a better, safer and more responsible driver. The beauty of the chip was it allowed me to spot a problem and intervene before some state trooper came knocking on my door in the middle of the night.

Do you have teenage kids who are learning to drive? Maybe it's time to consider getting one of these chips so you can monitor their driving. Sure, the chips aren't cheap – I paid \$120 for mine – but what's that next to the cost of a funeral? For a small investment, you just might save someone you love.◀





A CRUSHING DECISION

COMPILED BY THE KNOWLEDGE STAFF

The Brigade Combat Team (BCT) had just returned from the National Training Center and enjoyed a well-deserved four-day weekend off. During the following week, they conducted recovery operations, including the download and recovery of unit vehicles and military-owned demountable containers (MILVANS) from the installation Railhead Operations Center (ROC). For three days, the ROC recovery operations had proceeded as planned. The final train was due to be downloaded on a Thursday, which was the last duty day before another four-day weekend.

The supporting Combat Service Support (CSS) sustainment command element had requested relief from the last day of railhead operations because there were only four remaining MILVANS to be moved to their respective unit motor pools. In addition, there were other missions that required their recovery assets. The noncommissioned officer in charge (NCOIC) for the CSS element suggested the BCT use organic assets – the M1075 Palletized Loading System (PLS) with

Container Handling Unit (CHU) – to move the four MILVANS. The BCT's movement officer agreed and informed the executive officer (XO) for the battalion in charge of the recovery operation of the change. The battalion XO notified his support company commander about the change. The next morning, the company commander directed the transportation and cargo platoon leader to dispatch an M1075 PLS with CHU and two Soldiers to the ROC to recover the MILVANS. The cargo

section NCOIC ordered two Soldiers from the section to perform the mission. The two Soldiers dispatched the equipment and reported to the ROC. Unit personnel at the ROC weren't aware of the change, nor did they have any information about the MILVANS, as they were focused on the BCT's rolling stock. After about an hour, the two Soldiers were shown the location of the MILVANS and began loading and transporting them to their respective motor pools. During the recovery of the MILVANS, the Soldiers

decided to conduct their own on-the-job training (OJT). The senior Soldier had not received CHU training during his Advanced Individual Training (AIT), so the two Soldiers switched roles as PLS Load Handling System (LHS) operator and ground guide. The Soldiers recovered three of the four MILVANS and returned to the ROC to recover the last MILVAN. All of the BCT's personnel had departed the ROC, as they had completed the download and movement of their rolling stock. The two Soldiers knew

they were the only personnel at the ROC. They decided to disregard the ground guide requirement to the MILVAN ramp and drove straight to the last MILVAN. When they arrived, the junior Soldier dismounted the M1075 PLS and positioned himself to ground guide the CHU to the MILVAN. As the CHU was unloaded from the PLS, the lower legs of the CHU contacted the PLS rear slider assemblies. The ground guide instructed the PLS operator to stop unloading the CHU and positioned himself directly under the CHU and between the PLS and MILVAN. As the PLS operator watched in his rear-view mirror, he saw the CHU fall off the LHS hook arm and crush the ground guide.

Why Did the Accident Happen?

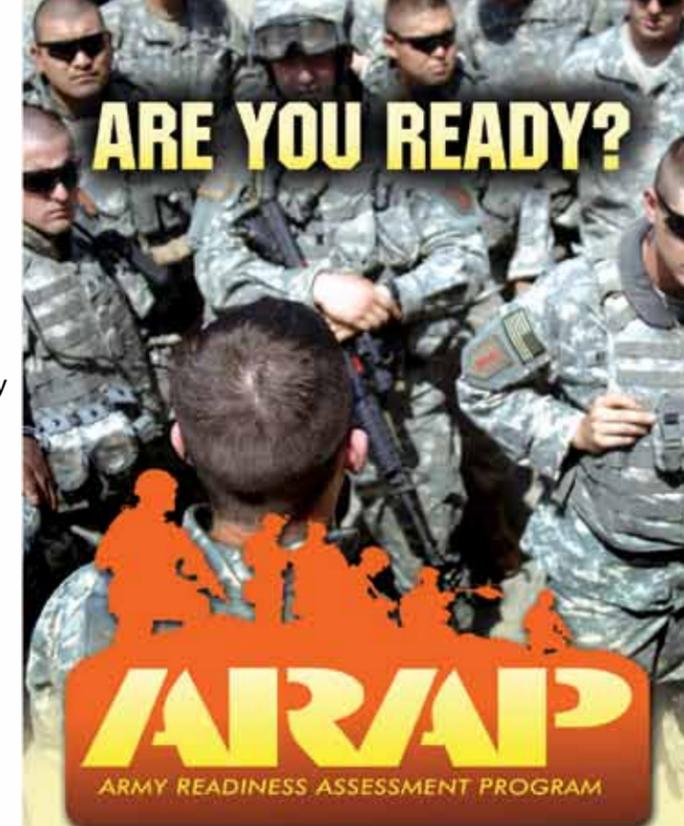
- The junior Soldier, who was trained on CHU operations during AIT, did not follow the CHU procedures and warnings shown in Technical Manual (TM) 9-2320-364-10. By manually clearing the lower legs of the CHU from the rear slide assemblies of the PLS, the Soldiers violated the troubleshooting procedures in the TM. Also, when the Soldiers initially mounted the CHU on the LHS hook arm, they did not install the bail bar lock and safety pin. When the CHU came in contact with the PLS, the hook arm had depressed enough to disengage from the CHU's bail bar. When the Soldier pulled the lower legs of the CHU to free them from the PLS, the CHU fell and fatally injured the Soldier.
- Company leadership made several basic planning errors contrary to local policy and common leadership practice. Specifically, unit Leaders did not ensure the

presence of any supervision at the MILVAN ramp as the two Soldiers moved unit MILVANS.

- Leaders failed to take appropriate actions to ensure safe operations. That is, Soldiers were routinely not completing unit Preventive Maintenance Checks and Services and Quality Assurance and Quality Checks using the appropriate TMs. Also, risk management tasks were not being conducted and approved at the appropriate levels. In addition, untrained Soldiers were dispatching and using complex equipment. Finally, driver's training was not conducted or documented, thus Leaders were not able to identify qualified operators for specific equipment.

How Do You Prevent This Accident in the Future?

- Ensure Soldiers are properly trained in the use of auxiliary equipment for the vehicle they are operating. Confirm your Soldiers have current training and experience on the equipment to be used.
- Enforce by-the-book operations. The CHU requires 63 steps be completed before connecting to a MILVAN. Do not count on memory recall for tasks that have not been recently performed or trained.
- Accidents can happen during all phases of a mission. Do not become complacent when conducting routine or low-risk missions. Ensure Leaders are present and engaged when Soldiers are performing missions. Leaders must know the standards to enforce safe operations. Do not allow short cuts.
- Ensure risk decisions are made at the proper level by the appropriate authority.◀



Wouldn't you like to know if your unit is about to experience a mishap?

Wouldn't you like to prevent the loss of personnel and equipment?

Don't you want to protect your combat power?

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FORKLIFTS

– Slow But Deadly

AL BROWN
G5
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Fort Rucker, Ala.

“All licensed **FORKLIFT OPERATORS** are to be **CERTIFIED** that they understand the **SAFETY ASPECTS** of forklift **OPERATIONS.**”

Here’s a quiz: Which four-wheeled vehicle is among the toughest, hardest-working ever made and has, at times, a center of gravity several feet off the ground? If you guessed “monster truck,” you’d be wrong. The correct answer is “forklift.” Despite the fact forklifts are slow and not very sexy, they demand a lot of attention from their drivers. And if they don’t get it, they can hurt you!

While forklifts make work easier, operators and bystanders can be seriously injured or killed if the proper safety protocol is not followed. Because of that, it is vital that forklift operators remain completely inside the cab while operating the equipment. Operators who stick their heads from beneath overhead guards run the risk of being hit by falling objects or striking their head against something outside the cab. And it’s not just noggins that are in danger. Forklift drivers also need to keep their hands and feet inside the cab. Protruding limbs are liable to get caught on objects as the forklift passes by, pulling the driver out of the cab and causing serious injuries.

Another important element of forklift safety is operators knowing how much weight the forks can safely handle. Some operators might assume if the forks can lift the weight, it’s safe to do so. This is not true and could lead to serious injury if the weight causes the forklift to lose its balance and topple over. Bystanders could also be crushed if the cargo falls off the forks.

In addition, forklift operators need to be aware of their surroundings at all times. Sudden drop-offs, hills, potholes, walls and other obstructions could lead to disastrous consequences for the operator. Bystanders and

forklift drivers also need to stay out of each other’s way because a collision could be unforgiving.

Operators must receive site-specific training, as well as instruction on the particular forklift they will be driving. This training must be documented and copies of lesson plans kept on file. In some circumstances, such as an accident or near-miss incident, refresher training should be provided to operators. Otherwise, the performance of all operators must be evaluated at least every three years.

Accident Prevention Measures

Forklift accident prevention is a significant challenge to Army leadership. Operator and material-handling errors are the most hazardous types of forklift accidents. Accident reports have documented operators who were not properly licensed, failed to follow procedures and safety standards, lacked ground guides, worked without supervision for difficult jobs or lacked training for the specific forklift in use. The following is a list of procedures unit Leaders must implement:

- Ensure your Forklift Driver Training Program is to Army standard and enforce the standards set out in Army Regulation 600-55.
- Ensure strict compliance with Occupational Safety

and Health Administration (OSHA) Standard, 1910.178(l) (1), *Forklift Safety Standards*.

- Enforce the use of seat belts when forklifts are in operation.
- Enforce 29 Code of Federal Regulations 1910.178 (Powered Industrial Trucks); if in Germany, BGV D 27 Flurförderzeuge.

Eliminating hazards in the workplace is the right thing to do and makes good business sense. In addition to OSHA compliance, other benefits include reducing injuries for Soldiers and employees, reduced workers compensation rates, lower forklift maintenance costs and less product damage.

All licensed forklift operators are to be certified that they understand the safety aspects of forklift

operations. Certification will be accomplished by their attending a safety class, passing a written test and demonstrating their ability to operate a forklift safely. Before taking a safety class, operators must have a valid state driver's license; a current Defensive Driver's Course (DDC) card; DA Form 348, Equipment Operator's Qualification Record; and OF 346 - U.S. Government Motor Vehicle Operator's Identification Card.

Licensed forklift operators who pass both the written and hands-on portions of the training will receive a forklift certification as follows:

- DA Form 348 - date certification is completed.
 - OF 346 - overstamped with class, powered by and capacity of forklift.
- Personnel without a forklift license

will be issued a learner's permit — after passing the written test. Personnel with a learner's permit will be required to have a minimum of 30 hours of training with a licensed forklift operator.

Supervisors will submit a memorandum for record that personnel have attained the required hours of training and are capable of operating a forklift without direct supervision.

Personnel with a learner's permit will demonstrate their ability to safely operate a forklift and provide the following documentation:

- DA Form 348 - date certification is completed.
 - OF 346 - overstamped with class, powered by and capacity of forklift.
- On Sept. 22, 2008, OSHA



updated its Powered Industrial Trucks (Forklift) eTool, which focuses on the safe operation of forklifts, to prevent employee injury.

The best way to protect Soldiers and employees from injury depends on the type of truck operated and worksite where it is being used, notes OSHA. The eTool specifically provides information on OSHA's Powered Industrial Truck requirements [29 CFR 1910.178] and industry best practices addressing:

- Types and Fundamentals - The differing types and fundamentals of powered trucks
- Operating the Forklift - The basic operating rules and safe work practices
- Understanding the Workplace - How workplace conditions can affect safe operation
- Training Assistance - Operator training required by OSHA

The full text of the new regulations is available through the OSHA Web site at <http://www.osha.gov/>. Leaders and supervisors must continually remind personnel they'll lose every time in an "argument" with a forklift.◀

OPERATOR and material-handling **ERRORS** are the most **HAZARDOUS** types of forklift **ACCIDENTS.**



» DID YOU KNOW?

It is a violation of federal law for anyone under 18 years of age to operate a forklift or for anyone over 18 years of age who is not properly trained and certified to do so.

Get the tools and information necessary to be an engaged Leader

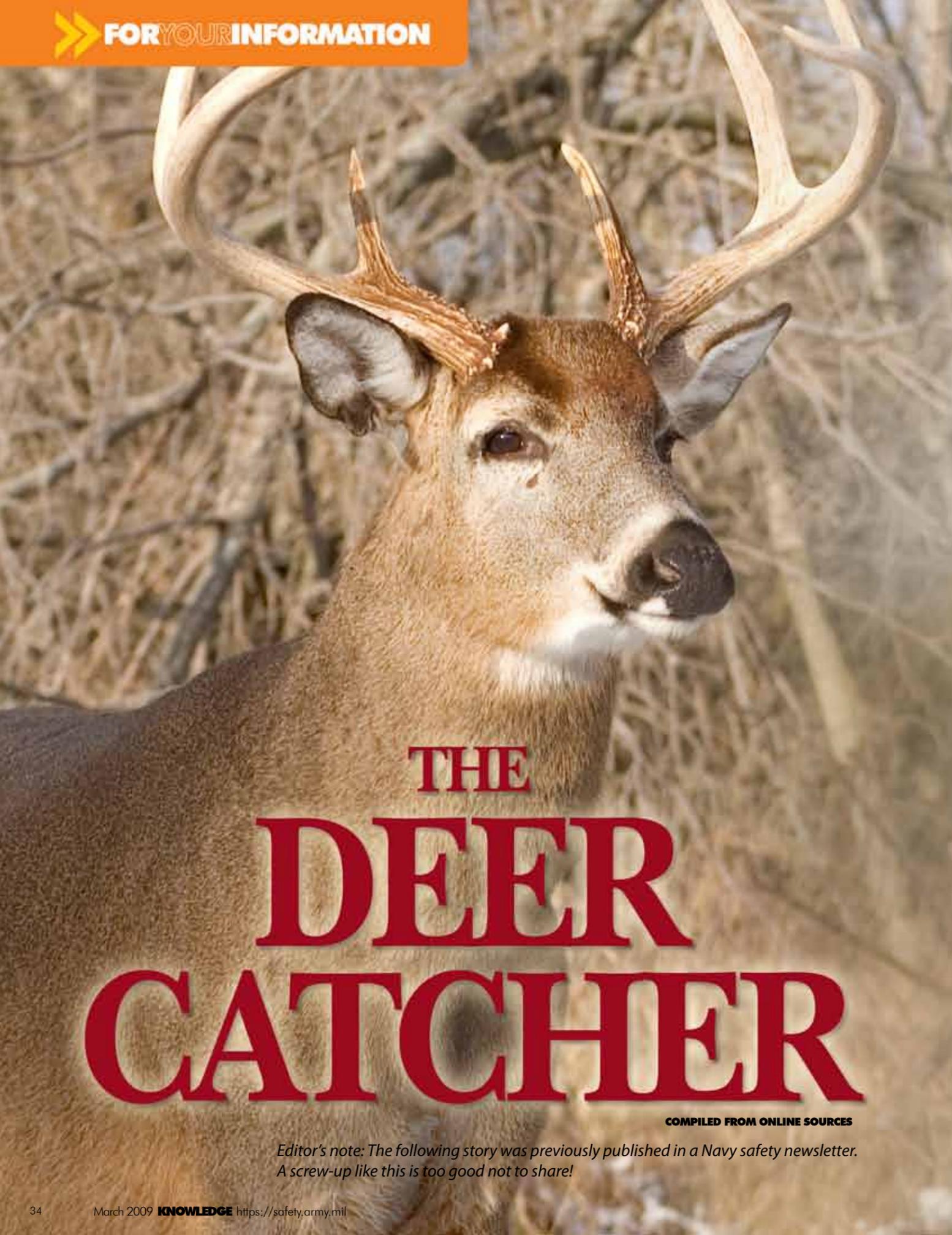
Leader's CORNER

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ARMY SAFE IS ARMY STRONG



THE DEER CATCHER

COMPILED FROM ONLINE SOURCES

Editor's note: The following story was previously published in a Navy safety newsletter. A screw-up like this is too good not to share!

The plan:
I had this idea I was going to rope a deer, put it in a stall, feed it corn for a couple of weeks and then kill it and eat it.

The Execution

The first step in this adventure was getting a deer. I'd noticed they congregated at my cattle feeder and didn't seem afraid of me (a bold one would sometimes come up and sniff the feedbags while I was in the back of the truck). I figured it wouldn't be difficult to rope one; toss a bag over its head to calm it down, hog tie it and transport it home. So, I filled the cattle feeder and hid at the far end with my rope. The cattle, having seen the roping thing before, stayed well back. They were not having any of it.

After about 20 minutes, three deer appeared. I picked out a likely looking one, stepped out and threw my rope around it. The deer just stood there and stared at me. I wrapped the rope around my waist and twisted the end so I would have a good hold. The deer still just watched me, but you could tell it was mildly concerned about the whole rope situation.

I took a step toward it ... it took a step away. I put a little tension on the rope. It was then the deer decided to give me an "education."

The Education

The first thing I learned is while deer may look at

you funny while you rope them, they don't like it when you tug on that rope – the deer EXPLODED!

The second thing I learned is that, pound for pound, a deer is a LOT stronger than a cow or a colt. A cow or a colt in that weight range I could fight down with a rope and with some dignity. But a deer – no chance! It ran, bucked and twisted and pulled. There was no controlling it and certainly no getting close to it. As it jerked me off my feet and started dragging me across the ground, it occurred to me my idea wasn't working out nearly as good as I'd planned.

The only upside is that deer don't have the stamina of other animals. A brief 10 minutes later, it was tired and not nearly as quick to jerk me off my feet when I tried to get up. It took me a few minutes to realize this since I was mostly blinded by the blood flowing from the big gash in my head. At that point, I had lost my taste for corn-fed venison. I just wanted to get that devil creature off my rope.

That gash and several large knots showed how I'd cleverly arrested the deer's momentum by bracing my head against several large rocks as it dragged me across the ground. Upon reflection, I realized I shared some tiny amount of responsibility for the situation we were in. I didn't want the deer to drag the rope off and maybe suffer a slow death, so I managed to line it up in between my truck and

the feeder. I'd set a little trap there beforehand – a kind of squeeze chute. As I got the deer in there and moved closer so I could get my rope back, the deer administered the next step in my "education."

Did you know that deer bite? They do! I never in a million years would have thought a deer would bite somebody, so I was very surprised when I reached to grab the rope and the deer grabbed hold of my wrist. Now when a deer bites you, it doesn't just bite and let go like a horse. A deer bites you and shakes its head – almost like a pit bull.

The proper thing would probably have been to freeze and draw back slowly – I tried screaming and shaking instead. My method was ineffective. It seemed like the deer bit and shook me for several minutes – but it was likely only several seconds.

I, being smarter than a deer (though you may be questioning that claim by now), decided to try and trick it.

While I kept it busy tearing the crap out of my right arm, I reached up with my left hand and pulled the rope loose. That was when I got my final lesson in deer behavior that day. Deer will rear up and strike at you with their front hooves, which are surprisingly sharp. When a horse does this, the best thing is to make a loud noise and move aggressively toward the animal. That will normally cause them to back down so you can escape.

However, this was a deer and such trickery would not work. In the space of a millisecond, I revised my strategy. I screamed like a woman and tried to turn and run.

Now the reason you don't try to turn and run away from a horse is there is a good chance it will paw you in the head. Maybe deer aren't so different from horses after all, other than being twice as strong and three times as evil. The instant I turned, the deer hit me in the back of the head and knocked me down.

Now, when a deer knocks you down, it does not immediately leave. Maybe it doesn't recognize the danger has passed. Instead, the deer pawed my back and jumped up and down on me while I lay there, crying like a little girl and covering my head.

I finally managed to crawl under the truck and the deer went away. I then understood why people hunt deer with rifles instead of roping them. At least a firearm makes them somewhat equal to their prey!◀◀

Do you have a funny story with safety lessons learned? Why not share with your fellow Soldiers? Just send it to safe.knowledge@conus.army.mil.



LOST

AVIATION



CLASS C
 ■ During approach to landing for passenger drop-off, the left-front landing gear contacted the ground. Unit maintenance inspection revealed structural, severed landing gear strut, antenna and fuel line damage.



CLASS A
 ■ The aircraft crashed into a tower while conducting a recon/security mission. A post-crash fire ensued and both crewmembers suffered fatal injuries.



CLASS C
 ■ The aircraft touched down with the landing gear in the stowed position.

➤ **WAS THE BEFORE-LANDING CHECKLIST USED? DID THE CREW VERIFY THE GEAR WAS DOWN AND LOCKED?**

UAS



CLASS A
 ■ The UAS was flown for contract-operator training with contractor oversight when the operator lost link with the one-station unmanned ground control station.



CLASS B
 ■ The UAS experienced engine failure. The flight termination system chute deployed and the UAS crashed.

CLASS C
 ■ The UAS experienced an ignition/generator failure at 3,500 feet mean sea level. The recovery chute deployed at 1,300 feet and the system was recovered with damage.



CLASS A
 ■ A Soldier serving as the gunner in a Mine Resistant Ambush Protected vehicle was killed in a rollover accident during a combat patrol. The driver of the vehicle had attempted a U-turn at a median break when it contacted a curb or road obstacle and overturned. The driver was not injured.

CLASS B
 ■ Three Soldiers were hospitalized with various injuries when the M1126 Stryker they were riding in overturned on an improved two-lane road. The remaining Soldiers in the vehicle were treated for their injuries and released.



CLASS A
 ■ A Soldier was fatally injured when the M1114 HMMWV he was positioning for a roadblock was struck by a local national tractor-trailer. Two Soldiers who were passengers in the HMMWV received non-life-threatening injuries.

■ A Soldier was killed when he was pinned between a HEMMT and a wall. The Soldier was operating

a crane on the back of the HEMMT when the vehicle rolled backward, pinning him.

➤ **WHEN CONDUCTING CRANE OPERATIONS, ARE THE OUTRIGGERS DEPLOYED AND CHOCK BLOCKS IN PLACE?**

Personnel Injury

CLASS A
 ■ A Soldier was swimming underwater in a pool as personal physical training when he failed to surface. Lifeguards pulled the Soldier from the water and he was transported to a hospital. The Soldier was later removed from life support and died.

■ A Soldier drowned when he lost his footing and fell into the water during a dismounted patrol along a riverbank. The Soldier was carried off by the current. His body was later found by a dive team.

DRIVING



CLASS A
 ■ A Soldier signed out on leave and departed her unit at 12:45 a.m. in her privately owned vehicle. She was traveling on an interstate at 2 a.m. when her vehicle left the road, crossed the median and struck a guardrail. The Soldier was fatally injured.

➤ **LEADERS, DO YOU ENSURE YOUR SOLDIERS HAVE ADEQUATE REST BEFORE DEPARTING ON ROAD TRIPS? WHAT'S YOUR UNIT'S LEAVE POLICY? DOES IT HELP AVOID SITUATIONS LIKE THIS?**

ARMY AVIATION LOSSES

Fiscal 2009
 as of Feb. 4, 2009



ATTACK	0/0
RECON	2/6
UTILITY	2/2
CARGO	0/0
TRAINING	0/0
FIXED-WING	0/0
UAS	1/0

TOTAL 5/8

ARMY GROUND LOSSES

Fiscal 2009
 as of Feb. 4, 2009



AMV	8/9
ACV	3/2
PERSONNEL INJURY <small>includes weapons-handling accidents</small>	11/8
FIRE/EXPLOSIVE	1/0
PROPERTY DAMAGE	0/0

TOTAL 23/19

■ A Soldier made a U-turn on a bridge, pulled into the oncoming lane, accelerated and collided with an oncoming pickup. A post-crash fire ensued and the Soldier and the civilian pickup driver were killed. Alcohol was a factor in this crash.

■ A Soldier was on emergency leave from Operation Iraqi Freedom en route to his father's funeral when his vehicle left the road, struck a tree stump and overturned. The Soldier was not wearing his seat belt and was ejected and fatally injured.

■ A Soldier was driving her sport utility vehicle in wet road conditions when she hydroplaned, crossed the median and collided with an oncoming pickup truck. The Soldier suffered fatal injuries.

■ A Soldier was attempting to make a left-hand turn during a yellow light at a controlled intersection when he was struck by an oncoming truck. The Soldier was taken to a hospital, where he later died. He was not wearing his seat belt.

■ A Soldier was traveling 90 mph in a 50-mph zone with a Soldier riding as a passenger when the car left the road and struck a power pole. The driver died at the scene. The passenger was transported to a hospital and listed in stable condition. Both Soldiers were wearing their seat belts.

DO YOUR SOLDIERS UNDERSTAND WEARING SEAT BELTS WON'T ALWAYS PROTECT THEM IF THEY DRIVE RECKLESSLY?

■ A Soldier was driving a minivan when a vehicle in the oncoming lanes crossed the centerline and hit his vehicle, sending it spinning into another vehicle. The Soldier died at the scene.

■ A Soldier was traveling 90 mph in wet road conditions when she hydroplaned, spun sideways into the oncoming lane and struck a vehicle driven by another Soldier. Neither the Soldier nor her two civilian passengers were wearing their seat belts. They all died in the collision, which tore their car in half. The Soldier in the vehicle they struck was wearing his seat belt and hospitalized in stable condition.



CLASS A

■ A Soldier was operating his motorcycle when it started to weave, struck a curb and crashed. The Soldier was responsive at the scene, but later died from his injuries.

■ A Soldier was riding in the company of another Soldier when his sportbike veered off the road and crashed. Although the Soldier was wearing his helmet, he wasn't wearing any other personal protective equipment. He was medically evacuated to a hospital, where he was pronounced dead.



CLASS A

■ Two Soldiers were attempting to cross an interstate highway on foot after dark when one was struck by a passing vehicle. The injured Soldier died at the scene.

■ A Soldier attempting to cross a street early in the morning was struck by a drunk driver. The Soldier was taken to a hospital with critical injuries and died later that morning.

CAR	14/14
SUV/JEEP	7/7
TRUCK	3/3
MOTORCYCLE	7/7
PEDESTRIAN	5/5
OTHER*	1/1

of Feb. 4, 2009 Class A/Fatalities

37 TOTAL DEATHS

Fiscal 2008: 43 3 year average: 38

*Includes: vans and ATVs



GOT PLRs?

The U.S. Army Combat Readiness/Safety Center (USACR/Safety Center) is committed to keeping Army Leaders informed about the accidents and risks facing Soldiers today. One such effort is Preliminary Loss Reports (PLRs), which are released by the USACR/Safety Center following an accidental fatality or other serious accident. The PLR format is the most up-to-date resource for serious accident information.

PLRs are labeled For Official Use Only (FOUO) and are not for release outside military channels. They are archived and available for viewing with an Army Knowledge Online (AKO) login. PLRs are provided to Leaders for accident

prevention purposes, awareness of Army loss as it is experienced and to point out potential trends that affect the Army's combat readiness.

The PLR accident summary is comprised of factual information received through telephonic notifications from the unit, local investigative civil authorities and media coverage collected within the first 48 to 72 hours after the initial accident notification. The intent of the quick turnaround is to support Leaders whose formations could be at risk for a similar accident. In addition, PLRs offer relevant safety discussion points, resources and historical statistics to provide Leaders with engagement tools.

PLR readership includes Department of Defense service secretaries, general officers, brigade commanders, safety professionals and other individual subscribers. About 8,000 personnel receive each PLR and then forward it to subordinates and co-workers. They are posted on organization bulletin boards and read during weekly safety briefings. A PLR scroller, which lists the three most recent PLRs issued, is available for download and can be quickly and easily displayed on other U.S. Army Web sites. Both these services are available through the USACR/Safety Center Web site at <https://safety.army.mil>.

Army strength starts here...

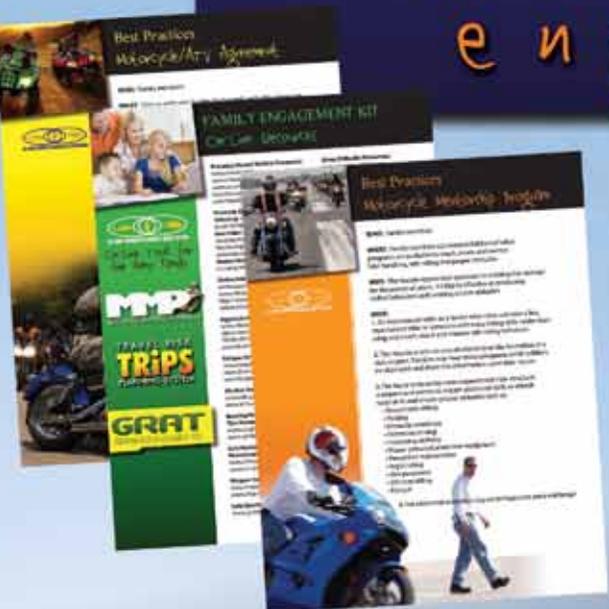
...which gives you strength here.

Family engagement kit



<https://safety.army.mil>

Army Safe is Army Strong and that starts with a Soldier's Family. Have the information to help you and your Family stay SAFE. Be prepared and get your own Family Engagement Kit TODAY!



ARMY SAFE IS ARMY STRONG



KNOWLEDGE

VOL 3 APRIL 2009

OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

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WE HAD LEGAL WEATHER

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CLEANING HOUSE

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ARMY STRONG



U.S. ARMY COMBAT READINESS/SAFETY CENTER
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IS ARMY STRONG**



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U.S. ARMY COMBAT READINESS/SAFETY CENTER
<https://safety.army.mil>

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Mission statement: USACRC supports our Army by collecting, storing, analyzing, and disseminating actionable information to assist Leaders, Soldiers, Families, and Civilians in preserving/protecting our Army's combat resources.

We welcome your feedback. Please e-mail comments to safe.knowledge@conus.army.mil.

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Knowledge provides a forum for Soldiers, Leaders and safety professionals

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ENFORCE THE STANDARD

We all are familiar with the basic attributes and actions a Leader must possess — Be, Know and Do. We also know that discipline refers to having the self control to enforce obedience and standards, even when no one is watching. But what exactly is a standard? Webster's defines it as "something established by authority, custom or general consent as a model or example."

Our Army is a standards-based organization with customs dating back centuries. Our standards for conduct, military courtesy and laws governing our operations are well documented. There is a rule or a standard for almost everything we do. If standards exist, then why do we still see so many acts of indiscipline directly violating those standards?

I believe, as many of you do, that the safety

climate and culture of a unit is determined by the command but best displayed in the individual actions of our Soldiers when no one is watching them. Our Soldiers know in their hearts and minds what is right but oftentimes disregard the known standard, opting for an easier way to perform a task.

Easier doesn't always mean quicker or with less effort. Sometimes it can mean a concerted effort to circumvent a known

standard, which often results in destruction of property, injury or, even worse, death.

During a recent senior safety symposium, Command Sgt. Maj. Neil Ciotola, III Corps and Fort Hood command sergeant major, gave a presentation in which he discussed standards and why enforcing standards is so critical to the good order of the Army. In celebrating the Year of the NCO, it was only fitting to have one of our Army's senior NCOs share his observations from his long, distinguished career as a Leader.

Ciotola said, "Our troopers want to do the right thing, but many have said, 'Why bother? We know that no one will be checking up on us.'"

How can this be? As Leaders, we know that we are responsible for the safety and well-being

of everyone assigned to our organizations, including our civilians and Family members. Given the high stakes involved, how can we afford not to be engaged with our Soldiers, civilians and Families?

Ciotola went on to ask the audience how many had a son or daughter currently serving in the armed forces. As the hands proudly shot into the air, Ciotola's countenance changed from cheerful to concern.

"This is exactly why we, as Leaders and safety professionals, must be engaged," he said. "We owe it to our Families to protect its most precious entrusted gift — its sons and daughters."

It is through leadership at every level that we can affect those measures that keep our Soldiers and civilians safe every day.

Our **SOLDIERS** know in their **HEARTS** and **MINDS** what is **RIGHT** but oftentimes disregard the known **STANDARD**, opting for an **EASIER** way to **PERFORM** a **TASK.**

And through educating the various echelons of leadership, they are able to extend that safety net to encompass Families. Leadership is not something left at the office, motor pool or flight line when we go home. It is what we do every day, on and off duty, by setting the example and committing ourselves to what's right because that's what our Army Family demands of us.

As Leaders, we must all know the standard, be the standard setter and, most importantly, enforce the standard.

Army Safe is Army Strong!

WILLIAM T. WOLF
Brigadier General, USA
Director of Army Safety

And through educating the various echelons of leadership, they are able to extend that safety net to encompass Families. Leadership is not something left at the office, motor pool or flight line when we go home. It is what we do every day, on and off duty, by setting the example and committing ourselves to what's right because that's what our Army Family demands of us.

If you think one individual cannot change the climate of a unit, just look around. Your actions will speak louder than your words every time, so never pass up an opportunity to positively influence those around you. If you want to figure out where you can help your unit, battalion commanders can reevaluate or better examine the safety



HANDLING the HEAT

COL. JOHN CAMPBELL, D.O.
Command Surgeon
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

Every year, Leaders and Soldiers look for new ways, better techniques or “magic bullets” to eliminate or minimize heat injuries in their formations. During training and combat operations, weather and environmental conditions are briefed as part of the overall operations plan. Also, risk mitigation is supposed to be incorporated into mission planning from start to finish. So what happens? Despite our best efforts, Soldiers still experience heat-related injuries and, sadly, some die of these injuries.

Information is readily available on the U.S. Army Center for Health Promotion and Preventive Medicine

(USACHPPM) Web site. The organization’s heat-injury prevention page is filled with critical information describing the signs and symptoms of heat injuries and treatment options. The site includes ready-made presentations, as well as statistics, multimedia awareness materials and a heat injury risk-mitigation matrix. You name it and the information is available. Why isn’t all this information passed to the Soldiers? Or, if it is, why isn’t the injury rate decreasing?

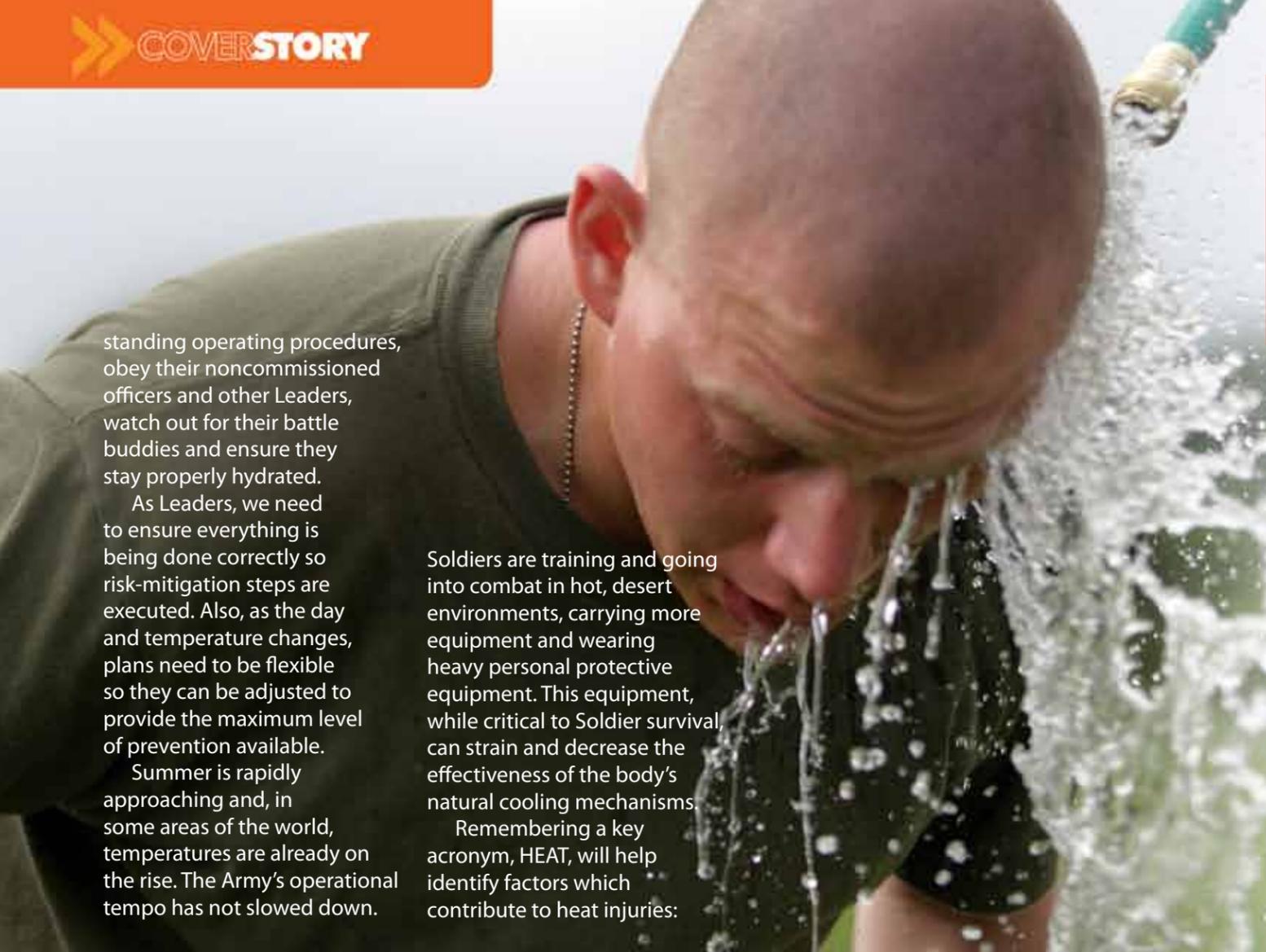
Although Leaders are held responsible for any injury, to include heat-related injuries, the responsibility doesn’t stop there. Each Soldier is responsible to follow unit

As much as we don’t like to think that our mothers and other sage advisers were right, the older we get, the more we realize how correct they were! The old adage “an ounce of prevention is worth a pound of cure” still holds true — especially when it comes to preventing heat-related injuries.

WHY DOES HEAT STROKE KILL SOLDIERS EVERY YEAR,

DESPITE THE THOUSANDS OF HOURS OF HEAT-INJURY PREVENTION BRIEFINGS?

- 1. Misunderstanding the onset of heat stroke.** During hard work — a quick march with a field load — a Soldier can go from optimum performance to heat stroke in a matter of minutes. Heat-injury prevention literature/briefings often give the impression that heat injury onset is sequential over a period of time (i.e., personnel will first suffer heat cramps, then heat exhaustion, then heat stroke).
- 2. Underestimation of Soldier workloads.** Supervisors/exercise observers frequently underestimate Soldier work/exertion levels. Soldiers can neither carry, nor drink, enough water to prevent heat stroke during high-exertion activities such as quick marches, heavy materials handling or wearing MOPP gear.
- 3. Underestimation of the impact of additional heat stressors.** (e.g., wear of MOPP gear, body armor and field packs/weapons loads)
- 4. Overemphasis on water intake as the primary prevention of heat injuries.** While proper water intake is vital, work/exertion level management is just as critical during high-exertion activities. Proper water intake must be balanced with other prevention measures, including acclimatization, conditioning, temperature monitoring and timely first aid and medical treatment.



standing operating procedures, obey their noncommissioned officers and other Leaders, watch out for their battle buddies and ensure they stay properly hydrated.

As Leaders, we need to ensure everything is being done correctly so risk-mitigation steps are executed. Also, as the day and temperature changes, plans need to be flexible so they can be adjusted to provide the maximum level of prevention available.

Summer is rapidly approaching and, in some areas of the world, temperatures are already on the rise. The Army's operational tempo has not slowed down.

Soldiers are training and going into combat in hot, desert environments, carrying more equipment and wearing heavy personal protective equipment. This equipment, while critical to Soldier survival, can strain and decrease the effectiveness of the body's natural cooling mechanisms.

Remembering a key acronym, HEAT, will help identify factors which contribute to heat injuries:

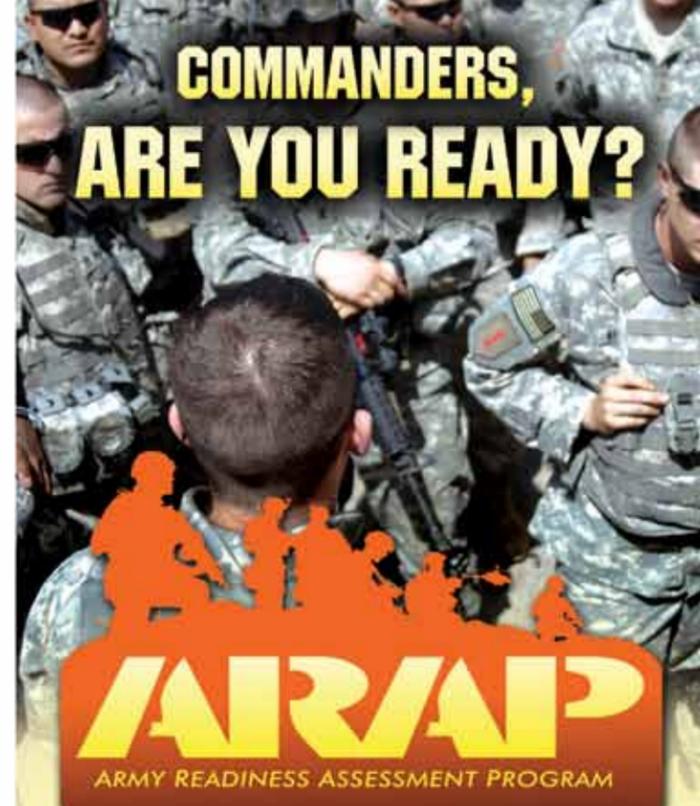
FYI

For more information on preventing heat injuries, visit the U.S. Army Center for Health Promotion and Preventive Medicine's Web site at <http://chppm-www.apgea.army.mil/heat/>.

- **High heat category**, especially on several sequential days (measure Wet Bulb Globe Temperature when ambient temperature is more than 75 F).
- **Exertion level of training**, especially on several sequential days.
- **Acclimatization** (and other individual risk factors — see info box below).
- **Time** (length of heat exposure and recovery time).

Leaders and Soldiers share the responsibility for preventing heat-related injuries. Leaders must use the tools available to help emphasize the importance of preventing heat-related injuries.

There is another old saying, "You can lead a horse to water, but you can't make him drink." However, such advice doesn't apply when it comes to preventing heat-related injuries. To stay fit to fight, we must take appropriate preventive measures and monitor ourselves and our battle buddies for the signs of heat-related injuries.◀◀



**COMMANDERS,
ARE YOU READY?**

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Wouldn't you like to prevent the loss of personnel and equipment?

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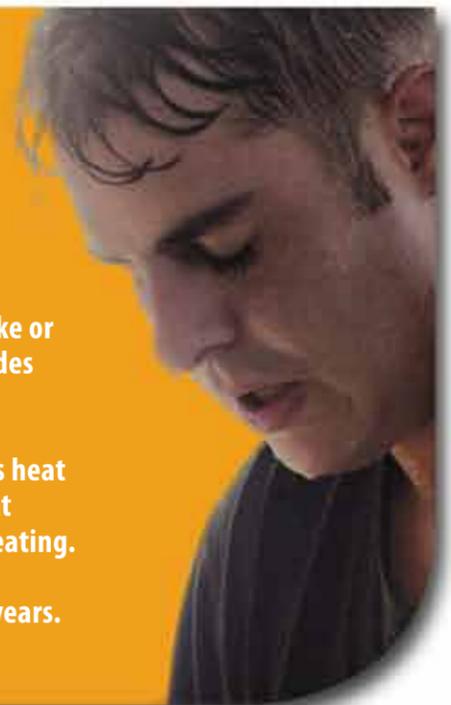
ARAP is a Web-based initiative that provides battalion-level commanders with data on their formation's readiness posture.



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INDIVIDUAL RISKS FOR HEAT CASUALTIES

(The more factors, the higher the risk)



- **Not acclimatized to heat** (need 10 to 14 days to get trainees adequately acclimated).
- **Exposure to cumulative days** (two to three days) of any of the following: increased heat exposure, increased exertion levels and lack of quality sleep.
- **Poor fitness** (unable to run two miles in less than 16 minutes).
- **Overweight.**
- **Minor illness** (cold symptoms, sore throat, low-grade fever, nausea, vomiting).
- **Taking medications** (either prescribed or over the counter), supplements or dietary aids (e.g., allergy or cold remedies or Ephedra supplements).
- **Use of alcohol** in the last 24 hours.
- **Prior history of heat illness** (any heat stroke or more than two episodes of heat exhaustion).
- **Skin disorders** such as heat rash and sunburn that prevent effective sweating.
- **Age greater than 40 years.**

All Gain, No Pain

KEITH HAURET AND DAVID SWEDLER
Injury Prevention Program
U.S. Army Center for Health Promotion and Preventive Medicine
Aberdeen Proving Ground, Md.

Sports and recreational activities help Soldiers achieve and maintain a high level of physical fitness. Many of these activities, however, carry some degree of injury risk or hazard. Each year, Soldiers are injured, some fatally, while exercising or participating in sports or other recreational activities. Fortunately, many of these injuries can be prevented.

In 2007, sports participation was the third-leading cause of injury hospitalizations for Soldiers. In field investigations conducted by the U.S. Army Center for Health Promotion and Preventive Medicine's (USACHPPM) Injury Prevention Program, physical training (PT) and sports were also the most frequent causes of injury resulting in sick-call visits and limited-duty days.

Sports and PT-related injuries are also common among deployed Soldiers. During the current deployments in Iraq and Afghanistan, about 20 percent of air evacuations for noncombat injuries have resulted from PT and sports activities. These activities are the leading cause of air-evacuated noncombat injuries.

Basketball, football, PT and weightlifting account for 76 percent of these sports-related injuries during deployments. USACHPPM has noted more serious weightlifting injuries among deployed Soldiers. At least one-third of these injuries occurred with

the bench press and involved serious muscle tears.

There are several injury hazards associated with weight training, including lifting too much weight, using improper technique and using anabolic steroids. To reduce the risk of injury, Soldiers should implement the following controls into their weightlifting routine:

- Use caution when loading and unloading the weight plates.
- Train with a spotter, especially when doing high-weight, low-repetition exercises.
- Be sure you know and use proper lifting form and technique.
- Warm up with repetitions of lighter weight before attempting heavier weights.
- Don't hold your breath; inhale lowering the weight, exhale pressing it back up.
- Avoid anabolic steroids — they're illegal and cause long-term health effects.
- Increase the amount of weight and number of repetitions gradually.

Unique injury hazards are present in most physical exercise, sports or recreational activities. Soldiers and Leaders have learned through use of composite risk management (CRM) how to identify hazards and control risks across the full spectrum of Army missions and activities. Soldiers must implement CRM for their specific activity to assess and identify hazards or risk of injury. Once the hazards are identified, Soldiers and Leaders must implement the controls proven to reduce these injury risks.

Suggested controls for athletic and recreational activities include:

Softball

- Use breakaway bases and a double first base.
- Wear a batting helmet.
- Wear a mouth guard.
- Call for fly balls to avoid collisions.

Basketball

- For a previously sprained ankle, wear a sports ankle brace to avoid re-injury.
- Remove trip hazards (water bottles, gym bags, etc.) from the sidelines.
- Wear a mouth guard and eye protection.
- Remove rings, watches and other jewelry.

Touch or flag football

- Avoid overaggressive play.
- Check the field for rocks, holes and other hazards.
- Wear appropriate footwear for the field and weather conditions.
- Wear a mouth guard.
- Remove rings, watches and other jewelry.

Bicycling, roller-skating, skateboarding, inline skating

- Wear a helmet.
- Wear appropriate elbow and knee protection.

Water activities (swimming, boating, sailing, kayaking, tubing, rafting, diving)

- Don't enter the water alone — always have a buddy.
- Always wear a life jacket when in open water.
- No diving into shallow water or close to rocks.
- Avoid using alcohol.

All-terrain vehicles (ATV)

- Children must use an age-appropriate ATV with adult supervision.
- Wear a helmet, eye protection and proper clothing.
- Avoid using alcohol.

Outdoor grilling and barbecue

- Check propane bottles for leaks.
- Use only approved lighter fluids; do not use gasoline.
- Ensure proper ventilation.

As warmer weather approaches and we head outdoors for exercise, sports and recreation, let's make certain to identify the hazards associated with our activities and implement controls which will allow us to minimize the injury risk for ourselves, our Family members and other Soldiers.◀

DID YOU KNOW?

Across all military services, more than 25 million limited-duty days occur annually due to injuries, with physical training/sports being a top injury category. Military Leaders are in the best position to prevent injuries. The Injury Prevention Through Leadership Course is entertaining and engaging and provides concise, evidence-based information and guidance Leaders can use to prevent many injuries. The one-hour, interactive online course teaches practical strategies to help Soldiers meet their fitness goals. Visit Combat Readiness University II at <https://crc.learn.army.mil>. Log in with your AKO ID and password, select the Courses tab, open the Joint Forces Safety Training folder and enroll in the course today.



a Major Disaster

COMPILED BY THE KNOWLEDGE STAFF

Editor's note: The names of the Soldiers in this article have been changed to protect their privacy and that of their Families.

Leaders engaging Soldiers is considered essential to preventing accidents. But what happens when Leaders fail to engage each other?

Maj. William Dean headed home on a Friday afternoon after completing his 42nd week of Command and General Staff College (CGSC). He was looking forward to celebrating his second anniversary with his wife that evening. When he got home, he found out his ex-wife had driven from another state to pick up their 10-year-old daughter. Although disturbed by the news, he and his wife went ahead with their plans to celebrate their anniversary at a nearby casino. After dinner and drinks, Dean drove home and fell asleep on the couch while watching television.

About 9:30 the next morning, Maj. Charles Hicks, a CGSC classmate and fraternity brother of Dean's, rode his motorcycle to the Dean home. Although Hicks knew Dean wasn't Motorcycle Safety

Foundation trained and didn't have an operator's license or insurance for his bike, he suggested they ride around the local area. About 45 minutes later, Dean got onto his 1998 Yamaha YZF 600RK motorcycle and followed Hicks onto the road.

During their ride, they visited a motorcycle shop and a park. While at the park, Dean told his friend about the stressful visit from his ex-wife the previous day. When they arrived back at Dean's home about 1 p.m., the two friends parted company. Dean relaxed at home, playing video games and drinking until about 5 p.m. About an hour later, Dean got into a heated discussion with his wife. After arguing for a half-hour, he jumped onto his motorcycle and angrily rode off.

Dean left the subdivision and accelerated to a high speed. The

street had a 35-mph speed limit and transitioned from a residential area to a rural area. After riding about three miles, Dean approached an intersection where a sign warned of limited sight distance ahead. A hay field obscured the view of cross traffic at the intersection, which was controlled by a two-way stop sign.

Dean approached the intersection at high speed. He was about 130 feet away when he realized the danger and locked his brakes to try and avoid entering the intersection. Despite leaving a 74-foot-long skid mark, he couldn't stop in time and slammed into the right-side passenger door of a pickup crossing the intersection.

The collision instantly killed Dean and threw him more than 60 feet across the intersection. The impact was so violent it bent the right side of the pickup's frame. The pickup then veered off the left side of the road and overturned 2 1/2 times before landing on its roof. The driver was ejected and severely injured, while the passenger was thrown around violently

inside the vehicle. Neither was wearing a seat belt.

Passing motorists saw the accident and immediately called 911. An off-duty nurse happened upon the accident scene and checked the pickup's occupants. When one told her they'd been hit by a motorcycle, she searched the crash site and located Dean, finding him lying face down without a pulse. A state trooper requested medical support, and a helicopter flew the driver of the pickup to a major trauma center while an ambulance transported the passenger to a local medical facility. Emergency medical service personnel checked Dean but couldn't find a pulse and contacted the county coroner. The coroner arrived at the crash site and pronounced Dean dead.

Why Did the Accident Happen?

- The motorcycle wasn't out of control, but the rider was.
 - Alcohol dulled Dean's perceptions, stealing the reaction time he needed to stop before entering the intersection.
 - Anger dulled Dean's judgment, influencing him to speed and ride recklessly.
 - Propelled by alcohol, anger and speed, Dean entered an intersection, collided with another vehicle and died.
- A buddy left a buddy "behind." Hicks knew Dean wasn't properly trained, licensed or insured to ride, but encouraged him to do so anyway. Despite knowing the standards, Hicks ignored them and set up his buddy to die on the streets.
 - Seat belts are never optional. The pickup's occupants failed to wear their seat belts. Even though they were hit by a much lighter vehicle, the impact was still severe enough to overturn the truck and eject the driver.

How Could this Accident be Prevented?

- Soldiers must have the personal discipline to not drive their vehicles or operate motorcycles after drinking alcohol or while in an adverse mental state.
- Soldiers should exercise peer-to-peer leadership and not let violations of known standards go unchallenged.
- Seat belts must be worn at all times by all personnel in a moving vehicle.

Outcome

- A field-grade officer was fatally injured.
- A civilian was seriously injured and another received minor injuries.
- An Army Family was devastated and unit morale degraded.
- The motorcycle and truck were destroyed.◀

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Keep your Soldiers safe on and off duty. Log on TODAY!



ARMY SAFE IS ARMY STRONG

MASTERING *Dust* LANDINGS

RET. CHIEF WARRANT OFFICER 5 DENNIS MCINTIRE
Fort Worth, Texas



Today, helicopters are being called upon to conduct operations in environments and at tempos far different from what was envisioned nearly 20 years ago. Brownout was inconceivable while patrolling the East German border back then. It has only been in recent years, with the wars in Afghanistan and Iraq, that this problem comes to the forefront.

Dust landings — the effect of swirling dust and debris caused by the rotor wash during the landing of a helicopter — will challenge the best aviators. In heavy dust, brownout is not a question of “if,” but “when.” The “if” is a given, while the “when” is a factor we have little control over.

It’s important to understand the dust generated during the landing phase doesn’t cause a true brownout until the vortices bring the heaviest dust through the rotor system. That said, if you can be in a touchdown position before that point, your landing will be easier and much safer.

Additionally, you must understand the direct correlation between the aircraft angle of approach and the rate of descent as it applies to the ground roll/run following touchdown. It is best explained this way. At one extreme we can use a shallow approach angle, in which our airspeed is higher (with a touchdown at or

slightly above effective transitional lift), our rate of descent is very low and our ground roll/run is long. That approach is relatively easy to master and has its place when landing to flat, unobstructed areas.

For illustrative purposes, let’s say the other extreme is a 90-degree vertical approach angle. This theoretical approach would use zero airspeed and a very high rate of descent and would result in little or no ground run. It would also be extremely difficult to perform. Again, this example illustrates the extreme ends of the spectrum. I am not advocating this type of approach. What I am saying is you can execute a safe and controlled dust landing with minimum ground roll/run to most areas using factors in between these two extremes.

Over the years, I have executed thousands of dust approaches while training others. During that time, I have learned

dust landings using a steep side of a normal approach work best when landing to the toughest and dustiest landing zones. This type of approach is tough to perform, but I believe every aviator needs to master it.

Approaches using the steeper approach angle must be flown in concert with a higher rate of descent than that of a normal approach. By a higher rate of descent, I am not implying the aircraft has to literally fall out of the sky. Hardly so. The rate of descent is just slightly higher than that of a normal approach. While the brownout condition occurs without warning using the steeper approach, it reduces the opportunity for the dust to cycle through your rotor system prematurely. That decreases the likelihood of a brownout before you are landing assured. In addition, these approaches require greater skill due to the timing factor involved with adjusting the controls for touchdown. The

benefits, however, become apparent when landing to unimproved, dusty landing zones. This approach reduces the ground roll/run while allowing the pilot to see the landing area for virtually the whole approach.

The confidence to perform a dust landing with this type approach comes only through repetition with the benefit of a more experienced pilot or instructor pilot on the other set of controls. Most of this training can take place in a nondusty area to reduce wear and tear on the aircraft. The “final exam,” however, must be in true brownout conditions. Only then can aviators know their skills are up to the task.

Surprisingly, I’ve noticed many aviators, especially those flying more powerful aircraft, tend to ignore the wind when determining their landing direction. Forgive me for stating the

“**LIMITED** visibility **OPERATIONS**, whether they’re in **DUST, SAND OR SNOW**, are **SOME** of the most **CHALLENGING ENVIRONMENTS** an Army **AVIATOR** can face.”

obvious, but this cannot be overemphasized. Landing with a tailwind forces you to land with a higher ground speed to avoid browning out prematurely. With that in mind, remember “wind calm” does not always mean there is no wind. Just a few knots of wind can make all the difference in the world when it comes to your dust landing. Try it yourself. Experiment with a tailwind and headwind dust landing under identical light wind conditions. You can use a quartering headwind/tailwind if you like. Regardless, you’ll be amazed with the results.

Knowing the surface wind is especially important to me. In times where trusted indicators

of surface wind were absent (trees, dust, smoke or water), I went through the effort of generating my own dust with a low approach to an area away from my final landing area. I performed the maneuver at a distance from my final landing area to avoid obscuring it prematurely for my later approach. This technique allowed me to accurately determine the wind direction and then consider it, along with other factors, in deciding my final approach method.

Formation landings add a measure of risk due to the increased chance of collision during the landing or go-around phase. Collective training is a must to ensure individual crews work as one during their

formation landing. While the landing techniques for formation aircraft are the same as those for single-ship operations, all aircraft in the formation must use the same approach angles, speeds and braking. In addition, formation landings in dust can be “stacked down” as a technique so the trail aircraft touches down first. All other chinks land in succession with the lead aircraft touching down last, thereby enabling all the aircraft to land in relatively “clean” air. Another landing technique to use is an echelon formation so aircraft can touch down simultaneously. This is only one of many techniques that can be used if the landing zone is large

enough and the ground commander doesn’t mind his forces being spread out.

Limited visibility operations, whether they’re in dust, sand or snow, are some of the most challenging environments an Army aviator can face. The primary duty of the pilot in command is the safe operation of the aircraft while performing the mission. Flight technique is important while flying in these challenging conditions. However, crew coordination briefs, rehearsals and application, coupled with the correct flight techniques, are critical to both mission accomplishment and aircrew safety. Fly safely!◀◀

It’s **IMPORTANT** to **UNDERSTAND** the **DUST** generated during the **LANDING** phase **DOESN’T** cause a true **BROWNOUT** until the **VORTICES** bring the heaviest **DUST** through the **ROTOR** system.



SAFE OPERATIONS IN DVE

CHIEF WARRANT OFFICER 4 JOHN M. MOSELEY
Concepts and Requirements Directorate
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The U.S. Army Aviation Center of Excellence recently led an integrated concept team (ICT) effort to define and document the capabilities required for safe aviation operations in degraded visual environments (DVE). This effort concluded in February 2009. The ICT defines DVE as flight conditions of partial or no visibility due to fog, heavy rain or dense obscurants such as fine sand, dust, smoke, blowing debris or snow. These conditions are most critical to pilots operating visually at low altitudes such as during takeoff, hover, terrain flight and landing.

Problems caused by the loss of situational awareness to DVE often result in pilots maneuvering their aircraft into unusual attitudes or experiencing excessive drift, rollover and/or contact with adjacent aircraft or obstacles. This problem is evident by the number of aircraft incidents and losses during Desert Shield, Desert Storm, Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF). The ICT analysis revealed the current fleet of Army aircraft lacks sufficient capability to provide aircrews with adequate situational awareness for safe operations in DVE.

To solve this capability gap, the ICT looked for changes and/or improvements to doctrine, organization, training, materiel acquisitions/upgrades, leadership, education, personnel and facilities. While nonmateriel solutions (like the techniques described by Ret. Chief Warrant Officer 5 Dennis McIntire in the article “Mastering Dust Landings” on page 12) can improve situational awareness and operational safety, some

emerging technologies for materiel improvements to legacy and future aircraft provide a more complete solution. These technologies include, but are not limited to, improved sensors, displays, flight controls, low-speed flight symbology, synthetic vision and obstacle detection warning systems. Some sensors use millimeter wave radar, laser radar and forward-looking infrared to see “through” DVE. Various displays can provide this information to aircrews visually, aurally and through tactile stimulation. Fly-by-wire flight control systems with improved control laws and auto-land capability can reduce pilot workload during DVE conditions. Many of these systems have already been flight demonstrated.

Aviation operations in DVE have become the norm in OEF and OIF. Future deployment locations around the world may have the same type conditions. To give the warfighter and commanders the most capability and risk mitigation today and tomorrow, materiel and nonmateriel solutions identified in the ICT analysis for DVE must be implemented.◀◀



Keeping Safety in Sight

TRI-SERVICE VISION CONSERVATION AND READINESS PROGRAM STAFF
U.S. Center for Health Promotion and Preventive Medicine
Aberdeen Proving Ground, Md.

The Army has a comprehensive and effective program for preventing battlefield eye injuries. But what about the risk of an eye injury at home? The good news is Soldiers can use the same piece of gear, Military Combat Eye Protection (MCEP), to protect their vision in both environments.

The MCEP program is managed by the Program Executive Office (PEO) Soldier, the Army organization responsible for virtually everything a Soldier wears or carries, including protective eyewear. Type and style of eyewear is a personal preference and it's not surprising Soldiers are more likely to wear eye protection if it looks and

feels good. PEO Soldier has established a list of authorized products to help Soldiers make informed decisions when selecting combat eyewear. The Authorized Protective Eyewear List (APEL) is comprised of seven spectacles and five goggles that have been tested and certified to meet or exceed the standards for Army-approved ballistic eyewear. To

make the list, eyewear must meet both the American National Standards Institute eye protection standard (ANSI Z87.1 2003) for safety glasses and goggles, and the U.S. military's ballistic protection standards. While deployed, the general guideline is, "Any time your helmet is on, your MCEP should be on." However, the Tri-Service Vision Conservation and Readiness Program advocates taking that a step further: "Any time you are outdoors, your MCEP should be on." But are Soldiers aware that these eye protection devices can benefit them off the battlefield? Home and recreational activities pose similar risks for eye injury, and combat-approved



To help promote the use of protective eyewear, the Authorized Protective Eyewear List has been expanded to offer Soldiers more choices. The list can be found at <https://peosoldier.army.mil/pmseq/eyewearmessage.asp>.



AUTHORIZED PROTECTIVE EYEWEAR LIST



ESS Profile NVG
(Rx capability)
(4240-01-540-5585)



ESS Land Ops
(may be worn over glasses)
(4240-01-504-5576)



UVEX XC
(Rx capability)
(4240-01-516-5361)



Arena Flakjak
(4240-01-548-7366)



ESS Vehicle Ops
(may be worn over glasses)
(4240-01-525-5101)



Oakley SI Ballistic
M Frame 2.0
(4240-01-525-3095)



Revision Sawfly
(Rx capability, Dual Size)
(4240-01-527-4051 reg)
(4240-01-527-4018 lrg)



Revision Desert Locust
(Rx capability)
(4240-01-547-6218)



ESS ICE
(Rx capability, Dual Size)
(4240-01-525-5085 ICE 2)
(4240-01-537-6143 ICE NARO)



UVEX Genesis
(Rx capability)
(4240-01-552-4131)



Wiley X SG1
(4240-01-504-0994)



Wiley X PT-1
(4240-01-510-7853)

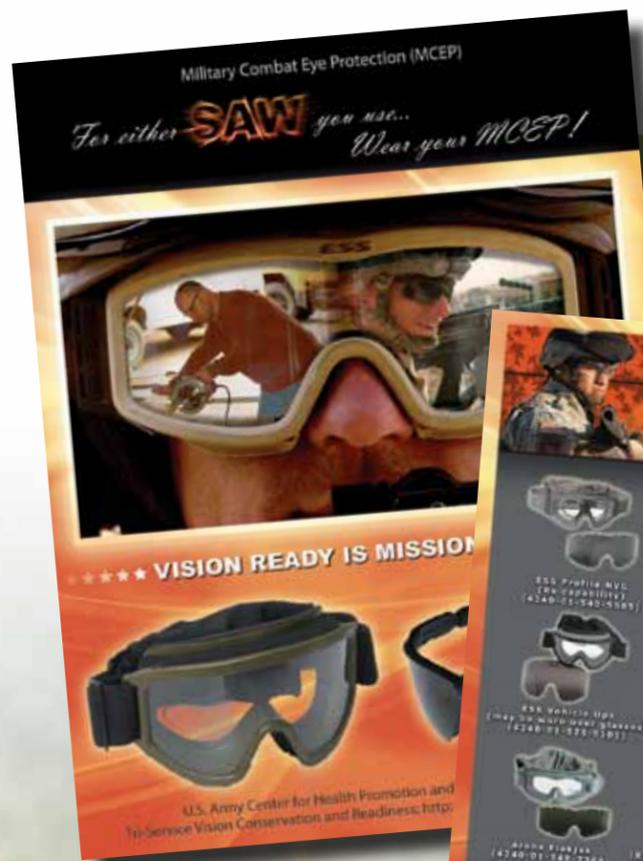
protective eyewear works just as well at home as it does on the battlefield.

Beyond deployment, the “train-as-you-fight” concept applies. MCEP should be worn during training, just as it would be worn during actual combat or deployment. However, the danger of an eye injury doesn’t end when Soldiers redeploy or leave the training area. Activities Soldiers perform routinely — groundskeeping, maintenance and shop work — all present significant potential for eye injury, both at work and home.

Common tasks like lawn mowing, weed whacking, auto

maintenance and working with power tools are some of the most common sources for eye injuries in U.S. households. According to an analysis of emergency department visits for eye injuries in 2005, 44.6 percent of serious eye injuries now occur at home, with work-related injuries at 20.3 percent. This is quite a change from a 1985 study that found 48 percent of eye injuries were work related and 27 percent happened at home.

Why the change? Over the past 20 years, enormous effort has gone into educating employers, supervisors and the



DID YOU KNOW?

The U.S. Army Center for Health Promotion and Preventive Medicine offers postcard-sized Authorized Protective Eyewear List reference cards to military organizations at no charge. To order cards, visit http://chppm-www.apgea.army.mil/hio_public/orders.aspx. Filter products by selecting the Workplace Safety and Health category and the Vision Conservation subcategory.

American workforce about the need for, and effectiveness of, safety eyewear in protecting against on-the-job hazards. This vision conservation effort, combined with legislative guidance from the Occupational Health and Safety Administration, has resulted in a decrease in workplace eye injuries.

The flip side of this improvement in work-related injury rates is that the message never made it home, where there is no mandate for use

issued a set of MCEP spectacles or goggles, those items are retained by the Soldier and can be used at home and work.

With the exception of racket sports and paintball (which have protective eyewear requirements specified by the American Society for Testing and Materials), MCEP eyewear meets the eye protection needs for most other eye hazards. An added benefit — they provide nearly 100 percent UV protection.

The success of safety eyewear programs in work environments can translate into a decrease in injuries at home. The U.S. Army Center for Health Promotion and Preventive Medicine strongly encourages Soldiers to use MCEP for any noncombat, nondeployment, nontraining activity where eye hazards exist. That includes home and work.

Remember, an eye injury occurring at home is as much of a threat to your vision as one that happens in the field. Make sure you’re protected — use your MCEP! Vision Ready is Mission Ready!◀

“The **SUCCESS** of **SAFETY EYEWEAR PROGRAMS** in **WORK** environments can **TRANSLATE** into a **DECREASE** in injuries **AT HOME.**”

of safety eyewear. While workplace injuries have gone down, home injuries have not. Fortunately, Soldiers already have the solution in hand. Once



A CHUMP on the ROAD

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I was a high school senior and it was just hours before prom. Even though it was pouring rain, I had my car washed and waxed. I picked up my tuxedo, but, being a kid, didn't know how it actually worked, so I called my mom at work. She told me her boss wouldn't let her off early, but I could drop by and she'd help me.



I put on the obvious parts — like the pants, shirt and cummerbund — but was clueless about how the bow tie worked or how the button covers went. I wanted to get everything right, so I jumped into my car and headed to where my mom worked.

I drove up a short on-ramp to get onto an interstate highway. Visibility was poor (thanks to the rain) and I was in a hurry. A pickup had stopped at the far end of the ramp, waiting to merge onto the highway. The driver looked back, checking for a gap in the traffic, so I did the same thing, hoping to spot one big enough for us both to merge. Sure enough, I saw a good-sized break in the approaching traffic. Glancing forward, I saw the

pickup's brake lights go off as the driver inched forward. I thought, "Good, this is it — now's my chance to merge."

I looked again to check the gap. Assuming the pickup's driver had pulled out, I nailed the gas without bothering to look forward. Bad move! Unfortunately, the pickup's driver had gotten cold feet and slammed on his brakes. When I looked forward, I swerved to the left, but it was too late to completely miss him. My right-front

fender and passenger door dragged along the left side of the pickup's rear bumper. While all I did was leave a dent in the bumper, it did a nice job of tearing up my fender and door.

And the fun wasn't over yet. I was still moving! In attempting to swerve and miss the pickup, I shot right into the middle of the traffic. Although I don't remember it, the pickup's driver said I swerved almost all the way across the highway

“ I LEARNED that just because I had a DRIVER'S LICENSE, it DIDN'T mean I knew how to SAFELY OPERATE a vehicle. ”



into the far-left lane, winding up in front of a huge tractor-trailer. Its driver moved left into the median as far as he could and managed to miss me.

Boy, was I lucky! When it was safe, I crossed the freeway and pulled onto the right shoulder. There, I discussed insurance with a very irate pickup driver. Fortunately, the car — although mangled — was still drivable.

I picked up my date and went to the prom. Not that it did me any good. All I could think about was the accident. I imagined what would have happened had I

hit a family in a van or a guy heading home from work to his wife and kids. I can only be thankful no one was hurt.

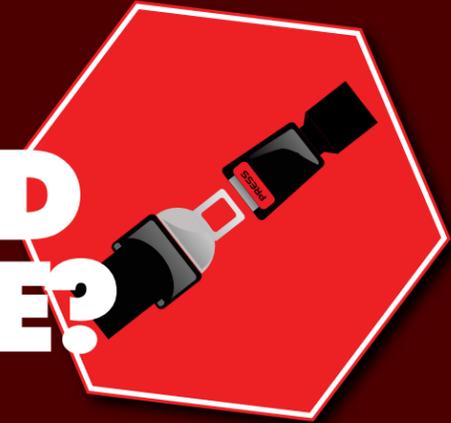
Looking back, I realize I not only almost killed myself; I nearly caused an accident that could have killed or injured others. And it was all because I was in a big hurry and too anxious to think about the consequences of my actions. I'd forgotten to take a moment and think about what I was doing. My car was a couple tons of metal moving down the road with a tank filled with flammable, explosive fuel. While it was a great way to get from point

A to point B, it could also be a battering ram if used irresponsibly.

I learned that just because I had a driver's license, it didn't mean I knew how to safely operate a vehicle. And that's scary. Driving safely isn't just knowing how to use the brakes, accelerator and steering wheel; it's paying attention to what's happening on the road around you and considering the consequences.

I was lucky that night. The only victim was my wallet, which was lightened by \$1,500 to cover my car repairs. While that wasn't exactly "chump change," it's cheaper than being a chump on the road. That can cost you — and others — a lot more!◀

WHAT WOULD IT TAKE?



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U.S. Army Combat Readiness/Safety Center
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There are events in your life that change the way you think. One happened to me when I was 17 years old.

As I sat on my front porch talking to a friend, we heard the screech of car tires followed by the sound of an impact. We looked up and saw a Cadillac sitting in the middle of the intersection. It had smashed into a Volkswagen Beetle, causing it to overturn three times before coming to rest on its tires against a house.

The Cadillac's driver was a 16-year-old boy who'd only had his license for two weeks. He'd been taking a spin in his father's car and, at the time, probably thought it was fun to go 10 mph over the speed limit and run a stop sign. The 17-year-old girl driving the Volkswagen was on her way home from working at a fast-food restaurant.

While my friend went into the house to dial 911, I went to see what I could do to help. When the Cadillac T-boned the Volkswagen, it crushed the passenger side of the car halfway to the stick shift. Although the driver's side had minor damage from the rollover, it was mostly intact.

What wasn't intact was the driver. It didn't take a doctor to know that the young lady would soon be dead. She

hadn't been wearing her seat belt and was tossed around inside her car while it rolled, breaking many of her bones. As she looked at me, blood came from her eyes, nose and mouth. I held her hand for the 10 minutes it took for the fire department to get there. But she took her last breath well before that.

I'll never forget her face or the look on the boy's face as he was handcuffed. He had started off thinking he was just going to have some fun, only to realize he'd just killed a young girl. I'll never forget the look of disbelief on her parents' faces when they drove up to the accident. I cannot even imagine the pain they must have felt.

I'll never forget that day. That's when I made up my mind to never ride in a car unrestrained. How about you? Have you made the same decision? If not, what would it take to get you to buckle up every time? Would it help change your mind to know 55 percent of vehicle occupants killed in accidents were unrestrained? Think about that the next time you take that short drive home. And hope it's not your last.◀

TAKE A WALK ON THE SAFE SIDE

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Safety is important for all roadway users — pedestrians and drivers alike. Both are expected to follow the safe rules of the road to help prevent crippling or deadly accidents.

Each year, about 4,600 pedestrians are killed and another 70,000 are injured in traffic accidents. Following the tips below will help you to walk on the safe side.

1. Be alert and attentive to traffic and don't cross the street until it's safe.
2. Be responsible and obey pedestrian Walk/Don't Walk signals.

One-third of all fatal collisions are a result of a pedestrian disregarding traffic signals or making a dangerous judgment.

3. Look left-right-left. If the road is clear, begin crossing. If you're in a country where motorists drive on the left side of the road, then reverse the process and look right-left-right.

4. When crossing the street, continue to check for traffic in all directions, especially for vehicles making a right turn on red.

5. At a crosswalk, if there is traffic, make eye contact with drivers so they can see

you, understand your intentions and stop before you start to cross.

6. Use sidewalks when they are available. On roads without sidewalks, it is safest to walk on the left side of the road, facing traffic.

7. Never attempt to walk along or cross expressways, interstate highways or turnpikes. If your vehicle breaks down, remain inside and use your cell phone to call for help.

8. When walking at night or during the low-light hours of dawn or dusk, wear something reflective on your clothing and shoes or carry a flashlight. Almost 50

percent of all pedestrian fatalities occur between 6 p.m. and midnight — a six-hour window. Wearing reflective clothing is especially important during the fall and winter months, when daylight hours are shorter and people often wear dark coats or other clothing which may be difficult for motorists to see.

9. Limit consumption of alcohol if you plan on walking. About 34 percent of all pedestrians killed have a blood alcohol content (BAC) of .08 or greater.

10. Supervise road crossings for children under the age of 10

since they don't have the capacity to safely judge the situation. Pedestrian fatalities involving children between the ages of 5 and 9 make up one-fourth of all roadway fatalities for this age group.

Drivers also need to be extra vigilant. Stay alert. Make sure your lights are on and refrain from taking your eyes off the roadway. Be sure to look for pedestrians in areas where they are likely to appear, such as an intersection, but remember walkers can be on any road. It could save a life — or change yours forever.◀

SAFETY IN THE SKY

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United States Military Academy
West Point, N.Y.

The West Point Sport Parachute Team commemorated its 50th anniversary with an alumni reunion and jump into the Army-Air Force football game. Team members were also celebrating a remarkable safety achievement, as well — no cadet fatalities in a half-century of participation and competition in a dangerous extreme sport.

The 32-member team, jumping five days per week and amassing more than 5,000 jumps per year, maintains an injury rate lower than most other sports at the Academy, including all contact sports. One of the reasons parachuting is inherently dangerous is equipment can be improperly rigged, packed or simply malfunction on opening. On average, skydivers worldwide experience malfunctions at a rate of about one per every 500 or so jumps. This year, West Point team members activated only three reserve parachutes, making their malfunction rate less than one-third the national average. The team noncommissioned officer in charge, Army rigger and instructor Sgt. 1st Class

Scott Graham, acknowledges the team's success, but points to daily effort and a safety-conscious climate as a simple answer to a complex safety challenge.

"We stress individual responsibility and accountability," Graham said. "Cadets, starting with their first jump, are charged with inspecting, packing and storing their assigned parachutes."

Cadets on the team also become certified as instructors so they can inspect each other before boarding the aircraft, continuously during ongoing operations and as they jumpmaster fellow teammates out the door.

The focus on individual

accountability and independent operations among these 19- to 22-year-old cadets, with only initial training and spot checking performed by well-trained cadre, may seem counterintuitive given the nature of parachute operations



and the Army's emphasis on safety. In fact, it's the key to the team's successful safety record.

"The parachute team is really a Leader development laboratory," said Col. Tom Kolditz, a West Point professor and participating instructor. "The danger that's inherent to this sport motivates cadets to focus intently on what they're doing, and with minimal coaching, they naturally assume responsibility and lead their less-experienced peers as the team trains."

Kolditz, who recently spoke on "in extremis leadership" at the Army's Senior Safety Professional Development Symposium, featured the parachute team's Leader development aspects

in a book used in courses at West Point and elsewhere.

In this spirit of leadership development, each cadet on the parachute team understands that the ultimate purpose of four years at the Academy is preparation for leading Soldiers as Army officers. In this respect, the cadets on the team take pride in the courage and competence parachute operations require.

"No other team at West Point offers opportunities that expose cadets as near to life-and-death decision-making," said Cadet Trey Wheeler, class of 2010.

A cadet chain of command built on trust and camaraderie lies at the heart of the team. Beyond the experience and

knowledge of the team's officer representatives and NCO coaches, cadets on the team take an active role in policing their own and expanding team skills.

Victories in competition and successful freefall parachute demonstrations are the West Point Sport Parachute Team's mission. However, all the accolades earned from performing well would be meaningless without an exemplary safety record. The team has the mentorship of its officer representatives and NCO coaches, as well as cadet leadership, to thank for such an accomplishment.◀



WE HAD LEGAL WEATHER

CHIEF WARRANT OFFICER 3 WILLIAM H. MURRAY
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Fort Belvoir, Va.

It was May 16, 2006 — a day in Iraq I'll never forget. I was the pilot in command (PC) in the lead aircraft on the downed aircraft recovery team (DART). The day started out as a normal standby day. We pre-flighted the aircraft and, afterward, I conducted a thorough crew brief.

Following my brief, I returned to my room to catch a movie. A few hours later, I got a knock on my door and was told we had a mission and to report to the tactical operation center (TOC). My pilot (PI) for the mission was my roommate, so I didn't have to go far to instruct him to find the crew chiefs and meet me at the TOC.

I met the PC of the second aircraft at the TOC and reported to the battle captain to discuss the details of our mission. He told us an aircraft was down in Q-West due to tail rotor problems. After our PIs entered the TOC, we got our S-2 brief, maps and route of flight. After the crew brief, we sent our PIs to assemble the DART team and had them meet us at the aircraft. Both flight crews checked weather and exchanged information for the flight to Q-West.

At the aircraft, I had another crew brief. I updated my crew and the DART team on mission details. We went over the weather, frequencies and route of flight. We strapped in and took off as a flight of two. I was the lead aircraft to Q-West and the flight went off without any issues.

After landing at Q-West, the maintenance test pilot (MTP) examined the broken aircraft. The crew with the broken aircraft swapped aircraft with Chalk 2 of the flight and took off to continue their mission. The MTP diagnosed the problem and quickly fixed the aircraft. He then took a test flight around the traffic pattern. The test flight was successful and we continued as briefed.

In the meantime, my PI and I walked over to operations to check on weather and

get approval from our TOC for the flight back. The weather report showed some thunderstorms to the south. Our battalion commander changed up the crews.

My crew consisted of a senior PI with more than 200 hours in Iraq, and I had more than 600 hours in country. Chalk 2 consisted of a new lieutenant and an MTP who did not have a lot of time outside the traffic pattern of Forward Operating Base (FOB) Speicher. It was a good crew change due to the situation we were about to face. The battalion commander directed I take Chalk 2 to keep an eye on the tail rotor of Chalk 1. We conducted another crew brief because of the crew change and, based on my having the most experience, I took the DART team and passengers.

The thunderstorms

were approaching Q-West from the south quicker than expected. We took off without delay. After we cleared Q-West airspace, the thunderstorm was over Q-West. We responded to Q-West tower and cleared their airspace. We soon noticed some thunderstorms developing on our route of flight. After having a brief discussion with Chalk 1, we agreed I would take the lead.

I passed Chalk 1 off the right side since I was on the controls in the left seat. We changed our route and crossed the Tigris River. The reason for the flight change was to give us a recovery base should the weather toward FOB Speicher go below visual flight rules (VFR) minimums. After crossing one of the ridges, we noticed the weather toward Kirkuk had deteriorated, so we weren't able to recover there as planned. We were being funneled in one direction and that was toward Speicher. After many talks with Chalk 2, we knew we had only one way to go.

We turned our aircraft toward Speicher. We were still on the north side of the Tigris, so we had one more ridge to cross. Just when I thought the weather couldn't get any worse, dust storms appeared on our right and left. I saw our path narrowing. This was unbelievable! This was not a good situation.

I asked my crew chiefs if I was clear left. My left crew chief responded I was not clear left. I then asked if I was clear

“ Just when I THOUGHT the WEATHER COULDN'T GET any WORSE, DUST STORMS appeared on our RIGHT and LEFT. ”

right. My right crew chief also said I was not clear right. I was a little confused and asked them to clarify why I could not turn left or right. That's when they informed me the dust storms had merged behind us.

I radioed Chalk 2 and we knew there was only one way to go. I asked if Chalk 2 had their instrument approach card to Speicher. They came back with a "yes." I had hoped not to use it; nevertheless, we conducted the inadvertent instrument meteorological conditions (IIMC) brief over the radio. Both chalks knew the corresponding altitude and frequencies if the weather worsened.

Thinking ahead, I knew the air would be a concern when crossing over the other ridgeline. As we got closer to the ridgeline, I started to climb. I didn't want to start too early because I didn't want to go IIMC. As we got closer to the ridgeline, the downdraft got stronger. I was in a 5- to 7-degree nose-up attitude and pulling close to 100 percent torque. The dust storm quickly converged in front of us. Once we topped the ridge, I radioed Speicher tower about the weather. Speicher quickly came back with, "We were IMC, but now we're VFR." That was finally some good news.

The bad weather was

unyielding and we slowed down to about 80 knots to keep the ground in sight. We continued the rest of the flight off of visual cues. A normally 45-minute flight had taken us well over an hour. I had my PI perform several fuel consumption checks because we needed to know exactly how much time we had.

Our aircrews carefully synchronized the next 30 minutes, using excellent aircrew coordination skills. After looking at the global positioning system (GPS), we realized we were approaching the 10-nautical-mile ring of Speicher. I radioed Speicher tower, reported my location and requested to land. We landed at our parking spot and my passengers quickly got out of the aircraft and kissed the ground. I heard a lot of thank yous.

All our training came to reality in one flight. The weather never got any better that day and I was doing all I could to keep my UH-60L in the air. We had lightning strikes all around us and we were tossed around like a rock in a soda can.

The crew coordination in my aircraft and with Chalk 2 was amazing and was the key to completing the mission without incident. Both crews relied on their training. That training kept a bad situation from getting worse.

The moral of the story is keep your cool and rely on your training. You never know when it might one day save your life.◀

NEW LOOK, GREAT INFORMATION



U.S. ARMY COMBAT READINESS/SAFETY CENTER

<https://safety.army.mil>

Visit our new Web site to find easily accessible information and tools that can assist you in keeping our Band of Brothers and Sisters

ARMY SAFE



ARMY SAFE IS ARMY STRONG



The debilitating effects of alcohol have been documented for centuries. A passage in an Egyptian papyrus from 1500 B.C. warned that drinking could lead to falls and broken bones. Ancient texts even refer to fatal accidents, including fires, falls and drowning, caused by drunkenness.

Drinking and Most Things Don't Mix

DR. PATRICIA LEDUC
Human Factors Task Force
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

From antiquity to the present, alcohol abuse has remained a major problem. It's amazing how things haven't changed much in the last couple thousand years. The main difference now in alcohol-related accidents is the physics. At the high

speeds offered in modern vehicles, a collision or sudden impact exacts a terrible toll upon the human body.

Everyone knows drinking and driving is illegal and dangerous for the person behind the wheel, but what about the danger impaired

drivers pose to passengers and others. In a number of off-duty accidents, Soldiers have lost their lives when riding in cars driven by drunk drivers.

One of the most widely known safety campaigns — "Don't Drink and Drive" — has been reinforced throughout every level of the Army. Soldiers, Family members and civilian personnel are urged not to drive after drinking and have been warned of the potential consequences.

OK, drunk driving is bad. Got it! But an equally important message is that performing just about any activity while impaired is dangerous and can result in injury or death.

“ But an **EQUALLY IMPORTANT MESSAGE** is that **PERFORMING** just about **ANY ACTIVITY** while **IMPAIRED** is **DANGEROUS** and can result in **INJURY** or **DEATH.** ”



Drunk Soldiers have wandered into the road or attempted to cross traffic and been hit by cars. Others were hit and killed by trains while walking on the tracks. That's right — hit by trains. Sounds pretty impossible to most of us, as trains are big and loud, but it has happened 12 times since 1998. Three of those deaths occurred during the past year. Of all 12 pedestrian/train collisions, only two didn't involve alcohol.

According to the National Highway Traffic Safety Administration (NHTSA), in both 1993 and 2003, roughly half of all pedestrians age 21 to 44 who were killed in traffic accidents had a blood alcohol content (BAC) of .08 or higher. The Army has lost 56 Soldiers in off-duty pedestrian accidents during the past 10 years. These statistics mirror those of the civilian sector, with 49 percent of Soldier pedestrian fatalities involving probable use of alcohol. All but one of these accidents occurred in the late evening, after 10 p.m., or the early morning, before 6 a.m.

You might wonder how so many people manage to get hit by cars. The answer lies in the effects of alcohol — diminished coordination and balance and impaired attention and

judgment. Alcohol not only contributes to motor vehicle and pedestrian accidents, it is also a factor in other accidents such as falls, drownings and burns. Most of the sober Soldiers killed during pedestrian activities died when they had car trouble or stopped to help someone on the road.

Alcohol is the most frequently abused drug throughout the

under the influence of alcohol. Many of these accidents did not have happy endings.

Since fiscal 1999, 32 Soldiers have died from off-duty falls. Only eight (25 percent) of these Soldiers were confirmed not to be under the influence. Data from the National Center for Injury Prevention and Control (NCIPC) shows that excessive alcohol consumption

“ In addition, **ALCOHOL** use is **INVOLVED** in about **HALF** of all **WATER RECREATION DEATHS** such as boating. ”

world and related injuries are a major cause of morbidity and mortality. Alcohol intoxication, common in both social drinkers and alcoholics, profoundly impairs cognitive function and motor skills.

Ironically, many people feel a sense of mastery while they are drunk. This leads them to believe that they can do anything as well as, if not better than, anyone else. This is seen in accidents where Soldiers tried climbing balconies or hanging out of barracks windows while

is a significant factor in civilian accidental deaths from falls.

The NCIPC also reports that alcohol is involved in 40 to 50 percent of drowning deaths among young males. In addition, alcohol use is involved in about half of all water recreation deaths such as boating. Seventy-five Soldiers have drowned in swimming, boating, fishing and personal watercraft accidents over the last decade. Of those, 92 percent were males, with 75 percent being under the age of 30. In those cases where

alcohol use was examined, 42 percent involved the use of alcohol. And by the way, none of the Soldiers who drowned were wearing a life jacket.

Alcohol can impair our ability to do many things. That is why all 50 states, the District of Columbia and Puerto Rico impose a BAC limit of below .08 for driving. In addition, most states impose a BAC limit of either .08 or .10 or lower for boating, and all states have boating-under-the-influence laws.

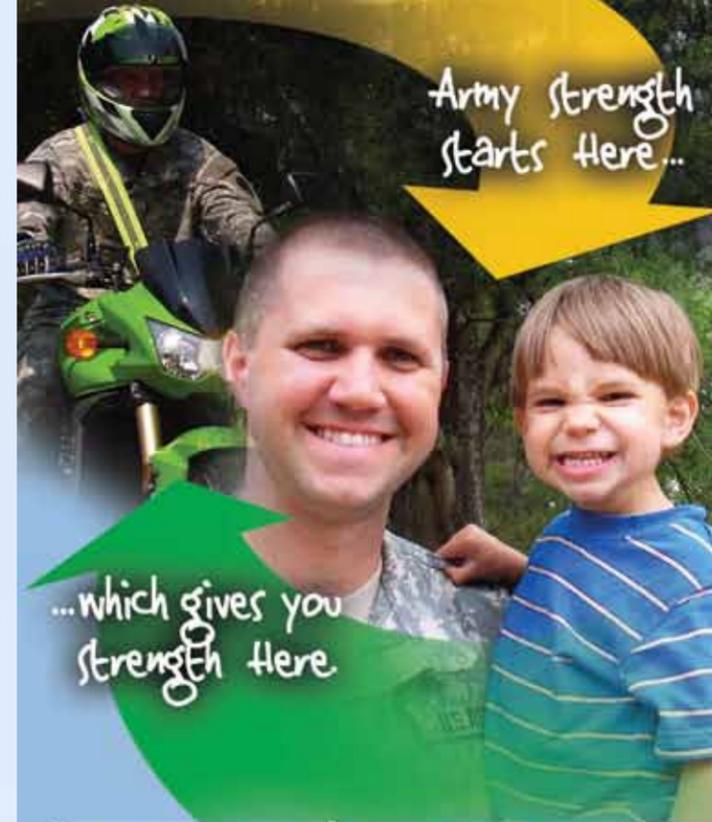
Ancient Egyptians warned us alcohol could make people act stupid. They described an excessive beer drinker's behavior as: "You think it proper to run down a wall and to break through the board gate; the people run away from you ... if you then talk, so from your mouth comes nonsense."

We have all seen someone behave that way when they drank too much. If you see a

battle buddy about to misstep and possibly cause themselves or others harm, intervene. It usually doesn't take much to influence them to do the right thing.

If you drink, take a cab. If you drink, don't go swimming. If you swim, wear a life jacket.

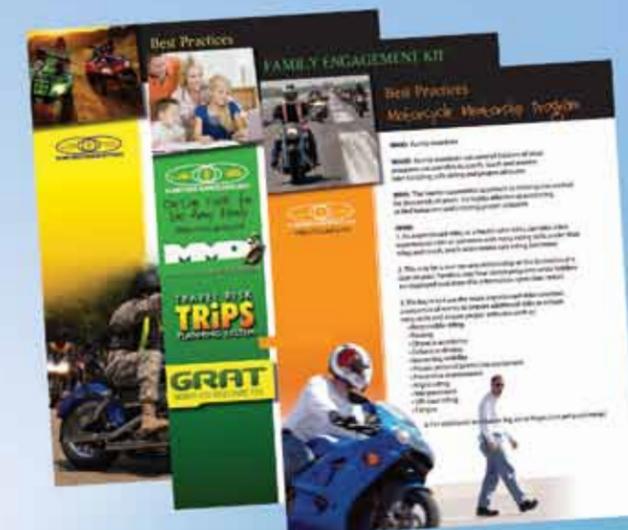
If you have a particularly argumentative friend who insists on acting stupid, call the police. It's better to have a ticked-off friend with a public intoxication ticket than to wake up the next morning hung over to find out that your friend is now a statistic in our database. Watching out for your buddies, even when you aren't on duty, is still part of the job description of "friend."



<https://safety.army.mil>

Army Safe is Army Strong and that starts with a Soldier's Family. Have the information to help you and your Family stay SAFE.

Be prepared and get your own Family Engagement Kit TODAY!



Cleaning House

VICKI ARNESON-BAKER
G5
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.



Housekeeping — it's a chore many of us would prefer to avoid. But did you know good housekeeping practices in the workplace can keep you safe?

Importance of Housekeeping

Poor housekeeping frequently contributes to accidents by hiding hazards. These hazards can cause accidents such as tripping over materials left on floors and other walkways; being hit by falling objects; slipping on greasy, wet or dirty floors; running into poorly stored items; or cutting, puncturing or tearing the skin of hands or other body parts on sharp, projecting materials.

If unorganized storage areas, cluttered hallways or slick floors

are considered normal in your workplace, then other, more serious safety hazards may easily be overlooked. Good housekeeping habits support composite risk management (CRM) practices by helping us identify, assess and mitigate or eliminate hazards in the workplace.

To avoid these hazards, a workplace must maintain good housekeeping practices throughout the day. However, there's more to housekeeping than just cleanliness. It also includes

keeping work areas neat and orderly; storing items properly; ensuring floors and other work surfaces are free of slip and trip hazards; and removing waste materials (e.g., paper, cardboard) and other fire hazards.

Regulatory Requirements

The relationship between good housekeeping and a safe working environment is widely recognized as a good practice. The Occupational Safety and Health Administration (OSHA)

requires "all places of employment, passageways, store rooms, and service rooms shall be kept clean and orderly and in a sanitary condition" (29 CFR 1910.22 (a)). Maintaining good housekeeping is also required by Department of the Army Pamphlet 385-10, Army Safety Program, paragraph 14-8 b (3), which states, "Storage areas will be kept free from accumulation of materials that constitute hazards from tripping, fire, explosion, or pest harborage."

Developing a Good Housekeeping Program

A good housekeeping program must include careful planning, a clean-up standing operating procedure or policy, an effective inspection process and continuous supervision and enforcement of housekeeping rules. Remember that good housekeeping is maintained, not achieved. Develop a daily clean-up policy and periodically review housekeeping rules, policies and procedures. Effective housekeeping is an ongoing, conscious effort by everyone working in the area throughout the day. Housekeeping that relies on spring clean-up events are more time consuming and less effective in eliminating hazards and reducing accidents.

Best Practice

One best practice for good housekeeping is the U.S. Environmental Protection Agency's 6S method to create and maintain a clean, orderly and safe work environment. The 6S is based upon the five pillars (5S) of the visual workplace in the Toyota Production System, plus a separate pillar for safety (5S + Safety), as seen in the graphic below.



Remember, good housekeeping practices are not only required by laws and regulations, they also protect you by reducing workplace hazards.◀

HOUSEKEEPING CHECKLIST

- **Floors**
Keep floors clean, dry and free of debris and in good condition.
- **Aisles and Stairways**
Should be clearly marked and well lit; good stair treads; unobstructed; and free of temporary storage.
- **Spill Control**
Promptly clean up spills; use proper absorbent rags for greasy, oily materials; and dispose of used rags properly and promptly.
- **Equipment**
Inspect regularly, use drip pans to contain leaks, repair/report broken tools, return equipment and tools to their proper place after use. Service guards and safety features to ensure they are operational.
- **Waste Disposal**
Properly dispose of waste, ensuring you have an adequate number of containers, including those approved for toxic and flammable waste. Empty those containers regularly.

- **Storage**
Stack materials neatly, place heavy or bulky items on the bottom, keep cabinet doors and drawers closed when not in use.

CLEAN-UP TIPS

- **Wear eye protection.**
- **Use hearing protection with loud equipment, such as a leaf blower.**
- **Wear gloves to protect hands while picking up debris.**
- **Be aware of traffic and warn traffic of work ahead.**
- **Wear proper footwear to protect feet.**
- **Review safety precautions for tools and equipment (ladders, lawnmowers).**

FYI

For more detailed information on 6S, visit the Environmental Protection Agency's Web site at <http://www.epa.gov/lean/toolkit/ch5.htm>.





LOST

AVIATION



CLASS C

■ The aircraft contacted the approach edge of a concrete helipad during landing, resulting in damage to the 30 mm cannon, surrounding fuselage area and portions of the main landing gear.



CLASS A

■ The aircraft's main rotor system contacted a power line

during liftoff. During an attempted recovery, the rotor struck a utility pole.



CLASS B

■ As the pilot in command (PC) and crew chief were boarding the aircraft, it became airborne for an unknown reason. Both crewmembers fell about five feet to the ground. The PC suffered potentially disabling injuries.

WERE THE CONTROLS GUARDED WHEN THE CREWMEN WERE ENTERING THE AIRCRAFT?



CLASS C

■ A cabin window separated from the aircraft in flight and damaged the tail rotor gearbox cover and one tail rotor paddle. The window was recovered.

UAS



CLASS B

■ The UAS failed to respond to flight control input during operator training and drifted off the runway, striking both

controllers and coming to rest in an adjacent ditch.

RQ-7B



CLASS B

■ The UAS experienced an engine failure while in Tactical Automated Landing System mode. The recovery chute was deployed and the UAS landed with significant damage.

■ The aircraft experienced a generator failure and subsequent engine failure indication during flight. The recovery chute was deployed, but the signal was lost. The UAS landed with significant damage.

GROUND

ACV



CLASS A

■ Three Soldiers were killed when their M1151 HMMWV overturned into a canal next to a roadway. The section of the road the Soldiers were traveling collapsed under their vehicle due to recent rains. Personal protective equipment (PPE) use was not reported.

Personnel Injury

CLASS B

■ A Soldier's left index finger was amputated to the first knuckle when it was caught between the fairlead and winch cable during vehicle maintenance.

■ A Soldier partially severed two fingers and severely damaged another finger while cutting wood with a table saw for a unit self-help project. The Soldier was not using the saw's blade guard.

■ A Soldier on lifeguard duty at a beach suffered a permanent partial disability injury when he dived into shallow water. The Soldier was pulled from the water by other lifeguards and transported to a hospital.

DRIVING

POV



CLASS A

■ A Soldier was driving his large sport utility vehicle with another Soldier riding as a passenger when he struck the back of a parked tractor-trailer. Although the Soldier driving the vehicle survived, his passenger died at the scene. According to police reports, the Soldier driving the vehicle was intoxicated. Both Soldiers were wearing their seat belts.

■ A Soldier was driving home following unit PT during inclement weather when he lost control, slid into the oncoming lane and collided with a pickup. The Soldier, who was wearing his seat belt, was taken to a local medical center, where he was pronounced dead.

ARMY AVIATION LOSSES

Fiscal 2009
as of Mar. 4, 2009



ATTACK	0/0
RECON	1/2
UTILITY	3/2
CARGO	0/0
UAS	1/0
FIXED-WING	0/0
TRAINING	0/0
TOTAL	5/4

ARMY GROUND LOSSES

Fiscal 2009
as of Mar. 4, 2009



AMV	11/10
ACV	5/2
PERSONNEL INJURY <small>includes weapons-handling accidents</small>	14/11
FIRE/EXPLOSIVE	1/0
PROPERTY DAMAGE	0/0

TOTAL	31/23
--------------	--------------

■ A Soldier was driving his privately owned vehicle (POV) — a high-performance, rear-wheel-drive car — following unit physical training (PT) when it left the road, crossed the median and struck a vehicle in the oncoming lane. Snow and icing conditions were present at the time of the accident. The Soldier, who was wearing his seat belt, died at the scene.

LEADERS, DO YOUR SOLDIERS KNOW REAR-WHEEL-DRIVE POVS CAN BE TRICKIER TO HANDLE ON ICY ROADS THAN FRONT-WHEEL-DRIVE MODELS?

■ A Soldier with a civilian passenger was speeding in his sports car when he went off the road and struck a tree. The Soldier, who was home on leave, died at the scene and the passenger was taken to a local medical center. The Soldier was not wearing his seat belt.

■ A Soldier was driving late at night when he lost control, struck a median and then collided head-on with a tractor-trailer. The Soldier, who was on leave and on a lengthy road trip to visit family, died at the scene.

■ A Soldier was speeding in his pickup early in the morning when he lost control in a curve, left the road and hit a tree. The Soldier was not wearing his seat belt and died at the scene.



CLASS A

■ A Soldier was using his privately owned motorcycle (POM) to travel on permissive temporary duty when he broadsided a civilian driver who pulled out in front of him. The Soldier was taken to a local medical center, where he was pronounced dead. The Soldier had received the required Motorcycle Safety Foundation (MSF) training and was wearing his helmet and PPE.

■ A Soldier was operating his sportbike on an interstate when he rear-ended a dump truck and struck a guardrail. The Soldier, who had received MSF training and was wearing his helmet and PPE, was pronounced dead at a local hospital.

■ A Soldier was operating his sportbike when it broadsided a pickup as it pulled into the right lane of the highway. The Soldier was thrown from his bike and died at the scene. Local authorities reported speed was a factor in the crash.

The Soldier, who was wearing his helmet and PPE, had completed MSF training and was a member of his installation's motorcycle mentorship program.

■ A Soldier was going more than 100 mph on his sportbike when he struck the passenger side of a civilian-owned POV as it was turning. The impact killed both the Soldier and the civilian driver. The Soldier had completed MSF training and was wearing his helmet and PPE.

DO YOUR SOLDIERS UNDERSTAND THAT RECKLESSNESS ON A MOTORCYCLE THREATENS THEMSELVES AND OTHERS ON THE ROAD?

Editor's note: Information published in the accident briefs section is based on preliminary loss reports submitted by units and is subject to change. For more information on selected accident briefs, e-mail safe.knowledge@conus.army.mil.

POV DRIVING LOSSES
Fiscal 2009

as of Mar. 4, 2009 Class A/Fatalities

CAR	15/16
SUV/JEEP	8/8
TRUCK	6/5
MOTORCYCLE	10/10
PEDESTRIAN	5/5
OTHER*	1/1

45
TOTAL DEATHS

Fiscal 2008: **54** 3 year average: **47**

*Includes: vans and ATVs

TRAVEL RISK TRIPS

PLANNING SYSTEM

<https://safety.army.mil>

ARE WE THERE YET?

Be realistic about the distance you can cover in a day. Find out before hitting the road. Use the easy, online TRIPS tool today!

Get the tools before
the road gets rough.



Driver's Training Toolbox

<https://safety.army.mil>



U.S. ARMY

ARMY STRONG.



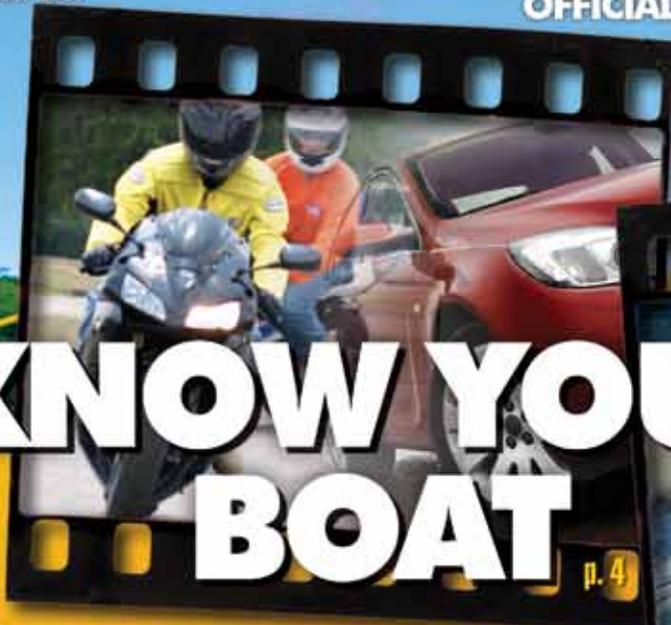
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**ARMY SAFE
IS ARMY STRONG**

KNOWLEDGE

VOL 3, MAY 2009

OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY



KNOW YOUR BOAT

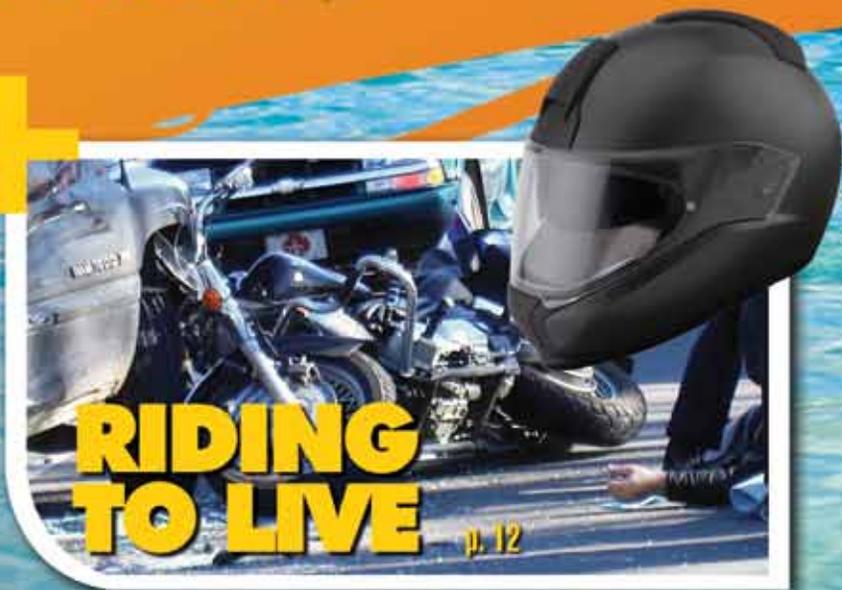
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RIDING TO LIVE

p. 12



ARMY STRONG



U.S. ARMY COMBAT READINESS/SAFETY CENTER
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ARMY SAFE IS ARMY STRONG



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Mission statement: USACRC supports our Army by collecting, storing, analyzing, and disseminating actionable information to assist Leaders, Soldiers, Families, and Civilians in preserving/protecting our Army's combat resources.

We welcome your feedback. Please e-mail comments to safe.knowledge@conus.army.mil.

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Knowledge provides a forum for Soldiers, Leaders and safety professionals to share best practices and lessons learned and

maintain safety awareness. The views expressed in these articles are those of the author and do not necessarily reflect the official policy or position of the U.S. Army, Department of Defense or the U.S. Government. Contents are specifically for accident prevention purposes only. Photos and artwork are representative and do not necessarily show the people or equipment discussed. Reference to commercial products does not imply Army endorsement. Unless otherwise stated, material in this magazine may be reprinted without permission; please credit the magazine and author.



» FROM THE DASAF

LEADERS must **TAKE** an active **INTEREST** in **WHAT** their **SOLDIERS** are **DOING** with their **TIME OFF** and **HELP** them **IDENTIFY** potentially **HIGH-RISK** **ACTIVITIES** or behaviors that could **CAUSE** serious **INJURY** or **LOSS** of **LIFE.**



As I travel around the Army and talk to Leaders and Soldiers, I am constantly reminded of how our environment is in a constant state of change and how critical it is that Leaders seek out ways to integrate composite risk management into all activities — on and off duty. Nowhere is this more obvious than with the recent change from winter to spring/summer-like temperatures.

Most of us recognize May as the unofficial kickoff to summer. This is the time of year for outdoor activities, vacations and road trips. But, we should not forget that the time between Memorial Day and Labor Day is also when our Soldiers and Families are at the greatest risk to off-duty summer injuries or fatalities.

Most schools are out, pools are open and Soldiers and their Families are looking for fun ways to cool down as summer temperatures heat up. As you head to the lake, beach or mountains for a weekend getaway or Family vacation, remember that safeguarding our Soldiers and their Families

from needless summer off-duty tragedies is the No. 1 priority.

To help you and your Family keep summer safety in mind, our Army's annual Safe Summer campaign starts this month and with it is a great opportunity for Leaders, Soldiers and Family members to create an effective summer accident prevention campaign. Running May through September, this year's campaign will be driven by the theme "No one stands alone," which highlights that every member of the Army community plays a part in protecting our band of brothers and sisters.

This year, we have implemented changes to the program to allow Leaders and safety professionals, at every level, the opportunity to tailor their summer safety campaigns to meet the needs of their specific audiences. Beginning May 4, all of the campaign's tools and resources

will be available online at <http://safety.army.mil>. This means posters, articles and videos relating to nearly 20 summer safety topics will be ready to be released and plugged into individual safety campaigns three weeks ahead of the Memorial Day weekend.

In addition to the wealth of resources available online, we will publish periodic news releases containing information to help Soldiers use composite risk management in making sound judgments while on and off duty during the Safe Summer campaign.

While we will have an arsenal of Safe Summer tools for your use, Leaders, peers and Families are the cornerstone of protecting the force against off-duty risk and preventable accidents. Leaders must take an active interest in what their Soldiers are doing with their time off and help them identify potentially

high-risk activities or behaviors that could cause serious injury or loss of life. Soldiers' taking care of Soldiers is also a key component to driving down the number of off-duty accidents. Likewise, Family members are the front line of defense when it comes to impacting a Soldier's off-duty decision-making process.

During this time of summer fun, each of us — Leaders, Soldiers and Families — must help each other manage off-duty risk. It's our duty and responsibility to ourselves and each other. As always, please look out for your Army brothers and sisters. May each of you have a safe and fun summer!«

Army Safe is Army Strong!

William T. Wolf
Brigadier General, USA
Director of Army Safety

Know, Know, Know Your BOAT

COURTESY OF THE U.S. COAST GUARD

“I’ve been piloting boats since before I could walk!” Maybe so; but no matter how experienced you may be as a boater, it’s worth paying attention to the handling characteristics of every boat you own or operate.



Every boat — even boats of the same type from the same manufacturer — handles differently. Your own boat responds differently from day to day as a result of weather, current, temperature, load and other factors.

Boaters who ignore these handling characteristics are risking their safety. Coast Guard data show that “collision with another vessel” is the No. 1 type of recreational boating accident; “collision with a fixed object” is second.

If you’re interested in the technical factors that influence handling characteristics such as side force, frictional wake current and drag, a review of one of the many boat-handling and seamanship publications, or the specifications supplied with your boat, will provide a wealth of useful information.

In the meantime, there are simple steps that the

Coast Guard recommends that every boater, including experienced boaters, go over as a matter of routine.

Drill It In

Whether you’ve been operating a particular boat for three years or three minutes, it’s a good idea to try some drills related to boat handling. Pick an open area on a calm day. Practice turning, stopping and reversing course at various speeds and pay attention to your turning radius, stopping distance and maneuverability when the boat has more or less momentum.

Later, try the same drills in rougher water, with more wind and with more or less weight in the boat. You may be surprised how much these variables can change the way your boat handles. At a minimum, these drills should be conducted on an



annual basis, especially if you live in an area of the country where your boat is stored during the winter. Once your boat has been launched for the summer boating season, take some time to reacquaint yourself with your vessel's handling characteristics.

A Weighty Issue

Do you know how much you weigh? Not trying to ask personal questions, but as the boat owner or operator, it's important that you know the total weight of the equipment and persons you bring onboard and ensure that it's

within the limits listed on your boat's capacity plate (if one is provided). You must take into consideration everything you've taken onboard such as fishing gear, a cooler, water (8 pounds per gallon), food and fuel (6 pounds per gallon). Exceeding your boat's rated capacity is dangerous and can severely affect safe handling.

Even if you're within the appropriate weight limit for your vessel, that weight must be properly distributed. Power trim and trim tabs are useful tools, but it's better to carefully balance weight fore and aft, port and starboard, to avoid listing or "porpoising" — both of which make handling a vessel more difficult.



DID YOU KNOW?

The U.S. Coast Guard's 2007 Recreational Boating Statistics show:

- 685 fatalities — 3,673 injuries — 5,191 accidents — \$53 million in property damage.
- 90 percent of drowning victims were not wearing life jackets.
- Alcohol was the leading contributing factor in approximately one-fifth of all boating fatalities.
- Only 14 percent of all boating fatalities occurred on boats where the operator had

received boating safety instruction.

- The most reported type of accident was a collision with another vessel. However, capsizing and falls overboard are the most reported types of fatal accidents and accounted for the majority (60 percent) of all boating fatalities.
- Overall, operator inattention, carelessness/reckless operation, excessive speed and passenger/skier behavior are the leading contributing factors of all reported accidents.

NOAA News is Good News

Finally, check the weather before you go out, and not just to find out whether you'll need a sweater. Wind and waves can drastically change a boat's handling characteristics. Take a few minutes to listen to the National Oceanic and Atmospheric Administration

(NOAA) marine forecast on your VHF radio, even if it's currently bright and sunny. You'll be much better off making the conscious decision not to pilot your boat in 30-mph winds than accidentally finding out you're incapable of it. For further information on NOAA,

check out www.noaa.gov/.

Yes, you may be an experienced boater. But even if you were born with tiller in hand, it's worth taking a little extra time to make sure you've mastered the handling of this boat on this day under these conditions.◀

BOAT RESPONSIBLY

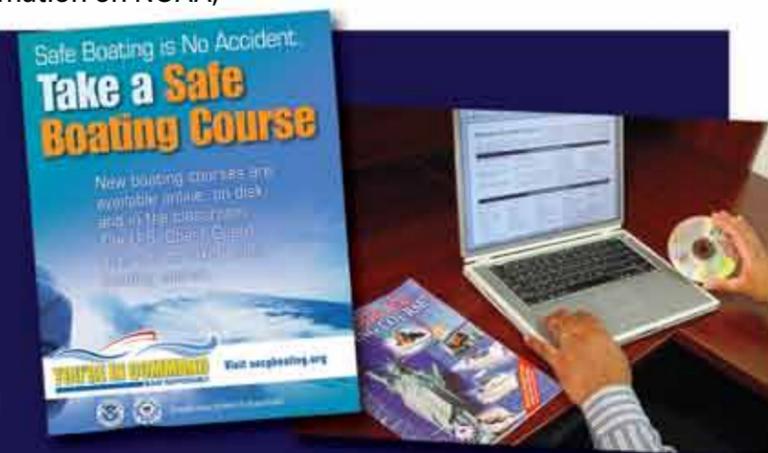
"Boat Responsibly" is the U.S. Coast Guard's public boating safety outreach initiative, which encourages all recreational boaters to take responsibility for their actions on the water. As a boat owner or operator, you are responsible for your safety and the safety of your passengers. Here are some steps you can take to stay safe on the water:

Take a safe boating course. Many boating safety courses are offered throughout the country for all types of recreational boaters and for boaters of all ages. Qualified volunteer organizations sponsor many courses, and many state boating agencies also

provide classes. To learn about the classes available, visit www.uscgboating.org/safety/courses.htm.

If you need to take the course, but have trouble finding the time, an online option is available. America's Boating Course is an electronic basic-boating course produced through a partnership between the U.S. Coast Guard Auxiliary and the United States Power Squadrons. Sign up online or order the CD-ROM at www.americasboatingcourse.com/.

Take advantage of the Coast Guard's free vessel safety check (VSC), a bow-to-stern inspection of your boat by a qualified member of the U.S. Coast Guard Auxiliary. It's your best way to learn about potential problems that might put you in violation of state or federal laws, or, worse, create danger for you or your passengers on the water. Things can go wrong on the water, with dangerous, even



fatal, results. The Coast Guard recommends you get a VSC every year. Learn what's involved at www.uscgboating.org/command/initiative/vsc.htm.

Water wear

COMPILED BY THE KNOWLEDGE STAFF

The U.S. Army Corps of Engineers is the leading provider of outdoor recreation on all federally managed public lands in the United States and the nation's largest provider of water recreation. Last year, more than 353 million visitors spent nearly 2 billion recreation hours at Corps water projects.

More visitors spending more hours is a strong indicator of the Corps' success in providing safe, family-oriented water recreation. It also means that safety efforts must keep pace to provide visitors with the safest experience possible. The men and women of the Corps' National Water Safety Program are at the forefront of water recreation risk management efforts.

The Corps' water safety experts agree that it all comes down to the basics. When on or near the water, know your limits, learn to swim, have someone watch you and don't

get out there by yourself. And the most critical factor of all — wear your life jacket.

Proper and consistent use of life jackets, also known as personal flotation devices (PFDs), is one of the Corps' primary education and prevention messages. It's a message that has real potential to save the lives of Soldiers and Family members. Between fiscal 2000 and 2008, the Army lost 15 Soldiers who drowned in boating accidents. In six of these accidents, it was reported that life jackets were available but not worn.

Lynda Nutt, manager, National



Operations Center for Water Safety, spoke with Knowledge to clear up some common water safety misperceptions and share the latest and greatest in life jackets.

KNOWLEDGE: What are the major causes of drowning at your facilities?

NUTT: Not wearing a life jacket; abuse of alcohol; lack of sufficient swimming skills; hypothermia; and, one that affects swimmers of all ages, lack of supervision.

Supervision? Even for adults?

For everyone, regardless of age. You should never swim alone. Having a swim buddy greatly increases your odds of rescue if you get into trouble in the water.

What are the circumstances you see most frequently in boating-related fatalities?

Those related to poor decision-making and failure to properly assess risks.

Can you give an example of a poor decision or failure to assess risk?

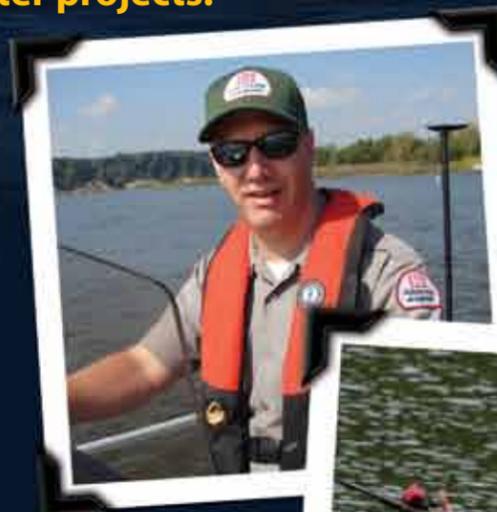
Some people make plans for water activities and, despite negative conditions such as rain or wind, still choose to continue out onto the water. In that weather, small craft are likely to capsize — a completely preventable accident. But the most common factor is failure to wear a life jacket. Of the water-based fatalities at Corps' facilities, 93 percent of those who lost their lives were not wearing a life jacket. And the largest demographic of fatalities we see is males in their mid-30s.

So wearing a life jacket is the single-most important thing you can do to avoid drowning?

Absolutely. It's a no-brainer, but I can't say it enough — you've got to wear it!

Statistics show people aren't wearing PFDs. Why?

There are lots of reasons given for not wearing one, but they fall into two primary categories: a false sense of security and not wanting to be uncomfortable.





Try an inflatable life jacket . . . they're easy to use!

How does a false sense of security lead to trouble?

Many people, especially those who know how to swim, don't feel they are at risk for drowning. They think having life jackets on the boat is enough and, if anything happens, they can just put them on. To me, this makes as much sense as saying you can put on your seat belt right before an accident.

Federal requirements state PFDs must be readily accessible. What does that mean?

It means within reach. Not stowed in a plastic bag, in closed or locked compartments or under a pile of other gear. Accidents can occur in a split second and there just isn't enough time to get into a PFD. Two-thirds of people who drown never had any intention of being in the water.

What's new in life jackets?

Traditional life jackets, such as the old, orange, horseshoe variety, are uncomfortable. They're bulky and can make it difficult to move around and are not a pleasure to wear in warm weather. But they saved lives and still do today. Now

there are alternatives, such as inflatable life jackets, which provide greater freedom of movement while allowing maximum buoyancy.

How do the inflatable PFDs work?

Traditional life jackets rely on buoyant material, such as foam, to stay afloat. Inflatable life jackets rely on chambers that provide buoyancy when inflated. Auto-inflate versions use a water-soluble capsule attached to the inflation unit. Its mechanism pierces the carbon dioxide (CO2) cylinder and releases the gas when submerged. Manual-inflate versions release the CO2 from the cylinder via the ripcord.

Units with automatic inflation mechanisms may also be manually inflated using the ripcord. Both efficiently bring the wearer to the surface, turning them face up.

Greater maneuverability, more comfortable? Is there a downside?

First, inflatable life jackets require maintenance after being deployed. Nothing difficult, just allow the device to dry thoroughly and rearm the CO2 cylinder. The other factor is cost. Your basic Coast Guard-approved life jacket runs about \$10 to \$15. Belt-pack devices are about \$80. Vest or suspender-style devices can cost between \$100 and \$120.



Are they worth it?

That's a question only the wearer can decide. Ease of use, cost vs. convenience, style and safety; these are all personal factors to consider when choosing a life jacket. Bottom line, the best life jacket is the one you wear.

How do you select a life jacket?

The Coast Guard Web site, www.uscgboating.org/, is an excellent starting point to learn about life jacket requirements, which differ based on the type of water activity and the size and weight of the wearer. State boating officials and park rangers are great resources, as well. Keep in mind that if you are swimming or boating in an area under the jurisdiction of the Corps of Engineers, or federal, state or local park authority, other rules may apply.

Any other water-safety advice?

Learn to swim. Being comfortable in the water is key to reducing panic should you hit the water unexpectedly. Understand the difference between the swimming pool and lakes, rivers and oceans, and be aware of open-water hazards such as drop-offs and rip currents. Educate kids on water safety. Teach them to wear a life jacket and buckle up, just like you do in the car.

What resources are available to teach water safety to children?

We offer age-appropriate materials on our Web site. Cartoons and coloring books featuring our mascot, Bobber — the Water Safety Dog, are a great way for preschool-age children to learn water safety. The "Safe Passage" adventure activity book reinforces water-safety messages at an elementary-school level and has a downloadable teachers guide. For teens and pre-teens, the "Young and the Reckless" video program teaches key boating safety points. We also have a variety of posters, brochures and videos to reinforce water-safety messages at home and in the classroom.

These resources are available at Corps' offices nationwide and can be previewed by visiting the National Water Safety Program Web site at watersafety.usace.army.mil/. To order, click on the Nation Program Office link or contact your local Corps lake office.◀



<https://safety.army.mil>

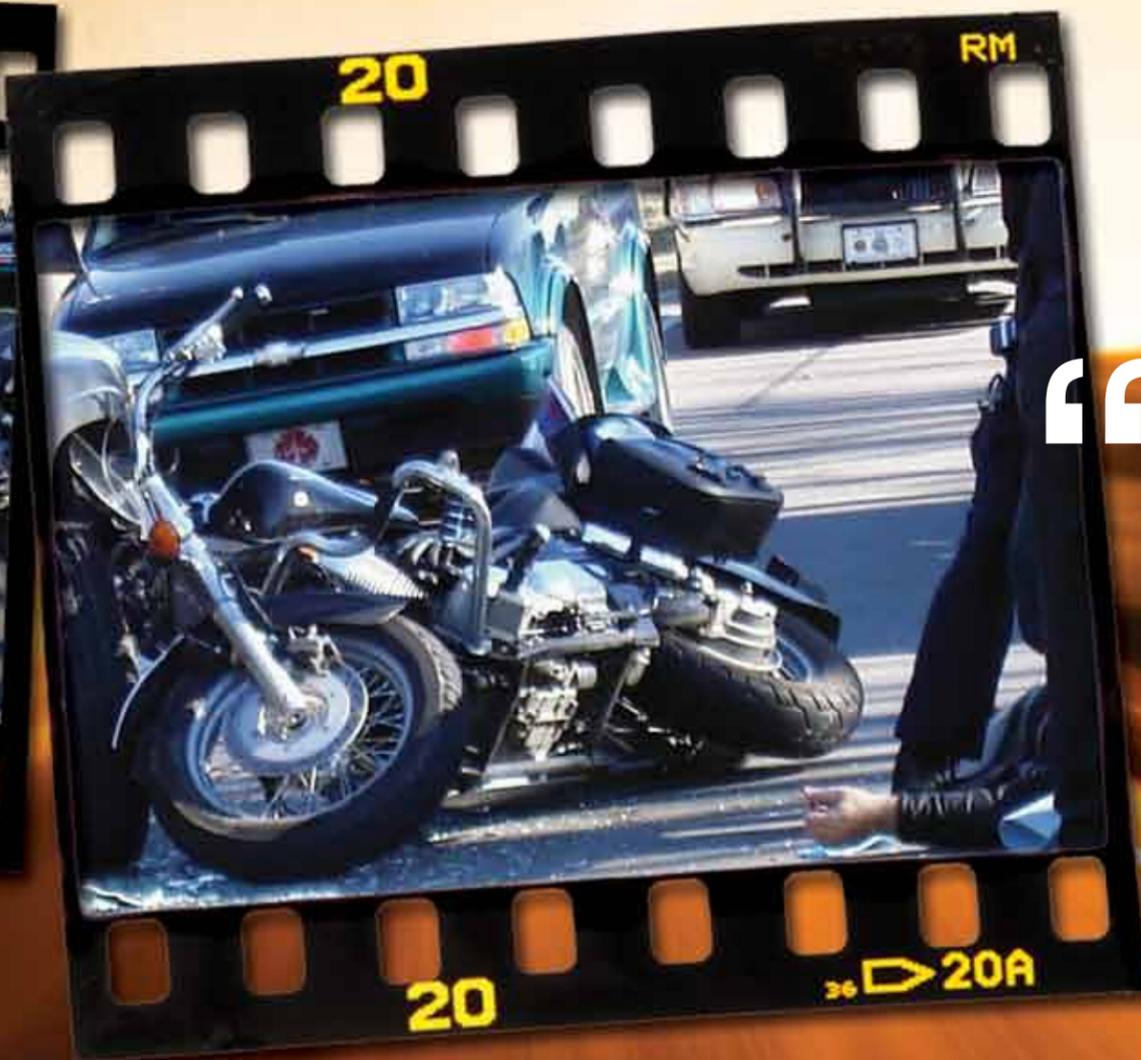
Army Safe is Army Strong and that starts with a Soldier's Family. Have the information to help you and your Family stay safe.



Be prepared and get your own Family Engagement Kit today!

Riding TO Live

BOB VAN ELSBERG
 Driving Task Force
 U.S. Army Combat Readiness/Safety Center
 Fort Rucker, Ala.



It was 11:53 a.m. on New Year's Day 2009. For Randall Yeoman, the world was empty, dark and silent.

Unconscious, he lay on the ground next to his battered Honda 750 Shadow motorcycle. Nearby, a pickup with a smashed passenger side straddled the white line along the road's left edge. Moments before, the pickup's young driver had suddenly turned left, cutting off the approaching motorcycle. Yeoman tried to brake, but could not stop in time. With a ditch to his right and the pickup partially blocking the oncoming lane, he had nowhere to go. Striking between the cab and the bed, the Honda spun to the right and slammed Yeoman against the passenger-side door. The violent impact shoved

the pickup's rear to the right, leaving the vehicle facing the wrong way alongside the road.

A witness reported the accident. It was 11:56 when a dispatcher notified Officer Mike Hill of the Tennessee Highway Patrol of a 10-46 (crash with injuries) involving a motorcycle. As he headed to the accident scene, Hill feared the worst. Most of the motorcycle accidents he'd responded to ended up with riders suffering severe injuries. Hill wasn't looking forward to what he would see when he arrived.

It was 12:03 p.m. — just 10 minutes after the accident occurred — when Hill, a state-certified first responder,

“With a DITCH to his RIGHT and the PICKUP partially BLOCKING the oncoming LANE, he had NOWHERE TO GO.”

reached the crash site. Deputies from the Lincoln County Sheriff's Department were already at the scene. Hill checked Yeoman's condition and then contacted the emergency medical services personnel, who were en route, with the information. It didn't look good. Hill suggested they request a helicopter to airlift Yeoman to a hospital in Huntsville, Ala.

As the minutes passed, Yeoman, who had suffered a severe concussion, began to regain consciousness. He felt hands touching him, feeling for injuries as his clothes were cut open. A paramedic asked Yeoman his name, but he couldn't retrieve the answer from his memory. Then he heard the paramedic working on him tell his partner, "If we

don't get him out of here, he may not make it." The words struck fear in Yeoman's heart.

The accident happened less than two miles from Yeoman's home. One of the paramedics found Yeoman's phone number in his wallet and called Kathy, his wife. She got to the accident site within minutes. The paramedics told Kathy her husband was talking and his ankle was broken, but they wouldn't allow her to see him. Still wearing his badly damaged helmet, he'd been strapped to a backboard and loaded into an ambulance awaiting the helicopter that would fly him to Huntsville.

Kathy immediately left for the hospital, knowing her husband would arrive first in the helicopter. He would undergo three hours of X-rays

and CAT scans before she would see him. And when she did, it wasn't pretty. He'd taken the brunt of the impact on the right side of his body. His right eye and cheek were turning black and there were cuts around his right eye from where his eyeglasses had jammed against his face. His right leg was broken and the ankle below it fractured in seven places.

The events of that day went much different than what was planned. That morning, Yeoman, an Army civilian working at Redstone Arsenal, Ala., had headed out on his motorcycle to visit a daughter who lived near Park City, Tenn., a small community about 15 minutes from the Yeomans' home. Simple, one-lane country roads connected the Yeoman home to the

community. For four years, Yeoman had safely ridden those roads on his 41-mile workday commute, deterred only when torrential rains or ice made riding too dangerous.

That New Year's Day, however, the weather was beautiful; warm enough he could forego the heavy clothing sometimes needed to protect against the winter chill. What he did wear was his leather riding jacket, modular helmet, chaps, gauntlet-style gloves and boots. He'd committed to wearing the full ensemble of his personal protective equipment (PPE) four years earlier when he began riding a Honda Reflex Maxi-Scooter. He'd taken the required Army-approved Motorcycle Safety Foundation training, which stressed riders wear such gear.

Some of his buddies who rode cruisers kidded Yeoman about wearing so much "armor" to ride a scooter. They'd kid him about his chaps, referring to them as Randy's "hot pants." But he took it all in stride. He'd remind his friends his scooter could cruise at freeway speeds. He'd challenge them, "You ride your Harley at 70 mph and I'll ride my scooter at 70 mph. Let's both jump off and see who gets hurt worse. The road is just as hard for a scooter as it is for a Harley." Yeoman was never quiet about the need for riders to wear good PPE. Frustrated at bikers riding in shorts, T-shirts, tennis shoes and without helmets, he'd wonder, "What is your life worth?"

That morning, his commitment to wearing PPE paid off. His helmet, a \$400 modular style, had been set up in the full-face mode — the most protective option for the design. The impact cracked the chin piece, ripped away the visor and damaged the hinge points for the pull-down face shield. The helmet gave its "life" to protect his. Without it, the impact that rendered him unconscious would have, instead, rendered him dead.

The chaps took the impact to Yeoman's right thigh and leg as he was thrown against the pickup's side. Although there was a quarter-sized hole in the leather, the rayon inner lining was still intact. Without his chaps, he could have suffered severe damage to the skin and muscles of his right leg (see the article "It's Better to Be

Chapped" on page 14). The boots played an incredibly important role in saving his right foot, according to Bruce Shoemake, Yeoman's supervisor and friend. "Without his boots, it would have been an amputation instead of an operation," he said.

Following his release from the hospital, Yeoman faced a lengthy recovery at home. But the key issue is he's still around for his family because he wore his PPE. For that, his wife, who spends much of her time caring for him, is grateful.

"Getting up with him every four hours is easy," Kathy said. "... He's told me, 'I am so sorry you have to take care of me like this,' and I say, 'I'd rather take care of you than do without you.'"

IT'S BETTER TO BE CHAPPED

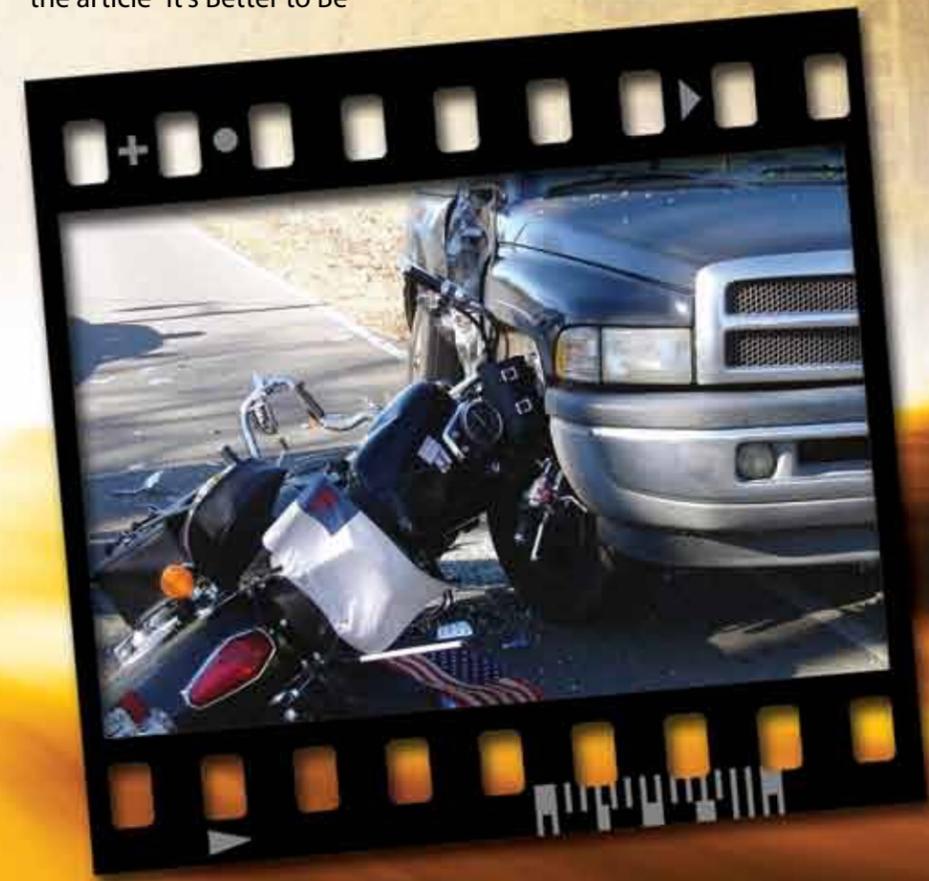
Ever wonder about the value of wearing chaps when motorcycling? Do they seem like an unnecessary added expense — one not even required for Army riders? If so, listen to the comments of Kathy Yeoman. Two members of her family — her husband and her cousin — had motorcycle accidents. One was wearing chaps, the other wasn't.

"I had a cousin who almost lost a leg because of road rash," she said.

Explaining he wasn't wearing chaps, only a pair of jeans, she added, "Those jeans were torn off of him. Surgeons had to rebuild the muscle and do skin grafts. It tore flesh, it tore muscles and it tore veins. They had to completely rebuild his leg."

Motivated by that memory, she is insistent her husband wear protective gear, including chaps, every time he rides. She believes it made a difference in her husband's motorcycle accident.

"If he hadn't had the chaps on, we would not only be working with broken bones, we would have to keep the road rash from getting infected," she said. "He's uncomfortable enough with the broken bones without having a bunch of sores on his legs."





**CAPT. DEBORAH L. GATRELL AND
CHIEF WARRANT OFFICER 4 CYNTHIA E HUDGENS**
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RUN OVER BY A BLACK HAWK?

Common sense. Sometimes it isn't as common as we'd like to think. Failure to follow established standing operating procedures (SOPs) — or to just review and update them regularly (especially after an accident) — can result in avoidable tragedy.

Washing a helicopter is not an inherently dangerous task; moving one can be. On Sept. 11, 2008, a Soldier in Kuwait was run over by a towed Black Hawk. It isn't every day you hear about someone being run over by a helicopter. This was not your run-of-the-mill accident and we might be tempted to call it a fluke. However, just six weeks earlier in July, another Soldier from a different unit was run over on the same airfield in an eerily similar incident. In that case, the Soldier decided to approach the aircraft from the left to speak with someone riding in the cabin while it was being towed. The Soldier lost situational awareness of his proximity to the rotating

wheel and his trouser leg got caught in it, pulling his left leg inboard of the turning wheel. The aircraft then ran over his ankle, causing a 90-degree break and dislocating his kneecap.

Members of the unit responsible for the Soldier injured in the September accident were aware of the July incident. So how did it happen again so soon?

Details of the Accident

In the September incident, a Soldier was riding in the cabin of the UH-60 while it was being towed down the flight line from the wash rack to the maintenance hangar. He was not an official member of the

towing crew; nevertheless, he decided to hitch a ride to avoid the long walk down the ramp from the tower to the maintenance hangar.

The tug driver conducted the towing brief, but stated he did not see the Soldier board the aircraft. That's understandable since the towing bar is hooked to the tail wheel to pull the aircraft backward; hence the stabilator completely blocks the tug driver's view of the cabin when he's looking toward the aircraft. In addition, the tug driver's attention was to the tug's aft to ensure clearance.

The Soldier was sitting on the cabin floor with his legs dangling out the right side of

the aircraft. The cabin floor was wet from the aircraft wash, so he shifted his position forward to a drier part of the floor. The turning wheel caught his trouser leg, pulling him from the aircraft and under the main landing gear, which rolled over his lower left leg, crushing it, and separating the sole from the bone of his right foot.

Why?

The real question is why was this Soldier in the helicopter in the first place? The SOP dictates only the individual "riding brakes" should be in a towed aircraft. Was there appropriate supervision? Should appropriate procedures and supervision been more strongly reinforced after the July incident?

As Leaders, we are responsible for identifying hazards and implementing control measures to mitigate risks. After the July incident, leadership directed that wing walkers remain at their stations outside the rotor tip caps. If anyone needed to speak with an individual inside the aircraft, they would need to get the attention of the tug operator to bring the aircraft to a complete stop before proceeding inboard. The Naval Air Ambulance Detachment, co-located in Kuwait, was directed by its SOPs to have wing walkers equipped with whistles to alert the tug driver since he is facing away from the aircraft.

Studies have shown it takes a person four to eight seconds to react to an emergency, two to four seconds to recognize something is wrong and two to four seconds to do something about it. No one can react fast enough to yell, "Stop!" to the tractor driver until it's too late.

The main landing gear is at the forward edge of the cabin area and in two seconds, even at a slow walking speed, it will roll half to a full cabin length.

It is important to note that when an aircraft is being towed backward, the entire cabin area is a danger zone because the wheel is turning toward the cabin instead of away from it. It is counterintuitive and

NO ONE can REACT FAST enough to YELL, 'STOP!' to the tractor DRIVER until it's TOO LATE. ; ;

doesn't register with those who don't have much experience with aircraft beyond riding in the back as a passenger.

Conclusion

What it boils down to is indiscipline. The wing walkers were trying to help a buddy out by giving him a ride and brain dumped the pre-towing brief administered by the tug driver, the noncommissioned officer in charge (NCOIC) of the towing crew. This accident occurred on the day the Soldier was to fly home on leave. Consequently, this was the end of his deployment, taking him out of the fight for months. The Soldier had emergency surgery and will endure a long rehabilitation program.

Incidents like this are painful reminders why safety discipline is such an important part of our

daily lives as Soldiers. We should always learn something from the mistakes of others. When we fail to learn from others, we frequently end up learning those hard lessons for ourselves. Evidently, lessons were not learned because two weeks later, a third towing accident occurred at the same airfield at night by a transient unit heading to Iraq.

Prevention Tips

- A 2028 should be submitted for all airframe operators' manuals with a warning to mandate that no one is to ride in a towed aircraft except the individual on the towing team appointed to ride brakes.
- Unit SOPs should dictate that wing walkers should be equipped with whistles to alert the tug driver because he cannot hear vocal commands above the engine noise of the tug and aircraft running up on the ramp.
- Unit SOPs should dictate that wing walkers are to prohibit pedestrians from approaching the aircraft while it is in motion.
- The NCOIC should conduct a towing safety briefing before towing the aircraft and reiterate the warning about no passengers during towing operations.◀

No Way to End Up

COMPILED BY THE KNOWLEDGE STAFF

Editor's note: All names have been changed to protect the privacy of the individuals involved.

Sometimes you'll hear a new rider rationalize buying a potent sportbike with the philosophy, "I might as well buy what I am going to end up with." However, lacking the experience and maturity to ride these machines safely, new riders could end up dead on the road beside them.

Staff Sgt. Edward Knight saw the police cruiser's flashing lights in the street's oncoming northbound lanes. He'd opened up his Suzuki GSX1300R Hayabusa after pulling away from a stoplight and was doing 70 mph on a 35-mph city street. This could be a big-money ticket. He looked over his left shoulder, checking if the cruiser had turned to chase him.

Deputy James Farrell had clocked Knight at 70 mph and flashed his lights, warning

him to slow down. He couldn't give chase, as he was transporting an arrestee in the backseat. In his rearview mirror, Farrell saw Knight looking back. What he saw next, though, he will never forget.

The events unfolding in his rearview mirror had begun two days earlier. Knight's unit had conducted a no-notice privately owned vehicle (POV) inspection before the three-day weekend. As Knight went through the inspection lanes, an NCO asked him if he had a motorcycle. He

replied that he'd bought a 2007 Hayabusa four months earlier.

His first-line supervisor, Sgt. 1st Class James Noble, knew about the bike, as he'd ridden it from the dealership to Knight's home. Knight had completed his Motorcycle Safety Foundation (MSF) Basic RiderCourse 18 days before buying the bike, but wasn't comfortable trying to ride it home from the dealership. He had his license and insurance, but it wasn't until the

POV inspection that his company commander and first sergeant learned he owned the bike. Before leaving for the long weekend, Knight provided copies of his MSF training certification, license and insurance to his unit.

That evening, Knight picked up a friend, Sgt. Tim Lawler, and brought him back to his apartment for a barbecue. Lawler's car was in the shop for repairs, so Knight lent him his car to use in the meantime. Knight had his bike as

backup transportation. He typically used it for short runs around town, especially during good weather.

The next day about noon, Lawler dropped by Knight's apartment and picked him up. The two had lunch and did some shopping. They returned to Knight's apartment about 5 p.m., where Lawler dropped off his buddy and drove home. Roughly an hour later, Knight got on his motorcycle and rode to Lawler's apartment. There, he planned to meet a friend, Gina Moore, and go out to dinner.

Moore arrived about 6:15 p.m. Since it was more convenient to ride in her car, Knight parked his motorcycle and left his helmet and riding gear inside the apartment. Lawler had separate plans to go club-hopping with friends from his unit. When Knight called him later to see if he was home, Lawler was headed to another club and described where he'd hidden his spare apartment key. Knowing where the key was, Knight could retrieve his helmet and riding gear from his friend's apartment.

It was about 12:30 a.m. when Knight and Moore arrived at Lawler's apartment. For whatever reason,

Knight decided not to pick up his helmet and riding gear. Mounting his motorcycle, he left for his place with Moore following in her car. The drive took them through a fairly well-lit commercial part of town, where they stopped for a red light. Knight was in front and, when the light turned green, rapidly accelerated down the street's southbound lanes. He'd gone about 600 yards before passing Farrell in the oncoming lanes and seeing him flash his emergency lights. Knight glanced over his left shoulder to see if the deputy had turned to follow. He was still looking back when the street gently curved to the left and his front wheel struck the curb.

In his rearview mirror, Farrell saw the Hayabusa's tail light come on briefly as Knight hit the brakes, but it was too late. The bike's rear wheel came up as the bike began tumbling end over end with Knight still onboard. The bike and rider hit a street sign, shearing it in half before slamming into a pair of vans on a rental lot. The impact threw Knight off the bike and onto the street's right lane. Unprotected by a helmet, his head suffered massive trauma

as it struck the vans, sidewalk and street. It was only 107 days since he'd bought the Hayabusa. Now he lay dead on the street just 14 feet away from it.

Why Did This Accident Happen?

- Knight diverted his attention from

the roadway while riding at high speed.

- He operated his motorcycle while impaired by the effects of alcohol (his post-mortem blood alcohol content was .11).

- Although his first-line supervisors knew he had a motorcycle, they never formally

engaged him about the requirements for safely operating it, including always wearing his personal protective equipment (PPE).

- Lacking a helmet, he suffered injuries he could not survive.

How Can We Prevent Accidents Like This?

- A super sportbike is a poor choice for a first motorcycle. The learning curve is too steep for new riders to survive their mistakes and learn from them.

- Mixing alcohol and asphalt makes a deadly cocktail. Soldiers should never operate their motorcycles or drive POVs after drinking.

- Speed kills by increasing impact severity and reducing reaction time, especially when the rider is distracted and fails to see a problem until the last second.

- Whether they own a motorcycle, Leaders need to know the requirements for safe motorcycle operation. First-line supervisors must enforce the standard for their Soldiers and set a positive example both on and off duty.

- Wearing protective gear is not an option. Regardless of state laws, PPE must be worn 24/7.◀◀

“For **WHATEVER** reason, Knight **DECIDED NOT** to **PICK UP** his **HELMET** and **RIDING GEAR.**”

STREET SMARTS FOR LEADERS

BOB VAN ELSBERG
Driving Task Force
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

It's no secret in the Army that motorcycle riding is gaining popularity, particularly with sportbikes reflecting the performance of machines bred for the track. The downside is a significant increase in motorcycle fatalities, often involving Soldiers unfamiliar with the capabilities of these high-performance machines. While many Leaders ride and can offer practical advice to their Soldiers, not every Leader is a rider. Despite that, every Leader is responsible to protect their Soldiers who ride.

Enter a new online tool that can give Leaders a good foundation for understanding motorcycle safety. "What a Leader Needs to Know about Motorcycle Safety" is now available on the U.S. Army Combat Readiness/Safety Center's Leader's Corner Web site. The presentation outlines questions Leaders need to ask Soldiers who ride or are contemplating riding. The goal is not to prevent Soldiers from riding; rather, it is to help them safely enjoy the sport, making it "fun rather than fatal."

Leaders will get background information on Soldier risk factors such

as age, grade and type of motorcycle based upon the Army's experience in fiscal 2008. Beyond that, concise information is provided on what caused these fatalities, including contributing factors such as lack of helmet use, proper training and licensing.

Leaders will then be acquainted with the Army's safety requirements for riders, which are designed to ensure they're trained and have the skills needed to survive. The focus then switches to questions Leaders can pose to their Soldiers to better understand their riding interests and ensure they're

aware of all of the costs involved.

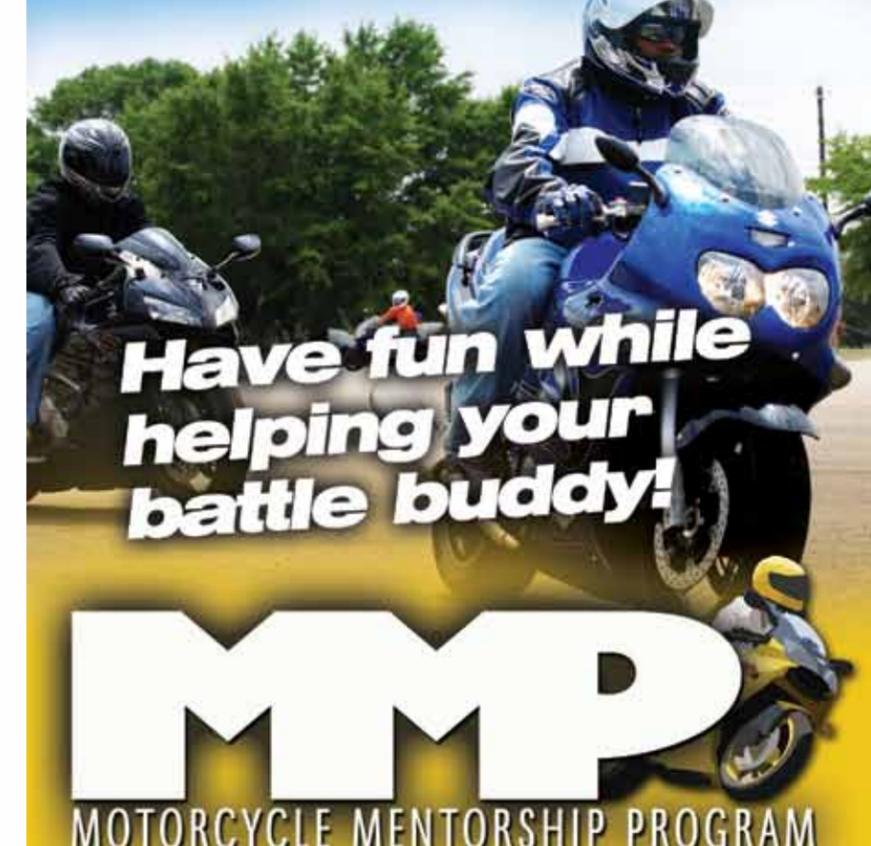
Taking the process one step further, Leaders are provided information on the different types of motorcycles, equipping them to understand their capabilities. While the trend has been to purchase high-performance sportbikes, other motorcycle types often better fit a rider's style while providing a satisfying riding experience.

Once a motorcycle has been purchased, proper maintenance is essential for operating it safely. Leaders are provided inspection tips to help them spot maintenance



problems that could put their Soldiers at risk. In addition, pictures illustrating popular motorcycle modifications are provided to help Leaders recognize them. Some of these modifications negatively affect handling. Equipping Leaders to recognize these modifications can help them prevent Soldiers from setting themselves up for a crash.

Want to check out this newest tool for Leaders? Just let out the clutch, roll on the throttle and cruise down the information superhighway to <https://safety.army.mil/leaderscorner/>.◀◀



Mentoring can be fun and set up in various ways. Here are a few examples:

- Unit-level one-on-one mentorship
- Unit-level riding groups
- Private organization
- Combination unit program and private organization at the installation level
- Non-appropriated fund instrumentality

Check out the USACR/Safety Center MMP Web site for some examples of active mentoring programs.



<https://safety.army.mil>



ARMY SAFE IS ARMY STRONG

Weddings, Vacations and Other Natural Disasters

JOSEPH R. OSBORN
U.S. Army North Safety Office
Fort Sam Houston, Texas

June is an important month for most of us. If you have kids, they'll be sure you know school is out soon and it's time for vacation plans to be put into action! Summer is also a popular time to get married, and many couples make plans to wed in June. Military Families often plan for leave to visit relatives, spend days at the local amusement park or swimming pool, or possibly even a drive to the beach. We plan all winter long to enjoy our summer months.

June is also the beginning of hurricane season. Have you made plans for that, too?

There is a story of a 1930s New England family that ordered a barometer through a mail-order catalog. After driving a long distance to pick up the mail and returning home, they opened the package to find the barometer's needle pegged at the far end, indicating a hurricane. They thought it was broken. There was no Internet or Weather Channel for them to check. They got back into the car and departed for the long drive to return the order by post. While away, their home

was destroyed by a hurricane.

Whether the story is true or just a bit of meteorological folklore, it serves as a reminder of the importance of awareness, planning and preparing for the possibility of something as serious as a hurricane. There have been several major hurricanes over the last few years with many lives lost — some for failing to plan — and countless homes destroyed. Do you remember Andrew, Hugo, Katrina, Rita, Dolly and Ike? Maybe there is another that stands out in your mind?

Not worried because you don't live near the coast? You still might

be affected by severe storms that can spin off a hurricane as it races ashore and continues inland.

Last year, Ike was responsible for numerous storm-related deaths in several states as it continued on its deadly path through mid-America. Just because you don't live near the ocean doesn't mean you shouldn't plan or be prepared for the next big hurricane.

Tornadoes, high winds, heavy rains and lightning are all components of a hurricane that can spread several hundred miles inland from the initial impact area. Based on the size of the storm, its strength and the path it travels, these elements can wreak havoc on communities far from the ocean.

You can't always predict when disaster will strike, so being well prepared is your first line of defense. Make a plan; get your Family involved as you think about what to do and where to

go. Let someone outside your area know your plan. Get supplies such as water, food, matches, candles, batteries, a good flashlight, blankets or sleeping bags, towels and a first-aid kit, just to name a few things.

There are planning tools, such as checklists and storm trackers, which take the guesswork out of preparing for the unpleasant and life-threatening possibility of a hurricane. The Federal Emergency Management Agency, Centers for Disease Control and the National Oceanic and Atmospheric Administration Web sites all

contain sections dedicated to hurricane preparedness and response. These great resources can help ensure you are well prepared for the next big storm. Also, don't forget local resources. Often there are merchants who provide free hurricane tracking charts or preparedness checklists.

Unfortunately, the danger isn't over once the sky clears. The aftermath of a hurricane presents hazards, as well. Spoiled food and unsafe water, unstable buildings, downed power lines and carbon monoxide poisoning from generators and camp

stoves are just a few post-storm concerns. Take the time to learn about hurricane recovery so you and your Family can return home safely and prevent injury or illness during the clean-up period.

The 1930s family may not have understood their barometer, and they didn't have the benefit of the Internet or clear warnings provided by the media to ensure awareness, evacuation and survival. We do. There is no excuse for not preparing your Family and home.◀

“Take the time to **LEARN** about **HURRICANE** recovery so **YOU** and your **FAMILY** can **RETURN** home **SAFELY** and **PREVENT INJURY** or illness **DURING** the **CLEAN-UP** period.”

PREPARED, NOT SCARED

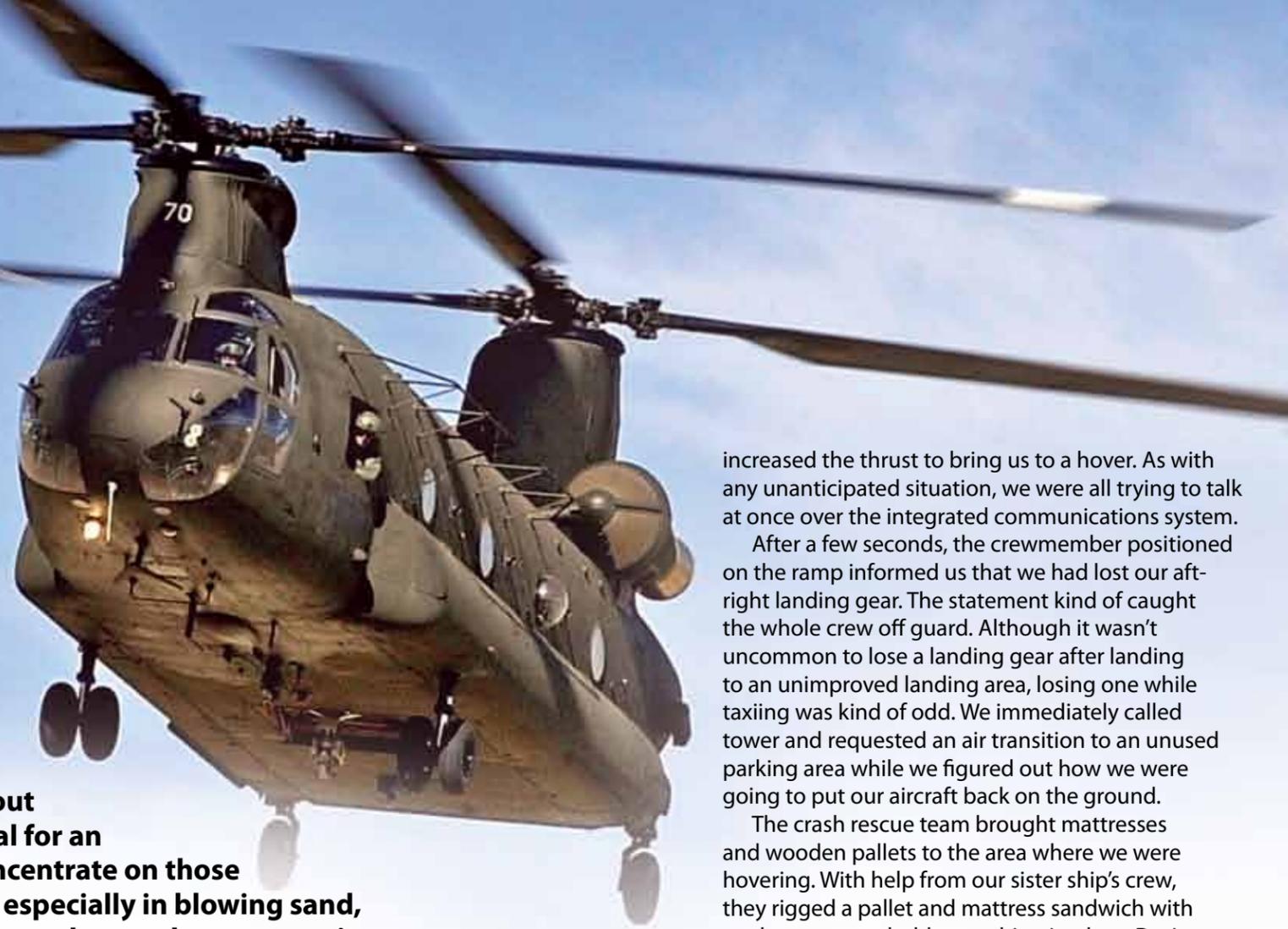
National Hurricane Preparedness Week, May 24-30, draws attention to the necessity of hurricane awareness and preparation. Knowing your vulnerabilities and what actions you should take can help mitigate the effects of a hurricane and prevent loss of life during these potentially deadly storms. Use these planning and preparedness resources and help your Family be prepared, not scared, this hurricane season.

Federal Emergency Management Agency
Centers for Disease Control
Ready America
National Weather Service
American Red Cross

<http://www.fema.gov/hazard/hurricane/index.shtm>
<http://emergency.cdc.gov/disasters/hurricanes/index.asp>
<http://www.ready.gov/>
<http://www.weather.gov/>
<http://www.redcross.org/>

We Lost Our *What?*

CHIEF WARRANT OFFICER 2 JUSTIN CROW
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Aircrews are aware there are periods during a flight that require extra situational awareness and increased concentration. From the time we taxi out of parking until the time we return, the potential for an accident or incident exists. While we tend to concentrate on those peak demand times, like takeoffs and landings, especially in blowing sand, dust or snow situations, things sometimes happen when we least expect it.

For those of you unfamiliar with the CH-47, a four-wheel taxi is when the pilot in the left seat controls the power steering and brakes while the pilot in the right seat has the cyclic and thrust (collective). The right-seat pilot usually applies just enough thrust to get the aircraft started and, after returning to flat pitch, doesn't have much else to do except scan, clear the aircraft and monitor the thrust. It's during those times when the other pilot is doing the "work" that pilots tend to let their minds wander, which can cause big problems.

Our unit was in the eighth month of deployment supporting Marines in western Iraq when, during a four-wheel taxi, we lost our aft-right landing gear. By this time in the deployment, the missions were starting to seem as though the only difference was the date. We had taxied into and out of passenger terminals at different airfields at least a thousand times, all with little or no problems.

On this particular day, we left our parking area and flew to the other side of the airfield for our first load of passengers and cargo of the day. Once we were

loaded, we headed to our next stop, another airfield. Everything seemed to be going fine. We performed a visual meteorological condition approach to the active runway and exited at the appropriate taxiway. Once on the ground, we performed the after-landing check and went right into the before-taxi checklist.

Our sister aircraft had gone to another part of the airfield and we were to meet up at the pickup zone after each aircraft had dropped off its current load. We were cleared to taxi into the parking area and perform our download. We weren't scheduled to pick up anything at the main parking area, so our time in parking was quick.

We requested to taxi to the approach end of the active runway via a different taxiway than we had used to get to parking, per the airfield's procedures. We left parking and made a right turn on the approved taxiway. We had been out of the turn for about 10 feet when the aircraft seemed to roll right and pitch up. From the left seat, I realized the power steering was unresponsive. The pilot on the controls instinctively applied forward left cyclic and

increased the thrust to bring us to a hover. As with any unanticipated situation, we were all trying to talk at once over the integrated communications system.

After a few seconds, the crewmember positioned on the ramp informed us that we had lost our aft-right landing gear. The statement kind of caught the whole crew off guard. Although it wasn't uncommon to lose a landing gear after landing to an unimproved landing area, losing one while taxiing was kind of odd. We immediately called tower and requested an air transition to an unused parking area while we figured out how we were going to put our aircraft back on the ground.

The crash rescue team brought mattresses and wooden pallets to the area where we were hovering. With help from our sister ship's crew, they rigged a pallet and mattress sandwich with ratchet straps to hold everything in place. During the process, we dropped a long mike cord out to one of the crewmembers on the ground. Once the mattresses were in place, the crewmember guided us down onto the makeshift landing platform.

It turned out that losing a landing gear was not a big deal for us. Had the pilot in the right seat been daydreaming or even a bit slower in reacting to the situation at hand, it could've been much worse.◀

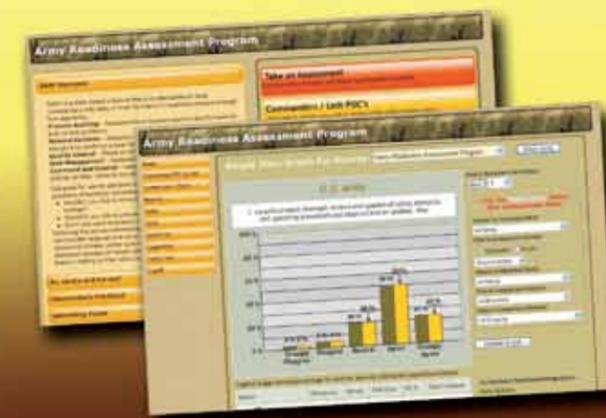


Wouldn't you like to know if your unit is about to experience a mishap?

Wouldn't you like to prevent the loss of personnel and equipment?

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CYCLE SMARTS

DAVID STONE
Aviation Engineering Directorate
Aviation and Missile Research, Development and Engineering Center
Redstone Arsenal, Ala.

Bicycling continues to gain widespread acceptance as a viable form of transportation. Whether you cycle to save money, reduce your carbon footprint or improve your physical fitness, safety is always a primary concern. Do you know the rules of the road and use smart cycling tactics to bike safely and legally?

As a league cycling instructor, I teach cyclists tips, tools and techniques to help them ride more confidently. There are, however, a number of cyclists and motorists who are misinformed about how to bicycle safely, and I'd like to clear up some of the misconceptions.

In my courses, the most common fear riders express is getting hit by a car and, further, being struck from behind. A quick look at bicycle crash statistics provides two amazing insights that can help

dispel a cyclist's fears of being involved in a vehicle collision.

First, the largest cause of bicycle crashes is falling off the bicycle. Half of the bicycle crashes involve falls, while less than 20 percent involve motor vehicles. In fact, collisions with pedestrians, animals and other bicycles are twice as likely as a collision with a motor vehicle. Second, crash studies show that only about 5 percent of bicycle crashes with motor vehicles involve the cyclist getting hit from behind. Most collisions — more than 85

percent — involve crossing traffic. Either the bicycle pulls in front of the car or the car pulls in front of the bicycle.

Since the consequence of any bicycle crash, from falling in the driveway to getting hit head-on by a motorist, can result in serious injury or death, bicycle safety must focus on reducing the probability of a collision. Cycling safety is not intuitive; what feels safe and what is safe are not necessarily the same. Also, there are times when what is safe is not

“ On ROADS that are NOT WIDE enough for a CYCLIST and MOTORIST to share a lane, CYCLISTS should USE the FULL LANE. ”

comfortable, and most cyclists try to avoid these conditions.

What controls can a cyclist implement to reduce the likelihood of a collision? The concept that reduces crash risk the most is called vehicular cycling. John Forester, in his book “Effective Cycling,” said it best, “Bicyclists fare best when they act and are treated as drivers of vehicles.” Basically, a bicycle should be operated with the same rules and responsibilities as any motor vehicle. Segregating bicycles from motor vehicle traffic makes cyclists less visible to motorists, thus increasing the risk of a crash. Visibility for a cyclist is not only what they wear, but also where they cycle.

Traffic law defines the cyclist's position as “as far right as practicable.” This causes considerable confusion. This does not mean “as far right as possible.” The right one third of the right-most lane is a good starting point, but may change further left or right depending on the circumstances.

On roads that are not wide enough for a cyclist and motorist to share a lane, cyclists should use the full lane. Most cyclists want to get out of the way of traffic; however, in this case, moving farther into traffic reduces the crash risk. Most bicycle crashes with motorists traveling the same direction do not involve getting hit from behind, but hit from the side by the right rear quarter panel. When cyclists ride too far to the right, they invite motorists to try and “squeeze by” when there isn't sufficient room. Using the full lane reduces this risk by making motorists pass them as they would any other vehicle — in the next lane.

If traffic is backed up, a courteous cyclist will pull completely off the road and stop

while motorists go by. Once the road is clear, the cyclist can continue. Motorists should not expect cyclists to move as far right as possible while still moving.

Many motorists feel bicycles should be on sidewalks because they impede traffic, but riding on sidewalks increases a cyclist's risk of a collision with a motor vehicle between two to four times. At every intersection where a sidewalk crosses the road, there is a higher probability of a crash with the cyclist on the sidewalk, where the motorist is not looking, compared to cycling in the roadway with traffic.

Shoulders can be a viable facility for cyclists. However, debris, which can cause a fall, becomes a significant issue when cycling on shoulders. Cyclists must assess if the increased risk from the debris outweighs the risk of cycling in the road with traffic. Shoulders should not be used on steep descents since cyclists are capable of reaching the same speed as motorists. Shoulders with too many intersections, or where the shoulder turns into a right-turn-only lane, also should not be used due to the risk of collision that can occur if cyclists continue straight through the turn lane when motorists expect them to turn right.

Bike lanes are essentially a shoulder with additional paint. A common motorist-caused

crash is called a “right hook,” where the motorist cuts off the cyclist by turning right across the bike lane. Cyclists also cause crashes by turning left from the bike lane. They don't realize they should merge to the left and turn like a motorist.

Another common cause of bicycle/motorist collisions is cycling without lights at night and in low-light conditions. Many times, a motorist's headlights do not illuminate the bicycle reflectors until just before a collision, so bicycle headlights and taillights, which can be visible for miles, are the best solution. Headlights are required by law and taillights are highly recommended. The up and down motion of bicycle pedals is readily recognizable and the use of pedal reflectors, reflective tape or a reflective leg band all increase cyclist visibility.

There isn't enough space to go over all aspects of bicycle safety. There are many more specifics with regard to road position, but I've hit the major highlights. Properly fitted helmets and bicycle inspections are also important safety issues. Cyclists must assess risks based on the time of day and road, traffic and weather conditions. Knowing potential hazards and implementing the proper controls are the keys to riding confidently and, most important, safely.◀



FYI

May is National Bike Month and 2009 marks the 53rd anniversary of this celebration of cycling sponsored by the League of American Bicyclists. The organization promotes Bike-to-Work Week from May 11-15 and Bike-to-Work Day May 15. Visit www.bikeleague.org/programs/bikemonth/ to learn more about National Bike Month and check the events section to see what riding events are going on in your community. The Web site also offers information on bicycle advocacy, education programs and rider resources.

HEAD STRONG

LT. COL. JAMES B. BARKLEY
351st Aviation Support Battalion
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I should be dead. The rate my head was accelerating when it struck the concrete barrier would have ended my life had it not been for my Kevlar. Call it what you will — divine intervention, perhaps premonition — but if I had not put on my Kevlar for that 10-minute bicycle ride, I would be dead.

Those of you who have deployed know transportation is constantly an issue, and my time in Iraq was no exception. There isn't a sufficient quantity of transportation assets to adequately cover a battalion in a 24/7, split-operations scenario. As Task Force 151's executive officer, I had my own HMMWV and driver, but I gave them up to the line companies who needed them more than I did.

I got a bicycle during my first weeks in country and used it exclusively on the forward operating base. Not only was I staying in shape, but I could also navigate quickly through areas blocked to vehicle traffic. In fact, I could get to my office faster than if I were forced to

drive. Getting to the flight line was another story; but, again, I was getting a lot of exercise.

Unfortunately, my bicycle was stolen. Well, it wasn't really stolen; someone just "traded" me theirs. It was the same model, but in much worse shape. However, the greatest loss wasn't the bicycle, it was my helmet. I couldn't replace it easily. In a stroke of luck, when I'd bought the bicycle, the PX also had the protective helmet and lights required, by regulation, to properly operate it. Now I was without, and bicycle helmets were out of stock.

I could wear my Kevlar, but it was so heavy and bulky compared to my bicycle helmet. And I definitely couldn't leave it outside

on my bicycle like I had with my other helmet. Therefore, I pushed my luck. I rode helmetless for exactly two days before running into the COSCOM commander. He smiled very patiently as I told my story of woe, but he wasn't smiling when he cited the regulation regarding proper bicycle operation. He spoke of leading by example and doing what was right regardless of who was watching. Humbled, I knew he was right.

I walked my bicycle back to my room and left it there. For nearly two weeks I stubbornly walked everywhere, but I began losing patience with the time it took to get to my destination. Finally, I decided to "cowboy up," put on my Kevlar and ride my bike again.

In Iraq, I'd go through periods when I couldn't sleep. My rule of thumb was if I lay in bed more than an hour, I'd get up and read. If I went back to bed and still couldn't sleep, I'd go to the office. This fateful night was no different. Unable to turn off my brain, I got dressed and headed for the door. I distinctly remember looking at my Kevlar and thinking, "It's 0130. Who would be up at this hour to see me?" To this day, I still can't honestly say why I put on my Kevlar, but I did. That action saved my life.

As I pedaled down the road in the middle of the night, I found myself riding into bright lights. Excavation equipment was in operation on the road and portable lights lit the primary and surrounding areas where

the work was focused. Unfortunately, the lights destroyed my night vision, and I slowed to pass the area. Once the road work was behind me, I accelerated, but I was having trouble seeing very far ahead.

Suddenly, my eyes saw something directly in front of me that my brain couldn't register and process quickly enough to avoid. It was a concrete barrier, about 4 feet tall, spanning the entire width of the road. I hit the barrier at full force, crushing my front rim and forks and breaking off the gooseneck at the upper frame. The sudden stop sent me flying over the

handle bars, dragging my biceps and forearms along the top of the barrier and slamming the front lip of my Kevlar on the opposite side. I heard the oddest sound that I couldn't place until later; it was the air being forced out of my lungs as my body contacted the ground.

I just lay there as I tried to figure out what happened. My disorientation slowly evaporated as I went from shock to anger. Sitting up with my back against the barrier, I regained my composure, checked for broken bones and then slowly stood up. As I stared at my bicycle, I realized

how lucky — not just a little lucky, but miracle-type lucky — I was to have worn my Kevlar. The concrete at the point of impact had broken away. My blood and skin decorated the top of the barrier — a bright red spot designating where my nose came to rest.

If I hadn't worn my Kevlar, my forehead would have absorbed the accelerated impact with the barrier and I would have died. My military-issue helmet, designed to protect my head from fragmenting munitions, turned out to be a lifesaver in a way the Army likely never imagined.◀

“ If I HADN'T worn my KEVLAR, my FOREHEAD would have absorbed the accelerated IMPACT with the BARRIER and I WOULD have DIED. ”

Completing the SAFETY CIRCUIT

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Oh, great, another electrical safety article, right? Go ahead, roll your eyes now; get it over with. Then think about why the topic bores you.

Is it because you've heard about electrical safety since you were a kid? Is it because you use electrical tools, equipment, toys and appliances every day? Or is it because you trust the builders, manufacturers and installers so much that you feel protected? After all, there are codes and laws to keep you safe. Actually, the truth behind these notions has probably gone a long way toward keeping you alive to read this. Sometimes, avoiding injury or death is just by luck, and the Army's accident records show that luck tends to run out regularly.

Every year, dozens of electrical accidents occur across the Army. The results range from death or serious injury of Soldiers and civilians to the loss of necessary equipment and facilities. You don't want to lose a buddy because you didn't warn them about pulling the third pin off an extension cord plug. And you certainly don't want to lose your gear and personal stuff because you had too many things plugged in, overloading the circuit and causing a fire.

Electrical accidents can happen anywhere. In forward-deployed locations, they can be especially bad because temporary or refurbished facilities often have nonstandard power systems that make it easier for mistakes to happen. Losing a Soldier in an accident affects

everyone in the unit and the mission readiness of the whole organization.

Despite the demands and inherent risks associated with combat training, protecting our personnel and preventing accidents must become a primary concern for each individual.

Accidents involving Soldiers getting shocked or killed usually occur when either the Soldier contacts exposed electrical equipment, or the power system or equipment is improperly grounded or bonded. To help prevent shocks and electrocutions, take the following steps:

- Replace broken electrical equipment or have it repaired by a qualified person. Broken or cracked outlets, tool housings and cuts or tears in wire insulation can allow an electric current to make contact with your skin.

- Keep guards on all electrical equipment and power systems, especially covers. Circuit breakers/

fuse boxes must have front covers and access panels for computers, amplifiers and other equipment which must be kept in place while powered.

- Don't try to fix power equipment yourself unless you are trained and certified, especially if it is energized.

- Stay away from power lines. It doesn't matter if it's a local

distribution line or a main trunk line carrying thousands of volts; a couple of seconds of this power can kill you.

- Never remove the grounding pin from a 3-prong electrical plug and don't use 2-prong adapters unless approved by an electrician. The grounding wire is there in case the power jumps to the tool or equipment housing. It will take the power away from you.

If it is not connected, the power goes through you.

- Know and follow the grounding or bonding rules for all power equipment and check grounding and bonding equipment before each use. Those with nonmetal cases or housings usually don't need grounding and only have a 2-prong plug.

Power equipment and appliances with metal housings (refrigerators, air conditioners, generators, washing machines, etc.) normally need a grounding conductor (wire/strap). Bonding is electrically connecting the metal housings of two separate appliances and can be used to connect to ground.

- Before the first use of a facility, and periodically afterward, check all grounded outlets to make sure the ground is working. Inexpensive plug-in testers can be used in addition to requesting inspections by the facility operator's electricians.

- If you feel any shock while using electrical equipment or

when contacting water or metal parts of a building, report it immediately and keep others away until you know it is safe.

Most property damage electrical accidents result in fires. There are a few main causes for this type of accident — too many items plugged in to one outlet, loose/broken connections and improper use of equipment. Steps to prevent the most common causes of electrical fires include:

- Don't plug in multiple devices to a single outlet and never plug one power strip into another (daisy chaining). Each computer, radio, DVD player, etc., plugged into the outlet may require minimal power, but all of them combined add to the resistance of the circuit and the amount of current running in the wire. Make a schedule for everyone in the room to take turns charging or using their equipment.

- Use the right size extension cords for your equipment. If the wire feels hot when you're using the equipment, it's probably too thin and should be replaced with a heavy-duty cord. Some equipment,

such as an air conditioner, is not recommended for use with any extension cord because it draws too much power.

- Make sure plugs fit tightly into outlets. If an electrical outlet is loose and won't hold a plug firmly, or if the plug isn't pushed all the way in, the loose connection can cause a very small arc that constantly jumps from the outlet to the metal blade of the plug. This can build up heat quickly and cause a fire.

- If electrical equipment has vents, do not block the openings or place the item on loose clothes or bedding. Always turn off equipment when you leave. If you're charging batteries, place on a nonflammable (metal or concrete) surface.

- If any piece of equipment sparks, smokes or feels unusually hot, stop using it and have it checked by qualified personnel.

The way to protect yourself and your team is to rely on smarts, not luck. Learning the hazards of electrical systems can provide the required knowledge to ensure your operations and facilities are safe. ◀



“Losing a **SOLDIER** in an **ACCIDENT** affects **EVERYONE** in the unit and the **MISSION** readiness of the **WHOLE ORGANIZATION.**”

Rings — Take 'em Off!

MAJ. PAUL G. CARDENAS
B Company, 1st Battalion, 112th Aviation Security and Support Battalion
Michigan Army National Guard
Grand Ledge, Mich.



I t was a Wednesday evening and I was sitting down for dinner while on temporary duty at the Eastern Army National Guard Aviation Training Site. Everything was going fine until my cell phone rang. We had just had an accident on the flight line. One of our pilots had partially degloved his finger as he was stepping down from the cockpit of a UH-60 helicopter and the medics were taking him to the hospital.

How Did This Happen?

The injured aviator was a Vietnam-era pilot with more than 5,000 flight hours and one year away from mandatory retirement at age 60. What went wrong? Apparently, as he was stepping down from the aircraft, he grabbed a support bracket next to the seat. However, when he released his hold and continued to step down, his ring caught on the metal lip of the bracket, causing the finger to be pulled from the joint and degloving

the finger. After several hours in surgery to try to save the finger and enduring different treatments to encourage the healing process (I will have to tell you about the leaches in a different story), the aviator still ended up losing the finger almost a month later.

As aviators, one of the first things we're taught is to not wear any rings when working around aircraft. We've seen pictures of what can happen if your ring gets caught on a piece of equipment, and there's usually one or two posters around the hangar reminding us of the consequences of not following this practice. Despite this, we continue to see accidents due to Soldiers not removing their rings when working around equipment.

In the weeks after the accident, I did some research and realized

that nowhere in the regulations or aircraft operator's manual does it state crewmembers have to remove their rings when working around aircraft. The only reference is in the Dash 23-series maintenance manuals, where it states maintainers should remove all rings and jewelry before beginning any maintenance work.

How can this be? Was this an isolated incident or is it more common than it appeared? Only a month before this happened in my state, something similar happened in another National Guard unit. In that incident, the crewmember thought he would be safe by wearing his flight gloves to prevent the ring from catching on anything. He was wrong and the result was again a partially degloved finger. This Soldier was lucky that he didn't lose his entire finger. According to a flight surgeon, wrapping the ring in tape doesn't work either. The best way to avoid losing a finger is to take the ring off.

Don't think this problem is unique to Army aviation. If you look at the October 2008 issue of PS magazine, turn to the back cover and notice the highlighted message. This problem is Armywide. In conversations with other pilots, they expressed that one of the first things they did when they got married was explain

to their spouse that they loved them very much, but they would not be wearing their wedding ring when flying or maintaining an aircraft. Apparently, this was easier for some spouses to accept than others. If spouses could see some of the gruesome pictures of Soldiers who have had their skin and tendons ripped from the bone by wearing a wedding ring, they might accept the fact and understand.

How to Protect Yourself and Your Soldiers?

- Ensure Soldiers take their rings off before conducting maintenance.
- Establish a standard in your unit standing operating procedure for removing rings when working around equipment and when conducting training.
- Get your first-line Leaders involved in making sure the new standard is enforced.
- Train Soldiers on the hazards of wearing rings and make sure they understand all the risks involved.
- Get your unit safety officer/NCO involved and find innovative ways to remind Soldiers when they are not meeting the standard.
- Have Soldiers talk to their spouses and explain why it's important they not wear a wedding ring when they are training.◀

“As AVIATORS, one of the FIRST things we're TAUGHT is to NOT wear ANY RINGS when WORKING around AIRCRAFT.”



CHIEF WARRANT OFFICER 4 DAVID MUEHLEISEN
Driving Task Force
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

GUNNING FOR SAFETY

Mounted vehicle gunners have come a long way since the beginning of Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF). Today, not too many units would consider deploying a combat patrol or combat logistic patrol to move in and around their area of responsibility (AOR) without the added benefit of the mobile security a crew-served weapon provides a convoy.

The evolution of gun trucks and gunner's protection has moved right along with the fast pace of the contemporary operating environment. From the Gunner Protection Kit (GPK), to the Objective GPK, to the Common Remotely Operated Weapons System (CROWS), technology has significantly improved convoy security and the ability to fight and protect Soldiers on the move.

Selection of a Soldier for the gunner's position is a critical decision. Combat experience and knowledge of the vehicle and the weapon system being employed are all key factors to consider before assigning a Soldier as a gunner. The gunner position of a mounted patrol should be the most experienced Soldier, as he is responsible for identifying targets and potential improvised

explosive devices (IEDs), implementing escalation of force (EOF) and engaging possible threats with warning shots and direct fire. Some units, however, tend to assign inexperienced or junior Soldiers in the gunner position, which is probably not the best practice.

Added technology and armor packages enhance the gunner's ability to fight and be protected from enemy fire. However, it doesn't change the fact that the exposed gunner has the highest risk of injury in the event of a rollover or collision due to evasive maneuvers, IEDs or an accident. Gunner fatalities in fiscal 2005 were extremely high, and the Army engaged the program manager for Tactical Wheeled Vehicles to develop and field equipment enhancements

to prevent Soldiers from being ejected from the vehicle, improving their chances of surviving a mishap. One such device is the gunner restraint system (GRS), which is a harness designed to fit over the body armor and attach to the floor of the vehicle, securing the gunner to the vehicle while on the move.

In addition to adding a GRS, the Army standard HMMWV Egress Assistance Trainer (HEAT) was fielded to assist vehicle crews in training and rehearsing emergency egress drills in up-armored HMMWVs. Central Command (CENTCOM) policy mandates all Soldiers receive HEAT training before deploying to the CENTCOM AOR. The training is a one-day course consisting of classroom instruction covering safety, rollover drills, egress

techniques, seat belt use, the GRS and identifying critical rollover angles, all of which are designed to assist crews in understanding egress from a vehicle that has overturned.

Many mishaps are caused by speed and/or Soldiers being unfamiliar or inadequately trained on the handling characteristics of high-center-of-gravity vehicles, terrain and road conditions and local driving habits. Applying the principles of composite risk management, as well as ensuring crews receive proper training, standards are enforced, crew drills are rehearsed and proactive Leader involvement, will significantly reduce the number of mishaps, thus reducing the risk to gunners.

Complacency is cited more often than any other single reason for mistakes leading to gunner casualties in up-armored vehicles.

For units deployed in combat, casualties reduce the probability that the operational mission will be fully accomplished. The injury or death of a Soldier also has a detrimental impact on the morale of the unit. Commanders and Leaders must recognize the signs of complacent behaviors and attitudes and move quickly to correct the situation.

It's hard to imagine operations in a hostile environment involving armored vehicles without employing gunners and crew-served weapons. Selecting the right person for the job, properly training each member of the crew and providing the required safety enhancements and enforcing their use will significantly increase the gunner's effectiveness. By doing these things, Leaders ultimately enhance the crew's survivability.◀

Get the tools before the road gets rough.



<https://safety.army.mil>

LOSING

AVIATION



CLASS C
 While on a multiship mission providing convoy security, the crew smelled a strong electrical odor. As the crew banked right, the shaft-driven compressor (SDC) caution light illuminated. The wingman reported to the crew that smoke was coming from their aircraft. The crew immediately landed and executed an emergency shutdown. Inspection of the aircraft revealed a failed SDC.



CLASS A
 A flight of two crashed while conducting an aerial security mission. Both aircraft were destroyed by fire and there were no survivors.



CLASS C
 A .50-caliber weapon system separated from the aircraft during

aerial gunnery training. The damaged weapon was located and recovered.

▲ DID YOU PRE-FLIGHT YOUR WEAPON SYSTEM AND ARE YOUR WEAPONS SYSTEMS SECURE?



CLASS C
 As the crew was repositioning into parking at a fixed-base operation, the aircraft's main rotor

blades (MRBs) struck the blades of a parked UH-60A. Both aircraft sustained damage to all four MRBs.

The PI on the controls was performing a visual meteorological conditions approach and allowed the aircraft tail wheel to touch down first. The aircraft continued to move forward and down. As the aircraft continued its touchdown, the belly of the aircraft struck a 3-foot berm that was located between the main landing gear and tail wheel. The impact with the berm caused damage to the underside of the aircraft, landing light and two antennas. As the aircraft came to rest on the ground, the left windshield cracked. *Late report.*

CLASS E
 While conducting environmental training under night vision goggles, the crew landed at a nearby forward operating base (FOB) to load passengers (PAX) for a return trip to the airfield. During the loading of the PAX, the crew chief failed to secure the cargo strap and, as a result, about 19 inches of strap was left unsecured between the right cargo door and outer frame of the aircraft. During flight, the strap dangled along the right-side cargo door, causing sheet metal damage to the surface of the door. The crew landed at the airfield without further damage to the aircraft. The aircraft sheet metal was repaired and the aircraft was released for flight. *Late report.*



CLASS A
 Following takeoff, the

crew initiated a left turn and the aircraft spirally descended to ground contact, resulting in fatal injuries to two of the occupants and nonfatal injuries to three others aboard. The aircraft was destroyed.

UAS



CLASS C
 The UAS experienced a fuel pump failure and subsequent loss of RPM in the aft engine. The aircraft touched down, but proceeded off the runway and sustained damage to the wings.



CLASS B
 The UAS experienced a launch malfunction following two failed launches. The aircraft's tail hook ensnared a cable.

GROUND



CLASS A
 A Soldier serving as the gunner in a Mine Resistant Ambush Protected (MRAP) vehicle suffered fatal injuries in a rollover. The Soldier, who was not wearing a gunner restraint system, was pinned underneath the vehicle.



CLASS B
 A Soldier driving an M1126 during a nighttime mounted patrol entered a serpentine and hit a dirt pile. At the same time,

ARMY AVIATION LOSSES

Fiscal 2009
as of Apr. 6, 2009

Class A/Fatalities

ATTACK	0/0
RECON	1/2
UTILITY	4/2
CARGO	0/0
UAS/UAV	1/0
FIXED-WING	0/0
TRAINING	0/0

TOTAL 6/4

ARMY GROUND LOSSES

Fiscal 2009
as of Apr. 6, 2009



AMV	11/10
ACV	6/2
PERSONNEL INJURY <small>includes weapons-handling accidents</small>	15/11
FIRE/EXPLOSIVE	2/0
PROPERTY DAMAGE	0/0

TOTAL 34/23

the DVE recalibration caused the screen to momentarily go blank. The driver veered off the road, hit another dirt pile and flipped into a dry canal. The driver and passengers were uninjured.

■ A Soldier driving an LMTV hit a patch of ice and lost control of the vehicle, which slid off the road and landed on the driver's side. During the rollover, the driver suffered a strained knee and a passenger suffered a shoulder injury. All occupants were wearing seat belts.

Personnel Injury



CLASS A

■ A Soldier drowned after drifting into a lake while participating in a parachuting currency jump. The Soldier submerged while attempting to swim to shore and was unresponsive when located.

■ A Soldier was killed handling a privately owned weapon, reportedly demonstrating the weapon was unloaded. The Soldier pointed the weapon at his head and fired, discharging a round.

■ A Soldier discharged a privately owned weapon into his temple, resulting in a permanent total disability. The Soldier remains in a medically induced coma.

■ A Soldier swimming in the ocean injured his spine diving into the surf and is currently in a quadriplegic state.

■ A Soldier is expected to have permanent paralysis from the waist down after falling about 14 feet while attempting to negotiate an obstacle course during physical training.

CLASS B

■ A Soldier serving as a range safety officer was disposing of unused demo material following training when a premature detonation occurred. The Soldier suffered the loss of his right thumb and left and right index fingers.

■ A Soldier suffered an amputation injury while knuckling containers together for loadout. The Soldier pinched his finger between the knuckling device and the container, severing his left index finger.

Other



CLASS A

■ A Soldier suffered fatal injuries when he was struck in the chest while driving a Gator under a sliding barrier.

■ A Soldier working in the motor pool suffered fatal injuries after he was run over by a forklift that was moving a load of wood.

DRIVING

POV



CLASS A

■ A Soldier was speeding in his sport utility vehicle (SUV) when he lost control, went onto the right shoulder and then veered left across three lanes of traffic. The SUV then struck the center guardrail, overturned and ejected the driver, who died at the scene.

■ A Soldier was speeding in heavy fog in his SUV when he left the road in a right-hand curve and struck two large pine trees. The Soldier was wearing his seat belt, but suffered fatal injuries.

DO YOUR SOLDIERS UNDERSTAND THEIR WRONG CHOICES CAN OVERCOME THE ENGINEERING DESIGNED INTO THEIR VEHICLES TO SAVE THEM?

■ A Soldier was driving his compact sedan with another Soldier riding as a passenger when the

vehicle left the road on a curve and rolled multiple times. The driver was treated and released from a local medical center, but the passenger died. Alcohol and speed contributed to this accident.

■ A Soldier was driving an SUV with four other Soldiers riding as passengers when he went off the right side of the road, causing the vehicle to overturn several times. Although wearing his seat belt, the driver was partially ejected through the driver-side window and died of his injuries. Three of his passengers were also injured.

■ A Soldier was speeding in his sedan along a paved road when the surface transitioned to dirt and gravel. The Soldier lost control and his vehicle rolled several times. Although he was wearing his seat belt, the Soldier was partially ejected and died at the scene.

Pedestrian



CLASS A

■ A Soldier attempted to cross a controlled intersection without a crosswalk late at night and was struck by a civilian bus. The Soldier died of his injuries.

Editor's note: Information published in the accident briefs section is based on preliminary loss reports submitted by units and is subject to change. For more information on selected accident briefs, e-mail safe.knowledge@conus.army.mil.



Technology Won't Save You

BOB VAN ELSBERG
Driving Task Force
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

Modern three-point seat belts were designed to restrain occupants from being thrown forward during a collision and striking the dash, steering wheel or windshield. However, seat belts are not nearly as effective in protecting occupants from the lateral (sideways) forces of rollover accidents.

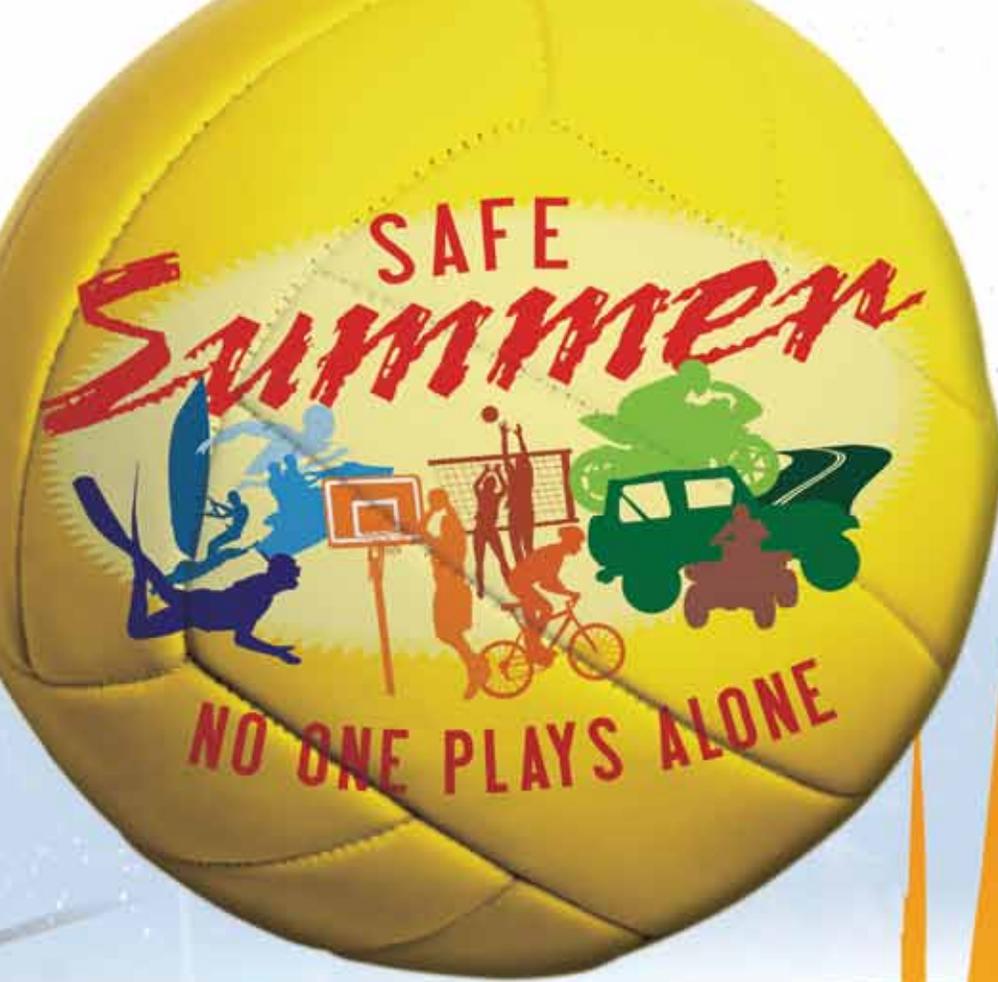
Experience has shown seat belts can allow enough movement during rollovers for occupants — typically drivers — to be partially ejected through their side window. As a result, they are sometimes trapped and crushed as the vehicle rolls. While new technology, such as side-curtain air bags, may provide an increased level of protection in these accidents, the real key is avoiding rollovers.

What typically causes these accidents? More often than not,

the answer is excessive speed or driving while fatigued or under the influence. Excessive speed reduces reaction times and increases the chances a vehicle will go off the road. Fatigued or intoxicated drivers can't recognize the limitations they have imposed on their own skills or effectively consider the consequences of their actions. They make dumb mistakes behind the wheel — mistakes for which they and others sometimes pay the ultimate price.

There is a difference between a mistake and a dumb mistake. Dumb mistakes are made by people who know better. Avoiding dumb mistakes boils down to one word — discipline. Do you have the discipline to make smart decisions, or are you an accident waiting to happen? The choice is yours. <<





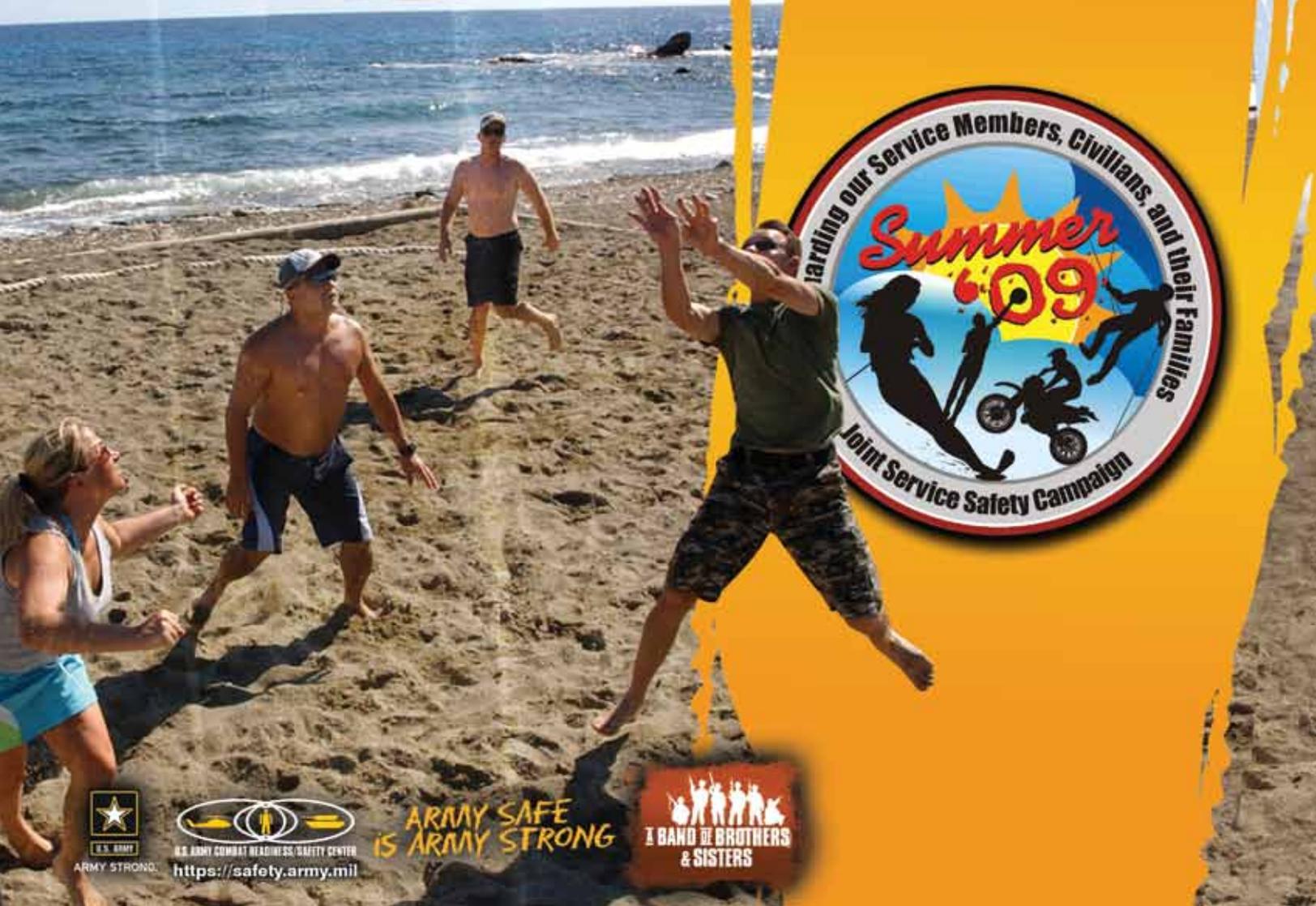
Summer Safety Campaign

May-Sept. 2009

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VOL. 3 JUNE 2009

OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

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ARMY STRONG.



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Mission statement: USACRC supports our Army by collecting, storing, analyzing, and disseminating actionable information to assist Leaders, Soldiers, Families, and Civilians in preserving/protecting our Army's combat resources.

We welcome your feedback. Please e-mail comments to safe.knowledge@conus.army.mil.

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ENGAGE YOUR THREE TO SIX

Prior to taking this job, I had been told that success is impossible to measure in this business of safety because we know how many Soldiers we lose, but never how many lives we save. While this is true, we have much work yet to do in order reduce our senseless and needless losses. But it's not all bad news. We've seen some successes and we will continue to see more if we apply proactive and engaged leadership.

From my foxhole, there are a couple of areas where I think we've made the greatest strides over the past two years that will help you enhance your existing practices as you move forward.

Communication. Over the last two years, I believe our greatest success was to open lines of communication with the field. As an Army field operating agency located at Fort Rucker, Ala., it has been easy for your Safety Center to become not only isolated from the force, but the rigors that face the force. Through engaged Leaders and Soldiers interacting with those here at the center, we have seen measureable success in opening a constructive dialog with those units in the field. While communication existed in the past, it was often limited within the command of post camps and stations. As a result, our success was often local and rarely was proliferated across our Army. The investment in the Battle Command Knowledge System (BCKS) and similar forums has greatly changed our ability to exchange ideas and share tactics, techniques and procedures in a real-time environment, which has enabled our team to learn at an incredible rate. However, let us not forget that many in our force still have no or limited connectivity and, therefore, we must ensure that these Soldiers are not forgotten.

Accidental loss reduction. We have seen a reduction in accidental fatalities across the force over the last couple of years. Our greatest success has been on duty where Leaders are present, and we are working to leverage Families and peers to make a difference off duty. There is a long list of programs produced by this center and other Army agencies that have been effective in reducing Army accidents, but none compare to effective leadership. The single most effective tool against accidents, suicides and indiscipline is still a trained and competent first-line supervisor. Allow me to explain, because this is one of the most misunderstood tasks in our Army. At last count, there were more than 130 tasks a Soldier must certify in before going downrange; none teach you how to understand Soldiers. Understanding the human



“The single **MOST EFFECTIVE TOOL** against accidents, suicides and indiscipline is still a **TRAINED and COMPETENT** first-line **SUPERVISOR.**”



dimension is nothing new to Leaders in our Army, but it seems, at times, that many units don't have time for it. If you're not investing in the development of our future Leaders, through officer professional development, noncommissioned officer professional development or some type of unit certification program, you are doing a grave injustice to the future of our Army.

The way ahead. Before the Global War on Terrorism started and we thought we were busy, our Army spent a significant amount of time mentoring and certifying Leaders. During this process, Leaders at all levels mentored two levels down and first-line Leaders spent time getting to know the three to six Soldiers under their charge. They then held those individuals responsible for the standards they set forth. I believe it is time to return to some of those same practices if we are to create a culture in which we can reduce suicides and accidents. Do you train as hard to develop and protect Soldiers in garrison as you do in combat? If not, you should reconsider it because in

November 2008, we had lost more Soldiers to accidents than we had in combat operations. So where is the risk to your formation? Every Leader from the most junior specialist to the chief of staff of the Army is a first-line supervisor of at least three to six people. When was the last time you sat

down and engaged in meaningful conversation with your three to six? Maybe it's time you get reacquainted.

I would like to thank the safety community, especially those at the brigade combat team level who have deployed repeatedly and continue to work to keep our Soldiers safe.

It has been a pleasure to serve our Army as the U.S. Army Combat Readiness/Safety Center command sergeant major over the last two years. Although as a noncommissioned officer I had spent years enforcing standards and discipline in the name of safety, I found that I knew little of safety at the Department of the Army level. The last two years has been a learning experience to say the least, but I believe it has been a two-way street. Yes, I have learned a lot from this experience, both from the professionals here at the center and from those professionals serving our nation. I cannot begin to thank all of those who provided input over the last two years in an effort to make our Army a safer place. Thank you all.

Safety – it's not about keeping you from doing something; it's about preserving your combat power while defeating those forces that threaten our way of life.◀

Tod L. Glidewell
Command Sergeant Major
U.S. Army Combat Readiness/
Safety Center

NCOs LEAD THE WAY

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I had an NCO who watched me like a hawk. At first, I took it personally. I felt he didn't believe a woman could do the job and didn't trust me. Well, I was partially right. He didn't trust me — but not because of my gender. I later learned the close supervision I received was because I was new and really didn't know much about Army aviation.

I was introduced to safety immediately after becoming a Black Hawk crew chief. I quickly learned taking a foreign object debris collection can with me every time I conducted maintenance on the aircraft, as well as conducting a complete toolbox inventory before and after performing maintenance, was not an option, but a requirement.



One time, I left a tool on the aircraft. My NCO lit into me like there was no tomorrow. He reinforced that when you are flying, there is no pulling over onto the side of the road; you're going down. I wasn't flying on that aircraft that day, but my friend was onboard. I am thankful my NCO checked behind me and enforced the standards. He always held my feet to the fire when needed.

Safety is second nature to me now. The most important thing you learn as a Soldier is everyone is a safety officer. As a crew chief, failing to act can lead to disastrous consequences. Some of the calls I have made as a crew chief include, "Bank left ... aircraft at three o'clock," "Check

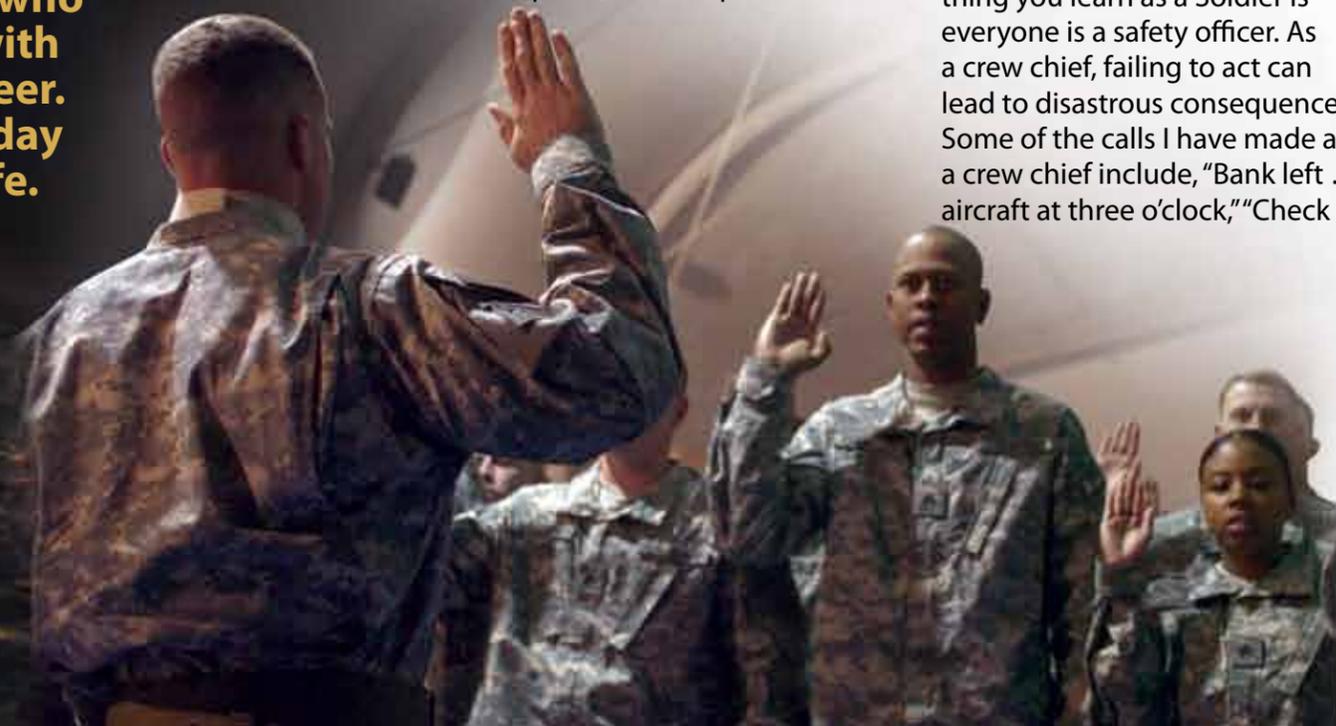
elevation" and "Wires — pull up!"

Had I not made those calls, I am certain our crew would not be here. That is what my NCOs taught me to do. It isn't something extra we do as Soldiers and NCOs; it is simply what we do. It doesn't make me or anyone else a hero to react appropriately to an unsafe situation. However, if you turn the other way and don't do anything, it makes you a weak Leader.

The greatest thing about the NCO Corps is we are unified and strong. We place trust within each other and our Soldiers, we are consistent, we continually strive to make ourselves better Leaders, we give our best and expect the best and we train for proficiency. We are separated from others because we know our nation cannot survive without us. You have placed your trust in us to take care of your sons and daughters, and that's what we do.

NCOs have played an important part in my Army career. In turn, I believe I have positively influenced Soldiers who have crossed my path. NCOs make it happen. We are the backbone of the Army.◀

Noncommissioned officers are vital to the military's success. Their attention to detail, drive and mentorship encompasses what and who we are as Soldiers. I have been blessed with some outstanding leadership throughout my career. In fact, I believe the reason I am standing here today is because of all the NCOs that have been in my life.



Check and Verify

SGT. 1ST CLASS PAUL R. PASCUAL
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As a young Soldier, I was excited about working in aviation. I was immediately responsible for protecting the lives of everyone who entered and operated my “bird,” as well as maintaining the aircraft when it was not in flight.



In the Army, military personnel are Soldiers first; in aviation, crew chiefs are Soldiers committed to safety first. As a newbie, I never accomplished tasks or missions without an NCO overseeing my work. Fortunately, I had an NCO who taught me what right looks like and ensured I followed all safety practices while performing my duties. I’ve always looked up to my NCOs and Leaders. Early in my career, I set a goal to one day become an influential NCO who holds the line and enforces the standards.

Day-to-Day Missions Bring Adventure

As a platoon sergeant assigned to an attack helicopter company during the 1st Cavalry Division’s deployment to Operation Iraqi Freedom 06-08, I was responsible for the maintenance of nine aircraft and ensuring my Soldiers and crew chiefs performed their jobs properly and safely. The Air Cav Brigade was responsible for all aviation assets and support of the division.

The high operational tempo of our missions took its toll on both man and machine. As a senior NCO, I ensured my Soldiers and aircraft were always ready for the missions. Our crew chiefs conducted scheduled and routine maintenance before and after each mission on 12-hour shifts. I stressed to them that proper maintenance is the key to a safe and successful mission and post-flight inspections are just as important as pre-flights. Aviators and crew chiefs performed these inspections; however, this wasn’t always the case, especially after a six-hour mission. We conducted preventive maintenance checks and services (PMCS), oil samples and gun inspections on a daily basis due to consecutive and sometimes concurrent missions.

I will never forget one particular PMCS job I inspected. Generally, platoon sergeants in a flight company have limited inspection authority. The crew chief asked me to

sign off on an inspection after he had installed panels. Incidentally, crew chiefs don’t install panels before the technical inspector performs the safety checks. Nevertheless, I developed a trust with my crew chiefs since they had performed this inspection numerous times.

I checked all the panels for proper installation; however, I was having second thoughts about signing off on the inspection. I needed to check an R510 panel to ensure the grease plug was tightened properly on the tail rotor intermediate gearbox. So I removed the panel and was shocked to see what was behind it.

The “trustworthy” crew chief had left his Gerber multitool on the tailboom, right below the No. 5 driveshaft. I couldn’t believe he had done such a careless and unsafe act, knowing the aircraft was getting ready to fly a mission. I went back to the shop, grabbed my camera and took pictures of the hazard. I then confronted the crew chief and his

“ I LEARNED a valuable LESSON that day: You can TRUST your SOLDIERS, but as an NCO, you ALWAYS need to CHECK and VERIFY (CAV). ”

squad leader with what I had found and showed them the pictures.

Both Soldiers were speechless because they knew the consequences if the tool had not been recovered. As corrective training, the crew chief was not allowed to work on an aircraft without his squad leader’s

supervision. Additionally, due to this incident and prior events, the battalion quality control NCOIC enforced standing operating procedures that all maintainers were not to use their personal tools while working on aircraft.

This incident was a close call and could have been a catastrophic accident if the tool had not been found. I remember our battalion

commander always preached about the “CAV” acronym — coordinate, anticipate and verify. This was an eye opener for me. Even an excellent Soldier makes mistakes. I learned a valuable lesson that day: You can trust your Soldiers, but as an NCO, you always need to check and verify (CAV).





Making the CALL

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Composite risk management (CRM) is the Army's primary decision-making process for identifying hazards and controlling risks across the full spectrum of Army missions, functions, operations and activities. (Field Manual 5-19)

This sentence lays the foundation for one of the most misunderstood doctrinal concepts in the Army. Designed to be a fully integrated process which facilitates the Military Decision Making Process, CRM is all too often an administrative afterthought to operational planning and execution. The CRM worksheet becomes just another piece of paper stapled to a mission packet, another slide to e-mail to higher and another block to check before we can cross the line of departure.

Five simple steps define the process: identify hazards, assess hazards to determine risk,

develop controls and make risk decisions, implement controls, and supervise and evaluate. We do this already, intuitively, every day.

The culture of our organization is such that we don't like to admit there's anything we can't do. We don't like to admit we don't have what's needed to get the job done. We're a goal-oriented, mission-driven organization. We should be. We also need to be realistic enough to know that sometimes we don't have everything we need to do the job and sometimes we need to let someone else decide whether we should do it.

I've had the opportunity to talk about CRM to NCOs and officers of all ranks on many occasions. I've come to realize that the process is misunderstood across all ranks and components. With the help of other safety professionals, I've developed techniques to try to better communicate the process.

Stress the risk we're really trying to mitigate. The CRM process was designed to mitigate risk to mission accomplishment. Many Leaders have what I call "range syndrome." All our careers, we've been told that anyone can call a cease-fire on a range. That's absolutely correct.

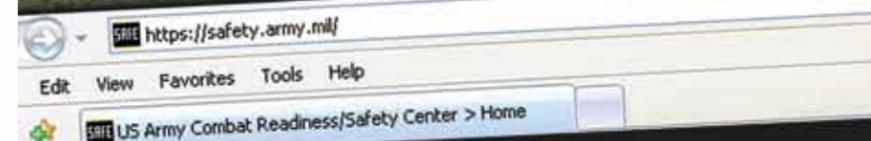
Does that mean the whole range is going to be canceled because one individual observes one unsafe act? No. The range is being conducted as the result of a legal order approved by a commander with legitimate training requirements. The unsafe act will be corrected and the conduct of the range will continue. The commander has not been handcuffed from executing a training requirement, an unsafe act or condition has been corrected and we all move on.

The CRM process identifies resource requirements. We can develop all the risk-mitigation measures we want. If we don't have the ability to resource those measures, how have we helped mitigate our risks? Can we lower our residual risk? No. Does that mean we can't ask for what we don't have? We absolutely can. There's no reason why we can't go back to the boss and say, "I have a high risk of mission failure with my available resources, but if I get this ... I can lower my risk of mission failure to a low risk." So we have created a statement of need.

Not every risk level can be eliminated. The risk assessment matrix defines risk level based on probability and severity. In many cases, we have to decrease both in order to decrease our overall risk level. Sometimes, we'll only be able to reduce one. If we've reduced the probability of an event occurring but not the severity, have we failed? What if we can only accomplish the opposite? I would submit that reducing either factor, even if it doesn't reduce our residual risk level, is worthy of the effort.

Sometimes the boss has to make the decision. No one really wants to go to the boss and say, "I need you to make the call." Most of us feel that we look indecisive if we kick the decision upstairs. However, sometimes the decision to proceed is way above our pay grade or rank. We have an obligation to let those above us know when a mission they're expecting to be accomplished may not be because it's gone beyond our ability to control. We're not "crying wolf"; we're giving the leadership a realistic picture of our capabilities and limiting the exposure to overall mission failure.

CRM has the ability to be a force multiplier like no other. Moving beyond institutional and organizational barriers to CRM increases the possibility of mission success exponentially.◀



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FARP Training at the NTC is Unmatched

SGT. 1ST CLASS TOMORRIS ROBINSON AND SGT. 1ST CLASS JAMES STAFFORD
 Eagle Team Operations Group
 National Training Center
 Fort Irwin, Calif.



The National Training Center (NTC) is one of the premier training facilities in the world. This is where units train for today's missions in Iraq and Afghanistan and gain the tactical knowledge and confidence to be successful in combat. The Eagle Team observes, coaches and trains aviation battalions and companies during the planning, preparation and execution phases of simulated combat operations. We subsequently collect, analyze and provide feedback to rotational aviation units via after-action reviews and take-home packages. This information provides training feedback to the Army in the form of tactics, techniques and procedures (TTPs), professional articles and video products. This training cannot be replicated anywhere else in the continental United States.

Our high operational tempo (OPTEMPO) training imparts units with real-world missions involving smart decision-making from the command. Platoon leaders and platoon sergeants are trained in the doctrinal employment of TTPs for forward arming and refueling point (FARP)

assets in accordance with Field Manual 3-04.104. So what is a FARP? A FARP is the temporary arming and refueling facility that an aviation unit commander organizes, equips and deploys to support combat tactical operations. Aviation is one of the most effective combat

multipliers in this tactical exercise. Distribution platoons assigned to the forward support company provide fuel and ammunition required for training and combat operations. These individuals are responsible for the storage, receipt and accountability of all fuel and ammunition within

the Aviation Task Force. Military occupational specialty (MOS) personnel allocations for the FARP include petroleum supply specialists (92F) and ammunition supply specialists (89B). Together, as one team, we operate and manage FARP operations.

The NTC provides distribution platoons with several opportunities during 14 days of high OPTEMPO training. This includes operating a base FARP at Forward Operating Base (FOB) Miami and a Jump FARP (J-FARP) at FOB Seattle. FOB Miami has six concrete pads that give the unit the ability to have six points for aircraft refueling and a built-in concrete spill container for the pump truck. FOB Seattle has the ability for an eight-point FARP. Its surface contains soil cement, which is a liquid dust abatement application that mitigates brownout conditions typically found in desert environments. It also has a ready ammunition storage area (RASA) at both ends of the FARP.

During the first six days of training, J-FARP operations

support aviation and ground units in close combat attack lanes where units are required to receive, store and issue live ammunition during the situational training exercise. For the remainder of the rotation, both FARPS remain operational, pumping fuel and notionally accounting for ammunition. Units must execute these primary tasks to standard to be successful during a rotation.

As observer controllers (OCs), we coach, teach and mentor distribution platoons on all aspects of FARP operations during their deployment to the NTC. We ensure they conduct quality surveillance on all fuel and fuel sources such as vehicles and Advanced Aviation Forward Area Refueling Systems (AAFARS). We also ensure the platoon properly accounts for all ammunition and fuel.

For aviators and ground support personnel, FARPs are one of the most dangerous areas to work. Safety is the biggest factor and enforced in all training exercises. Some high-risk areas to

watch for are the safe handling and storage of ammunition, proper use of personal protective equipment, equipment readiness, fire safety, fuel spill procedures and hot refueling operations.

Though most units conduct FARP operations very effectively, most NTC problem trends relate to the lack of planning and preparation. Some common observations during rotations include:

- Units fail to bring enough equipment for multiple refuel points during their 14 days of training. Units should come prepared to operate two four-point FARPs.
- Equipment checks and inspections are not properly conducted at home station before arriving at the NTC. We typically refer to these as pre-combat checks and pre-combat inspections.
- Units are not aware of current safety messages that apply to equipment such as the D-1 nozzles and closed-circuit refueling nozzles.
- Units are not equipped

with the proper long- and short-range communications systems. They should use frequency modulation (FM) communications for terminal guidance of aircraft in the absence of air traffic control services and also for long-range communications with a dedicated RETRANS capability. Handheld communications to talk within the FOB are typically nonexistent, yet help facilitate reports and nontactical traffic. Long-range communications should include Blue Force Tracker, high frequency, Tactical Satellite Communications or Iridium Phone. When planning for communications, encompassing primary, alternate, contingency and emergency means of communications is essential for success.

Leaders face many different personnel challenges. During split-based operations, having the right people at the right place is crucial. The ammunition supply specialist (89B) plays an important role in the success of all FARP operations. Assault and heavy assault task forces do not own ammunition supply specialists. We find unqualified personnel trying to manage live ammunition when they do not understand storage and accountability procedures. We recommend aviation brigades cross-train this MOS throughout its ranks.

The training that distribution platoons receive at the NTC is unmatched. Rotational units get the most realistic training in the most demanding conditions. The OCs provide realistic training and valuable feedback. Together, we ensure aviation units meet their training objectives and are better prepared for combat in support of the Global War on Terrorism. Train the Force!◀



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Arrive Alive

COMPILED BY THE KNOWLEDGE STAFF

I often travel as an Army reservist or in civilian life for my private business. Those trips involve flying, renting cars and staying in hotels in various cities across the country. While there has been a lot of emphasis on passenger safety in the airline industry, I would like to mention a few safety tips concerning rental vehicles and hotels.

Most rental cars in large fleets are well maintained. These vehicles are inspected for damage and faulty components before and after they are rented. These inspections, however, are not a substitute for doing a good walk around of the vehicle before driving it off the lot.

So what do you want to look for? When you approach a vehicle, check to make sure the tires are properly inflated. Look for poor or uneven wear patterns, such as excessive wear on the outside edges of the front tires. Such patterns can suggest a problem with the vehicle's alignment — something that can negatively affect handling.

Check the tread depth on all four tires. If you have a penny, insert it into the tread with Lincoln's head toward the tire. If you can see the top of his head, the tires are unsafe. Also, look for damage on the tires' sidewalls — places where the rubber has been cupped out, heavily abraded or excessively cracked. Your life is riding on those tires, so it's important to make sure they are safe.

Once you've looked at the tires, check the lights. Turn on the

headlights, signals and hazard flashers and walk around the car to make sure everything is working. If you have a passenger, have them stand behind the vehicle to observe the brake and backup lights. If you are alone and it's daytime, back the vehicle close to a shiny surface so you can watch the lights' reflections as they come on.

Take a few moments to adjust the mirrors so you can maintain good visibility beside and behind the vehicle. Also, check the interior of the car. Look under the driver seat for forgotten items that could slide under the pedals during turns or braking. Check the emergency brake and horn to make sure they're working. Finally, if you need to get directions off a map or set up a global positioning system, do it before pulling onto the road.

How about preventive maintenance checks and services (PMCS) on that rental car? You're going to have to get gas, so, while you're at the station, pop the hood. Is the engine oil low? How about the coolant? If needed, replenish these fluids and turn in your receipt to the rental car company. They'll typically credit that amount against your rental fee to reimburse you. After all, they'd rather your car be driven back to the lot instead of towed.

Getting there is only half the mission. Once you've reached your overnight accommodations, you want to make sure they are safe. I have heard stories from people who didn't know how to get out of their hotel when an alarm suddenly went off in the middle of the night. The time for

finding an exit is not when smoke is filling the building. After you check in, take a little time as you walk to your room to familiarize yourself with the nearest exits and stairwells. Plan for more than one escape route just in case your main path is blocked.

Entrances can also be a security concern. Many hotels have additional entrances not visible from the check-in lobby. Even though most modern hotels have cameras watching their entrances and parking lots, not all have these security features. During a business trip several years ago, a contractor I was supposed to meet was robbed while coming in the same back entrance I'd used just a few minutes earlier. That taught me to carefully look around before getting out of my car in a hotel parking lot after dark. It also taught me to check the entrance to see if it's well lit. If it's not, it's safer to walk around and enter through the main lobby. Finally, when you're in your room, set the deadbolt and make sure it unlocks when you turn the door handle.

Hear an unexpected knock at the door? Don't assume it is hotel service. Call the front lobby to confirm who is at your door before opening it.

Safety can sometimes slip as a priority for weary travelers eager to reach their hotel and check in for the night. However, using good common sense and maintaining situational awareness can keep you safe — even when you're far from home.◀



Five in the Sky

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Fireworks are a July Fourth tradition. To celebrate our nation's independence, many Americans will gather at professional events, while others will choose to hold a personal fireworks extravaganza in their own backyard. When done right, fireworks create spectacular displays of colored light in the night sky. But before lighting the first fuse on that bottle rocket or Roman candle, ensure you know the guidelines for the safe and responsible use of fireworks.

Have you ever wondered what makes those pretty colors when a skyrocket explodes? There are a lot of different chemicals used, but some of the most common are aluminum (produces silver and white flames and sparks), barium (green), copper (blue), lithium (red) and sodium (gold or yellow). On the ground, however, these components are nothing more than explosives and pyrotechnic materials.



Fireworks are classified as hazardous substances under the Federal Hazardous Substances Act. In fact, consumer fireworks are generally considered more hazardous than our military explosives. In the military, we spend considerable resources throughout the life cycle of ammunition and explosives to ensure they're safe and reliable. While the safety of fireworks continues to improve, many manufacturers and standards do not achieve this same level of safety,

with Family and friends. The Consumer Product Safety Commission (CPSC) estimates about 9,800 people were treated in hospital emergency rooms for injuries associated with fireworks in 2007. No one wants their fun to be spoiled by an accident or injury, so, whether you're using commercial or consumer fireworks, the rules on their safe use should always be followed. For large fireworks displays, Department of the Army Pamphlet 385-64, paragraph 2-12, and

over the fireworks.

- Fireworks should only be used outdoors.
- Never throw or point fireworks at another person.
- Do not handle or try and relight "duds." Wait 20 or 30 minutes, soak the duds in water and then properly dispose of them.
- Read and follow the instructions on how to use the item.
- Keep a bucket of water or a garden hose handy in case of fires.

Fireworks can liven up any Independence

FYI

Before spending a fortune on your personal tribute to independence, ensure fireworks are legal to possess and use in your city and state. The National Council on Fireworks Safety's Web site is a good source of information on state fireworks laws. You should also always ask

your local fire or police department if fireworks are legal in your area. Although fireworks may be legal in your state, there may be reasons, such as a burn ban due to dry weather, why their use is prohibited in some areas. For more information, visit www.fireworksafety.com.

quality and reliability. Take firecrackers, for example. Many people have probably lit 1 1/2-inch firecrackers. Were all the fuzes the same length? Did they burn at the same rate? Did they sometimes fizzle out, leaving an even shorter fuze intact? In commercial firework demonstrations, have you seen low bursts or even ground bursts? Safety is very important, whether it's a big show or backyard use of fireworks

National Fire Protection Agency Document 1123, Code for Fireworks Displays, provide current requirements. For personal use of fireworks, some generally accepted safety rules include:

- Maintain adult supervision.
- Alcohol and fireworks are not a good mix. Have a "designated shooter."
- Use eye protection when shooting fireworks and do not let any part of your body get

Day celebration, but they should always be treated with respect. Remember to use common sense and follow all safety rules so you, your Family members and friends don't become a fireworks statistic.◀

DID YOU KNOW?

Sparklers can reach temperatures up to 1,800 F. According to the National Council on Fireworks Safety (www.fireworksafety.com), more than half the sparkler-related injuries

happen to children under the age of 14. If sparklers are a part of your child's celebration, ensure they keep them outdoors and away from their face, clothing and hair.



A CREW CHIEF'S LEGACY

CHIEF WARRANT OFFICER 3 ALAN E. REED
 Otis Air National Guard Base
 Massachusetts Army National Guard
 Falmouth, Mass.

Many years ago, I served as a specialist four with the 48th Aviation Company at Nelligen Barracks in the Federal Republic of Germany. I was on a field training exercise as a Black Hawk crew chief in Netheravon, England, serving in a maintenance platoon as a new "Tango" (67T) and had recently joined the flight platoon. We were the first company-sized element to field the UH-60 in United States Army, Europe. Although inexperienced, I was confident in my crew chief abilities; however, after this incident, I wasn't so sure.

As most Black Hawk crew chiefs know, one of the required aircraft inspections consists of taking oil samples from the intermediate and tail rotor gearboxes and getting them to a lab to conduct an analysis of wear and particles therein. We also take a sample of the auxiliary power unit (APU) oil.

One evening after a night vision goggle flight, we landed on a grassy flightline without incident. Oil samples were due immediately

after landing. I had a headache and was tired, but knew I had the next day to rest up, so I pushed on with taking the oil samples with a flashlight after the pilots departed for their hooch.

Typically, this process doesn't take more than 20 or 30 minutes. However, as "Murphy" would have it, I discovered the sump was a bit low while taking the APU oil sample. I took care of it right away and filled the sump using a funnel borrowed

from another crew chief. The red plastic funnel was attached to a 10-inch tube with a 3-inch flared end at the opposite end of the funnel. As the flared end of the tube disappeared into the dark, oil-filled sump, I innocently poured the oil into the funnel and then pulled the entire assembly out, only to discover that the flared end didn't come out with the tube.

Crap! I frantically took my flashlight and pointed it inside the sump. With my tired

eyes now wide open, I saw the missing piece floating in the oil. This assembly was actually three pieces, not two.

I spent the next hour "fishing" for the piece with my fingers to no avail. Frustrated and worried about how I was to get this thing out, I retired to my bunk and collapsed. I would attempt this feat again first thing in the morning.

I awoke the following morning and immediately headed to my aircraft

to continue my fishing expedition. Luckily, my aircraft wasn't scheduled to fly, so I had time to try a number of ways to retrieve the broken plastic. As a "wannabe" true member of the flight platoon, I was concerned about the impact this incident would have on my future as a crew chief. I worried for several hours while I tried every possible tactic and special tool to get the funnel piece out. Embarrassed and stumped, I finally broke down and told my squad leader my dilemma.

Through the unsuccessful efforts of my squad leader and platoon sergeant to fish the darned piece of plastic out, my first sergeant recognized we needed assistance from the Brits. The APU had to be pulled out of the helicopter and drained. We spent the

next two days waiting for the Brits to secure a wrecker with an arm long enough to lift the APU from its compartment, tip it upside down and drain the oil and piece of plastic.

The Black Hawk was down for three days. However, my first sergeant reassured me that accidents happen and he was glad I reported it quickly. We learned a lot about the APU and other maintenance tools during this process. This was the first time an APU had to be removed from a Black Hawk in a field environment. Most importantly, both our armies benefited from this incident, and a bond was formed that can only come from adversity.◀

**COMMANDERS,
ARE YOU READY?**

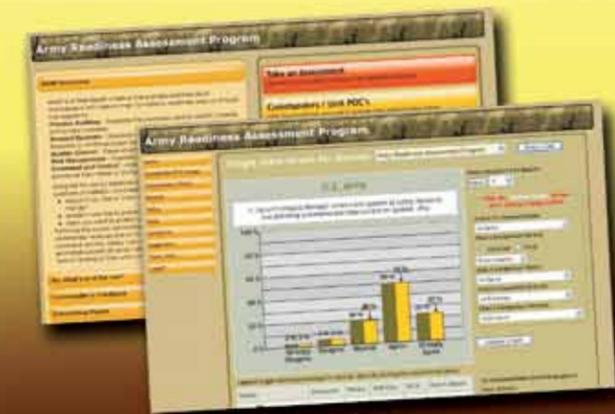
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DYING TO RIDE

COMPILED BY THE KNOWLEDGE STAFF

Imagine a couple of Soldiers — we'll call them Jim and Joe — talking as Jim comes off a 12-hour watch and Joe gets ready to go on duty. It's 7 a.m. on the beginning of a beautiful day, and Joe has a cool sportbike Jim would like to borrow. So, Jim hits up his buddy with his request.

"Hey, Joe, since you have to work, would you mind lending me your bike? I'll have it back by this evening."

Joe thought about it for a minute. He'd lent Jim his bike the day before and it came back in one piece. Figuring he could trust his buddy, Joe answered, "Yeah, sure. Just be careful and fill it up with gas."

Jim took the keys and smiled. As he headed for the parking lot, he called back to Joe, "I'll see ya this evening."

Unfortunately, Joe never had the chance to speak to Jim again. However, he did attend his funeral and memorial service later that week. While Jim was riding that evening, his motorcycle went into a "tank slap" or speed wobble. A friend from his unit was riding behind him and saw Jim go off the right side of the road and over a steep drop-off. The friend stopped and ran to where the bike left the road, but couldn't see it or Jim through the trees and undergrowth below. He called 911.

The local fire department, emergency medical services and police were at the scene within minutes. After more than an hour, they found the motorcycle, but they didn't find Jim. It wasn't until 6 a.m. the next day that his body was found. He'd landed 160 feet from where he'd gone off the road and died from blunt trauma injuries to his head and neck.

Jim is not around to tell us his story. However, investigators from the U.S. Army Combat Readiness/Safety Center delved into this accident to discover how it happened and what might have been done differently to prevent it. What they found was, as in most accidents, there were several contributing factors. First, Jim was a high-risk Soldier. He had two convictions for reckless driving — one of those resulting from a motorcycle crash where he broke his leg. Second, Jim did not have a motorcycle endorsement to his license and had not completed the Motorcycle Safety Foundation's (MSF) Basic RiderCourse. For that matter, neither did Joe, the Soldier who owned the motorcycle.

Even though Joe's Leaders knew he had the bike, they failed to ensure he got the proper training and license. Third, Jim operated the motorcycle in a careless manner. That set the conditions for the tank slap which led him to lose control of the motorcycle.

Before we go any further, it's important to explain what a tank slap is and what causes it. A tank slap is a rapid, violent, side-to-side swinging of the handlebars and can occur at any speed. Do a search for "tank slap" on the Internet and you'll find video clips of the phenomena.

How do we keep history from repeating in future accidents of this kind? Leaders must identify Soldiers who engage in high-risk activities or demonstrate high-risk behaviors and employ meaningful countermeasures to help keep them safe. Leaders also need to ensure their Soldiers understand the principles of composite risk management (CRM). Jim, who was untrained and inexperienced as a rider, could not do the first step of CRM — identify the tank-slapping hazard — and died because of it.

Composite Risk Management Process



OK, so now that we know what it is, what causes it? In simple terms, the conditions leading to tank slap occur whenever the front wheel loses contact with the road. If the front tire, when it makes contact with the ground again, is not lined up with the rear tire, the front end can react violently and cause tank slapping.

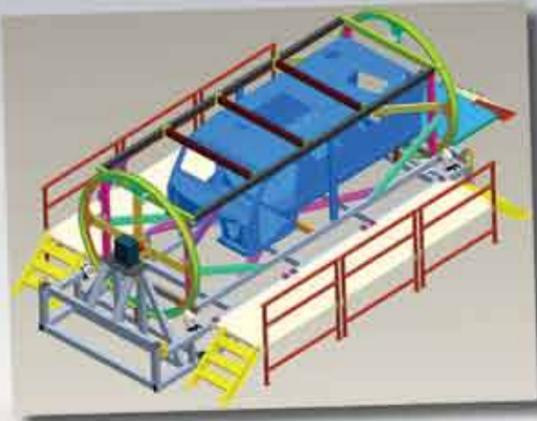
Although worn suspension components can exacerbate the tank slap, it's the front wheel leaving the road that starts the chain of events. While any motorcycle is susceptible to tank slapping, powerful lightweight motorcycles are much more likely to raise their front wheel during acceleration. This is what the accident investigation board believed happened in this accident.

How can Leaders protect their Soldiers who ride? They can start by identifying them and ensuring they get the required training and motorcycle endorsement. That is important because one in four fatal Army motorcycle crashes involve unlicensed riders. Leaders must also act quickly and take decisive action against Soldiers who ride at excessive speeds or in a reckless manner.

Riders need to take personal responsibility, as well. Public streets can be unforgiving, even when riders operate their bikes within the limits of the law. Riders must understand that when they speed, pop wheelies or ride recklessly on the street, they risk finishing their ride in an ambulance or hearse.◀◀

Get MET

Editor's note: The following is an excerpt from an article previously published in Show Daily, the daily news digest of the Interservice/Industry Training, Simulation and Education Conference.



The success of the HMMWV Egress Assistance Trainer (HEAT) has led to the development of a new tool to protect Soldiers.

The Joint Mine Resistant Ambush Protected (MRAP) Vehicle Program has developed an MRAP Egress Trainer (MET). The MET program is of critical importance as MRAP vehicles replace up-armored HMMWVs in Iraq and Afghanistan. As of November 2008, 8,758 MRAP vehicles were fielded in Iraq and 1,154 in Afghanistan, with another 5,000 or so vehicles scheduled to be deployed.



Like the HEAT, the purpose of the MET is to teach Soldiers how to egress MRAP vehicles after a rollover. This experience helps vehicle occupants overcome shock and gain "muscle memory" in knowing what to do when vehicles overturn. Occupants will experience the same maximum side-slope angle, tip-over point and 90- and 180-degree inversion. The MET must be able to complete a full 360-degree rotation in nine to 12 seconds.

Following the promulgation of a draft Joint Urgent Operational Needs Statement in November 2007, a concept feasibility study for the MET was conducted from April to June 2008, and detailed design work began in July. Whereas the HEAT replicates a single vehicle, the MET will replicate five different MRAP vehicles: the Navistar MaxxPro and General Dynamics Land Systems RG-31 Category I MRAPs; and, the BAE Systems RG-33, BAE Systems Caiman and Force Protection Cougar Cat II MRAPs. Using the hulls of vehicles originally subjected to ballistic testing at Aberdeen Proving Ground, the Red River Army Depot is building a single expedient MET for each of the five MRAP variants mentioned above.

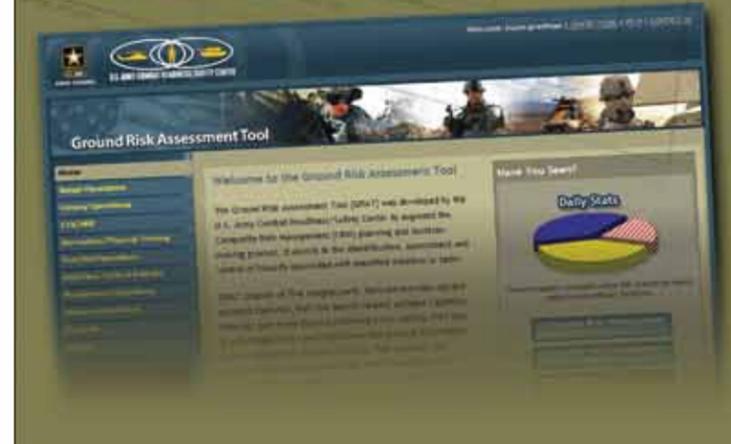
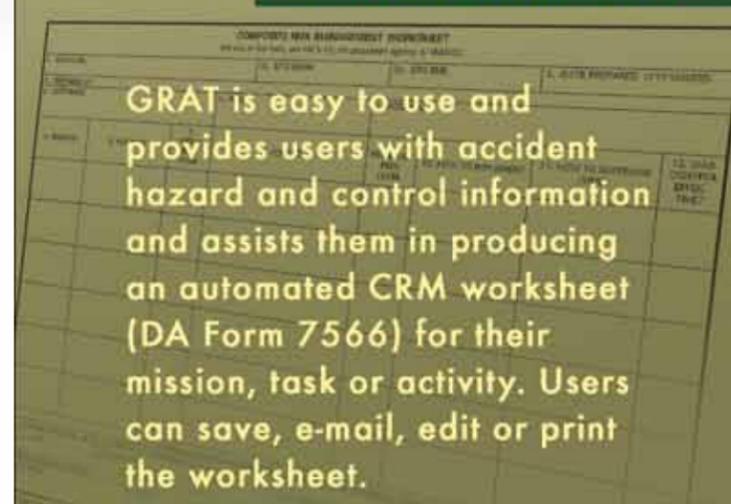
The U.S. Army Tank Automotive Research, Development and Engineering Center in Warren, Mich., began limited user testing of the first prototype production standard MET in December 2008. The first shipment of METs was scheduled to arrive in Iraq in April.◀



GRAT

GROUND RISK ASSESSMENT TOOL

<https://safety.army.mil>



The Lost Link

MAJ. DARIN GAUB
National Training Center
Fort Irwin, Calif.

As Army aviation meets the needs of the field, the use of unmanned aircraft systems (UAS) is playing a major role in winning the Global War on Terrorism. Today's role for unmanned aircraft (UA) is primarily reconnaissance. However, future missions will include operations in nuclear, biological and chemical detection, logistical resupply, increased communications relay, target recognition and even attack. These versatile UA are proving their worth every day in operations worldwide.

As with any system, UA have their pros and cons. Communications can be a problem. Today's remotely piloted UAS require a complex and highly reliable communication link to the ground control station (GCS). If a UA loses link with the GCS, it crashes, which is what happened to the aircraft mentioned below.

Background

While launching out of Bicycle Lake Army Airfield (BLAAF) in support of Joint Air Attack Training at the National Training Center (NTC), Shadow tail number 2272 suddenly reported a generator failure. The aircraft operator (AO) immediately directed the Shadow to return to BLAAF for landing.

In accordance with the UAS operator's manual, the AO turned off all nonessential equipment to conserve battery power for flight control movement to keep the Shadow airborne. The Shadow entered the tactical automatic landing system (TALS) loiter area. The loiter area is about 2.5 kilometers radius orbit, and the Shadow was in a clockwise orbit climbing from 700 to 2,000 feet above ground level (AGL) and attempting to find the signal.

The Shadow was on its second orbit in the loiter area when it lost contact with the GCS. At the time of loss, the Shadow was heading 195 degrees and was most likely still in its orbit. The altitude remained between 700 and 2,000 feet AGL. The AO commanded the Shadow to climb so it could deploy its chute since the battery power was low (18 volts) and the previous orbit failed to capture the TALS signal. Unfortunately, the chute never deployed and the Shadow crashed.



The training brigade combat team and NTC permanent party observer/controller aircraft spent the next three days and 52 flight hours searching for the Shadow, only to find it within four kilometers of the loiter area's center of mass grid. Before the Shadow link was lost, numerous reports were obtained through various channels on the potential direction of flight, endurance based on remaining fuel (33 liters) and other applicable technical data. Despite dedicated aircraft and a specific search pattern covering most of the NTC maneuver area, the Shadow was difficult to find because of the terrain and lack of redundant tracking mechanisms.

Lessons Learned

Some key lessons learned were discovered from this accident, both for the rotational unit and operations group at the NTC. A primary concern of losing power to a UA is losing the ability to track it and potentially creating a hazardous situation for troops on the ground, as well as pilots operating in sector.

If Soldiers on the ground are not given a refined grid to narrow their search, they are forced to search large areas. This increases their risk of exposure to direct and

indirect fire, as well as improvised explosive devices and other hidden dangers. It also increases risk to other aircraft and crews, as the UA can continue flying in airspace with nobody tracking it.

There is also a significant risk to communications security, primarily if the UA is equipped with a communications relay package. The answer to this problem is to provide the UA with redundant mechanisms for tracking. The NTC is currently tracking the Raven small unmanned aircraft system (SUAS) with a falcon tracker system that operates in the 216 MHz range. This system is effective and inexpensive. Installing a basic tracking mechanism into the Shadow UAS will allow it to be tracked when it loses link with the GCS and crashes, reducing the risk to recovery forces.

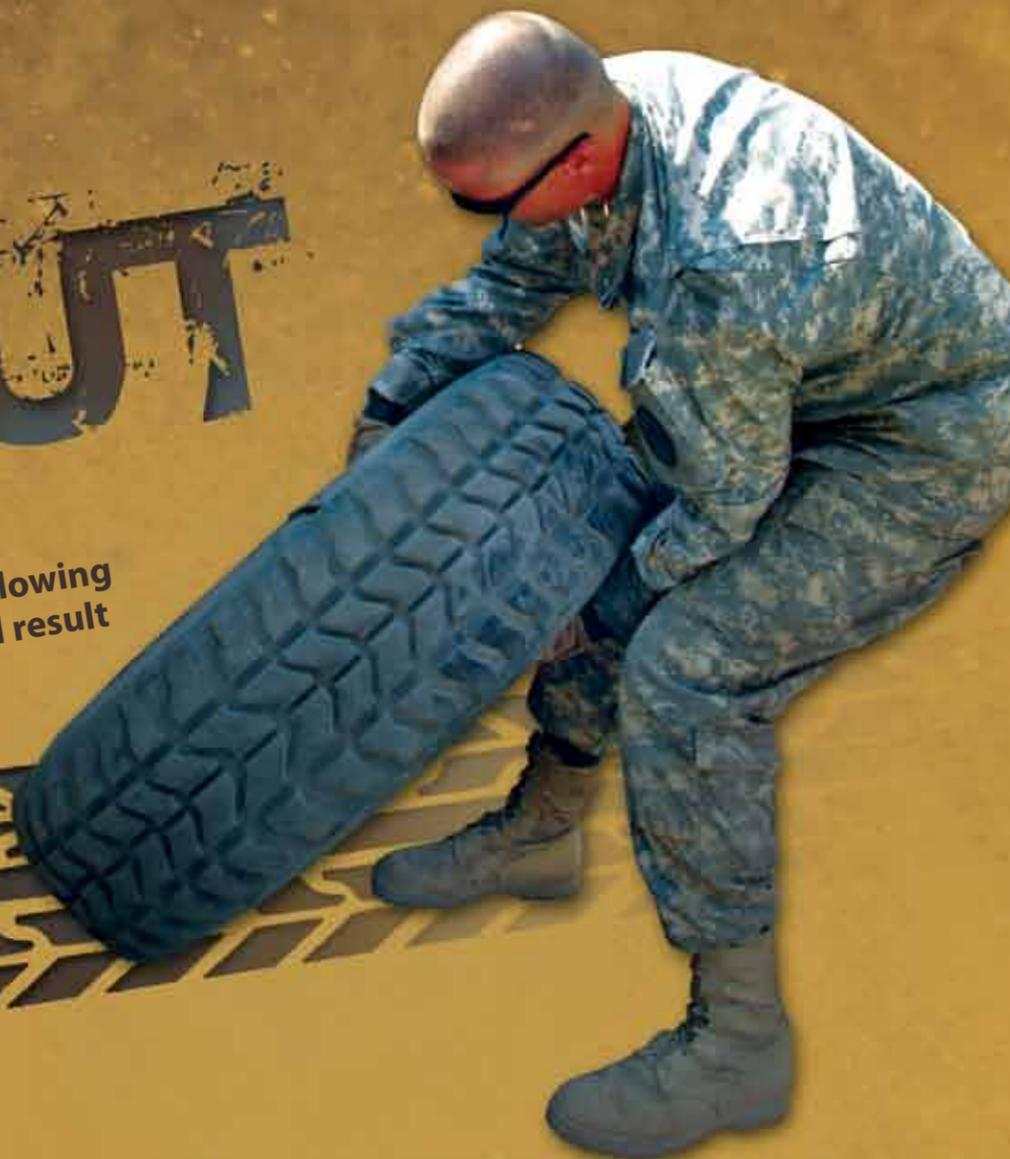
Immediate steps must be taken to fix this deficiency. A link to the technology system used at the NTC is http://www.marshallradio.com/falconry/fproducts_transmitters.asp. The NTC is currently working on the viability of putting a falcon tracker or similar system on Shadows to provide the necessary redundant coverage. As Army UAS mature, they will play a larger role in all types of missions. Shouldn't we be ready?◀



ALL TIRED OUT

CHIEF WARRANT OFFICER 4 JOSEPH B. REESE
Ground Task Force
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

On the best of days, an Army motor pool is home to numerous hazards. Failing to mitigate risks, not following safety precautions or becoming complacent can all result in a very bad end to a vehicle maintainer's day.



concerning the proper inflation of forklift tires. He elected to use a field-expedient inflation method using a ratchet strap, despite the fact that the forklift tire deflated at a forward operating base and could have easily been removed and taken to a tire safety cage.

The TM specifies that inflation must always be conducted using a tire safety cage. The cage prevents injury due to accidental explosion and would not have required the use of a ratchet strap. (In addition, always use at least a 10-foot extension air hose, snap-on chuck and an in-line pneumatic tire inflator gauge.)

The TM also specifies that the tire be deflated

after inflation to ensure the bead is securely seated to rim. In this case, failure to deflate the tire resulted in its expansion as the tension from the ratchet strap was released. This, in turn, caused the ratchet locking mechanism lever to swing backward, severing both of the maintainer's thumb tips at the base of the nail and requiring medical evacuation.

The motor pool is no place for shortcuts or half measures. Strict adherence to the procedures outlined in TMs and a constant focus on composite risk management are critical to the safety of the vehicle maintainers who are responsible for ensuring the Army goes rolling along.◀

In my 20-plus years as a maintainer, I have seen a number of maintenance-related accidents. Most, if not all, of these accidents were completely preventable. Even "weekend mechanics" understand the danger of injuries that heavy parts, sharp tools or hazardous materials can inflict on users.

Many people have handled the dirty and aggravating task of changing a flat tire — and done so without a second thought. Military

maintenance, however, involves vehicles of immense weight and tires of sufficient size to carry them. In this world, changing tires presents not only a challenge, but also the danger of serious bodily harm.

What can happen if the tire maintenance procedures outlined in training manuals (TMs) are not followed or safety precautions are not taken? Rims and tires can explode, causing serious injury. Under the pressure necessary to cause an

explosion, rims come apart, making the fragments deadly projectiles. Some maintainers have suffered injuries ranging from broken jaws and arms to knocked-out teeth and serious eye trauma. Occasionally, a tire maintenance injury results in the maintainer leaving the motor pool with fewer fingers.

In one such instance, a maintainer failed to properly follow the procedures outlined in TM 10-3930-660-20, which contains step-by-step instructions



FYI

Changing a tire on a military vehicle can present some unique challenges. In some cases, Soldiers have been killed or suffered serious injuries while performing tire maintenance. The following are a few of those instances.

- While servicing a UH-60L tire with nitrogen, the rim separated and the tire exploded. A Soldier was fatally injured and another Soldier suffered a permanent total disability injury.
- A Soldier was killed and three others were injured when the split ring on a HEMMT tire blew off after inflation.
- A Soldier suffered a fatal head injury when he was struck by the split ring while inflating an M977 HEMTT tire.
- As a Soldier was mounting a HEMTT tire, the split ring separated. The tire/wheel struck the Soldier, causing fatal injuries.

Proper "Wh-Tire"

STEVE BISHEL
U.S. Army Research and Development Command
Tank and Automotive Research, Development and Engineering Center
Detroit Arsenal, Mich.

There are several things you can do to optimize the performance of your tires and ensure your vehicle is operating safely.

Tire Size/Load Rating/NSN

First, it's important to make sure you are using the correct tire for your military vehicle. The tires specified for a specific vehicle are designed to meet the performance required for the vehicle's mission profile. Check your vehicle's technical manual (TM) for the national stock number (NSN) and size and load rating description. All tires on a vehicle must match the description provided in the TM, which includes size, load rating, manufacturer(s), design(s) and part number(s).

Never mix bias and radial tires on the same vehicle and never mix tires with different NSNs on the same vehicle. Driving a vehicle with tires bearing different NSNs can result in loss of control, damage to equipment and serious injury or death of Soldiers.

Tire Inflation Pressure

Correct tire inflation pressure is one of the most important things a

user can do to improve tire life and ensure vehicle safety. Tire pressures should be set to those specified in the vehicle's TM. Check and correct a vehicle's tire pressure in accordance with the TM preventive maintenance checks and services (PMCS) table.

Tire pressure should be checked before operation, when tires are still cold. The term "cold psi" is used to indicate the pressure in the tire before the vehicle is operated or after it has remained static for a significant period of time (four hours or more). If there is variation in temperature during the day (i.e., 80 F in the morning and 120 F in the afternoon), cold psi should be set in the morning or coolest time of the day, before the vehicle is operated. Cold psi applies to all tires, independent of geographic location.

When checking pressures, use an accurate tire gauge. When inflating tires on a vehicle, use a 10-foot tire inflation hose with clip-on chuck and in-line gauge. This process



For additional information on HMMWV tires, see TACOM LCMC Safety of Use Message 08-002 at <https://aeaps2.ria.army.mil/Commodity/safety/SafetyComm.cfm?FunType=SOUM>.

allows the maintainer to stay out of the trajectory should tire or wheel components come apart during inflation. When inflating tires that are off the vehicle, use a tire inflation cage in accordance with TM 9-2610-200-14.

Tire Inspection

Inspect tires per the before, during and after operation PMCS table of the applicable operator's TM. Look for cuts, bruises, nails, rocks and uneven wear. Tires designed with built-in wear bar indicators will show solid bars of rubber across the tread crown area when wear is sufficient to require the tire and wheel assembly to be removed

from the vehicle and turned in for repair.

If inflation pressure is 80 percent or less of the recommended tire inflation pressure, or when there is damage to the tire or rim/wheel components, the tire must be deflated and removed for inspection to check the inside for damage. This should only be done by personnel properly trained in tire maintenance. Also, check tires for missing valve caps and replace as required.

Vehicle Alignment/Tire Rotation

Proper alignment and tire rotation are other activities which increase the life and performance of tires. Refer to TM 9-2610-200-14 and your vehicle's TM for more information.◀

Get the tools before the road gets rough.



<https://safety.army.mil>

Hot-Footin' It

CHIEF WARRANT OFFICER 3 DENSMORE BARTLY
Warrant Officer Career College
Fort Rucker, Ala.

In 2007, there were 1,840 reported heat injuries for all military services. Of these, 259 were heat stroke and three were heat-related deaths — one in Iraq, one in basic training and one on a land navigation course. It's the responsibility of commanders and Army Leaders to prevent heat injuries and heat-related fatalities in both combat and training activities.

Foot marches and land navigation training both involve a great deal of walking while wearing load-bearing and other required equipment. These types of physical activities induce significant sweating and fatigue, which can lead to heat injuries. It's important that Leaders are aware of common heat injuries associated with these activities, as well as preventive measures to minimize the

risk of these injuries. It's also important for Leaders to be aware that heat injuries may occur when performing activities in a cold or winter environment.

Preventive Planning

Soldiers and Leaders must take a proactive approach to reduce or eliminate the occurrence of heat injuries during road marches and land

navigation training. When applying composite risk management to these activities, you must remember the five P's: proper planning prevents poor performance. Safety must be considered from the beginning to the end of the plan.

The following control measures will help ensure a safe training event:

- Identify and assess the risks for heat injury before the training event or mission. Leaders must ensure the decision to accept any identified risk is made at the appropriate level.
- Identify prior heat casualties and monitor them closely. Prior heat casualties are at high risk for a recurrence of the prior injury or worse.
- Adhere to prescribed work/rest cycles for high-heat categories, as

outlined in the Fluid Replacement and Work/Rest Guide. Plan rest breaks and take them in the shade where possible.

- Monitor and enforce hydration standards outlined in the Continuous Work Duration and Fluid Replacement Guide. Ensure Soldiers carry full canteens for water replacement and place well-marked water stations throughout the training area. Leaders can monitor individual hydration by using the Riley (water) card or Ogden Cord method.
- Use adequate sun protection, such as sunscreen lotion rated at SPF 15 or higher. Ensure the uniform is worn properly to limit exposed skin. Ensure the uniform is properly fitted, to include footwear.
- Ensure Soldiers are well rested

FYI

For more information about the Riley card, Ogden Cord, Fluid Replacement and Work/Rest Guide or other heat-injury prevention methods, see the Commander's, Senior NCO's and Instructor's Guide to Risk Management of Heat Casualties on the USACHPPM Web site at <http://chppm-www.apgea.army.mil/>.



TRAINING, PLANNING and implementing RISK MANAGEMENT measures greatly REDUCES the LIKELIHOOD of HEAT INJURIES.

and fed before the training event.

- Ensure first aid kits and/or combat lifesaver bags are equipped with moleskin and other remedies needed to treat heat-related foot injuries.
- Plan the placement of Leaders to observe and react to any injuries.

Active Prevention

Certain mitigation measures must be fully developed to ensure they play an active role in heat-injury prevention. Establishing a sufficient quantity of water points in designated locations is an important step. Soldiers must be able to refill their canteens or CamelBaks often enough to meet the fluid intake guidance in the Fluid Replacement Guide. Equally critical is briefing Soldiers

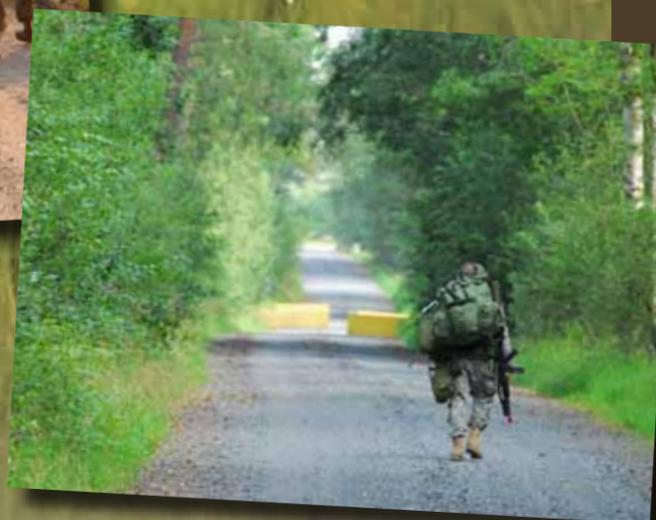
on the location of these points.

Early identification of heat injuries allows medical personnel to render first aid which can, in many instances, reduce the severity of these injuries. In addition to first aid kits, having iced sheets readily available is a key measure. In the event of heat injury onset, wet sheets kept in coolers of ice can provide immediate relief and treatment of heat injury. Leaders and cadre of training events must know the location of these coolers and ensure there is a plan to quickly get them where they're needed.

Training, planning and implementing risk management measures greatly reduces the likelihood of heat injuries. However, it's important to remember heat injuries can develop

suddenly and can have fatal results if treatment is not immediate and effective. Quickly identifying a heat injury, or recognizing warning signs of a Soldier about to succumb to one, are key to keeping Soldiers safe while engaging in foot marches and land navigation exercises.

One final tool that can play a critical role in heat-injury prevention is the buddy system. Based on the type of training, environmental conditions and terrain, Leaders should give serious consideration to assigning buddy teams as a heat-injury mitigation measure. Doing so may keep these preventable injuries from affecting your formations.



Heat injuries can occur in any environment. The following are some common heat-related injuries that can affect Soldiers during foot marches and land navigation training.

- Sunburn occurs when skin is overexposed to ultraviolet radiation. This overexposure causes the top layers of the skin to release chemicals that cause the blood vessels to expand and leak fluids, causing inflammation, pain and redness.
- Heat rash is an irritation of the skin caused by excessive sweating during hot and humid weather. Heat rash appears as clusters of red pimples or blisters on the skin that occur in areas such as the neck, upper chest, groin, under the breasts and in elbow creases.
- Heat cramps are muscular pains and spasms caused by a combination of heavy exertion and exposure to heat. They usually involve cramping in the abdomen, arms and calves.
- Heat exhaustion is a condition caused by fluid loss, which, in turn, causes decreased blood flow to vital organs. This reduced blood flow can lead to an induced form of shock.
- Dehydration is a condition caused when the body loses more fluid than it takes in. Fluid loss may be due to frequent urinating, reduced food and/or water intake, sweating, diarrhea or vomiting.
- Overhydration (hyponatremia) occurs when someone drinks an excessive amount of water and/or loses too much salt from the body in a short time. Drinking an excessive amount of water overwhelms the kidneys and they can't process and eliminate the water fast enough, so the amount of sodium in your blood drops too low.
- Blisters are a defense mechanism of the body that occurs when the epidermis layer of the skin separates from the dermis. This causes a pool of fluid to collect between the separated layers, while the skin regrows from underneath. Blisters can be caused by chemical or physical injury. Physical injury can be caused by heat and/or friction that can occur during foot marches or land navigation training.
- Athlete's foot is a chronic fungal infection of the feet that results in itching, burning and reddened or cracked skin. Causes of athlete's foot include hot, humid weather; excessive sweating; and occlusive, or closed, footwear (sneakers, boots, socks).

A NEARLY DEADLY DAY IN PARADISE

CHIEF WARRANT OFFICER 3 MICHAEL ECKHARDT
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Fort Wainwright, Alaska



It was a beautiful, sunny Hawaiian day with the thermometer comfortably resting in the high 80s — perfect weather for a motorcycle ride along Oahu’s North Shore. After a quick check of my trusty steed, a new Suzuki GSXR 1000, I donned my personal protective equipment and headed for the gate.

I had recently graduated from the Motorcycle Safety Foundation’s Experienced *RiderCourse* and considered myself a competent rider. I’d been riding since I was 4 years old, including competing in professional motocross racing since high school. I’d also been riding sportbikes for several years and felt confident in my skills.

As I rode down Kamehameha Highway toward Haleiwa that Saturday morning, I was amazed at the number of tourists on the road. I thought about the upcoming race at the Kahuku motocross track that weekend. At the same time, I was reminding myself to stay alert to the dangers along my route that morning. Those included the pineapple intersection and the Dole Plantation.

As I approached the pineapple intersection, I saw I had the green light and a clear road around the sweeping right-hand turn. While

there were cars stopped on the left side of the intersection, I wasn’t concerned. After all, I had the green light. I wasn’t prepared when, at the worst possible moment, a white van crossed the road and pulled into my lane.

I knew I couldn’t stop in time, so I instinctively grabbed a handful

through the jagged pineapple tops!

I guided my bike to the left in hopes of passing the van when, to my horror, I saw a car in the oncoming lane. It was too late to go to the right, so I began contemplating how a mouthful of that van would taste. Fortunately,

“ I WASN’T PREPARED when, at the WORST possible MOMENT, a white van CROSSED THE ROAD and PULLED into MY LANE. ”

of front brake and started looking for maneuver options, but they were limited. There was no road shoulder — only a pineapple field to my right. Going into it would ensure a crash, so that wasn’t a good option. (Imagine tumbling

the oncoming car suddenly drove into a ditch on its side of the road, allowing me to “thread the needle” and pass the van on the left.

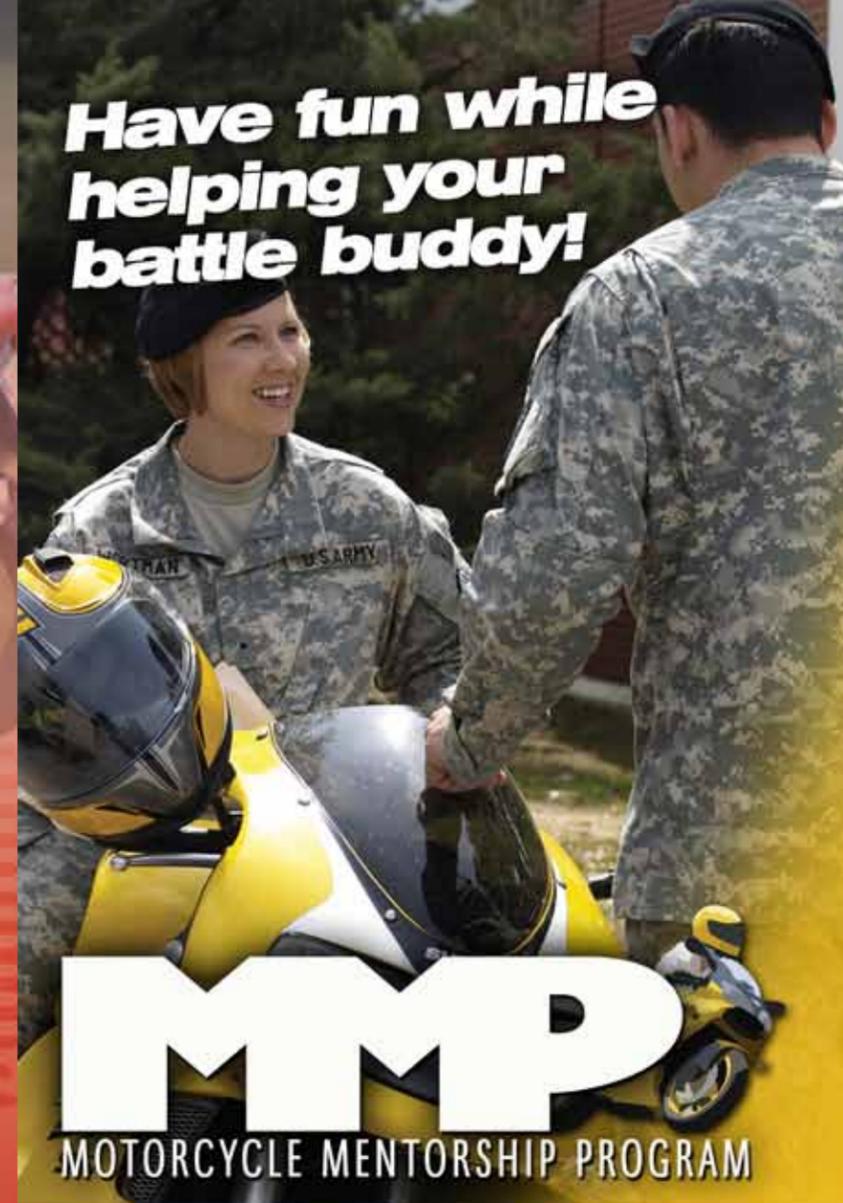
I immediately pulled over. I was shaking as I removed my helmet. The fact I’d narrowly missed a

very bad crash hadn’t escaped me. I suddenly no longer felt like riding. As I sat there regaining my composure, I began evaluating what had happened and where I’d gone wrong. I realized I’d made a number of mistakes.

First, although I was familiar with the road and knew the pineapple intersection could be dangerous, I didn’t give it the respect it deserved. Second, I was going way too fast for the road and the conditions. The posted speed limit was 55 mph, but I was going closer to 65 mph when the van pulled out. Third, I was overconfident about my abilities. As it turned out, despite my experience in motocross racing, very little of what I’d learned on the track translated to the street. Lastly, I’d overestimated my bike’s capabilities. When the van pulled out in front of me, not even the GSXR’s amazing braking capability could stop me in time. Complacency, too much speed and overconfidence in myself and my bike left me without options when I needed them most.

I learned a lifetime of lessons in that fraction of a second. I learned to never let the deceptive calm of a beautiful day blind me to the risks while riding. I learned that the moment you stop looking for the risks, they’ll start looking for you.◀

Have fun while helping your battle buddy!



MMP
MOTORCYCLE MENTORSHIP PROGRAM

Check out the USACR/Safety Center MMP Web site for some examples of active mentoring programs:

<https://safety.army.mil/mmp/>



Accidents occurred between Feb. 1-28, 2009

LOSSES

AVIATION

HH-60L

CLASS D
 On a multiship medevac mission, aircraft No. 1 landed on the ground. Aircraft No. 2 was on short final and landing trail. As aircraft No. 2 came close to touching down, the rotor wash caused a piece of 4-by-6-foot plywood from an adjacent bunker to become loose and airborne. The wood shot 130 feet and struck the main rotor system of aircraft No. 1, resulting in damage to one main rotor blade tip cap. Both aircraft pilots immediately performed an emergency shutdown and

assessed the damage. *Late report.*

MH-60L

CLASS C
 A "through-flight" inspection revealed damage to the main rotor blades and a missing auxiliary power unit cover.

UH-60A

CLASS A
 The aircraft's main rotor system contacted a concrete barrier as it was ground-taxiing for passenger pickup. The aircraft

initiated a spin and the tail boom ultimately separated.

CLASS B
 The crew experienced dust conditions during landing, and the nose of the aircraft contacted the top of a berm. During emergency shutdown, the main rotor system brushed the top of the berm.

CLASS C
 The aircraft was trail of a flight of three when it contacted a small tree while landing during air assault training. Inspection revealed damage to the undercarriage and stabilator.

UAS

RQ-7B

CLASS B
 The unmanned aircraft (UA) launched with solar panels still attached and was unable to sustain flight. The UA subsequently crashed from 288 feet above ground level.

The UA experienced a GEN FAIL indication during flight. The UA operator lost link after a voltage drop. The UA is presumed to have made ground contact and has yet to be recovered.

RQ-11B

CLASS C
 The UA operator lost complete video link with the UA during flight. The UA did not respond to rally input; therefore, tracking could not be performed. A total loss was reported.

GROUND

ACV

CLASS B
 Three Soldiers were injured when their Mine Resistant Ambush Protected vehicle left the road in wet conditions, struck a metal pillar and overturned. Personal protective equipment (PPE) use was not reported.

AMV

CLASS A
 A Soldier suffered fatal injuries when he was ejected from a nontactical vehicle that overturned when the driver

attempted to change lanes. The Soldier was not wearing a seat belt. The driver, who was wearing a seat belt, was uninjured.

An AN/TPQ-36 radar and trailer were damaged when the HMMWV towing them overturned. The HMMWV sustained minor damage.

Personnel Injury

CLASS A
 A Soldier was fatally injured while helping a neighbor cut down a tree. As the tree fell toward the road, the Soldier ran out to stop an approaching motorist and was struck by the tree.

A Soldier is presumed to have drowned when he fell overboard while undergoing vessel qualification. Search and rescue efforts failed to locate the Soldier, who was not wearing a life jacket or cold-weather immersion gear.

A Soldier and his wife were found dead in their home reportedly due to carbon monoxide poisoning.

DRIVING

POV

CLASS A
 A National Guard Soldier was driving his pickup truck with two passengers when he encountered black ice, lost control, struck a median and overturned. None of the vehicle's occupants were wearing their seat belts and both passengers were ejected. The Soldier was pronounced dead at a local hospital, while the passengers were listed in serious condition.

ARMY AVIATION LOSSES

Fiscal 2009
 as of May 6, 2009



ATTACK	0/0
RECON	2/2
UTILITY	4/2
CARGO	0/0
TRAINING	0/0
FIXED-WING	0/0
UAS	2/0

TOTAL 8/4

ARMY GROUND LOSSES

Fiscal 2009
 as of May 6, 2009



AMV	11/10
ACV	9/2
PERSONNEL INJURY <small>includes weapons-handling accidents</small>	16/12
FIRE/EXPLOSIVE	3/0
PROPERTY DAMAGE	0/0

TOTAL 39/24

■ A Soldier was driving his sedan on an autobahn with another Soldier as a passenger when he encountered black ice, lost control and struck a guard rail and a parked utility vehicle. Both Soldiers were transported to a hospital for treatment. The driver died five days later. The passenger suffered only minor injuries.

■ A Soldier was driving with another Soldier as a passenger when his car went off the road, struck a tree, overturned into a ditch and caught fire. The driver died on impact, but the passenger was able to exit the vehicle.

■ A Soldier was speeding in his sport utility vehicle when he struck a tractor-trailer turning onto a road. The Soldier was pronounced dead at the scene. Local investigating authorities believe alcohol was a factor in the crash.

■ A Soldier was driving his pickup with another Soldier as a passenger when he crossed the median and struck another vehicle head-on. The impact killed the Soldier and the driver of the other vehicle. The Soldier riding as a passenger was hospitalized.

CLASS C

■ Black ice contributed to an accident when a Soldier was returning home after physical training and lost control of his vehicle, which rolled several times. The Soldier was wearing his seat belt and suffered only one lost duty day and five days restricted duty.



CLASS A

■ A Soldier was operating his motorcycle at a high rate of speed when he lost control while negotiating a curve and was thrown from his bike. The Soldier died at the scene.

■ A Soldier lost control of his motorcycle in a turn, struck the guardrail and was thrown from his bike. The Soldier was transported to a local medical facility with severe head injuries and later died. Authorities believe alcohol was a factor in the crash.

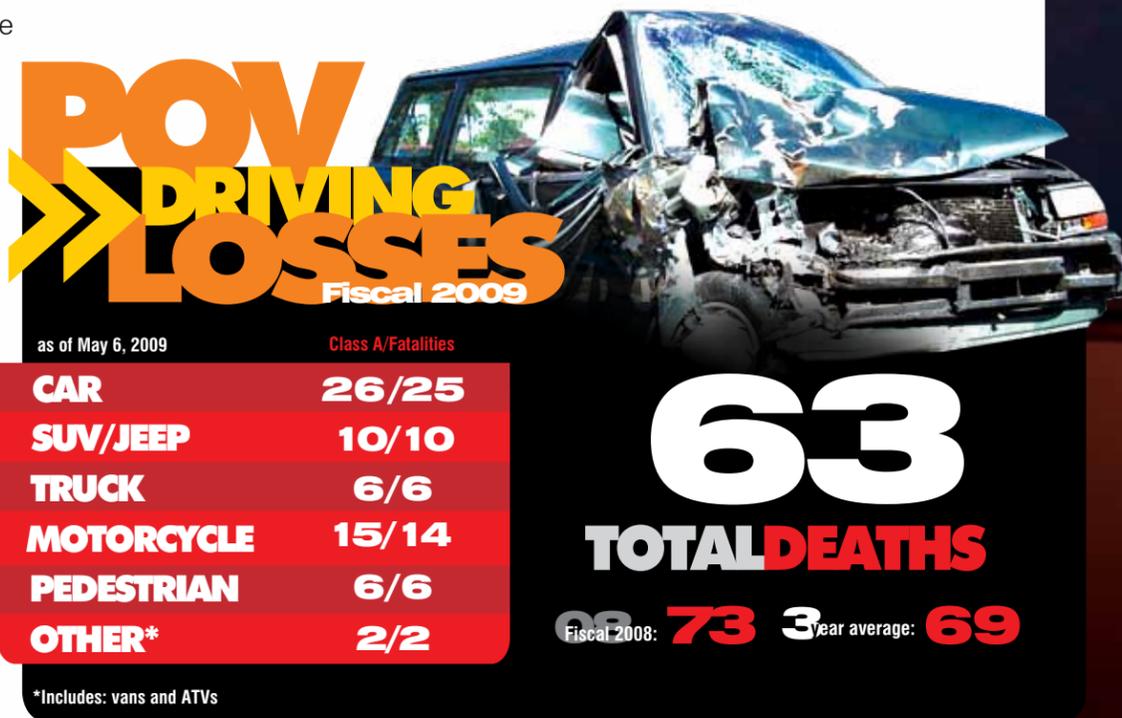
■ A Soldier was operating his motorcycle when he struck the rear of a pickup that had turned in front of him. The Soldier, who was wearing his helmet and all of his PPE, was thrown from his bike into the truck's path and died of his injuries.

CLASS C

■ A Soldier was approaching an intersection where he planned

to turn when a vehicle to his left suddenly pulled into his lane, hitting his motorcycle on the left-front side. The impact knocked the Soldier unconscious, but he was wearing his helmet and PPE and was not seriously injured.

Editor's note: Information published in the accident briefs section is based on preliminary loss reports submitted by units and is subject to change. For more information on selected accident briefs, e-mail safe.knowledge@conus.army.mil.



TRAVEL RISK TRIPS

PLANNING SYSTEM

<https://safety.army.mil>

ARE WE THERE YET?

Be realistic about the distance you can cover in a day. Find out before hitting the road. Use the easy, online TRIPS tool today!

Summer FUN!

Army Safe is Army Strong and that starts with a Soldier's Family. Have the information you need to help you and your Family stay SAFE.

Family engagement kit

<https://safety.army.mil>

Be prepared this summer and get your own Family Engagement Kit **TODAY!**



ARMY SAFE IS ARMY STRONG



KNOWLEDGE

VOL. 3 JULY 2009

OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

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IN YOUR EYE** p. 28



ARMY STRONG.



U.S. ARMY COMBAT READINESS/SAFETY CENTER
<https://safety.army.mil>

**ARMY SAFE
IS ARMY STRONG**



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& SISTERS**

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U.S. ARMY COMBAT READINESS/SAFETY CENTER
<https://safety.army.mil>

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“MAKE sure you have **FILLED** out a **TRIPS** assessment and that **YOU**, as well as your **PASSENGERS**, are wearing your **SEAT BELTS** every time **YOU** get **INTO** a **VEHICLE.**”



ELIMINATE THE RISK NOT THE FUN

July is marked for the celebration of our nation's independence in 1776. Shortly after the signing of the Declaration of Independence, John Adams wrote to his wife:

"I am apt to believe that this day will be celebrated by succeeding generations as the great anniversary festival. It ought to be commemorated as the day of deliverance, by solemn acts of devotion to God Almighty. It ought to be solemnized with pomp and parade, with shows, games, sports, guns, bells, bonfires, and illuminations, from one end of this continent to the other, from this time forward forevermore."

Today, Independence Day and the surrounding holiday weekend period is commonly associated with fireworks, parades, barbecues, carnivals, picnics, concerts, baseball games, political speeches and ceremonies and various other public and private events celebrating the history, government and traditions of the United States. To safely participate in some or all of these festivities, we need to acknowledge the risks associated with each and take the proper precautions by mitigating or eliminating the enemy of risk. Eliminating risk does not mean eliminating fun. On the contrary, by eliminating some or all of the risks associated with the events

of summer, we can bring great joy and happiness to our celebrations instead of pain and suffering caused by an injury or death.

With the sweltering heat already being felt by many of us, it's hard to believe we're not even halfway through the Army's Safe Summer campaign. Despite the escalation of fuel cost, more of us are hitting the highways and taking well-deserved vacations to visit Families, beaches or theme parks. Driving a privately owned vehicle is still the most dangerous activity you can

do this summer. Make sure you have filled out a TRIPS assessment and that you, as well as your passengers, are wearing your seat belts every time you get into a vehicle.

With topics encompassing everything from boating and swimming to hiking and rock climbing, participants in the Safe Summer campaign will find a myriad of tools and useful information to make their summer more enjoyable. Leaders, Soldiers, civilians and Family members will find tools such as subject videos, posters and news releases that are available to download at <https://safety.army.mil>.

Internet and multimedia tools found on the USACR/Safety Center's Web site and social media sites enhance the composite risk management process, but there is no substitute for good leadership. Statistics have clearly shown that Leaders who use all the tools available to identify and mitigate risks have the biggest and most

lasting impact on their units. This act, coupled with the ruthless enforcement of standards and discipline, will help ensure your organization does not experience the needless loss of combat effectiveness. Tough, but caring, engaged leadership may not always be popular, but our Soldiers, civilians and Family members depend on Leaders to remain vigilant in order to drive down unnecessary losses and sustain our "Band of Brothers and Sisters."

Thank you for your continued engagement and efforts to reinforce the principles and practices we know to be successful in mitigating risk and preventing accidental losses.

Army Safe is Army Strong!

WILLIAM T. WOLF
Brigadier General, USA
Director of Army Safety



DOWN AND DIRTY AT 130

SGT. 1ST CLASS FREDERICK MCMULLEN
U.S. Army Aviation Logistics School, Utility Helicopter Division
Fort Eustis, Va.



I knew there was a slight right-hand bend about three-quarters of the way down the stretch, but I held the throttle all the way open. As I tried to spot the curve ahead, I entered the right-hand bend and felt a strange sensation. I was so focused on the curve that I didn't realize my bike was telling me my rear tire had lost traction and was sliding to the left.

For the next 20 seconds, my life hung in the balance. My rear tire suddenly regained traction, violently snapping the rear of my motorcycle to its original position and throwing me over the handlebars. I've heard of people saying they saw their life flash before their eyes during a near-death experience, but that's not what happened to me. I saw the pavement and knew it would chew up my skin like a grinder. I thought, "Is this really happening to me?"

The next few moments were a blur. I seemed to slide forever until I hit the grass beside the road and began tumbling. I heard metal scraping as my bike skidded across the pavement — my handlebars taking the brunt of the damage. My bike then slid onto the grass and began tumbling. I heard the sound of plastic parts being ripped off

my motorcycle. It was the sound of my bike dying.

The green grass and blue sky kept changing places as I tumbled. When I stopped, I was on my back, looking at a beautiful sky. Everything was quiet and I was afraid to move. Knowing that adrenaline can sometimes mask injuries, I laid still for a bit, waiting for the pain to start. You don't just fall off your motorcycle at 130 mph and not get seriously injured ... right?

But the pain didn't come.

up and walked away. That might seem impossible, except for the fact I was attending a rider improvement course at the Virginia International Raceway. If I had to crash at high speed, this was the place to do it.

Seeing the growing number of motorcycle fatalities had forced me to rethink not only how I was riding, but where I was riding. Knowing how dangerous public streets can be, I decided to get my bike on a real track. There I could ride as fast as I wanted in

“ I was **SO FOCUSED** on the **CURVE** I didn't realize my **BIKE** was telling me my **REAR TIRE** had **LOST TRACTION** and was **SLIDING** to the left. ”

I slowly raised my head and looked toward my feet. Everything looked intact. I saw something in my peripheral vision — an ambulance headed toward me. The emergency medical technicians arrived and began checking me out. After 15 minutes of, "Does this hurt?" and not finding anything, I got

relative safety and not have to worry about the police.

I eventually found a company at the raceway that would allow me put my bike on the track. All I had to do was pay to take a rider enhancement course and the track was mine. Initially, I thought of this as an opportunity to showcase

The road flashed by seemingly just inches away from my shoulder as I rounded the sharp corner on my trusty 2005 Yamaha YZF-R6. I envisioned the road ahead of me, eager to get on the long, straight stretch and really open up and let the engine sing. I'd been down this road before and knew there wouldn't be any police. As I exited the corner, I hurriedly worked my way up through the gears. A quick glance at my speedometer showed 130 mph.





my "incredible" motorcycle-riding skills. Little did I know the professionals teaching this course would train me to ride in ways I could only dream of — and do it in a safe, controlled environment.

I spent the day between classroom time and track practice. On the track, there was an instructor for every four riders. Instead of trying to see how fast I could go, my instructor's goal

was to teach me how to safely get the most out of my bike.

After returning home, I began using the skills I learned from the course on the street. I quit riding aggressively, treating every corner as a challenge and every straightaway as a drag strip. Once you've ridden on the track, you understand the dangers of public streets. On the track, I knew what was around the next corner. I knew I didn't have to worry about debris, cars, animals, people backing out of their driveways and other dangerous unknowns. On the street, you're rolling the dice every time you zip through a blind corner.

It was then it hit me how overrating my skills could've set me up for an accident.

I'd blown off motorcycle safety briefings because I thought I was a good rider. My attitude was, "This brief isn't for me. It's for those guys and gals who can't ride." Little did I realize those briefings were directed at my high-risk riding style. Riding with a professional instructor showed me the difference between the skills I thought I had and the ones I needed to avoid becoming a fatality statistic. That got through to me.

I did become a statistic, but not as a fatality. Although I wrecked my motorcycle at 130 mph, I got up and walked away from my crash. My personal protective equipment (PPE) shows the battle scars, but my body doesn't. My bike was a total loss, but I wasn't.

Was it luck? I think not! I'm an example of how wearing the correct PPE and not racing on public streets can keep you out of the fatality statistics. For guys who want to go fast, I have a simple message — take it off the street and put it on the track!◀

HELPING NEW RIDERS

SGT. 1ST CLASS FREDERICK MCMULLEN
U.S. Army Aviation Logistics School, Utility Helicopter Division
Fort Eustis, Va.

Since my training, I have a new challenge when riding. I have a group I regularly ride with and we try to grab new riders before they fall in with the wrong crowd. We teach them that when it comes to riding, it's about leaving your ego at the house and turning the testosterone level down. We point out that the streets are not our personal playground for going out and pushing the limits.

I show Army riders it's not enough to wear the correct personal protective equipment (PPE), attend safety briefs, sign counseling statements

promising to ride safely and get their bikes inspected by their Leaders. I tell them they must make a personal commitment to not become a statistic.

We share our experience with new riders to help them ride safer. We pick out a route for a ride that will not overwhelm or scare them. Before we begin, we perform a brief much like a military convoy brief. This is an important step — especially for new riders because they must know we're there to help.

We brief them on the route and the hand signals we'll use. We also brief them on emergency procedures should there

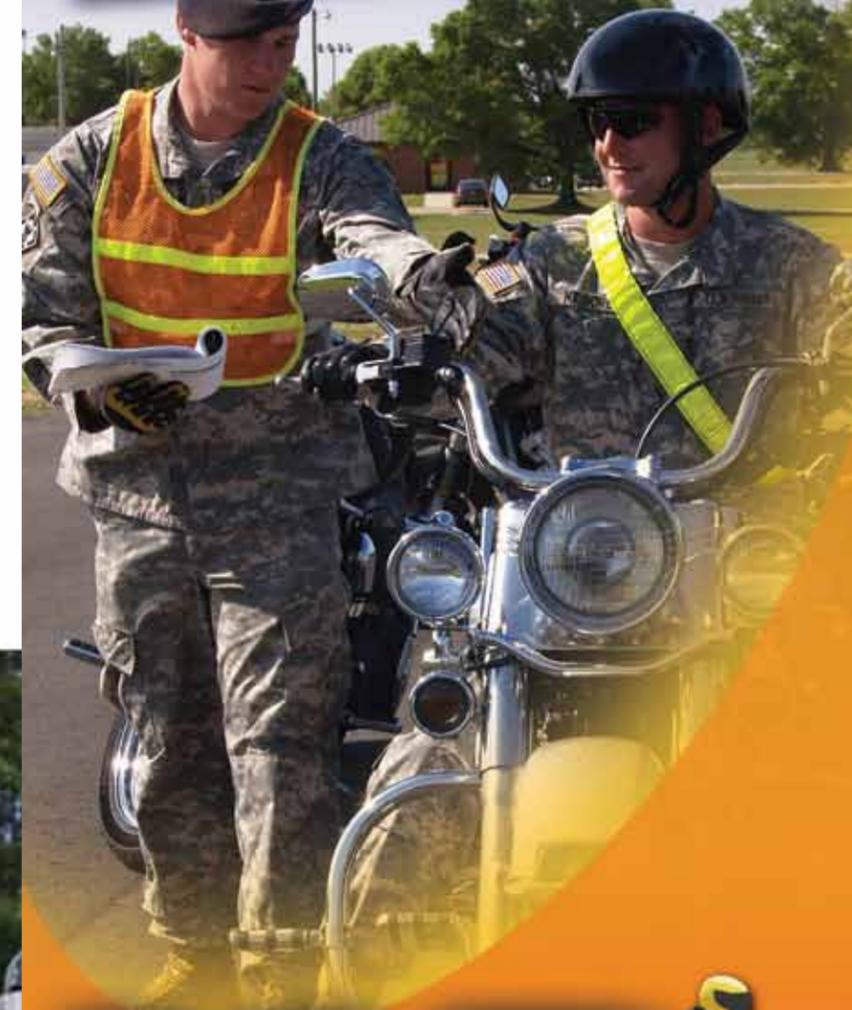
be an accident or a rider gets lost. We put new riders toward the back of the group and pair them with a strong rider who can evaluate their strengths and weaknesses. We plan rest stops to discuss any issues that need to be addressed. These stops are very important because they allow the strong rider to evaluate each of us, providing an honest critique. No one is exempt from constructive criticism.

Sometimes you can overwhelm a new rider with too much information, so only one or two new techniques are suggested for them to try. After the ride, we get

together to talk about how things went, mimicking an after-action review and reinforcing lessons learned.

Our main goal is to keep these new riders riding with us. If that seems over the top, remember we are trying to keep them from finding a "thrill-seeking" group. These groups don't care about the safety of new riders; all they want to do is show these "newbies" how to "really" ride. They don't care who is weak and might need some help; they just want to get an adrenaline rush. When new riders find themselves in such groups, peer pressure and lack of experience can lead to horrific endings.◀

Share street smarts
while helping your
battle buddy!



MMP
MOTORCYCLE MENTORSHIP PROGRAM

Check out the MMP Web site for some
examples of active mentoring programs:
<https://safety.army.mil/mmp/>

TROUBLED WATERS

COMPILED BY THE KNOWLEDGE STAFF

I always considered myself a good swimmer. Growing up in Michigan, I began swimming in Lake Superior at an early age and have swum in pools, lakes and oceans all my life. One fine day on a beach in Hawaii, however, changed my view on my swimming abilities.

While “PCS-ing” from Korea back to the States, my Family and I decided to stay a week in Hawaii for a much-needed vacation. While there, my 15-year-old daughter begged me to take her to a beach to snorkel like we had in Guam, so I planned a trip for us to the northwest side of Oahu, near Haleiwa.

It was early afternoon when we left, so we stopped at a place to grab lunch and then hit the beach. When we arrived, we saw the locals surfing waves between 4 and 6 feet tall. It looked like a lot of fun, but after lunch, I was feeling full and tired. I wasn’t sure I would enjoy swimming on a full stomach, but I was

going to try and have some fun while at this beautiful beach.

My daughter wanted us to swim to a rock about 40 yards out, so we jumped in the water. Having never been to Hawaii, we did not know the strength of the trade winds in December. As we made our way out, it became

apparent that swimming in the Pacific with these waves was completely different than swimming in the local pool.

I swallowed about three mouthfuls of seawater and felt my lunch becoming heavier and heavier. I was getting nervous and my heart rate dramatically increased, which caused my breathing to accelerate and lose rhythm. For the first time in my life, I was scared in the water and decided to turn around and head back toward the beach.

At the time, I was only about 30 yards from shore; however, as I found out later, most drowning deaths occur just 20 feet from shore. I was sure I could make it and rolled over and started using the backstroke, keeping my head out of the water and trying to slow my pulse to a comfortable level.

As soon as I turned back, I heard my daughter yell, “Dad!” Now I was frightened for her — although she

is also a good swimmer. She had pulled ahead of me on our way to the rock and was now only a few feet from it. How was I going to save her in these rough seas when I was having trouble myself?

Fortunately, she was only yelling at me to keep on swimming toward the rock. She didn’t realize I was in trouble. I yelled for her to come back to shore with me. In typical teenager style, she complained that she was already to the rock, but she eventually followed me. I was exhausted when we made it back to shore and felt like collapsing on the sand. I was relieved we had made it back, although my daughter was still complaining that I made her come back to shore.

I’ve never been scared in the water before, but this trip was a good lesson for me. I realized swimming in the ocean is totally different than swimming in a public pool. I also learned that you should swim only when you feel comfortable and not push yourself beyond your limits.

The day after our swimming scare, I took my daughter to a calmer beach. The conditions there were more favorable for swimming, and I ate my lunch after getting out of the water. Overconfidence in my abilities almost cost me my life, but it left me with a valuable lesson. I will never underestimate the ocean again.◀

DID YOU KNOW?

The greatest safety precaution to take is to recognize the danger of rip currents and always remember to swim at beaches with lifeguards. The United States Lifesaving Association (USLA) has calculated the chance that a person will drown while attending a beach protected by USLA-affiliated lifeguards at 1 in 18 million.

“ HOW was I going to **SAVE** her in these **ROUGH SEAS** when I was having **TROUBLE** myself? **”**



FYI

Rip currents are powerful, channeled currents of water that flow away from shore. They typically extend from the shoreline, through the surf zone and past the line of breaking waves. Rip currents can occur at any beach with breaking waves, including the Great Lakes. The United States Lifesaving Association (USLA) estimates more than 100 people die each year on U.S. beaches due to rip currents. Rip currents also account for more than 80 percent of rescues performed by beach lifeguards. For more information on how to stay safe and protect your Family in the water, visit the USLA Web site at www.usla.org/.

THE LONGEST FLIGHT

STAFF SGT. JOSEPH F. KEYES
Company B, 2-149th General Support Aviation Battalion
Oklahoma and Texas National Guard

On the night of Sept. 17, 2008, I embarked on the longest flight of my military career. That night, a simple point A to point B trip quickly turned into a flight that brought my crew and me to the very brink where friends were lost and only courage and focus kept us alive.

Today's the Day'

It was a hot September day in Kuwait and the mission was simple; fly four CH-47D Chinook helicopters from Udari, Kuwait, to Balad, Iraq. We were the last of twelve Chinooks scheduled to make the trip and were eager to get going, but weather had kept us in Kuwait for nearly a week longer than the rest of the company.

The day started like every day the week before; we got up, packed and prepared the aircraft

to fly. This day, though, we all had a good feeling about it. The weather looked good and our hopes were up that we would go.

"Today's the day," was heard throughout our tent and we were all smiles and jokes.

When it was announced that the weather was good enough to go, everyone grabbed their stuff and headed out to the flightline. The aircraft were cranked and we began repositioning for takeoff.

We lined up in chalk order. Chalk 1 was Red River 26, Chalk

2 was Red River 45, Chalk 3 was Red River 44 and Chalk 4 was Red River 41. I was in Chalk 2. The engines were roaring and blades were thumping when we got a radio call from Udari tower. "Red River 26 and flight, this is Udari tower ... be advised we have updated weather; visibility has just dropped to 2 ¾ miles at the airfield."

My heart sank as I listened to the words, but the next communication gave me hope again. "Flight, this is 26, tower

has advised that visibility has dropped to 2 ¾ here at the field. All other weather along the route is still good. In chalk order, advise if you are good to proceed."

We talked it over as a crew and agreed we felt good about going — and so did the other crews.

At about 2321 local, we took off. Man, it felt good to finally be leaving.

Zero Horizon

Shortly after takeoff, I was scanning my sector and noticed that it was a dark night and there was very little in the way of cultural features. The horizon was becoming more difficult to make out; the ground was blending with the sky in a greenish haze.

At one point, I experienced a brief moment of spatial disorientation, but I was able to regain focus, so I didn't think much of it at the time. This moment of disorientation was a telling sign of what was to come, though.

About 20 minutes into the flight, I was watching Chalk 1 and ensuring we had plenty of room while scanning for other traffic out the right side. Sgt. John Vasquez was on the ramp and keeping an eye on Chalks 3 and 4. The left side was covered by Cpl. Spencer Skipworth. While scanning my sector, I noticed Chalk 3 was fading back from our aircraft about one-eighth of a mile. This was farther than we had briefed, but given environmental challenges, I

wasn't overly concerned. As long as I could see them, I felt more space was better than less.

The atmosphere in the aircraft was growing tense. We were losing the horizon and everyone was concentrating on their duties. In the distance, we saw a series of lights. At first, we thought it was a village until Skipworth announced that it was a convoy. I was glad for the lights because this was the first real horizon we had had for some time.

As we approached the convoy, I checked on Chalk 3. They had faded farther from us and were now almost a quarter-mile back. They were still in sight and still did not cause me any concern. I turned my attention back to Chalk 1 as we crossed the

convoy. Suddenly, the right side of the aircraft lit up in my goggles, nearly causing them to shut down. I thought one of our flares had gone off, only it was much brighter.

"Chalk 3 is down, Chalk 3 is down," Vasquez screamed over the ICS. My heart sank and I desperately tried to get a fix on their position. The radios came alive with calls from Chalk 4 saying the same thing and Chalk 1 trying to confirm what had happened.

Suddenly, my pilot announced, "I am going spatial, I'm spatial." I felt the aircraft lurch into a turn and go nose down. I immediately came off of my gun, flipped up my goggles and searched the instruments. "You are in a nose down right turn, pull up and turn left," I announced after finding the attitude indicator.

I felt the nose come up, but I felt us go farther into a left turn. "Correction, you are in a left turn. Come right, come right," I yelled. The pilot responded at once and the aircraft leveled off.

Now I was locked on three gauges — attitude indicator, airspeed and altimeter. Chief Warrant Officer 2 Michael McGill, the pilot on the controls, was still disoriented, and we were all in some state of shock. Chalk 3 had crashed and all we could see was the huge trail of flames left from the impact. Chalk 1 climbed up to initiate Fallen Angel procedures and Chalk 4 announced they were going to land and see if they could help Chalk 3. Meanwhile, we were still heading away from the crash site.

It was a constant struggle to help keep the aircraft oriented during this time. We would go into a slight left turn, I would call the turn and corrections until we were level, then we would go nose down, nose up, right turn, left turn, lose airspeed, lose altitude. I was constantly calling

corrections, constantly scanning one instrument after the other. My whole world was three instruments.

Finally, McGill decided that we needed to turn around and stay in the vicinity of the other aircraft. After we began heading back, McGill made the decision to climb to 1,000 feet. I called his ascent and had him level the aircraft out of the turn.

Time seemed to creep by until finally we reached 1,000 feet and 1st Lt. Michael Stanski applied Barometric Altitude Hold. The aircraft would hold at 1,000, no more descents. I still checked the altitude to ensure we were holding at 1,000; I didn't want this to be the one time the hold failed us.

At 1,000 feet, McGill seemed to calm a little and the aircraft stabilized a bit. I still announced the attitude and airspeed about every minute or so and my voice was the only sound for a while. I remember thinking over and over, "This isn't happening, this isn't happening," but then the crash site would cross in front of us and I would see the flames.

Chalk 4 had landed near the crash and I could see them just sitting on the ground, blades turning. I wished I was with them; I

wanted to be done with this flight.

Sudden chatter on the radios brought me around again. I heard that there were other aircraft en route to the scene, including medevac.

"There are no survivors; please ensure you have recovery assets," Chalk 1 relayed to the medevac bird. The radio call hit me like someone had just punched me in the stomach. They were all dead. Part of me had hoped that Chalk 4 had found someone alive. That hope was smashed after one radio call.

We orbited for what seemed an eternity, the carnage displayed for me on every left turn — a huge burning fire and one lone Chinook sitting off to the side. After more than an hour at the crash site, Chalk 1 called for fuel statuses of the flight. We were all getting dangerously close to bingo fuel. We couldn't stay any longer or we wouldn't make it to the fuel stop. Lead made the call; we were to link up in flight and continue to our planned fuel stop at Talil, Iraq. We made one more left turn, looking out at the fire and the helicopter, and then we were off.

A part of my heart was left there in the desert as we flew away that night. Capt. Robert Vallejo II, Chief Warrant Officer 3 Brady Rudolf, Sgt.

“ Spatial **DISORIENTATION** is **NOT** just some **TERM** out of a **TEXTBOOK.** ”

Daniel "Grumpy" Eshbaugh, Staff Sgt. Luke Mason, Cpl. Michael "Tommy Gun" Thompson, Chief Warrant Officer 2 Corry Edwards and Sgt. Maj. Julio Ordonez were gone. May they rest in peace.

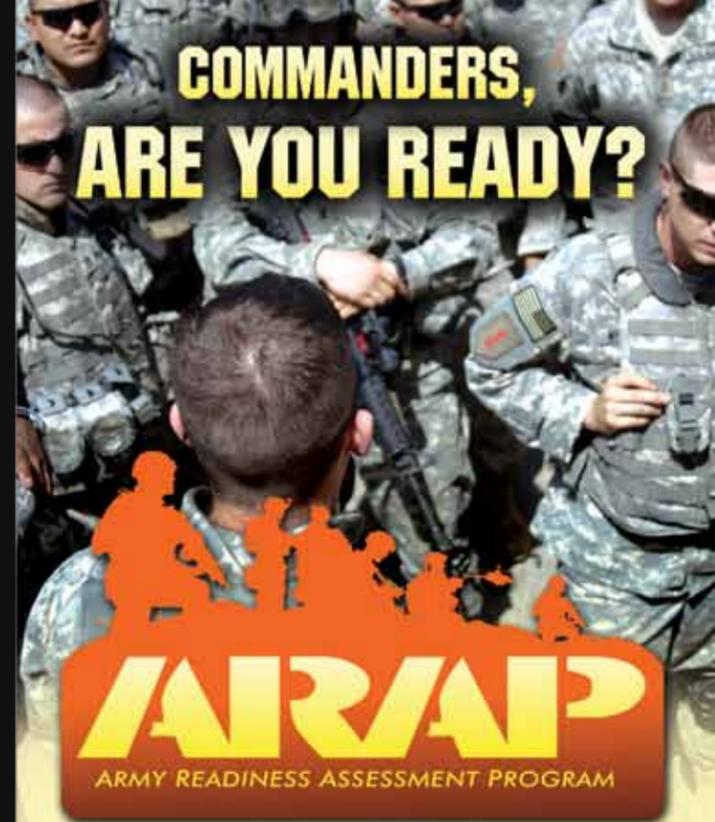
Making Sense of it All

My friends are gone and I tell this story with a heart full of sorrow but also filled with a hope that I can help prevent something like this from happening again. I do think there are lessons to be learned from this tragedy. What could have been done to prevent this? How can we keep it from happening again? I don't have all the answers, but the aircrews involved in this accident have talked and tried to answer these questions to make some sense of it all.

Spatial disorientation is not just some term out of a textbook. It is a very real and potentially deadly phenomenon. Aircrews should talk about spatial disorientation regularly and have a plan on how to deal with it. Enlisted crewmembers should know their helicopter's instruments and be available to help their pilots. My understanding of the attitude indicator, altimeters and airspeed saved my life. Get with your pilots and have them teach you how to read these instruments and where they are located.

Only fly in weather you are briefed to fly in and ensure you are prepared for bad weather and have contingencies well planned and briefed. Use effective crew coordination. Talk about everything within your aircraft and your flight. Would a radio call to Chalk 3 when they broke formation have made a difference? Maybe it would have.

When Red River 44 went down, my crew and I were forced to act with courage and focus despite all that happened. It is because of this courage and focus that we survived. It is my sincere hope that those who read this will learn from this tragedy and use the lessons here to survive your own "longest flight."

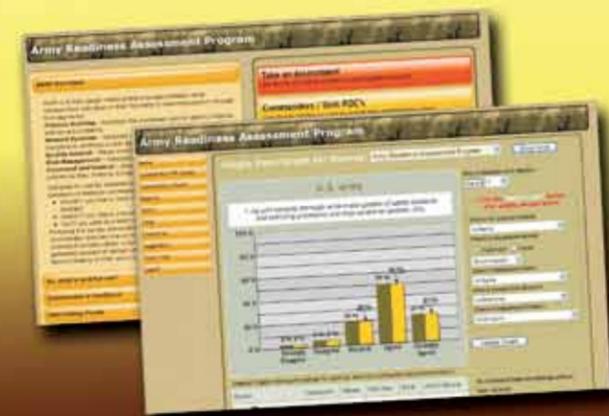


Wouldn't you like to know if your unit is about to experience a mishap?

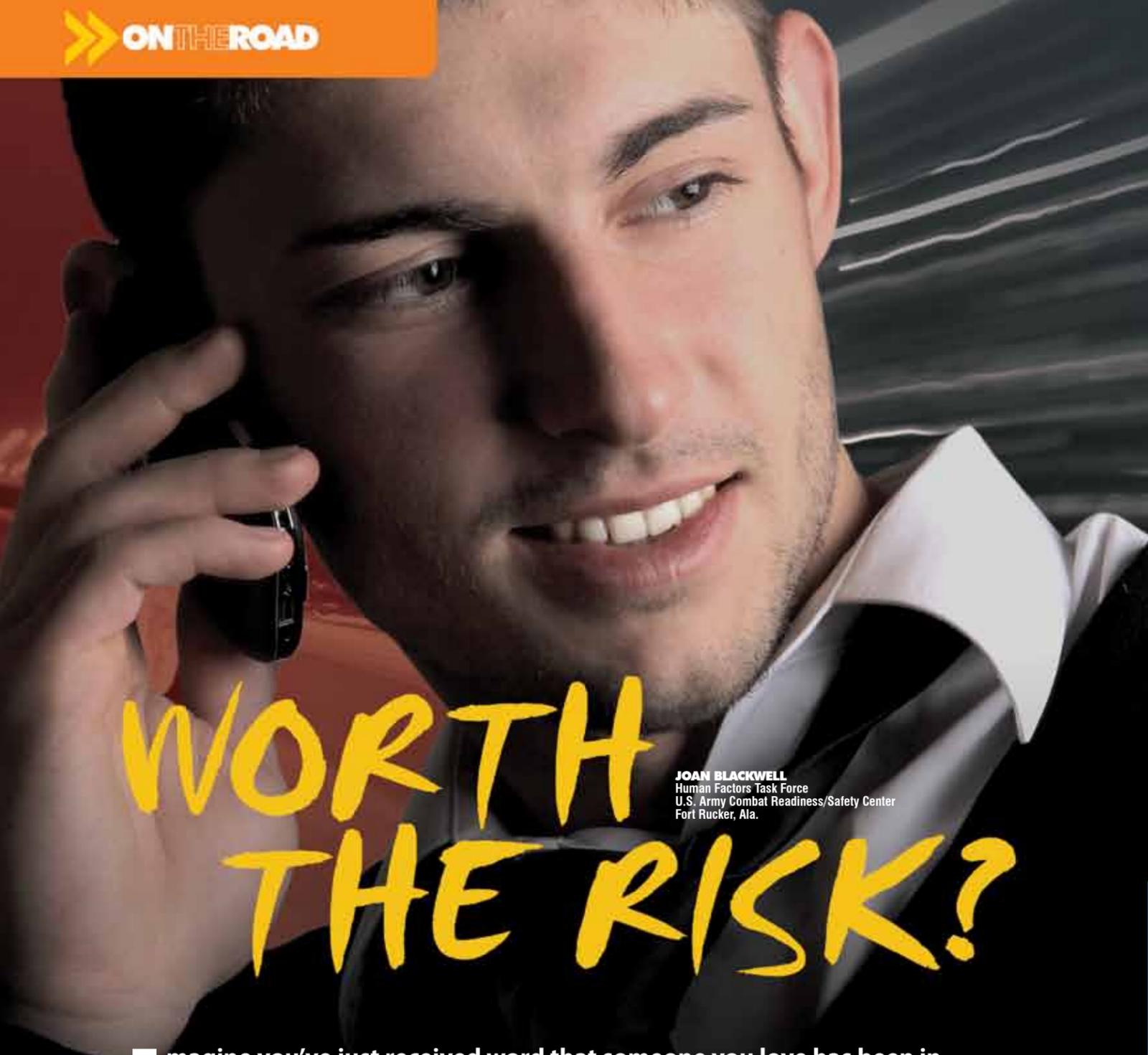
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WORTH THE RISK?

JOAN BLACKWELL
Human Factors Task Force
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

Imagine you've just received word that someone you love has been in a traffic accident — from all indications, struck by a drunk driver. Time slows, or seems to, forcing you to experience every agonizing moment. You call to alert Family and friends as you make your way to the hospital. Waiting for the ambulance to arrive, you wonder aloud, "How could this happen? Why would a person put themselves and others at risk doing something as dangerous as driving drunk? Who could be so selfish?"

Those questions still hang in the air when the emergency room's (ER) hectic din turns to chaos. Emergency medical technicians crash through the outer doors, pushing the gurney that holds the bloodied and broken body of the person you hugged goodbye only an hour ago. You strain to approach, to reach out for just one touch, but hospital staff members hold you back, allowing the gurney to be wheeled by and into a trauma suite. Transfixed, you stare through the wall of glass until a nurse flings the curtain closed with one sweeping motion of her arm. The metal rings clang along the rail but go silent as the curtain billows and then falls still.

Somewhere behind you the ER desk clerk asks a police officer, "Drunk driver at this hour of the day?" Anger flares in your constricted, worry-filled chest. The questions form again. Who puts themselves and others at risk? Who is that selfish? Before you can voice your fury, the officer replies, "No. The other

driver was talking on a cell phone. Blew through the intersection like it wasn't even there."

Your consciousness shifts. Suddenly, you feel you can see the whole room, the whole city, at once. All this turmoil? All this destruction? All this heartbreak? All this was caused by someone driving and talking on a cell phone?

RESEARCH shows it is the **ACT** of conversing — **SPEAKING, LISTENING, PLANNING** to **SPEAK** — that takes the **DRIVER'S** mind **OFF THE ROAD.**

Who puts themselves and others at risk doing something as dangerous as driving drunk? Anyone who drives while talking on a cell phone. Research shows it is the act of conversing — speaking, listening, planning to speak — that takes the driver's mind off the road. Based on brainwave measurements, when a person listens to sentences, there is a 37 percent decrease

in activity in the parts of the brain that facilitate driving. The demand on brain resources is even greater when the driver speaks, as well as listens.

Unlike talking with passengers, where the task of driving is a shared experience and may even become part of the conversation, a tunneling effect occurs when talking on a cell phone. The driver

"zones out," becoming less observant and less available to anticipate and respond to hazards. Whether the research studies were conducted in a driving simulator or on-road in highway traffic, drivers talking on a cell phone missed exits, strayed into adjacent lanes, made lane-changing errors and had a 50 percent reduction in their ability to recognize or remember landmarks

FOUR WAYS TO PROTECT YOURSELF AND OTHERS

- Turn off your phone before you get into your car. From an early age, we've been programmed to answer a ringing phone. Even though you know the dangers, there will be a tremendous temptation to answer the phone or take a quick peek at caller ID.
- If you can't bring yourself to turn off your phone, let all calls go to voicemail and then pull off the road and return them at your earliest convenience. Have your outgoing message state that you are currently driving and will call back soon.
- Refuse to ride with a person who talks on a cell phone while driving. It may initially cause hardship or hurt feelings, but just remember you wouldn't accept a ride from someone who was legally drunk. Research has shown there is no practical difference between driving

- drunk and driving while talking on a cell phone. If necessary, offer to place or receive a call on the driver's behalf.
- When you receive a call from someone, ask whether they are driving. If the answer is yes, have them hang up and call you back when they reach their destination. Same goes for you. If you call someone who is driving, either call back later or ask the person to call you when they've pulled off the road. They may snicker and call you absurd or accuse you of being impractical. But if that person were to be involved in an accident while on the phone with you, injuring or killing themselves or someone else, it would be you left to deal with the tragedy and to wonder — was the call worth it?

encountered while driving.

Another study led researchers to conclude that cell phone users are actually more likely to have an accident than drunk drivers (especially rear-end collisions) due to the impairment compensation strategies each group employs. When under the influence of alcohol, drivers tend to exhibit an aggressive driving style. They follow closely, requiring them to brake suddenly and with great force.

Drivers talking on a cell phone appear sluggish. Though they attempt to compensate for their divided attention by increasing

the following distance between themselves and other vehicles, their reaction times, on average, are more than 130 milliseconds longer than a driver impaired by alcohol.

When asked, a vast majority of people will say using a cell phone while driving impairs a person's ability to drive safely. They might even have been a victim of the "near miss" and will offer one or two stories as proof. However, many of those same people believe they are immune from such impairment. It's always the "other guy" who can't drive and talk at the same time. Research has shown,

however, we all are the "other guy."

We're busy people. We have places to go and things to do, so we multitask. But drive time is not downtime. An activity that takes a person's mind off the task of driving is just as problematic as taking one's eyes off the road or hands off the steering wheel.

Do you underestimate the danger created by talking on a cell phone simply because every call doesn't result in a crash? Put yourself back in that tumultuous scene at the ER.

Imagine ... there's a doctor walking toward you with an

ominous look on her face. You sense your whole world is about to change; that life as you knew it only an hour ago is over. Would it lessen the impact of this moment if you knew the driver who blew through the intersection made a dozen crash-free calls before running the red light and colliding with your loved one?

If the situation was reversed and you were the driver who'd been on the phone, what would you say to the grieving family to convince them the phone call was worth it?◀◀

DID YOU KNOW?

- A person talking on a cell phone displays the same incapacitation as a person with a .08 blood alcohol content level — and it doesn't matter whether they are using a hand-held phone or a hands-free device.
- The risk of having an accident is estimated to be four times higher while talking on a cell phone.
- Over half of U.S. drivers admit to using a cell phone while driving. According the National Highway Traffic Safety Administration, there are 500,000 drivers on the phone at any given time.

DRIVING IN-TEXT-ICATED

SGT. ROBERT KNAUER
Delaware Army National Guard
Wilmington, Del.

How many things can people do behind the wheel besides drive? It's not bad enough that some folks yak on the phone, oblivious to what's going on around them. Some aren't satisfied until they're trying to steer, hold a cell phone and key in a message all at one time. Can you do that with two hands? More importantly, can you do that with one brain?

I consider myself a pretty cautious driver, always being mindful of others around me on the road. Staying aware of my surroundings has allowed me to dodge deer, drunk drivers and flying tires. Also, I never want to know what a .08 blood alcohol content feels like because I don't want to be on the side of the road taking a

breathalyzer test. So far, I've managed to stay accident-free for the last 12 years.

Not that I haven't pushed my luck. During the last three years, I got caught up with text messaging. I initially hated texting and didn't see any point to it. Keying in a message took twice as long as calling and you had to pay extra for the "luxury" of this headache.

However, as it became commonplace, I grew accustomed to texting and it became a part of my everyday life. My friends and I would communicate via text whether I was at home, work or driving my car. Because I thought it would be more "high speed," I even got a new phone with a QWERTY keyboard, which was a lot easier and faster

than using number keys. After going to work as a safety specialist with the Delaware National Guard, I regained a strong grasp on being safe and promoting safety. During some research, I came across an article that piqued my interest. The article, which was based upon a study conducted in England, stated text messaging while

driving is more dangerous than driving under the influence of alcohol.

As I read the article, it really changed my way of thinking. It showed text messaging increased reaction times by 35 percent, compared to 12 percent for drunk drivers and 21 percent for those using marijuana. The article reported text-messaging

drivers were 91 percent poorer in their steering skills (staying in their lane) than drivers paying full attention to the road. The article also stated it took an average of 63 seconds for a text message to be composed and sent compared to 22 seconds when sent from a desk. A multitude of disasters can happen in 63 seconds.

That got my attention.

While I'd never be foolish enough to drink and drive, I have texted complete conversations while driving.

The numbers were compelling. I thought about the times paying attention to my driving kept me from an accident or a near miss. I immediately stopped using my cell phone

while driving, especially for texting. I realized that if I didn't, it wasn't a matter of "if" but "when" I would have an accident.

Looking back on that decision, I'm glad I made it before something devastating happened to me or someone else. I cherish my life; there is no one in this world I'd risk losing it for just to send a text message. Also, I don't want to have on my conscience the death or injury of someone else because of my negligence.

I am concerned, however, we may be trading one hazard (talking on cell phones) for an even greater one (text messaging). With cell phone use banned while driving on post, some Soldiers may resort to text messaging as a more "stealthy" way to

communicate — something that might be harder for military police to spot.

At a time when privately owned vehicle accidents are the leading cause of accidental death, this could increase the risks even further. And this isn't just a concern for lower enlisted Soldiers. Many of our Leaders carry and communicate with BlackBerrys.

If you wouldn't drink and drive, why make an even worse decision to text and drive? Consider the risks, which far outweigh the benefits. If you have something important to say, park on the side of the road and call. After all, which would you rather give your full concentration to — a conversation or a collision?◀◀

DID YOU KNOW?

Text messaging while driving has already been banned for all drivers in Alaska, Arkansas, California, Connecticut, Louisiana, Minnesota, New Jersey, Utah, Washington and the District of Columbia. In addition, novice drivers are banned from texting in Delaware, Maine, Maryland, Nebraska, North Carolina, Oregon, Texas, Virginia and West Virginia. Also, school bus drivers are banned from text messaging in North Carolina, Texas and Virginia. (Information provided courtesy of the Insurance Institute for Highway Safety.)



HAPPY TRAILS

BRIAN TSAI
U.S. Department of the Interior
Washington, D.C.

Every year, hundreds of thousands of hikers head for the great outdoors. Those who return with stories that last a lifetime did serious homework long before they reached the trailhead. They made self-education — from simple physical conditioning to the study of potential dangers — a priority.

Before hiking, it's important to do some warm-up exercises. Stretching gradually increases your heart rate, temperature and circulation to the muscles. Visitors with health issues should also plan their activities according to their abilities, said Vivian Sartori, a park ranger at Organ Pipe Cactus National Monument in Arizona.

Once on the trail, you should start out slowly, wear a hat and sunglasses and bring along plenty of water. The National Park Service (NPS) also recommends bringing extra clothing, such as gloves, a fleece and an extra jacket. Remember, you can get sunburned even in subfreezing temperatures because of the sun's reflection off the

snow. It's best to bring, and use, sunscreen.

As your hike proceeds, take a rest from time to time, especially if you are experiencing headaches or shortness of breath. The staff at Rocky Mountain National Park recommends people feeling symptoms of fatigue drink plenty of fluids, avoid alcohol, don't skip meals and get plenty of rest.

"Consume at least 1 gallon of water, per person, a day," Sartori said. "You will become dehydrated before you realize it. Always carry extra water when you're hiking."

Also, be sure to bring carbohydrate energy bars, granola, candy or fruit, all of which provide an instant burst of energy for long hikes. Energy drinks are not recommended

because they contain high levels of sugar, but sports drinks such as Gatorade can be useful for boosting electrolytes in the body after long hikes.

A lot of adventurous hikers love to explore the parks on their own and can end up in trouble if they don't tell someone where they are going. There are a lot of remote areas in national parks, and it is strongly suggested

you hike with a partner.

"Nowadays, a lot of people are taking GPS units on their hikes, but those devices are not always reliable," said Michael Loder, a park ranger at Crater Lake National Park in Oregon. "A GPS requires a satellite to get a signal and sometimes you can't get a signal if you're in a canyon or on the side of a mountain."

If you do hike alone, be

sure you are competent with a map and compass and able to locate important features such as highways, visitor centers, campgrounds and trails.

"If you become lost, it's important to stay calm and stay put," Loder said. "It's a lot easier for a search party to find a stationary target than a moving target."

If children are brought on a hiking or camping trip, make sure to check the recommended trails for Family hikes. Ranger-led walks are free and can increase your confidence while you learn more about the park. It's advisable

for children to wear a whistle so they can signal where they are should they become lost.

"Keep day hikes to a reasonable distance, three to five miles, for example, and do not overdo them," said David Elkowitz, spokesman at Big Bend National Park in Texas. "We have many hikes like this."

During your hike, you may encounter wildlife, and it's good to know what safety precautions to take. Depending on where you are, most park rangers recommend making a lot of noise while you are hiking. This warns animals of human presence and, in most cases, scares them away before you cross paths. In the rare occasion that a hiker should come in close contact with a bear, it is best not to run. Just slowly back away.

"Bears have poor eyesight compared to other animals, so even if you are 50 yards away, the

bear may still try to come closer to see what you are," said Alex Lindeman, a park ranger at Denali National Park and Preserve in Alaska. "You want to stop moving and hold your ground. Denali is fortunate that in its 91-year history, no one has ever been killed by a bear."

Denali requires that visitors who are planning to hike in the park take a mandatory 90-minute training course on safety

around bears and other wildlife that live in the park.

"Hiking and outdoor activities are relatively safe as long as you plan ahead of time and take all the proper precautions," Loder said. "As long as you take the proper equipment, check the weather and use common sense, hiking should be a relatively safe and enjoyable activity."◀

When preparing for a hiking or camping trip, make sure your pack contains the following essential items:

- Map
- Compass
- Flashlight/head lamp
- Food
- Extra clothes
- Water
- Sunglasses
- Sunscreen
- First aid kit
- Pocket knife
- Waterproof matches/lighter
- Insect repellent



FYI

The National Park Service (NPS) plays a pivotal role in helping hikers enjoy their outings. The NPS manages more than 84 million acres of land in the United States, averages 275 million visitors every year and provides time-tested advice to help keep visitors safe. For more information, visit the NPS Web site at www.nps.gov/.



Just a ROUTINE MISSION

COMPILED BY THE KNOWLEDGE STAFF

Statistical data show Army aviation units deployed in support of Operation Iraqi Freedom and Operation Enduring Freedom have accidents typically between 90 and 120 days after the unit arrives in the theater of operation. An OH-58D crew recently confirmed this when they struck a tower with the main rotor system, destroying the aircraft and killing both crewmembers. The crew had a little more than 100 days of operating in Iraq. This is what happened and the lessons learned.



The mission was “routine” — one the pilot in command (PC) had flown countless times since the unit’s arrival in Iraq. The PC, a high-flight-time, well-experienced aviator with more than 3,200 flying hours, had served in several positions throughout his Army career as an instructor pilot and was recently designated the troop standardization pilot.

The pilot (PI), a new aviator in the Army, completed readiness level (RL) progression at his home station; however, he was unable to complete his night vision goggle (NVG) progression before deploying to theater. Within the first few weeks of arriving in Iraq, the PI integrated into the unit’s NVG training program and successfully completed full RL progression. Even so, he was placed on the day cycle, not flying NVGs again until the day before the accident.

The troop had experienced a high flying operational tempo (OPTEMPO) of about 100 to 120 hours per aviator each month. This was 30 hours more flight time

per aviator than the squadron’s two other line troops located at different forward operating bases (FOBs). Augmenting the unit with additional aviators from the two other troops alleviated OPTEMPO concerns and allowed pilots from other troops to gain combat flying experience.

A rotation of four aviators from the other troops occurred every six weeks. The PI rotated to augment the troop just three days before the accident. This NVG flight was the PI’s first flight upon arrival in Iraq. During the flight, he flew in the trail aircraft with another aviator. He was primarily shown the area’s road structure which the unit used to navigate. The PC that he flew with said he did not point out towers or potential hazards in the area. This was the first of two scheduled flights the PI was to receive as part of his local area orientation.

The Day of the Accident

The scout weapons team (SWT), consisting of two OH-58Ds, came in two hours before their scheduled mission brief to preflight. After preflight, the SWT went to the tactical operations center (TOC) to receive their mission

brief; however, the ground forces did not provide one. With no scheduled missions, the plan was for the PI to fly with the troop standardization pilot in the lead aircraft to finish his orientation.

Both crews went to their aircraft and began run-up procedures. As the aircraft were running up, a messenger from the TOC brought each aircraft a set of mission graphics and a communication card for a convoy security mission. The SWT conducted a hasty mission brief over the radio using the graphics. They quickly conducted an aircraft weapons check, refueled and rearmed before beginning the mission.

The aircraft departed the FOB, flew to the test fire area and then returned to the forward arming refuel point to rearm and refuel. The trail aircraft contacted the ground forces and told them they were ready. The ground forces acknowledged with a mission delay.

The SWT repositioned the aircraft to another area of the FOB and waited 20 minutes until the ground forces were ready. During this 20-minute period, neither crew discussed further details of the mission or ways to mitigate risk.

The SWT departed the FOB for the start point of the mission. The convoy also reached the start point for the planned route of travel. The alleged plan was to fly within the area of operations and provide aerial on-call coverage to the ground forces. The lead aircraft was to fly 300 to 500 feet above ground level (AGL) in front of the convoy about 1,000 meters and then turn around to intercept the convoy before again flying 1,000 meters in front of the convoy. The trail aircraft was to fly 1,000 to 1,200 feet AGL and provide cover for the lead aircraft and the rear of the convoy.

“High bird/low bird” was a typical tactic, technique and procedure for the troop conducting a convoy security mission. As the convoy continued along the route, it became dark to the point NVGs were required.

Both crews acknowledged they were using NVGs. While conducting the route reconnaissance, the lead aircraft PC made an extraordinary number of radio calls to the ground convoy commander — so many calls that both the trail aircraft and the ground convoy crews thought it to be excessive.

The lead aircraft flew primarily on the left side of the road while the trail aircraft flew on the right side as they followed the convoy. For the most part, the lead aircraft made left turns to intercept the convoy before flying ahead again.

As the convoy reached the last leg of the route, the lead aircraft flew in front of the procession about 1,000 meters and then made a left turn to intercept the convoy again. Nineteen minutes after the

crew announced they were using NVGs, the lead aircraft struck a 370-foot tower with the main rotor system, destroying the aircraft and killing both crewmembers.

What Happened?

The primary cause of the accident was the PC and PI failed to scan and detect the tower before the PC, flying from the right seat, made a left turn to intercept the convoy. Due to the PC’s excessive number of radio calls, he was acting more in the capacity of the troop standardization pilot showing the new PI how to perform a convoy security mission. Consequently, little, if any, crew coordination occurred during the flight. This was both the PC’s and PI’s first deployment. Other pilots noted this PC had

a tendency to become fixated on ground operations during previous missions.

Both the PC and PI were lulled into a false sense of security as a crew. The PC knew the PI was familiar with combat operations in Iraq. After all, the PI had almost 160 hours of combat experience in the 104 days he had been in theater. The PI understood he was flying with the troop standardization pilot, the most experienced pilot in the troop. He was comfortable the PC knew where all the towers and hazards were located. This was a sentiment expressed by the trail aircraft crew during the 20-minute period the crews were on the ground waiting for the mission to start. To them, this was just a routine mission.

Another flaw in this mission was the SWT failed to plan the mission properly. First, the crew and mission briefer did not interact. The PC had completed the mission brief the day before and dropped it in a box for the briefer to review and sign. The reason being was the troop had flown in the area for 104 days and “every mission was the same.”

Other flaws included inaccurate weather data. The mission listed moon illumination to be 93 percent; however, the moonrise did not occur until 1849 — 59 minutes after the accident occurred. Although the city provided ambient light, the SWT actually had zero percent moon illumination at the time of the accident. All in all, it was darker than the crews anticipated.

The SWT also failed to discuss the obstacles and hazards they might face along the route. Discussion of obstacle and hazard avoidance is required during crew briefs as described in Training Circular 1-248, Kiowa Warrior Aircrew Training Manual. The SWT failed to brief team tasks as described in Field Manual 3.04.26, Attack-Reconnaissance Operations.

Additionally, they failed to consider the PI had no previous experience flying in the area, he had not yet flown a day orientation flight, they were combining a mission with an orientation flight and the PI had not flown NVGs since RL progression 58 days before.

There was ample time for the crews to discuss this information during the 20-minute period they were waiting for the start of the mission. All the same, the crews never discussed composite risk management because they had been flying in Iraq for over 100 days and it was just a “routine mission.”

“The PC that he FLEW with SAID he did NOT point out TOWERS or potential HAZARDS in the AREA.”

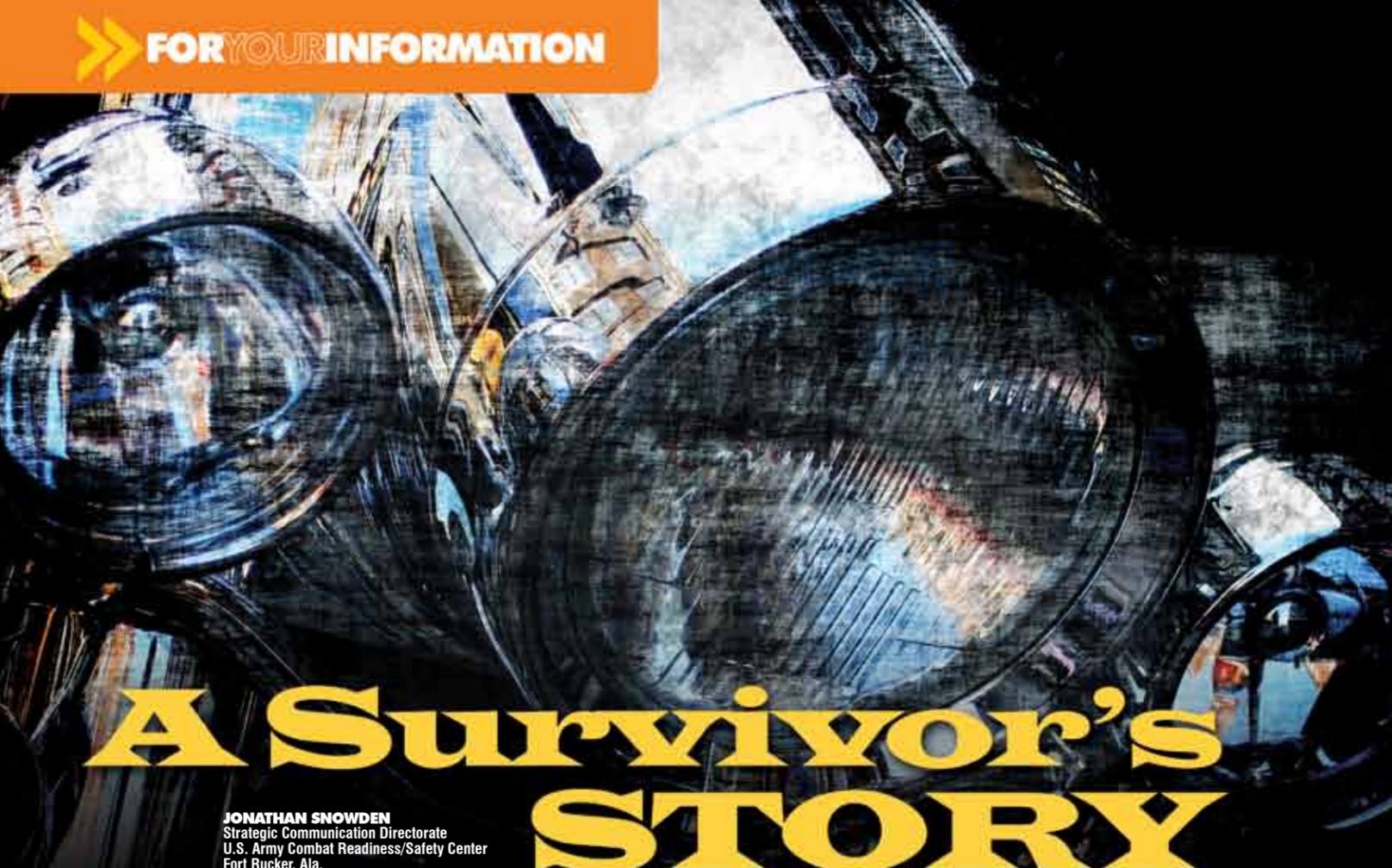
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A Survivor's STORY

JONATHAN SNOWDEN
Strategic Communication Directorate
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

Frank Mir was on top of the world. He'd recently beaten the 6-foot-8-inch, 260-pound gargantuan Tim Sylvia for the Ultimate Fighting Championship's (UFC) heavyweight title, making him the top fighter in the world's fastest-growing sport. Cruising on his motorcycle down Sahara Avenue in his hometown of Las Vegas, Mir didn't have a care in the world. Arm resting on the gas tank, Mir was heading to work as a nightclub security specialist and thinking about his upcoming nuptials. He never saw the car coming.

"A person ran a yellow light ... and I just happened to be at the wrong place at the wrong time," Mir said. "I got T-boned and thrown quite a distance. Motorcycles don't provide a lot of protection. It could have been a lot worse, though. Thankfully, I had my motorcycle helmet on because we found cement lodged in the back of it afterward."

The helmet Mir wore saved his life that day. He had been hit before. In his line of work, it was an occupational hazard. But the cage fighter had never

been hit like this. The oncoming compact car struck him at 50 mph, sending Mir flying more than 70 feet and snapping his femur, the body's largest bone, in half.

"I tore the ligaments in my knee and messed my hips up some," Mir said. "But the femur was the most tragic of the injuries. I lost a way to provide financial security for my family."

Surviving the injury was just the beginning of an arduous comeback trail. Unable to train or fight, Mir was stripped of his heavyweight

championship. He had lost more than his job. Just looking in the mirror was hard. Where was the world-class athlete, the warrior, he had worked so hard to become?

"I had enjoyed being an athlete my whole life," Mir said. "Now I'm hobbling around and I lost a lot of my identity. ... Obviously, if you choose to be in the military, that's a certain life choice. That's not just a job. Same thing for me as a fighter. It's a lifestyle. It's who I am when I wake up in the morning. Same as someone in the military. You don't just take off your ACUs and say you're a civilian now. You're a military person. That means you come from a certain walk of life and you have certain goals and you're a certain kind of warrior. You don't want that taken away from you."

It took Mir years to get back to where he was at the time of the accident, but he almost didn't make it. When he made his return

to fighting, almost a year and a half after the wreck that had nearly taken his life, he was a shell of himself. Out of shape and rusty, he eked out a win over a fighter he would have steamrolled before the injuries.

The California State Athletic Commission had serious questions about his fitness to fight. Even the UFC thought it might be best for the former champion to retire rather than risk his legacy or further injury trying to become what he could never be again — a champion.

"I went from being one of the top martial artists in the world to being a guy who might never be able to fight again," Mir said. "It took me four years to get back to where I was because of one car wreck. There were several times I was in the UFC head office begging not to be cut. I was one decision, one breath, away from never having my career ever again."

In December 2008, after years of hard work and gallons of sweat, the comeback was finally complete. Mir beat interim heavyweight champion

Antonio Rodrigo Nogueira to regain his spot as the UFC's top big man. Mir is back on top and fully aware that a motorcycle helmet made it possible for him to have a second chance. And while he won't ride a motorcycle again until he retires from fighting, he knows exactly how he could have prevented the accident. According to Mir, safety on the roadway is up to the rider. The first step is proper training.

"Jumping on a bike for the first time is the equivalent of jumping into the cage with no training," Mir said. "You can do it, but it's more intelligent to have proper training. I had no ego about starting out in a parking lot until I felt comfortable on the open road. I see too many guys who have been riding for a week and they're trying to fly and keep up with me. There's no way, man. There are so many functions that go into controlling a bike. That's what's beautiful about it. To ride a motorcycle well takes a lot of ability and skill."

Like Mir's accident, in most collisions between a motorcycle and a car, the driver of the car is at fault. But Mir says that doesn't mean riders can't do more to ensure their own well-being.

"A lot of times, when people get hurt, it's because they don't fear something," Mir said. "Fear is a very healthy thing. I'm afraid every time I step in the cage. All my losses occurred when I got a certain level of arrogance and wasn't afraid anymore. When I got hit by the car, I was so comfortable on my bike that I literally had my forearm on the gas tank and was just chilling."

"If I had been 'head on a swivel' and been somewhat alert and a little fearful of the situation, I could have easily hit my brakes and avoided the car wreck. Being comfortable in the situation allowed me to be hurt. Make sure you don't lose that healthy sense of fear when you are on the bike. Because that is what keeps you safe."◀

MORE ABOUT MIR

For Frank Mir, fighting is a family affair. His first teacher was his father, a Kenpo Karate instructor who taught him how to punch and kick. It wasn't until they saw the first Ultimate Fighting Championship (UFC) that father and son realized that standup striking wasn't enough to be successful against the top competitors in the world.

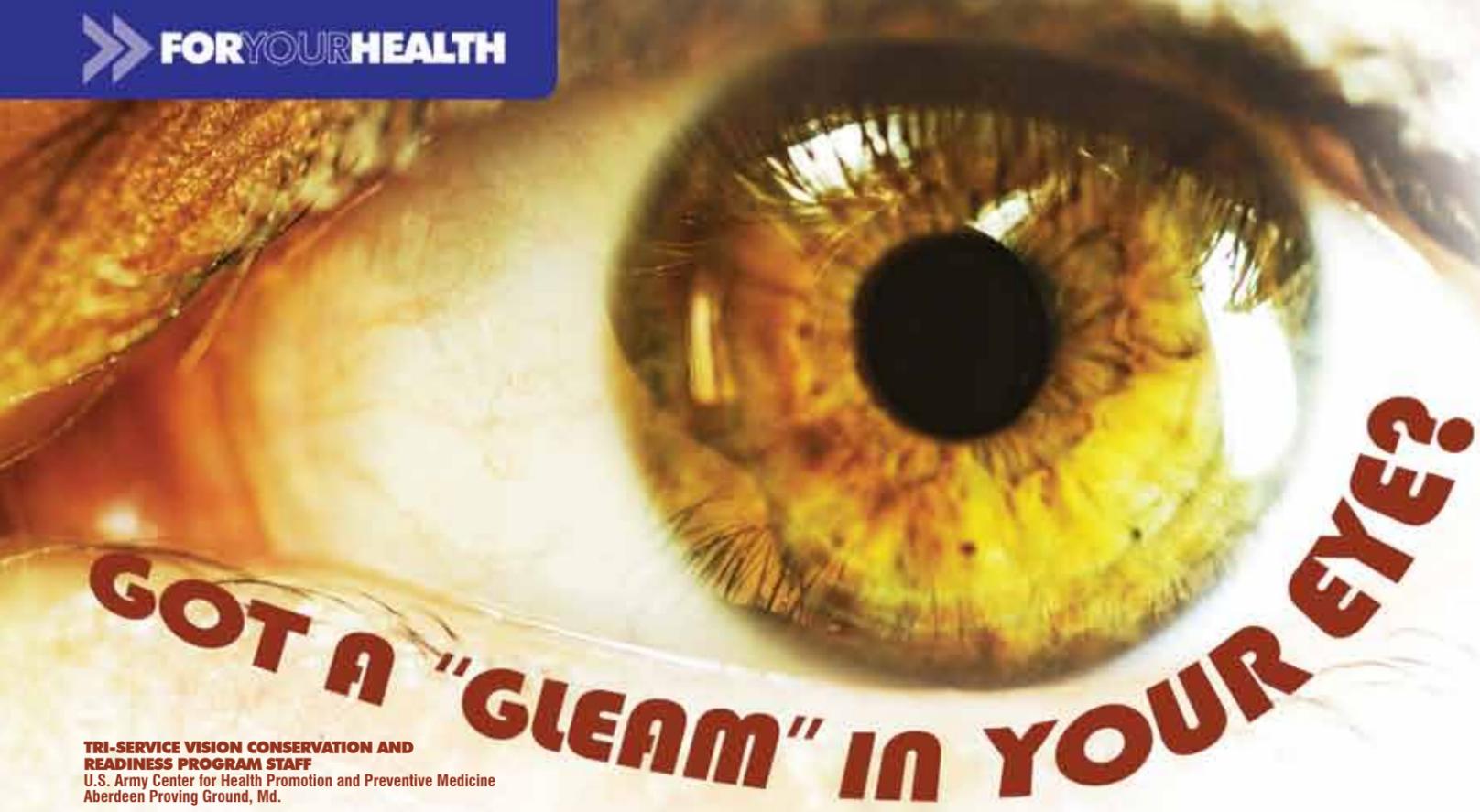
Mir turned his attention to grappling, winning a high school wrestling title and becoming a black belt in Brazilian Jiu Jitsu. This combination of skills put Mir on the fast track to success. He won seven of his first eight fights

before challenging Tim Sylvia for the heavyweight championship. A heavy underdog, Mir used his grappling to snap Sylvia's forearm with an armbar submission when the big man refused to tap the mat in surrender.

After a motorcycle accident, Mir has returned to title contention. He beat pro wrestling superstar Brock Lesnar with a kneebar and defeated the legendary Antonio Rodrigo Nogueira to earn the UFC interim heavyweight championship. Mir is scheduled to face Lesnar again July 11 at UFC 100 for the undisputed heavyweight championship.



Photo courtesy of: Eric Williams/DR Photo Management



TRI-SERVICE VISION CONSERVATION AND READINESS PROGRAM STAFF
 U.S. Army Center for Health Promotion and Preventive Medicine
 Aberdeen Proving Ground, Md.

Editor's Note: Excerpts of the following article were originally published in the September 2008 Naval Operational Medical Lessons Learned Newsletter.

There has been an increase of blue force on blue force laser eye incidents reported to in-theater eye clinics and the U.S. Army Center for Health Promotion and Preventive Medicine (USACHPPM). The rise of incidents appears to be cyclical and corresponds to the arrival of new units into the Multi-National Corps Iraq (MNC-I) theater.

Although the majority of these incidents have not resulted in permanent damage to the eyes or vision of the Soldiers affected, a safety alert on "laser fratricide" was issued from MNC-I Headquarters in July 2007 and All Army Activities (ALARACT) 144/2008, Increase of Laser Eye Incidents, was released in June 2008.

Commanders and Leaders must ensure personnel are thoroughly

familiar with laser hazards, control measures and proper employment of these devices. Tab F to Appendix 20 to Annex C of the MNC-I standing operating procedure (SOP), subject: Control Measures and TTP Training for Green Light Laser Systems, contains control measures for the use of lasers for escalation-of-force procedures. All incoming units should be familiar with laser hazards and control measures before issuing laser systems to personnel.

The U.S. armed forces use many different types of laser systems, which vary in power from safe to extremely hazardous. Soldiers and Marines are currently issued Class 3R (formerly 3A) and Class 3B lasers

as designators and nonlethal force weapons. These classes of lasers pose significant eye hazards if not used properly. Lasers should be given the same respect as a loaded weapon and handled with equal diligence.

In the U.S. Central Command area of operation, all laser incidents of consequence have been thoroughly evaluated and studied. To date, there has not been one laser eye injury attributable to enemy activity, although that danger still exists. All investigated laser incidents have been the result of self-inflicted accidental exposure or through improper and inappropriate illumination of friendly forces.

Lasers are potentially hazardous

to something of great value — your vision. While the dangers of firearms and explosives are obvious, the risks associated with laser use are less apparent. There is a possibility that a beam of laser light can cause instant, severe and irreversible damage to vision.

Each laser has a nominal ocular hazard distance (NOHD). The NOHD is the distance from the laser exit port to where the exposure falls below the maximum permissible exposure (MPE). The MPE is the level of laser radiation to which an unprotected person may be exposed without adverse biological changes in the eye or skin.

Because the Soldier being "lased" does not often know the type and NOHD of the laser, a "lasing" incident often evokes fear or outrage. Regardless of whether the damage is real, a laser incident will often evoke an unfavorable response.

Laser beams that operate in the visible spectrum (e.g., green or red laser pointer or illuminator) may appear extremely bright, even

The Authorized Protective Eyewear List approves Ballistic-Laser Protective Spectacles, the Special Protective Eyewear Cylindrical System and the sun, wind and dust goggle for laser eye protection. These devices block specific laser wavelengths, while reducing the transmittance of all light through their lenses, in a manner similar to regular sunglasses. Therefore, the use of laser eye protection may encumber some night operations.

Commanders must balance the risk of diminished light transmittance against the risk of laser exposure when deciding on the use of laser eye protection for night operations. However, laser eye protection is not a substitute for proper training, which is the best defense against an eye injury.

Immediately evacuate personnel suspected of experiencing potentially damaging eye exposure from laser radiation to the nearest medical facility for an eye examination. Laser eye injuries require immediate, specialized ophthalmologic care

established safety investigation procedures or other service-specific notification procedures.

To prevent eye and skin injuries and protect vision, the following controls must be rigorously applied any time lasers are in use:

- Never intentionally point the laser at anyone except an aggressor.
- Never shine the laser at someone's face if they are closer than the laser's NOHD.
- Include laser safety in the unit SOP.
- Include laser safety precautions when briefing rules-of-engagement and escalation-of-force procedures.
- Ensure laser operators are trained on the proper use of their specific laser systems.
- Ensure laser operators can identify the class of laser they have been issued.
- Ensure laser operators know the NOHD of the laser they have been issued.
- Always treat lasers with the same respect and care as you would a loaded weapon.

DID YOU KNOW?

Lasers used by the U.S. armed forces have been tested by the Army at USACHPPM, the Navy and the Air Force. If you do not know the nominal ocular hazard

distance of the laser you are currently using, or if additional information is needed on lasers, training or LEP, please contact USACHPPM's Laser/Optical Radiation Program at

(410) 436-3932/3353, DSN 584-3932/3353, or e-mail wesley.marshall@us.army.mil or carolyn.johnson4@us.army.mil.

at power levels that carry a low risk of permanent eye damage. Such an exposure is operationally distracting, however, and may lead the Soldier to suspect injury and seek medical attention. During daylight, an exposure can result in a perceived afterimage (e.g., photoflash effect) that may persist for several minutes. During night-time operations, the direct viewing of a laser may diminish or impair night vision up to 30 minutes.

to minimize long-term visual acuity loss. Medical personnel should obtain guidance for the treatment of laser injuries from the Tri-Service Laser Incident Hotline.

Incident and accident reports should be submitted through Department of Defense component channels to the Laser Accident and Incident Registry (U.S. Army Medical Research Detachment, Walter Reed Army Institute of Research). These reports do not replace

Laser systems are ubiquitous. They are a part of a Soldier's life on the battlefield and in training. Continued emphasis on training is essential to ensure all Soldiers know how to safely and properly handle lasers. Leaders must ensure Soldiers understand the risks inherent to laser use. Training Soldiers in safe laser operations can reduce the incidence of laser eye injuries and help them safely accomplish their mission.◀

FYI

Medical experts who can evaluate laser eye injuries can be reached through the Tri-Service Hotline. Call toll free 1-800-473-3549; DSN 240-4784; or commercial 210-536-4784. During nonduty hours, call 210-536-3278.

ANNOUNCE YOUR ACTIONS

CHIEF WARRANT OFFICER 3 ANTHONY LOWRY
Fort Irwin, Calif.

The mission for that night, just like every night before, was to conduct security in and around the Baghdad airport. The airport was a busy place because of the number of aviation units departing and arriving in country. We had conducted this mission countless times with the same crews at the same time of night, so the crew was generally familiar with the area of operation and the mission.

I was a chief warrant officer 2 instructor pilot with 1,200 total flight hours and pilot in command of the lead aircraft in a two-formation flight. In the left seat was a warrant officer 1 with almost 300 hours of total flight time. Seated in the right seat of the trail aircraft was another chief warrant officer 2 with about the same amount of flight hours I had. In the left seat was the company commander, who had about 900 flight hours.

Our team had been out about 1½ hours and was running low on fuel. We were on the west side of the airport and decided to return for fuel by intercepting the checkpoint on the southwest side, entering the traffic pattern and then landing at the forward arming and refueling point (FARP). It was the standard entry procedure at that time. I monitored the tower frequency

as we turned toward the airfield, awaiting the opportunity to contact the tower and let them know we were inbound for the FARP.

It was a busy night. We attempted to contact the tower several times but were interrupted by other aircraft. We were about one kilometer from the CP and had reduced airspeed from 90 knots to about 60 knots, but we could not get through to the tower that we were about to enter their airspace. Due to the massive amount of radio traffic from other aircraft, the tower never heard our calls.

To avoid entering their airspace, we elected to make a 360-degree turn. I told my left-seater that I was going to make a 360-degree turn to the right and then started my turn. What I did not know was the trail aircraft, in a free cruise formation, had lost sight of our aircraft in the

lights of the airfield and couldn't see we had reduced our airspeed. The trail aircraft had continued at 90 knots and caught up to our aircraft. Trail ended up on the right side of the lead aircraft at the same altitude and at a distance of about two rotor disks.

A split second before beginning my right-hand turn, I switched radios to tell my wingman I was turning right while simultaneously looking out my right door to make sure I was clear for the turn. As I looked right, I saw another aircraft at our 2:30, passing us and starting a left-hand turn.

My first thought was there's another aircraft I had not heard on the radio. However, then I recognized the pilot in the left seat and knew he was my wingman. I made a hard left turn and said something over the radio to our wingman that I don't remember, but I know it was not in

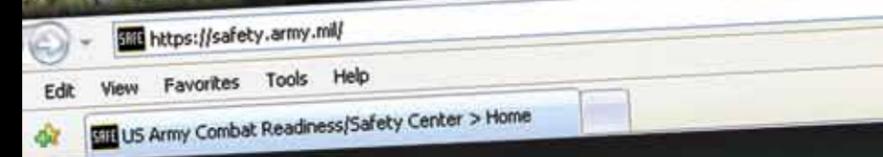
keeping with proper phraseology. We linked back up with each other and finally landed at the FARP without further incident.

Lessons Learned

Crewmembers are always briefed on crew coordination, specifically "announce actions," before every mission; however, it isn't always briefed from aircraft to aircraft. I made the mistake of not communicating with my wingman that I was reducing airspeed, and our wingman made the mistake of not informing us when they lost sight of the lead aircraft. Had I not looked to the right before starting my turn to clear the aircraft, I have no doubt we would've had a midair collision and killed all four crewmembers that night.

This incident served as a wake-up call. From that night on, when one of our aircraft did something that was either not briefed or out of the norm for the situation, we made sure we announced our actions first to the entire flight and not just the crewmember sitting next to us.◀

LET US KNOW
WHAT YOU THINK!



U.S. ARMY COMBAT READINESS/SAFETY CENTER

<https://safety.army.mil>

Your feedback is important to our ongoing mission to constantly improve the products and services offered by the USACR/Safety Center.

HOME Safe HOME

CHIEF WARRANT OFFICER 4 JOSEPH B. REESE
Ground Task Force
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

Do-it-yourself projects can be a great way to improve the value of your home. But just because you're working in a place you feel safe doesn't mean there are no hazards. When beginning any home-improvement project, the first tool you use should be composite risk management.



A primary consideration is your skill level as it relates to the task at hand. Do you have the necessary experience and the right tools to do the job? If not, then hire someone who does.

If you know you are up to the task, you'll need to identify potential hazards and risk factors so you can take steps to get the job done safely. For some reason, when people work at home, they tend to think that nothing can happen to them. This is far from true.

According to the Home Safety Council, nearly 21 million people suffer injuries in their home every year. The three most common causes of injuries are falls, poisoning and burns. Given that ladders, power tools and chemicals are common to home repairs, you may want to take a closer look at your safety level in these areas.

How many times have you used a ladder without giving any real thought to your safety? Each year, there are more than

164,000 emergency room-treated injuries in the U.S. relating to ladders. The U.S. Consumer Product Safety Commission (CPSC) offers the following safety precautions to help prevent these injuries:

- Make sure the weight your ladder is supporting does not exceed its maximum load rating (user plus materials). There should only be one person on the ladder at a time.

- Use a ladder that is the proper length for the job. Proper length is a minimum of 3 feet extending over the roofline or working surface. Never stand on the three top rungs of a straight, single or extension ladder.

- All metal ladders should have slip-resistant feet.

- Metal ladders will conduct electricity. Use a wooden or fiberglass ladder in the vicinity of power lines or electrical equipment. Do not let a ladder made from any material contact live electric wires.

- Be sure all locks on extension ladders are properly engaged.

- The ground under the ladder should be level and firm. Large flat wooden boards braced under the ladder can level a ladder on uneven ground or soft ground. A good practice is to have a helper hold the bottom of the ladder.

- Keep your body centered between the rails of the ladder at all times. Do not lean too far to the side while working.

- Do not use a ladder for any purpose other than that for which it was intended.

- Do not step on the top step or bucket shelf or attempt to climb or stand on the rear section of a stepladder.

- Never leave a raised ladder unattended.

- Follow the instruction labels on ladders.

While working on a home-improvement project, power tools help save time and usually make the job easier, making them indispensable to the

“ Being **AWARE** of **HAZARDS** typical to home **IMPROVEMENT** will give you the **EDGE** in **COMPLETING** your project **SAFELY** and **SUCCESSFULLY.** ”

do-it-yourselfer. However, negligence, boredom and overconfidence can lead to mishandled tools and serious injury. Keep these guidelines in mind before you plug in the cord:

Wear safety glasses.

These prevent dust, debris, wood shavings, shards from

fiberglass, etc., from getting into the eyes and are one of the most basic pieces of safety equipment.

Protect your ears. Power tools can generate a lot of noise, which may sound louder in a closed environment. To minimize damage to the ears, it is advisable to wear earplugs.

Use the right tools the right way. Thoroughly read

the instruction manuals provided with the equipment and get familiar with the recommended safety precautions. Do not carry tools by their cords and disconnect them when not in use.

Dress appropriately. Long hair should be tied and loose clothing should be avoided. Gloves should be used to prevent injuries from sharp implements and splinters, and masks prevent inhalation of harmful minute particles. Steel-toed work boots and hard hats can also be worn.

Inspect your tools. Check them periodically for exposed wiring, damaged plugs and loose plug pins. Nicked cords can be taped, but should be replaced if the cut appears to be deep. Tools that are damaged or those that sound and feel different when used should be checked and repaired.

Keep it clean. Good housekeeping and an uncluttered work area can go a long way toward reducing accidents.

Hazardous materials are an often-overlooked danger involved in repair and maintenance around the home. Cleansers, bleach, oil, paints, thinners, batteries, medicines, pesticides and many common household items are considered hazardous.



Many of these items, in addition to causing physical injury, are poisonous. These guidelines will help you use hazardous or poisonous products safely:

Look for "caution," "warning" or "danger" on product labels and always read the directions thoroughly.

Store products in the original containers and keep labels legible.

Never transfer dangerous products to glass jars, soda bottles or other containers. Many products look alike. In addition to the risk of the products being mistakenly consumed or otherwise improperly used, the containers may leak or break. It's also easy to forget what product was placed in which container.

Prevent chemicals

from mixing. Some chemicals, such as bleach and ammonia, combine into a deadly gas.

Use a locking cabinet to store pesticides, automotive fluids, charcoal lighter fluid, paint thinner, antifreeze, turpentine or any chemical substance.

Being aware of hazards typical to home improvement will give you the edge in completing your project safely and successfully. Always take the time to read the instructions on products and tools and do not undertake work beyond your skill level. The time to realize you should've called a professional is not when your spouse is frantically flipping through the Yellow Pages looking for a plumber or carpenter — or, even worse, dialing 911.



<https://safety.army.mil>

Army Safe is Army Strong and that starts with a Soldier's Family. Have the information to help you and your Family stay safe.



Be prepared and get your own Family Engagement Kit today!

Good HIT Check, Sir

CHIEF WARRANT OFFICER 4 CHRISTOPHER R. TENARO
 Army Aviation Support Facility No. 2
 Florida Army National Guard
 Brooksville, Fla.

Our unit conducted a field training exercise during a drill weekend, and I was given an assigned aircraft to fly. On the first day, we conducted a health indicator test (HIT), or HIT check, which resulted exactly in the middle of the range on the HIT card. Crew chiefs sometimes take care of the logbook, if allowed, and “run the numbers” during the HIT check. This means the helicopter is run up, the HIT procedure accomplished and engine indications are compared with the HIT log to verify the engines are working properly.

For the first flight, everything went as planned and we flew the aircraft without any problems. Later that afternoon, we finished flying and performed preventive maintenance daily (PMD). The next morning, we preflighted the aircraft for airworthiness and were ready to go. During the run-up, we conducted the HIT check and I heard from the crew chief, “That was a good HIT check, sir; we’re ready to go!”

I didn’t verify the numbers, having flown the previous day with the same crew chief and same aircraft. I replied, “Roger,” and drove on. We completed our flight home, conducted PMD and readied the aircraft for the next day’s mission.

As fate would have it, I was scheduled for the mission the next day. I asked the folks in operations to give me the same aircraft for that mission and they granted my wish. The next morning, we preflighted and were ready to go. Everything was the same except I got a new

pilot and crew chief. We were a flight of two for this mission.

During our preflight mission planning, we noticed some early thunderstorms in the area that were slowly making their way to the airfield. As we taxied out for the HIT check and departure, the rainstorms were quickly approaching. We deferred the HIT check until we reached our first destination, an airfield about 45 minutes away. What made my decision was the fact I had flown this aircraft for the past two days and the HIT check was fine both days.

We arrived at our first destination and, before shutdown, did the HIT check. I started with the No. 1 engine, got the numbers and, while waiting for the crew chief to run them, went on to the No. 2 engine.

Imagine my surprise when the crew chief said, “That was a bad HIT check, sir, on the No. 1 engine.”

“Are you sure?” I asked.

He said he was sure, so I asked

him to read the numbers back to me. We were over on the HIT check by 3 degrees. I decided we would finish the No. 2 engine and then we’d recheck No. 1. We did the HIT check again and it barely passed by 1 degree. To top it off, the next thing I heard from the crew chief was, “It looks like it failed yesterday too.”

Now I’m truly in disbelief. I shut down the aircraft and grabbed the logbook to look at the HIT check. Sure enough, the numbers the crew chief wrote down the day before showed the HIT check was over by 2 degrees.

I don’t know why he said the numbers were good. What bothered me more was that I deviated from my normal procedure of having the crew chief read back all the numbers to confirm the HIT check. We had a 15-degree difference from the HIT check I did three days ago. Now what? We got the HIT to pass within limits on the second try.

After a brief discussion, we decided to drive on with the mission since it was a short one and shouldn’t be a problem. The only problem I had was the anxiety of a 15-degree rise in the HIT check. We completed the mission and returned home. Upon arriving home, I asked the crew chief to write up the HIT check as being within 5 degrees of failing. I then went and had a talk with the maintenance officer and relayed my concerns.

The next morning while going about my daily business, one of the mechanics came to me and said, “You have to come check this out.” I followed him to the hangar. There was the answer to the HIT check mystery. The bearing in the inlet particle separator blower had failed, stripping the shaft that goes into the accessory gearbox. This failure manifested itself in the high HIT check.

The moral of the story is to pay attention to the HIT check and verify the numbers. Take a look at the previous checks and look for a trend or a deviation from the trend. One more item of concern: Remember the pilot in command of an aircraft is directly responsible for the operation of the aircraft and the safety of all personnel onboard.◀◀

“What **BOTHERED** me **MORE** was that I **DEVIATED** from my **NORMAL** procedure of **HAVING** the **CREW CHIEF** read back all the **NUMBERS** to **CONFIRM** the **HIT** check.”

LOSERS

AVIATION

HH-60L

CLASS C

During a simulated dust landing, the forward-looking infrared radar and position location system antennas incurred damage when the landing gear broke through a newly surfaced landing area.

UH-60L

CLASS A

The aircraft crashed into trees during a return flight to home station. Crewmembers were able to egress without injuries. The aircraft was destroyed.

CLASS C

During a return flight to home station, a bird struck the aircraft, damaging two main rotor blades and the tail rotor gearbox cover.

OH-58D(R)

CLASS B

The crew heard a "popping" sound in the tail rotor pedal during cruise flight followed by an uncommanded left yaw of the aircraft. During emergency landing, the aircraft initiated an uncommanded right yaw.

CLASS D

Upon completion of refuel/rearm, the pilot in command lifted the aircraft to a hover slide left and executed a left pedal turn to depart the forward operating base (FOB). During this time, the tail stinger contacted the refuel grounding cable. The crew felt a jerk in the tail rotor. After takeoff from the forward arming and refueling point (FARP), the sister ship checked for visual damage, and both aircraft returned to the FOB without further incident. The vertical fin was damaged by the grounding cable, which was not contained in the point box. Late report.

UAS

RQ-7B

CLASS B

The ground control station lost link with the unmanned aircraft (UA).

The UA experienced a generator failure during flight. The air vehicle operator was able to maneuver the UA to land in an open field with chute deployment. The UA was damaged.

CLASS C

The external power cord remained attached as the UA was launched and became intertwined in the engine area and propeller.

GROUND

ACV

CLASS A

A Solider suffered a permanent total disability injury when he was struck by a round from an M249. The weapon fell from its resting place inside an M1117 Armored Security Vehicle and discharged a round when it struck the ground.

CLASS B

An M1130 Stryker was damaged when a fire started in the engine compartment during self-recovery following a vehicle malfunction. As the fire spread, it cooked off the onboard .50-caliber ammunition, damaging the vehicle.

CLASS C

A Mine Resistant Ambush Protected (MRAP) vehicle was damaged when it overturned. The accident occurred when the

driver swerved to avoid a local national vehicle that pulled into his path. All personnel received only minor injuries. They were treated onsite by medics and returned to duty.

AMV

CLASS B

A Soldier's right hand was medically amputated following an injury he suffered when his M1114 up-armored HMMWV overturned during convoy training.

Personnel Injury

CLASS A

An Army contractor suffered fatal cardiac arrest following an electrical shock. He was attempting to activate a vehicular performance test system and was shocked when he reached into the compartment that housed the transmitters and capacitors.

CLASS B

A Soldier suffered a permanent partial disability injury when he fell from a second-floor fire escape. The Soldier experienced head trauma and a broken arm.

EXPLOSIVES/FIRE

CLASS A

Equipment in two laboratories was destroyed in a fire.

A UH-60A that was being used as a static display during simulated training was damaged in a fire. The fire was caused by a flash-bang pyrotechnic that detonated, ignited the grass and spread to the aircraft.

ARMY AVIATION LOSSES

Fiscal 2009
as of June 7, 2009



ATTACK	1/1
RECON	5/4
UTILITY	5/2
CARGO	0/0
TRAINING	0/0
FIXED-WING	0/0
UAS	2/0

TOTAL 13/7

ARMY GROUND LOSSES

Fiscal 2009
as of June 7, 2009



AMV	13/12
ACV	11/3
PERSONNEL INJURY <small>includes weapons-handling accidents</small>	16/11
FIRE/EXPLOSIVE	4/1
PROPERTY DAMAGE	1/0

TOTAL 45/27

DRIVING



CLASS A

■ A Soldier was test driving a privately owned vehicle (POV) at high speed when he struck a cargo truck from the rear. The Soldier's vehicle then spun 180 degrees into the path of the truck, which struck the car on the driver's side. The Soldier died at the scene.

■ A Soldier was operating his POV at high speed when he lost control while attempting to negotiate a curve and crashed into a barricade. Local authorities cited alcohol as a factor in this fatal accident. The Soldier was pronounced dead at the scene.

■ A Soldier was operating his POV at high speed when he lost control, went off the road and overturned. The unbelted Soldier was ejected from his vehicle and suffered fatal injuries.

■ A Soldier was operating his POV when he failed to negotiate a left-hand turn, left the road and overturned. The Soldier was ejected from the vehicle and suffered fatal injuries.

■ A Soldier was operating his POV with another Soldier as a passenger when he lost control and struck a wall. The Soldier was evacuated to a medical facility, where he later died. The passenger was treated for minor injuries.

■ A Soldier with three passengers was attempting to pass another vehicle when he lost control, struck the other vehicle, went off the road and hit a sign pole and a container. The Soldier, who was unbelted, was taken to a medical facility, where he later died. His passengers, who were all belted, survived and were treated for their injuries.

■ A Soldier with three passengers was speeding when he lost control, went off the road and struck a tree. The Soldier was taken to a medical facility, where he later died. In addition, one of his passengers died at the scene. According to authorities, alcohol was a factor in this accident.



CLASS A

■ A Soldier was operating his privately owned motorcycle (POM) when he collided with a vehicle at an intersection. Although the Soldier was listed in stable condition, his prognosis was for a permanent total



SET THE EXAMPLE

disability due to compound leg and pelvic fractures.

CLASS C

■ A Soldier was operating his POM when he collided with a POV. The POV overturned, resulting in fatal injuries to the pregnant driver and her unborn child and serious injuries to another child inside the vehicle. The Soldier also lost control, left the road and overturned. The Soldier suffered numerous fractures and injuries.



CAR	29/30
SUV/JEEP	10/10
TRUCK	7/7
MOTORCYCLE	20/19
PEDESTRIAN	6/6
OTHER*	2/2

74
TOTAL DEATHS

Fiscal 2008: **82** 3 Year average: **78**

*Includes: vans and ATVs

BE A RESPONSIBLE RIDER

In fiscal 2008, the Army lost more Soldiers in motorcycle accidents than any other previous year going back to 1986.

Prevent disabling injuries. Wear your PPE and a helmet that meets DOT standards.

Hold on to your cash. Having to rebuild or purchase a new motorcycle means less money in your wallet.

Arrive at your destination. Speed and lack of control continue to play major roles in traffic deaths.

Enjoy the ride. Ride within your abilities — enjoy this riding season and live to ride for the next one.

Pedestrian



CLASS A

■ A Soldier was attempting to cross the traffic lanes of an access road for an interstate highway when he was struck by a vehicle and killed.

Editor's note: Information published in the accident briefs section is based on preliminary loss reports submitted by units and is subject to change. For more information on selected accident briefs, e-mail safe.knowledge@conus.army.mil.



MMP
MOTORCYCLE MENTORSHIP PROGRAM

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ARMY STRONG



U.S. ARMY COMBAT READINESS/SAFETY CENTER

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A BAND OF BROTHERS
& SISTERS

KNOWLEDGE

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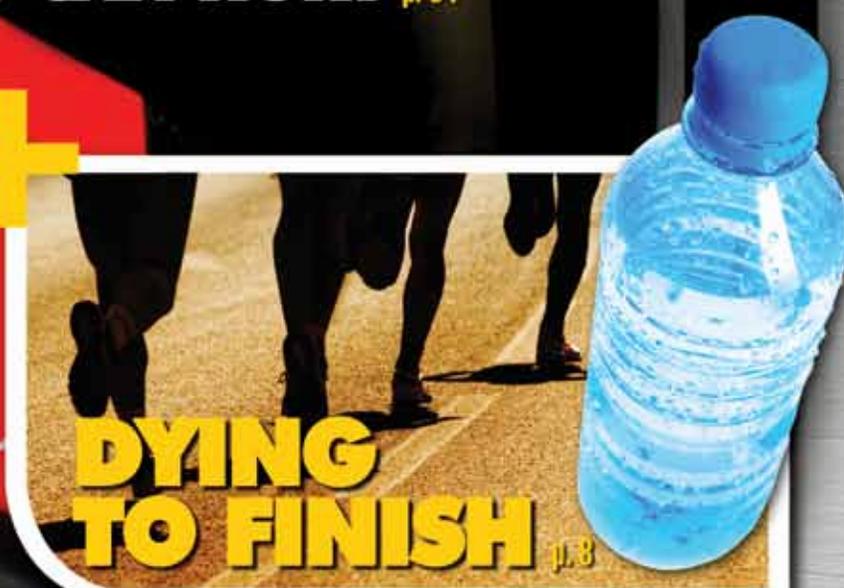
OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

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ARMY STRONG.



U.S. ARMY COMBAT READINESS/SAFETY CENTER
<https://safety.army.mil>

ARMY SAFE IS ARMY STRONG



BAND OF BROTHERS & SISTERS

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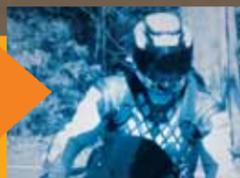
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CONTINUE to remain vigilant about **SAFETY** and **APPLY** composite risk **MANAGEMENT** to all **YOUR** daily **ACTIVITIES**, both **ON** and **OFF** the **BATTLEFIELD.**



SAFETY IS EVERYONE'S BUSINESS



A few months ago, the U.S. Army Combat Readiness/Safety Center entered the social networking and media arena, establishing profiles on Facebook, YouTube, Vimeo and Twitter in order to embrace an active online community. Periodically, I spend some time on these sites, reading what our "fans" in the field are discussing when it comes to Army safety.

I've found that our Soldiers, civilians and their Family members are openly sharing their personal beliefs and values on a host of subjects. There was, however, one theme that kept reappearing throughout several postings and comments. That theme was individual responsibility.

A recent message posted on our Facebook page caused me to pause and consider the great insight offered by one of our troops in the field. He wrote, "Individuals have to know that they are owners of their own safety."

In another recent Facebook posting, a former company commander commented on the issue of personal responsibility, noting, "Regardless of the programs we implement, the safety briefings we present or vignettes we tell, the individual Soldier is the only one who can either embrace that information or toss it out."

Every year, the USACR/Safety Center team publishes numerous tools and programs to help keep our Army safe. But these products are of no value if they are not embraced and used by the individual Soldier as part of everyday life.

We all must embrace Army safety and use the tools, programs and lessons learned to protect our most vital resource — our Soldiers — both on and off duty, in combat or home station and off-duty with Family and friends. The five steps of the composite

risk management process must be at the heart of every Soldier's "plan," whether that plan is taking them to a local beach or their hometown thousands of miles away.

Though individual responsibility is, by definition, focused on the individual, it also reaps rewards for our entire Army Family. Engaged Leaders who use all the tools available to identify and mitigate risk do make a difference. Likewise, Soldiers and Family members who embrace safety are also a critical component of protecting our Band of Brothers and Sisters.

This team approach to safety is especially important during the high-risk summer season. Tragically, our Army continues to experience an increase in off-duty accidental fatalities during this timeframe. The USACR/Safety Center recently developed the Safe Summer campaign and Off-Duty

Safety Awareness Program to ensure Leaders, Soldiers and Families are aware of the off-duty hazards they will face in the upcoming months. You can find these products on our Web site at <https://safety.army.mil>.

I encourage you to remain focused on reducing preventable losses and conserving our combat force. Continue to remain vigilant about safety and apply composite risk management to all your daily activities, both on and off the battlefield. I thank you for all you do for our nation and for making safety a top priority in all your activities.

Army Safe Is Army Strong!

WILLIAM T. WOLF
Brigadier General, USA
Director of Army Safety



U.S. ARMY COMBAT READINESS/SAFETY CENTER
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Mission statement: USACRC supports our Army by collecting, storing, analyzing, and disseminating actionable information to assist Leaders, Soldiers, Families, and Civilians in preserving/protecting our Army's combat resources.

We welcome your feedback. Please e-mail comments to safe.knowledge@conus.army.mil.

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Knowledge provides a forum for Soldiers, Leaders and safety professionals to share best practices and lessons learned and maintain safety awareness. The views expressed in these articles are those of the author and do not necessarily reflect the official policy or position of the U.S. Army, Department of Defense or the U.S. Government. Contents are specifically for accident prevention purposes only. Photos and artwork are representative and do not necessarily show the people or equipment discussed. Reference to commercial products does not imply Army endorsement. Unless otherwise stated, material in this magazine may be reprinted without permission; please credit the magazine and author.

KEEPING YOUR HEAD

CHIEF WARRANT OFFICER 5 ROBERT B. REYNOLDS
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A motorcycle helmet is not a novelty; it's a serious piece of safety gear that should be carefully selected and maintained. While manufacturers strive to make helmets stylish and flashy, the primary concern is the protection they provide. It doesn't matter whether you've always worn a helmet or if wearing one is new to you. Here are some helmet basics you need to know for your safety and comfort on the road.

The Components

While there are many different helmet styles to choose from, all have four major components: a rigid outer shell, an expanded polystyrene (EPS) impact-absorbing liner, padding for fit and comfort and a retention system. Your helmet,

at a minimum, should meet Department of Transportation (DOT) requirements.

Shell Construction

Helmets typically offer one of three types of outer shell construction: thermoplastic, fiberglass or carbon fiber. Each has different qualities worth examining.

- Thermoplastic shells are a single-layer, injection-molded material. Due to its single-layer construction, a thermoplastic helmet requires a larger inner impact liner. This, in turn, increases the shell size and weight.

- Fiberglass shells are generally stronger than thermoplastic shells because they are made of multiple layers of fiber cloth combined with multiple layers of resin. The strength of the fiberglass weave permits the use of a smaller inner liner, allowing fiberglass shells to be lighter and more compact than thermoplastic shells.

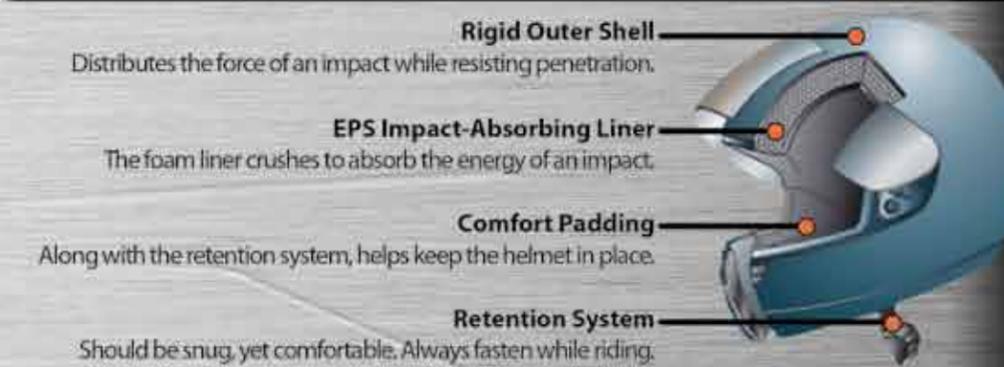
- Carbon fiber helmets are made of multiple layers of extremely strong, carbonized Kevlar fibers along with multiple layers of resin. Due to the inherent strength of both carbon and Kevlar, less material is needed to achieve maximum

strength and durability. As a result, carbon fiber helmets are significantly lighter than comparable thermoplastic or fiberglass shells.

Helmet Styles

While there are a variety of helmet designs to fit the tastes of different riders,

for full-face exposure when riders are stopped and need extra ventilation for cooling. Riders should always ride with the module in the closed position. For an example of how a modular helmet helped save a rider's life, see the story "Riding to Live" in the May 2009 issue of Knowledge.



the best ones protect both the head and the face.

- Full-face helmets provide optimum face and head protection. Equipped with flip-up face shields and flow-through ventilation, they can be warm in the winter and comfortable in warm weather.

- Modular helmets combine the benefits of full-face and three-quarter helmets. Flipping up the face/chin module makes these helmets easier to put on and take off and allows

- Three-quarter open-face helmets don't offer the face and chin protection of full-face helmets. If you use an open-face helmet, you should have a snap-on face shield in place when you ride, or buy a pair of goggles that can withstand the impact of stones and other debris. Prescription eyeglasses or sunglasses do not provide sufficient protection.

- "Shorty" half-helmets protect even less of your head and are more likely to



come off upon impact. These helmets are not recommended.

Does It Fit?

Ensuring your helmet fits properly is vital to its performance and effectiveness. Here are a few tips to help you get the right fit.

- Measure the width of your head by placing a standard tape measure approximately 1 inch above your eyebrows. This will give you a starting point in selecting the proper-size helmet. The following link will provide you a measuring tape with gradations showing the suggested helmet size: <http://www.motorhelmets.com/htm-service/sizingchart-measuringtape.htm>.
- Put on the helmet by grasping the chin strap in each hand and



pulling it over your ears until you feel the inner lining touch the top of your head. If the helmet feels too tight — for example, you cannot pull the helmet down over your ears or the helmet is painful — try the next larger size.

- Ensure the helmet is not too loose. Properly secure the chin strap and then grasp the chin bar and try to move the helmet up and down and side to side. If the helmet slides on top of your skin and hair, then it is too loose. If your hair and skin move with the helmet, then it is properly snug. Also, try rolling the helmet

forward and backward to ensure it does not slide off your head.

- Wear the helmet for at least 15 minutes before buying it to ensure there are no uncomfortable pressure points. If you do encounter pressure points, try the next larger size.
- If you typically wear eyeglasses or sunglasses, bring them along to ensure they will fit inside the helmet without causing pressure points at your ears and the bridge of your nose.

Here are some tips to maximize the life and effectiveness of your helmet:

- Follow the manufacturer's instructions on helmet care.
- Never expose a helmet to chemicals or excessive heat. These may degrade the protective properties, even if the damage is not visible.
- Never hang a helmet on a motorcycle's mirror, turn signal or sissy bar. The EPS impact-absorbing liner can be easily damaged.
- Before riding, ensure chin straps are tightened properly and not frayed. Also ensure the visor locking mechanism and face shield are tightly affixed.
- If you are in an accident and your helmet suffers an impact, replace it immediately. Impacts may fracture the outer shell or compress the impact-absorbing liner, causing damage that may not be immediately visible.

Manufacturers recommend that helmets be replaced every three to five years, depending on use. Glues, resins and other helmet materials break down over time and hair oils, sweat, cosmetics — even the sun's UV rays — can add to helmet deterioration.

Keep It Clean

- Use mild soap and water to wash the outer shell. Clean

the face shield with warm water and a soft, lint-free cloth.

- Avoid using a dry cloth, as it may scratch the shield.
- Hand wash all internal liners with mild soap and allow to air dry.
- Use compressed air to clear helmet air vents and channels.
- Do not use solvents or chemicals to clean any part of the

While **MANUFACTURERS** strive to make helmets **STYLISH** and **FLASHY**, the primary **CONCERN** is the **PROTECTION** they **PROVIDE**. It doesn't **MATTER** whether you've **ALWAYS** worn a **HELMET** or if **WEARING** one is **NEW** to **YOU**.

helmet or shield, as they can destroy protective coatings and compromise the helmet's structural integrity.◀

Editor's note: Material for this article was derived from MotorHelmets, available online at <http://www.motorhelmets.com/> and from the Motorcycle Safety Foundation.

Share street smarts while helping your battle buddy!



MMP
MOTORCYCLE MENTORSHIP PROGRAM

Mentoring can be fun and set up in various ways.

- Unit-level one-on-one mentorship
- Unit-level riding groups
- Private organization
- Combination unit program and private organization at the installation level
- Non-appropriated fund instrumentality

Check out the MMP Web site for some examples of active mentoring programs:
<https://safety.army.mil/mmp/>

Dying to Finish

MAJ. ANNA HABERZETTL
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

ran this race five years earlier, which was just seven months after having my second child).

By mile two, people were walking. Water and drink stands were being replenished like crazy as runners grabbed any type of hydration they could find. I kept my mind occupied by listening to the bands that played on the side of the road, but I could tell my pace was way off and wasn't getting any faster. When I hit mile 10, I knew the last five kilometers were going to take a lot longer than they should.

The heat was brutal. Competitors were laid out on the roadsides, sidewalks and on lawns. Ironically, there were T-shirts at the previous day's expo printed with "If found on roadside, drag to finish line."

So, after driving six hours the day before and knowing I had six more hours ahead of me that afternoon, not getting a personal record was

kind of a bummer. I tried to figure out what I learned from this experience and could only come up with "train smarter." I was probably in the best shape of my life, but I lacked a hydration plan. That ultimately crushed me and my hopes to run a great time.

How can I prevent this from happening again? I must simply "worst case" the event, research and prepare. I could not induce rain on my runs, but I ran in the rain, cold and heat when those opportunities presented themselves.

You might be wondering what kind of dementia I am suffering from, but just ask any avid runner and the answer will probably be very similar. What I didn't do was read more about how much water I needed. You have to practice like you fight. I didn't drink on practice runs, so, come race day, I didn't want to choke on water while trying to maintain a pace.

By the time you're thirsty, though, it's usually too late. The salt is caking on your face and extremities and you have to wait another mile or so for another water stop. I wasn't having fun between miles 10 and 13; rather, I was just looking for the next cup of water that I could sip and pour over my head. How much did I pay to do this?

On the other hand, other runners cruised to the finish. They had properly prepared and maybe even read the Web site and pamphlet tips on hydrating. By the next race, I will have forgotten about the pain. I will look at the finisher medal and remember the most important lesson I learned that day — hydrate or die.◀

It takes months of preparation and untold amounts of mental and physical strength to reach your personal best. It only takes a change in the weather to throw all that out the window. Or does it?

How do you set yourself up for success when you're at the mercy of Mother Nature? I'm talking about training for individual competitions. Whether it's bodybuilding, running, swimming, biking or racing enduro, prepare your body for the worst and hopefully you'll be pleasantly surprised by the not-too-bad.

This past winter/spring, I spent 13 weeks finessing my meal plan

and workouts for a half marathon in which I planned to run my personal best. Counting reps, miles, gallons of water, as well as grams of protein, carbohydrates and fat, absorbed a good portion of my day. I was so focused. I researched average temps on race day and even trained in the heat a few weeks before the event.

Finally, it was race day. As my friend and I stretched in a tree-covered area and waited in the

endless "blue canoe" lines, the shade and breeze made it seem a little chilly — my preferred running climate. The race started at 7 a.m. in two-minute waves, and we didn't get to the start line until 7:30 a.m. with thousands of runners in front of us. By then, the breeze was gone and the temperature was already in the 80s, topping the record high for this race by almost 14 F (and about 15 F hotter than when I

HOW TO HYDRATE TO SUCCESS

1. Educate yourself. Race Web sites have helpful hints such as historic temperatures, health and medical advice, medical assistance plans and hydration point locations. Also, the bigger races assemble detailed information packets which usually include pamphlets on medical information, medications and training. If there is room or a format on the back of your race bib for medical information and points of contact, ensure you fill it out.

2. Have a plan. Backward plan from race day and set obtainable goals. Is this the first time you are competing at this sport or level? Does your training program and fitness level match up and do they progress together?

3. Incorporate your hydration plan into your training at the onset. We're talking water, electrolyte replacement, carbohydrates and salt. Are you tracking fluid loss, sweat rate and core body temp? Drinking too much can sometimes be worse than not drinking enough. Are you taking medications or supplements? Set up water points in safe locations along a long training run and practice drinking. It's harder than you think to gulp and maintain a decent pace. The drink/rest cycle the Army advocates may not be enough for your event.

4. Find a running partner as insane as you and work out with him or her. You'll see in your partner certain symptoms you cannot

see in yourself. Plus, it's motivational and may "guilt" you into that session you would have slept through.

5. Have fun with it. I keep a gallon water jug on my desk to motivate me to drink during the day. I even fill up my girls' hot pink CamelBaks with ice and water so they feel like they're training with me. Most of all, hydrate as if your life depends on it. It does!



The Great Menace

CHIEF WARRANT OFFICER 3 RUSSELL D. MOTES
C Co., 2nd Battalion, 151st Aviation Regiment
Georgia Army National Guard

We were well into our 15-month deployment in support of Operation Iraqi Freedom 06-08. During the first half of the rotation, our ground brethren and gun pilots of the 1st Cavalry Division were constantly duking it out with the enemy. Our Soldiers were fatigued, the fleet of AH-64Ds was showing signs of wear and the missions became routine for the aircrews. Troops in contact, reconnaissance, forward operating base security and medevac escort were part of everyday life, and the aircrews were getting comfortable with these missions. Dare I say complacent?

Fast-forward a couple of months and I'm on the schedule for a "good deal" — a day reconnaissance mission in our area of operations. The shooting slowed quite a bit since the surge ended and we hadn't gotten many direct support missions. Today was no different, and the mission set looked familiar: fly for four or five hours and look for work.

I had been on the day shift for a couple of months and this day started just like the one before. Early wake up, followed by the intelligence, operations and weather briefings, and then off to chow for some much-needed breakfast and "lifer's juice" (coffee).

As we walked from the chow hall to the flightline, the conversation was about everything except our

upcoming task. We checked in with the crew chiefs for aircraft assignments, scrubbed the logbooks, grabbed our gear and then stepped to the birds. Normally, I would take the opportunity on those long walks to the aircraft to talk with my co-pilot/gunner (CPG) about things like actions on contact or conducting the crew brief; but we had no "real" mission. What's the point, right? Besides, the staff captain I was flying with used to be my battle-roster crewmember when he was a platoon leader, and we had done this many times before. "Easy like Sunday morning," I thought. Add "failure to adhere to standards" to the list!

Preflight, run up, taxi out and line up all went normal. We knocked out our bore sights and soon were

airborne, looking for work. Two long hours went by and we were unable to pimp ourselves out to the ground guys. No units out kicking in doors, no joint terminal attack controller to play with, not even a counter improvised explosive device patrol was out looking for gunship support. It was so boring we even cut tactical chatter and started bantering about what was the worst song ever written.

Finally, we reached our bingo numbers and hit the forward arming and refueling point (FARP) for a splash of gas and, hopefully, some leftover cheeseburgers from 3/5 platoon's lunch truck. As we waited for the fuel nozzles, I radioed my wingman and jokingly said, "Maybe we'll get shot up today so we can get done early." See where this is going?

Add "breakdown of discipline and bad karma" to the list.

We launched out of the FARP with no updates on the enemy situation and headed out to the west for route reconnaissance. Complacency, "the Great Menace," was having its way, so I took the same route of flight as most Apaches going out to this area. As I crossed over the route, I felt and heard a couple of thumps against my aircraft. Not realizing I was getting ready to have a significant emotional event, I told my CPG we might have had a bird strike.

Seconds later, we experienced the thumps again. Reality quickly set in as the bullets entered the CPG station and the smell of cordite filled the air. One of the bullets became lodged in the blast shield that separates our two crew stations! How the captain up front walked away with virtually no injuries is truly a miracle. Fortunately, I knew the area was bad guy territory, so I

was carrying plenty of airspeed to maneuver away from the aerial ambush as my wingman suppressed the area with 30 mm.

Multiple cautions and warnings appeared on the upfront display and "Betty" sure was good about reminding me of my lack of attention. Thankfully, Boeing builds a great product and I was able to recover the aircraft with my hurt pride and plenty of battle damage from the 12.7 mm and 7.62 mm rounds. If only I had flown this mission like it was my first!

Lessons Learned

As an instructor pilot on my second combat tour, I got lulled into the very thing that I warned new aviators. I allowed overconfidence, boredom and the routine "same o', same o'" to take me away from the professional standards I was taught. My CPG and I were lucky that day. We were even luckier to have such a

capable wingman! What began as a ho-hum reconnaissance mission ended with a chain of preventable human errors. Many times in Army aviation, the results are tragic when complacency, failure to adhere to published standards and lack of discipline enter our world. Too many people have crashed Army aircraft in combat and in training when one or all of these factors were present. As Leaders, we need to get involved in combating these distracters. A couple of simple control measures including limiting time on one shift and changing the crew mix, will help deter aviators from getting complacent. As a student in the Aviation Safety Officer Course and having seen some of the accident videos, I see an even greater need to fight the Great Menace. «

“MANY times in Army AVIATION, the RESULTS are TRAGIC when COMPLACENCY, failure to ADHERE to published STANDARDS and lack of DISCIPLINE enter our world.”

TSAS



Workload Reduction via the Sense of Touch

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A recent accident illustrates that no aviation community is safe from spatial disorientation (SD) accidents. Unfortunately, many top-shelf pilots have fallen victim to this loss of reference, and statistics suggest more mishaps will occur in the future.

In today's Army aviation community, there is an added emphasis on night flying, all-weather capability and low-altitude missions, which are all scenarios that increase SD. Aviation SD mishaps increase dramatically in times of conflict. The sharp spike in SD mishaps during Operation Desert Storm recurred with the onset of wars in Iraq and Afghanistan. These theaters of engagement are associated with conditions of degraded visual environments (DVE), primarily brownout. However, SD is also a leading cause of noncombat aircrew fatalities. The costs of SD mishaps include mission failure, the impairment of mission effectiveness, the monetary

value of aircraft/equipment lost and fatalities and disabilities. Pilot workload is a factor closely associated with SD under conditions of DVE. In contrast with the older training and legacy aircraft, new helicopters and updated legacy aircraft possess many more sensors to provide pilots with the necessary information to land under DVE conditions. The problem is, all this information is shown on multifunction displays to an already overloaded pilot. As many pilots have noted, there is often simply too much information to assimilate under the highly dynamic conditions of DVE. Many aircraft manufacturers and research groups are actively developing visual displays to

present that information in a format that can be used by pilots. Unless the pilot is provided sufficient flight parameter information intuitively, the only solution would be to remove the pilot from the loop and use automated procedures to land under brownout or other DVE conditions. The U.S. Army Aeromedical Research Laboratory (USAARL) is developing the Tactile Situational Awareness System (TSAS) to use the sense of touch to provide spatial orientation and situational awareness information to the pilot. The system consists of a matrix of tactile stimulators (tactors) embedded into a lightweight cooling garment that maintains the tactors in

close proximity to the torso.

Using data from existing aircraft sensors or a custom self-contained sensor package for non-bus aircraft, TSAS obtains the aircraft position, velocity, attitude, altitude and threat information. Similar to pages of a multifunction display, TSAS has the following modes for displaying critical information during various phases of flight:

- In the hover mode, TSAS provides horizontal drift velocity and vertical altitude information.
- In the forward flight mode, TSAS provides attitude and altitude cueing. It can also provide navigational cueing in conjunction with existing navigation displays.
- In the approach mode, TSAS provides glide slope and course information, as well as airspeed deceleration information.
- In the threat mode, TSAS

provides the threat direction and general distance to the pilot without the pilot actually having "eyes-on" information. As the pilot turns and maneuvers the aircraft, the tactors continuously provide threat relative position and distance information. This mode of operation permits the pilot to fly with eyes outside the aircraft in a hostile environment.

The TSAS has been flight tested in the UH-60A, MH-53M and Canadian Bell 205 aircraft, as well as CV-22, MH-47, MH-53M and MH-60K simulators. Pilots participating in the simulator and in-flight testing agree that TSAS reduces pilot workload and increases flight safety by decreasing instrument scanning requirements during degraded visual conditions. Both qualitative and subjective data demonstrate that hover performance improved with the use of TSAS.

The TSAS is intuitive and quick for pilots to learn. Within 10 minutes, pilots could hover without the aid of visual instruments.

A USAARL scientist recently conducted a study demonstrating that fatigued pilots perform considerably better when TSAS is available to provide orientation cues. Since fatigue is a contributing factor in many SD-related mishaps, TSAS may provide a countermeasure to reduce mishaps.

With the widespread use of night vision goggles, Army aviation can justifiably claim to "own the night." New technologies such as TSAS, in conjunction with recently developed sensors, will help provide Army pilots with the ability to fly safely under conditions of DVE. ◀



hit the road

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While traveling the nation's highways, how often do we see pieces of tire and tread belts along the sides of the road? I see them nearly every trip I take. Almost all of this litter is caused by blowouts and tread separation. So how do we keep our tires from becoming part of this road debris? The answer is vehicle tire maintenance.

Most of us never even think about tire maintenance. Our minds are full of other things such as planning our route, packing the car and making sure the tank is full of gas. Failure to maintain a vehicle's tires, however, could bring a quick end to a family road trip.

The most important part of vehicle tire maintenance is having the tires inflated to the recommended pressure. That pressure is shown on a tire's sidewalls and can also be found on a placard located on the driver-side door jamb.

To check the air pressure, always use an accurate tire pressure gauge and check the tires when they're cold. If you check the pressure after driving, the tires will be hot and the gauge will register higher than the actual pressure. This false reading could cause problems later.

As tires wear, patterns develop, and these wear patterns can indicate several problems. The main two types of wear patterns are caused by tires being either underinflated or overinflated. An underinflated tire will develop excessive wear on the edges of the tread. An underinflated tire can flex more than a properly inflated tire. This flexing builds up heat, which can ruin the tire and lead to sidewall cracks. Underinflation can also reduce fuel economy through increased rolling

resistance, which makes your vehicle's engine work harder.

Overinflation causes the tire to wear in the middle of the tread. In this case, the middle of the tire takes all the weight, which accelerates the wear. This uneven wear reduces the useful life of the tire.

Another important step in proper tire maintenance is to check for tread depth or boldness. There are two ways to check for tread depth. One method is the penny test. Simply insert a penny into the tread with the date facing you. If you can see the date, it's time to replace the tire.

The majority of tire troubles occur when there is less than 10 percent of the tread depth remaining. Remember, when it comes to tires, bald is never beautiful. Mechanics check tread depth with a tire wear indicator, which can be purchased at many auto parts stores.

Weather is another issue that usually doesn't come to mind when checking tires, but it can play a part in tire maintenance. Tires on vehicles that sit parked on hard surfaces or stand in the

hot sun for weeks or months can be damaged from lack of use. This damage is caused by ozone and heat and shows up as cracks in the sidewall that weaken the tire.

Bulges and abrasions should also be checked as part of a good tire maintenance routine. A bulge check depends on the type of tire you are using. A certain amount of bulge is normal with radial tires. However, if you notice a bulge on a bias tire, replace it. Any bulge on these tires makes them unserviceable.

On a radial tire, some bulges are not defects. These bulges are the result of how the tires are made. Different manufacturing techniques cause different types of bulges. The best thing to do is ask your tire company if the bulge is dangerous or not. However, any abrasion that goes all the way through the rubber to the cords should end the life of that tire. This type of damage is too risky to leave to chance.

Before you hit the road, take the time to check your vehicle's tires. A good tire inspection means a safe and happy trip.◀

“FAILURE to MAINTAIN a vehicle's TIRES, however, could BRING a quick END to a FAMILY road TRIP.”



TIRED AND TRUE

ED CARTWRIGHT
593rd Sustainment Brigade
Camp Arifjan, Kuwait

As darkness falls on the forward operating base (FOB), Soldiers make the final checks of their weapons and equipment. The Stryker — a hulking, eight-wheeled, armored behemoth — rumbles to life and the call to mount up is made. Two air guards turn out the light and, with weapons loaded and at the ready, pop out of the hatch. The Strykers lumber forward, weaving through the FOB's barricaded entrance before disappearing into the darkness of uncertainty. Tonight, these Soldiers will be facing a new enemy — fatigue.

Fatigue is the state of feeling tired, weary or sleepy that results from extended periods of mental or physical work, prolonged periods of anxiety, exposure to harsh environments or loss of adequate sleep. Unfortunately, all are common to Soldiers, so they must be aware of the effects of fatigue on their bodies and find ways to prevent it.

Perhaps the easiest way to combat the effects of fatigue is getting the proper amount of sleep. However, with obscured frontlines, unpredictable violence and increased patrols, Soldiers are finding adequate sleep a rare commodity. Without proper rest, Soldiers could have difficulty making good decisions. A recent event in theater connected to inadequate sleep was an M1151 HMMWV rollover that occurred while returning from combat logistics patrol. Fortunately, there were no fatalities.

Fatigue is a subject that is not truly appreciated in the professional military education arena. While fatigue adversely affects some Soldiers faster than others, it will affect most

over time. The dilemma is commanders have had no way to objectively assess how much sleep they and their Soldiers require.

Most sleep experts agree people need six to eight hours of continuous sleep. The Army Safety Program, governed by Army Regulation 385-10, states that Leaders will ensure vehicle operators are provided with at least eight continuous hours of rest during any 24-hour period. Leaders must develop policies that integrate proper rest cycles into the planning and execution of each mission. Furthermore, supervision is essential to ensure Soldiers are suitably rested.

There are individual controls Soldiers can implement to lessen the consequences of fatigue. Before attempting sleep, they should avoid engaging in activities that will stimulate the mind such as television and video games. Caffeinated drinks, especially energy drinks, should also be avoided. Soldiers should attempt to practice habits that will relax the body in preparation for sleep.

Sleep helps to maintain situational awareness. By no means is this to say Soldiers cannot fight when deprived of sleep. They can, but their combat effectiveness may be decreased. Because of mission requirements, there will be situations in an operational environment where adequate sleep is not possible. However, Leaders must remember that Soldiers are like equipment. They require a certain amount of preventive maintenance or they, too, will degrade in performance. ◀

FYI

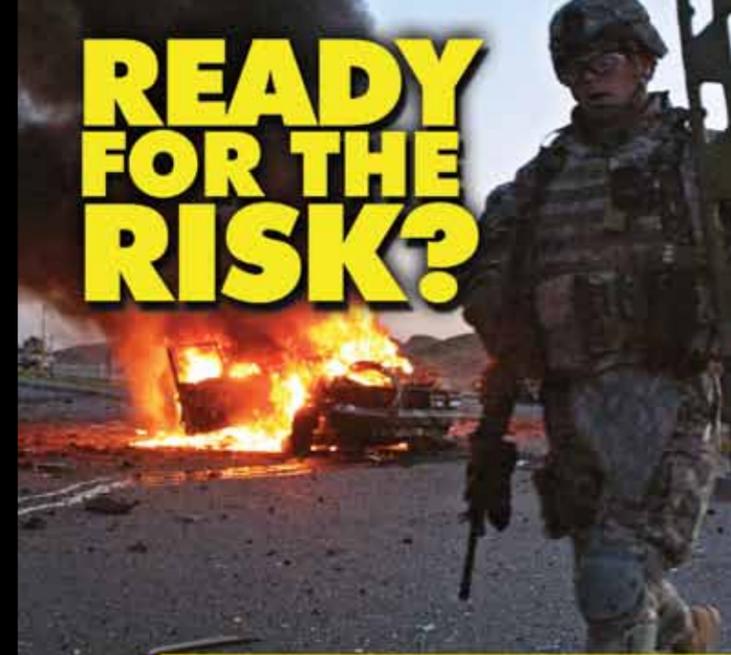
Sleep deprivation may lead to Soldiers falling asleep at the wheel, failing to recognize a threat or reacting too slowly; impaired thinking and reasoning abilities, leading to bad decisions; and an overall degradation in alertness and ability to function properly. The following tips can aid with sleep management:

- Maintain a nutritious diet and try to avoid too much caffeine, sugar and tobacco.
- Do not eat or drink too much before bedtime.

- Exercise regularly — but not within three hours before bedtime.
- Avoid activities that are mentally or physically stimulating before sleeping.
- Avoid over-the-counter “sleep aids,” which can cause grogginess, not actual sleep.
- When sleeping, minimize noise and light by wearing earplugs and blackout shades.
- Maintain a disciplined work/rest cycle.



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GOOD JUDGMENT

WILL KEEP YOU ALIVE

CMDR. DAN BITTON
Multijurisdictional Law Enforcement Aviation Coalition
Winthrop Harbor, Ill.

Many of the recent, mostly fatal accident causes in emergency medical services (EMS), corporate and private helicopter arenas remain controlled flight into terrain (CFIT) and inadvertent flight into instrument meteorological conditions (IIMC). After flying helicopters for nearly 38 years, I'd like to share what has worked well for me and for those in police aviation, as well as illustrate how these accidents can be averted with some basic disciplines.

I fly with high- and low-time pilots, mostly in helicopters such as the Bell 430, EC-135 and OH-58C. However, regardless of flying in an instrument flight rules (IFR) Bell 430 or a helicopter such as a Robinson R22/R44, pilots need to remember to follow basic disciplines and use good judgment to prevent accidents. To prevent future accidents, I urge all helicopter pilots to review their basic disciplines and embed those tactics, techniques and

procedures into their mindset, thinking about them before and during every flight.

When I discuss CFIT with new rotary- and fixed-wing pilots, I am surprised that many consider this to mean flying a helicopter or airplane into a mountain. Nothing could be further from the truth.

New and experienced pilots must remember that CFIT occurs in other situations. These include flying into rising or flat terrain and where the pilot

is unaware of a descent and contacts the ground, resulting in a crash. I'm also pairing CFIT with obstructions — while in controlled flight, the pilot is unaware of the height of obstructions and flying too low.

New and experienced pilots must also understand that hours do not make a good or safe pilot; good judgment makes a safe pilot. Judgment in preflight, judgment in knowing your limitations and flying within them, judgment to know the

height of obstacles in your flight path, judgment to not continue a flight in deteriorating weather and judgment to trust your instincts and warning signs are just some of the judgment issues that make for a truly safe pilot.

Mindset is the core of implementing good judgment. As rotary-wing pilots, we have an advantage that fixed-wing pilots do not have — the ability to land vertically almost anywhere. Using that advantage properly can prevent an accident and save your life.

First, if you are a visual flight rules (VFR) pilot, do not depart in marginal VFR weather, as it can become IFR very quickly. The weather you receive from the automatic terminal information service or automated surface observing system is only for a very specific point on the airport;

it might be worse 100 feet or two miles away. Accidents often begin with a common-error chain of events, such as departing in marginal conditions. Never be so committed to a planned flight that you refuse to alter it when the weather changes.

If you encounter diminishing weather conditions, land immediately or as soon as possible. A park, parking lot, golf course or open fields are useful. When the fire department and police come, tell them you conducted a precautionary landing due to weather. When you call the local Federal Aviation Administration (FAA) office, they're going to say, "Good job ... no one injured ... no damage ... no issues." Wait for the weather to become VFR and fly home. It is that easy. It takes good judgment and discipline to make that landing rather than trying to

continue to the airport closest to your intended destination. Trying to continue with diminishing ceiling and visibility has caused many fatal accidents.

I have made several precautionary landings. Flying police and commercial helicopters near Lake Michigan with its "lake effect" makes for unpredictable weather that can quickly turn into fog. I once landed in a school parking lot and, after the weather cleared and having called the airport just 10 miles away to verify they were also VFR, I had to make another off-airport landing as the weather again fogged in around me. It is better to land than to chance going IIMC.

Should you need to make an off-airport landing, be extremely cautious and ensure no obstacles such as poles, wires, trees, low-level brush and buildings are in



your landing path. The best way to handle these obstacles is to remember slow is good and slower is better. An EMS type of approach, steep and slow, is my first choice — and when I say slow, I mean really slow. You might not agree with this, as you may find yourself within the height-velocity curve. My personal feelings are that during off-airport landings, the chances of striking an obstacle are greater than the chances of an engine failure. Going slow gives me the ability to see what I am flying into so I can abort or alter the landing if necessary.

When flying in reduced visibility, we're often told to do a 180-degree turn and return to better weather. This is a double-edged sword that I consider an especially dangerous situation. Radar tracks from many accidents clearly show the last radar return before the crash was during a turn. In a turn, pilots can suffer the physiological aspects of spatial disorientation (SD) and lose situational awareness. I would rather a pilot land as soon as possible from a straight flight path than attempt a turn in reduced visibility. I choose to learn from those killer accidents. Accidents while turning can happen to new pilots or pilots who have thousands of hours of experience and are IFR-rated and current in VFR and IFR helicopters.

As for newer IFR pilots, do not let that rating give you a false sense of security. I fly hard or solid IFR all the time and it is a handful; but, then again, I don't fly outside my abilities. Having the IFR rating, flying with goggles or under the hood is not the same as flying in real clouds solely on instruments. I see this firsthand when I train pilots flying under a hood over Lake Michigan and things go bad quickly because they can no longer see the ground through the windows or chin

bubble. However, IFR pilots should practice these techniques and, I believe, VFR pilots should receive some basic training in inadvertent flight into IFR conditions.

Loss of situational awareness occurs to the most experienced pilots, too, and I urge those of you who fit this category to practice good judgment during flights into marginal weather. At

NEW and EXPERIENCED pilots must also UNDERSTAND that HOURS do NOT make a GOOD or SAFE pilot; good JUDGMENT MAKES a safe PILOT.

some point, any pilot — young or old — will encounter SD. My recommendation is to pull pitch and fly straight. Again, no turns unless obstacles or rising terrain require one. Trust your instruments, declare an emergency and ask air traffic control (ATC) for help.

During years gone by, ATC offered no-gyro and radar surveillance approaches. These are not as common now; however, by declaring an emergency, ATC can tell you if you are turning, climbing or descending and help you get back to VFR weather or vector you toward a runway. Pilots sometimes fear they'll lose their license or be reprimanded by the FAA if they declare an emergency. Nonetheless, the term was created as a method for you, the pilot, to obtain preferential treatment. You are required to submit a letter explaining why you declared an emergency, but that does not mean you will be disciplined or expected to take the dreaded recheck or proficiency ride. If the weather ahead has diminished

and the weather behind appears bad, that is beyond your control. From my discussions with many FAA inspectors, these instances do not lead to disciplinary actions. On the contrary, pilots are typically commended for using the system and averting an accident.

As for obstacles, know the height of the tallest obstacle in the area where you will be flying and keep a respectable distance (500 feet) above and away from it. Day and night are very different environments, and I fly higher at night than during the day — typically 1,200 to 1,500 feet above ground level (AGL). Helicopter pilots tend to fly lower. I would say most fly at 500 feet AGL.

You should remember that altitude offers safety not only when it comes to avoiding obstacles (including terrain), but also during engine failures. In real-world flying, if you have an engine failure, the time from failure to contact with the ground at 200 feet is three to five seconds; from 500 feet, 15 to 20 seconds; and from 1,000 feet, about 35 to 40 seconds. Several

videos showing real-time engine-failure accidents can attest to these times.

In summary, do not depart into marginal weather if you find yourself in deteriorating visibility or ceiling. Instead, land immediately — preferably straight ahead into the first open area you see, with caution as described above. Know the obstacles in your flight path and fly higher rather than lower. At the very least, fly higher at night. Remind yourself that good judgment will keep you alive and trust your instincts. When you are thinking, "This weather is getting bad," or you find yourself flying at 40 knots 200 feet above a road, you should have already landed, so don't delay.

None of the pilots or passengers killed during CFIT or IIMC took off thinking they were going to die. In almost every case, had the pilots not continued the flight but, rather, landed immediately, they would still be with us today.

Helicopter flight is a terrific experience, one that is especially safe and rewarding if conducted within the capabilities of the helicopter and the pilot. Use these disciplines I have suggested and, hopefully, you also will have 30-plus years of flying helicopters and all the wonderful memories and great experiences that go with that. Fly safe.◀

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IF YOU DIDN'T DROP IT ...

HOWARD ALLMAN
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When munitions fail to function as intended, they become unexploded ordnance (UXO). You might expect to find UXO only on impact ranges and in combat areas, but that's not always the case.

Military and foreign munitions come in a variety of types, sizes and shapes and might not be easy to recognize. However, items that are easily identified as military ordnance have found their way into homes as souvenirs or war trophies. Some unsuspecting collectors have even discovered that "inert" grenade they've been using for years as a paperweight is actually live.

Military explosives ordnance disposal (EOD) personnel routinely get calls to take care of UXO. Sometimes, these items are found in unlikely locations, including:

- Three 155 mm rounds (one live, two inert) and a 16-inch naval

gun round were discovered at a metal recycling facility. The live 155 mm round was detonated by an EOD unit. The status of the 16-inch round was not reported.

- A 3-inch illumination projectile was found at a construction site.

- While cleaning a shed, the shed's owner found a 2½-inch rocket, a 60 mm illumination mortar round with fuze and an M9 aircraft parachute flare.

- A large quantity of crystallized civilian dynamite was found at a residence.

- A Civil War buff was killed when one of the cannon balls he collected exploded.

- While cleaning out a

conex box, an M82 grenade was discovered.

Give some thought to that ordnance item that's sitting on your desk as a souvenir or conversation piece. If you really want to keep it, make sure you know its history and follow Department of the Army Pamphlet 385-64, chapter 13-6, for guidance on how inert ammunition should be properly marked, identified and inspected. You can't be too careful. Even museums have had items they've displayed for years turn out to be live when properly inspected.

If you encounter anything resembling ammunition or ammunition components, follow

the three R's of explosive safety:

- **Recognize.** Be on the safe side. If you think the item might be a piece of UXO, consider it one. Do not touch or move it.

- **Retreat.** Get away from the item and tell others to keep away. If you can, mark the area without getting too close. That will help the EOD team find it later.

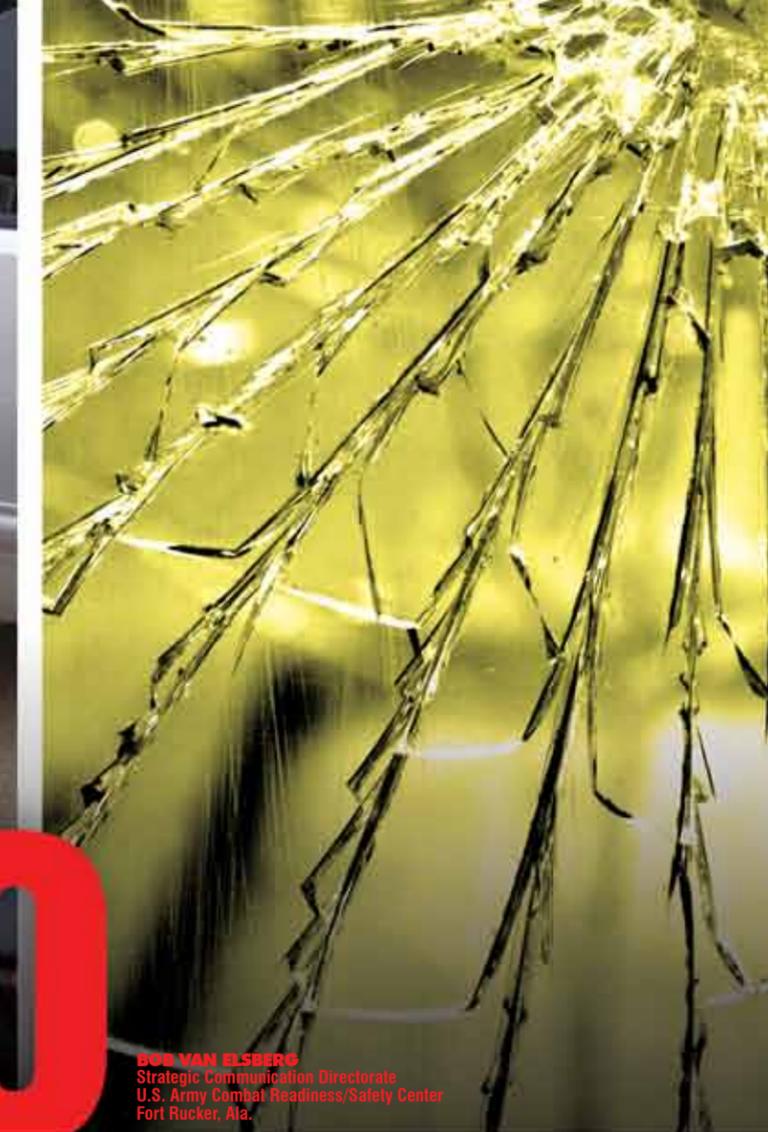
- **Report.** Contact the nearest security, law enforcement or EOD unit. Provide them as much information as you can about what you saw and where it is located. Be sure to let removal personnel know how to contact you in case they need help in locating the item.

Remember, if you didn't drop it, don't pick it up. Not every bomb looks like a bomb. Even UXO fragments can explode and should not be touched or moved.

The Defense Environmental Network and Information Exchange has a Web site that provides information and educational materials on UXO to help you stay safe. Visit it at <https://www.denix.osd.mil/portal/page/portal/denix/environment/uxo>. Don't be a dud; follow the three R's of explosive safety. They might help keep you in one piece.◀



Unexploded ordnance is defined in Army Regulation 385-10 as: Ammunition and explosives that have been primed, fused, armed or otherwise prepared for action and that have been fired, dropped, launched, projected or placed in such a manner as to constitute a hazard to operations, installations, personnel or materiel, and remain unexploded by malfunction, by design or for other causes.



NOWHERE TO GO

BOB VAN ELSBERG
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Staff Sgt. Brian Gebhart tried to lift his head as he sat on the vehicle's hood, leaning back against the windshield. The double flip he'd just done in the air above the vehicle would have earned him high marks in Olympic gymnastics. However, this wasn't a competition; it was a collision. Gebhart's 370-pound Honda CBR600 motorcycle and a 4,500-pound Nissan Pathfinder tried to occupy the same place at the same time. Physics says you can't do that.

But that isn't how he planned to end his ride home from his unit at Redstone Arsenal, Ala., that beautiful Friday afternoon. Gebhart was assigned to the 59th Ordnance Brigade as an instructor on the Avenger Low-Level Air Defense System and also assigned to the 832nd Ordnance Battalion as a squad leader. As he got ready to leave, he added his modular-style helmet, gloves and reflective physical training belt to his Army Combat Uniform and boots. He then climbed onto his bike and waved to his first sergeant and two other cadre members as he pulled out of the parking lot. He

was looking forward to getting home to his wife, who was pregnant with their first child.

The route home took him out Redstone's Gate 7 and down to the intersection of Zierdt Road, which ran north and south alongside the post. Despite the road offering only a single lane in each direction, drivers were known for moving quickly. Gebhart got to the intersection, waited for the light to turn green and then turned left to head south on Zierdt Road. But he didn't get very far.

Less than a mile away, a driver was itching to get her vehicle onto the northbound lane of

Zierdt Road. Pulling out of a subdivision on the west (right) side of the road, she edged her Pathfinder to the edge of the road and looked for a break in traffic so she could pull across the road and turn left into the northbound lane. She looked to the left — in the direction Gebhart was coming — but later claimed she didn't see him. Zierdt Road comes up a rise that hides approaching southbound traffic from the view of drivers at the entrance of the subdivision until they were only about 100 yards away. The woman pulled forward perhaps four feet into the road and then spotted

a car quickly approaching from the right. Deciding to wait until the car passed, she stopped, blocking most of the southbound lane and leaving Gebhart — approaching from the left — nowhere to go. With the Pathfinder blocking most of the southbound lane and

Pathfinder's left-front fender. "When I hit, I felt myself lifting off the bike and then went straight into the windshield," he said. "When I hit the windshield, I felt my body crumple up. I went into the air and felt myself do a couple of flips. When I landed on the windshield, I thought

operator to request assistance, but to her husband to explain she'd been in an accident. Gebhart couldn't believe his ears and yelled out at her as the pain and frustration started to set in.

The pain rapidly grew worse. Gebhart had been thrown forward during the collision, his pelvic region striking the rear of the fuel tank hard enough to severely dent it. He was rocking back and forth in pain when a man stopped and called 911 on his cell phone. Gebhart gave the man his home phone number and asked him to call his wife to let her know he was all right. Fortunately, an off-duty nurse stopped to assist him. Gebhart wanted to climb off the hood and walk around to ease the pain, but the nurse stopped him. When he tried to raise his head to see if his wife was coming, the nurse told him, "Don't move your head ... don't move your head!"

Help soon arrived in response to the 911 call. Emergency medical services personnel cut off his book bag, removed his helmet and then placed him on a backboard. They then lifted him off the Pathfinder's hood and placed him in an ambulance and drove him to

a local hospital for treatment.

When he arrived at the emergency room, the doctors cut off the rest of his clothing and gave him pain medication. For the next four hours, Gebhart underwent X-rays and CAT scans. Fortunately, he hadn't crushed his pelvis, as was initially thought, and he was released to go home. He was given three days' quarters and then went to sick call, where he was given an additional three days' quarters. He came to work for a couple of days, but had to go on quarters again.

Ultimately, the accident took Gebhart away from his job for nine days and caused him to be restricted from physical training from May until November 2008. Fortunately, however, the accident didn't take his life. He could not predict the events that happened that day on the road, but he could protect himself against the unpredictable. He had the choice all riders face as they prepare to ride — "Will I dress for the ride or the possible crash?"

And he made the choice that saved his life. His modular helmet hadn't been cheap, but cheap wasn't part of the equation when he began riding. There are some things you can skimp on, but not safety.

"My bike is totaled, but that's something I can replace," he said. "If it wasn't for my helmet, I definitely would be in a lot worse shape."

His wife, Kaila, echoed those sentiments.

"I was so relieved that he made it through this accident," she said. "I can't even begin to imagine what it would have been like to lose him and be left alone to raise our child. I am glad he is still here to come home each night."◀◀

But **HE COULDN'T STOP** in **TIME** and **SLAMMED** into the Pathfinder's **LEFT-FRONT FENDER.**

the possibility of fast-moving traffic in the oncoming lane, his options weren't good.

"My whole mindset at that time was 'stop!'" he said. In the process, he panicked, jamming down with his right foot on the rear brake and locking up the wheel. The Honda began fishtailing, so he got off the rear brake and then applied both brakes. But he couldn't stop in time and slammed into the

it was a pretty soft landing."

The Pathfinder's windshield was caved in from the impact. Gebhart now sat upright on the hood, his back leaning against the windshield.

"For a brief second, I took a breath and it was just like, 'Wow, I made it through it!'" he said.

As he lay against the windshield, he heard the driver make a call on her cell phone. Amazingly, it was not to the 911



KEEP THE LINES IN MIND

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Overhead power lines are so common that we practically don't see them when we look down a road or walk around a building. Birds sit on them and pairs of shoes hang from them — with no sparks, fire or other signs of dangerous energy. But contacting power lines is one of the most common causes of Army electrical accidents in both tactical operations and on base. It's probably because we see them all the time, without any fireworks, that we don't recognize the hazardous energy they contain.

I used to work roofing and painting houses. There always came a time when I had to work around the service entrance lines, the heavy cables bringing power into the house. At first, I avoided all contact with the wires, thanks to the local power company's school program and its cartoon light bulb that made me scared of them.

Of course, when you're working fast, there can come a time when you lose your caution. My hand would slip and I'd hit the wires with my arm. Nothing happened. Standing on a porch roof, I backed into the wires. Still, nothing happened.

Eventually, I came to think that these wires were pretty safe to touch, as long as they had that black insulation on them. I would push them, lean on them, lift them, no problem. I realize now the only thing protecting me was dumb

luck — seriously dumb luck.

Let me tell you what could have happened through this true description of an accident investigated during my Army safety career. A painter put a metal ladder against the side of a base command building to paint around the service entrance cables. The lines were normal distribution lines — just 110 volts on the hot side, like you'd see in most neighborhoods in the United States. They had a typical rubberized black sleeve on them, and it appeared to be in good shape. Where the overhead cables connected to the building wires, there were bolted connections covered with insulating putty. There was no metal visible.

It was a hot day, and the worker busily painted around the hangers holding the wire to the building. He then brushed paint in the tight area right under the hanger. Without

warning, there was a dull pop and the worker fell from the ladder. Twelve feet isn't much of a fall and the worker survived, but he lost his arm. The pop had been his arm basically exploding above his elbow.

During the site investigation, it was found that the insulating putty had been worn away from the edge on one of the bolt heads in the cable connection. The worker had accidentally touched this with the back of his hand during a brush stroke. Because of the hot weather, his skin was wet with sweat, allowing the power from the line to easily travel through his arm.

What saved his life — but cost him his arm — was that his bicep was touching the metal ladder as he stretched to reach across it. The



from them. If you don't have a choice, use a nonconducting object (fiberglass pole, plastic pipe, dry wooden broom handle) to move them out of your way. When you will be in an elevated position, especially the top of a moving vehicle, plan ahead for this hazard

up heat quickly and cause a fire. Imagine the size of the flash when a larger power line arcs.

Several Soldier accidents happened when metal objects were accidentally or intentionally put into circuit-panel boxes. The resulting arc flash is like a localized ball of lightning. It can cause burns, vaporize metals that the Soldier inhales and transmit enough power through the body to kill.

This brings up the second way you can be injured or killed by electricity; the current running through your body and interfering with your nerves and muscles. By touching wires or energized surfaces, you can become part of the circuit. It doesn't take much power either. At 10 to 15 milliamps (one-thousandth of an amp), your muscles can contract and you can't let go of an energized object. If you're exposed to that current for long, you can die, especially if the current is running through your heart. If the current runs through major nerves or the brain, it can cause serious permanent injuries or death.

To keep current out of your body, stay well away from exposed, uninsulated electrical conductors such as open panel boxes. Be aware that when you're wet, your skin is up to 10 times less resistant to current than when dry, so avoid all electrical equipment.

The most important measure to protect you from becoming a path for electricity is to make sure all power systems are grounded. Grounding means that there is a wire or other conductive pathway that the electricity can use instead of your body. Use a simple plug-in tester to see if your outlets are grounded. If they are not, stop using the outlets and notify the proper authorities immediately. Never use a three-prong (grounded) plug that has the grounding pin removed. Any equipment plugged into the cord can malfunction and you would not be protected.

The third way electricity kills is by causing internal damage and burns. When power runs through any conductor, the material has some resistance to the current. The resistance causes heat. If there is high current and high resistance, like there is in your body, the fast buildup of heat causes extreme damage that cannot heal. Many electrical shock victims who do survive lose whole organs or limbs due to internal burns.

As mentioned in the accident description earlier in this article, this heat buildup can be extremely fast — so fast the water in the muscles turns to steam, expanding and causing explosive wounds. Protection against these injuries is the same; don't contact energized conductors and make sure grounds are in place.

In many accident investigations, it looks like the hazard that led to the injuries or deaths should have been obvious to everyone involved. It doesn't help the victim or their teammates to see this after the accident. What we all need to do is practice good risk management and evaluate all the hazards of a task or operation — even the hazards we see every day.◀

“ About **ONE-FOURTH** of the **ARMY'S** serious **ELECTRICAL INJURIES** and **DEATHS** are caused by **CONTACT** with overhead **POWER LINES**. ”

current jumped from his arm into the ladder and went to ground, but the heat caused by his body's resistance to the current inflicted an explosion-type exit wound. And no, he didn't stand there and shake, like in the movies. It all happened in one, maybe two seconds.

So what does this have to do with Soldier safety? About one-fourth of the Army's serious electrical injuries and deaths are caused by contact with overhead power lines. There is no completely safe way for a nonelectrician to handle these cables if they are energized. It's best to stay away

and keep an eye out for cables.

Electricity kills or injures in three main ways. The first is by arc flash. If you have been near an electrical welder while they are working, you know how much heat that bright light produces. A welder uses a very small arc to melt metal and weld it together.

On a small scale, if an electrical outlet is loose and won't hold a plug firmly, or if you don't push in the plug all the way, the loose connection can cause a very small arc that constantly jumps from the outlet to the metal blade of the plug. This can build



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DON'T JUST CHECK THE BLOCK

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U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

The commander has just appointed you as the aviation mission briefer for all low-risk missions. What are your duties as a briefing officer? Certainly, your duties are more than just approving and signing a risk management worksheet (RMW) prepared by the crew. So, then, what exactly are your duties?

Let's start with the basics. Army Regulation (AR) 95-1, Flight Regulations, paragraph 2-14a(2), states that commanders will select briefing officers based on their experience, maturity, judgment and ability to effectively mitigate risk to the aircrew and designate them by name and in writing. Mission briefers are authorized to brief regardless of risk level. The briefing officer must be a qualified and current pilot in command (PC) in the mission profile as determined and designated by the commander.

What should the mission briefer consider as he evaluates the mission using the unit's RMW? The mission briefer should be evaluating, at a minimum, those key elements identified in AR 95-1, 2-14b (1)-(7). Unfortunately, the RMW is not a cure-all to the risk management solution. The mission briefer still must take into consideration all information concerning the mission, environment and crew, as well as all the hazards inherent in aviation operations.

Ideally, the mission briefer is an experienced aviator qualified and current in the mission profiles he is to brief. He should possess the ability to quickly assess and apply risk mitigation techniques for the aircrew to accomplish the mission safely. Once the briefing officer and crew have mitigated the risk to the lowest level, the appropriate approval authority authorizes

the mission in accordance with unit standing operating procedures and local policies.

Composite risk management (CRM) is not just about completing and signing the RMW. It is a five-step process that includes identifying hazards, assessing hazards to determine risks, developing controls and

There are many things that can go wrong. Mitigating risks to their lowest level is not only prudent, but also necessary when the situation and mission permit.

Where will your unit's next accident be? Will it occur on a very complex collective training event in which an operation order

LOW-RISK MISSIONS cannot be **TAKEN** for **GRANTED** or **WRITTEN OFF** as a **ROUTINE** event.

making risk decisions, implementing controls and, finally, supervising to ensure the controls identified provided the desired results. After the RMW is signed, the mission briefer must backbrief the modified mission to the PC to ensure he understands what he is approved to do.

Most units do an adequate job of identifying and assessing mission risks (steps one and two). Unfortunately, the five-step risk management process normally ends when the RMW values fall within the mission briefer's authority and, regrettably, he signs the worksheet. After that, little is done on steps three through five of the risk management process to mitigate or eliminate risk.

Low-risk missions cannot be taken for granted or written off as a routine event.

has been published and rehearsals and rock drills have been completed? Or, will it occur on a routine low-risk aircrew training manual flight in the local area?

Mission briefers must not fall into the trap of just "checking the block" so a crew can conduct a low-risk training mission. We must identify and assess the risks on all missions and then make decisions at the appropriate level, implementing controls so the mission can be executed safely. Commanders must ensure their approved aviation mission briefing officers are trained to perform these duties and have a thorough understanding of CRM.



COMPLACENCY

CAN HURT

JOSEPH E. RICHARDSON
70th Regional Readiness Command
Fort Lawton, Wash.

It's no secret that over the past few years there has been a drastic increase in the number of motorcycles on the road. Therefore, it should come as no surprise that motorcycle accidents are on the rise. I am now a part of both of those statistics.

After retiring from the Navy in 2005, I was hired as an executive assistant for the 70th Regional Readiness Command by the Army Reserve in Seattle. The new job was about 67 miles from my house, and, for the first month, I drove my vehicle to work. After dishing out about \$360 in ferry and fuel costs, I started looking for alternate modes of transportation.

Unfortunately, buses didn't run early enough to get me to work on time and nobody responded to my requests to carpool. While driving around one day, I decided to go into a motorcycle shop to check prices.

Because I never had any desire to own a motorcycle, I decided to start small and found a 50cc moped that showed a top speed of 40 mph on the speedometer.

I thought this was the answer because I didn't need to go any faster than 40 mph on my route to work. I purchased the moped and started riding it to work, saving myself more than \$200 per month in transportation costs. Additionally, in Washington State, if the bike is 50cc or less, there is no requirement for a motorcycle endorsement on the driver's license. Because it was just a small moped, I also didn't feel the need for a motorcycle safety course.

It took about three months before my first mishap. I was on my way home from work, riding

at about 40 mph (the posted speed limit), when somebody sped out of a gas station. The vehicle sideswiped me, sending me into one of the car's windows, which smashed on impact, and then to the asphalt.

I was wearing my helmet (which never hit the ground), a short-sleeve shirt, work slacks and dress shoes, so I wasn't protected very well from the ensuing road rash and glass shards entering my arms and legs. Once I healed, I decided fixing the moped wasn't worth it, so I bought a bigger bike and changed my route so I wouldn't have to ride around the curve where the accident occurred.

For my next venture, I purchased a 600cc motorcycle; but this time I was determined to do things right. I attended a Motorcycle Safety Foundation (MSF)-sponsored riding course and got my motorcycle endorsement on my license. I purchased a motorcycle jacket with padding in the back and around the elbows and over-the-ankle motorcycle boots. I also wore a reflective vest — absolute styling.

“The vehicle **SIDESWIPED** me, **SENDING ME** into one of the **CAR'S WINDOWS**, which **SMASHED** on **IMPACT**, and **THEN** to the **ASPHALT.**”

The more I rode, the more confident I became in my abilities. I even went on a three-day, three-state bike ride with my

friends. Everything was going well until one fateful morning in September, just two weeks after being hired as a safety and occupational health specialist.

I was on my way to work and going to the ferry landing like I had every morning for the past couple of years. On this day, however, I had to travel down a different ferry lane than normal. As I checked my blind spot for an upcoming lane change, I inadvertently pulled my bike into a 7-inch-high concrete lane divider.

I was only traveling about 5 mph, so, instead of just going over the divider, the motorcycle bounced off, throwing me off the bike. The bike then fell on my leg, breaking my fibula. The new safety guy was now an accident victim.

As I write this, I'm still in the process of healing. However, I still plan to ride my motorcycle to work once I fully recover. For all you riders whose motorcycles are a daily necessity, I have a little advice. Don't let confidence become complacency because accidents can happen to even the safest of riders. Make sure you

remain vigilant because others might not be. Finally, be safe and don't become an accident statistic like I did — twice. «

LOSSES

AVIATION



CLASS C

Post-maintenance test flight inspection revealed both aircraft pylon work platforms broke at the latching points and separated from the aircraft. One rotor blade and right-engine exhaust tail cone sustained damage from debris.



CLASS A

The crew experienced a spike in the engine and rotor RPM. They initiated FADEC-manual mode and

subsequently initiated autorotation. The aircraft landed hard and was destroyed.



CLASS B

The aircraft contacted the ground during power recovery and simulated engine failure (autorotation) training.



CLASS D

While in cruise flight, the pilot banked the aircraft right to avoid a flock of birds. The flock turned and

reversed course. The pilot made an immediate left bank to try to evade the flock. The aircraft struck about 20 birds. The pilot in command did a precautionary landing at a nearby airport and shut down the aircraft for inspection of damage. Maintenance found numerous bird strike smudges on the aircraft with damage to the 90-degree gearbox cover. They replaced the tail rotor gearbox fairing and the aircraft was released for flight. Late report.

UC-35A

CLASS E

At a takeoff speed of 100 knots and an altitude of 5 feet above ground level (AGL), the aircraft encountered a flock of eight to 10 birds that flew across the nose of the aircraft. The pilots heard two thumps and continued the departure into a closed traffic pattern for a precautionary landing. The crew remained in the air to reduce their landing weight and then landed at a nearby airbase. During postflight inspection, they found blood from a bird strike on the leading edge of the right wing, just outboard of the main landing gear. Airfield management did a sweep of the runway and found two dead birds. No damage was noted and the aircraft was authorized a one-time flight back to home station for further inspection.

UAS

RQ-5A

CLASS A

The air vehicle operator lost link with the unmanned aircraft (UA), resulting in a 75-foot descent to ground contact. The recovery chute did not deploy due to low altitude.



CLASS B

Upon landing, the UA proceeded over the safety net, bypassing the landing cable and ultimately ended up in a ditch 250 feet beyond the end of the runway.

CLASS C

The recovery chute deployed shortly after launch and the UA contacted the ground.

GROUND

ACV

CLASS A

A civilian was killed when his pickup truck was struck by a Stryker that was crossing a road on an Army installation.

CLASS C

A Mine Resistant Ambush Protected (MRAP) vehicle was damaged when it was sideswiped by another MRAP vehicle at a control point.

Personnel Injury

CLASS A

A Soldier died after he was struck in the head with a .40-caliber round from a newly purchased handgun. The Soldier and his wife were handling the weapon after loading it when it discharged.

CLASS B

A Department of the Army civilian (DAC) suffered a permanent partial disability injury to his hand while cutting a steel bar on a band saw. The DAC's glove was caught by the wire brush wheel and his hand was pulled into the saw blade. He lost his right thumb as a result.

ARMY AVIATION LOSSES

Fiscal 2009
as of July 7, 2009



ATTACK	1/1
RECON	7/4
UTILITY	5/2
CARGO	1/0
TRAINING	1/0
FIXED-WING	0/0
UAS	3/0

TOTAL 18/7

ARMY GROUND LOSSES

Fiscal 2009
as of July 7, 2009



AMV	14/13
ACV	12/4
PERSONNEL INJURY <small>includes weapons-handling accidents</small>	20/13
FIRE/EXPLOSIVE	5/1
PROPERTY DAMAGE	2/0

TOTAL 53/31

ALWAYS WEAR YOUR BELT

DRIVING

POV



CLASS A

■ A Soldier was driving her privately owned vehicle (POV) when she lost control in a sharp curve, left the road and struck a tree. She was unbelted and suffered fatal injuries on impact.

■ A Soldier fell from a Jeep operated by his girlfriend and suffered a fatal head injury when he struck the pavement.

■ Four Soldiers were riding in a POV when the driver lost control and the vehicle overturned. One Soldier passenger was ejected and later died during surgery. Another Soldier was hospitalized for 17 days. Local authorities cited alcohol use by the civilian driver as a factor in this accident.

■ A Soldier was driving his POV when he collided head-on with another driver who crossed the center line and into his path of travel. The Soldier was transported for medical care, but died the following morning.

■ A National Guardsman was driving to his weekend duty location when his POV hydroplaned, struck a guard rail and overturned. The Soldier, who was wearing his seat belt, suffered fatal injuries.

CLASS B

■ A Soldier was driving his POV when it blew a tire, causing a multiple-vehicle accident. The Soldier was badly burned when his car caught fire.



CLASS C

■ A Soldier was struck from behind by a pickup as he slowed for a vehicle waiting to turn at an intersection. The Soldier was not seriously injured.

POM



CLASS A

■ A Soldier and his wife both died when a vehicle unexpectedly exited a convenience store and entered their motorcycle's path.

The Soldier was wearing his helmet, gloves and personal protective equipment (PPE).

■ A mobilized National Guardsman was operating his motorcycle on a single-lane road when he collided with a pickup truck that turned into his path. The Soldier, who was wearing his helmet and PPE, was fatally injured.

■ A Soldier was operating a borrowed sportbike and changing lanes when he lost control, struck a guy wire and flipped the motorcycle. The Soldier, who was wearing his helmet and PPE, died en route to a local hospital.

■ A National Guardsman was riding his motorcycle at high speed when he struck a curb and tree and was fatally injured. The Soldier had attended Motorcycle Safety Foundation training, was licensed and was wearing his helmet.

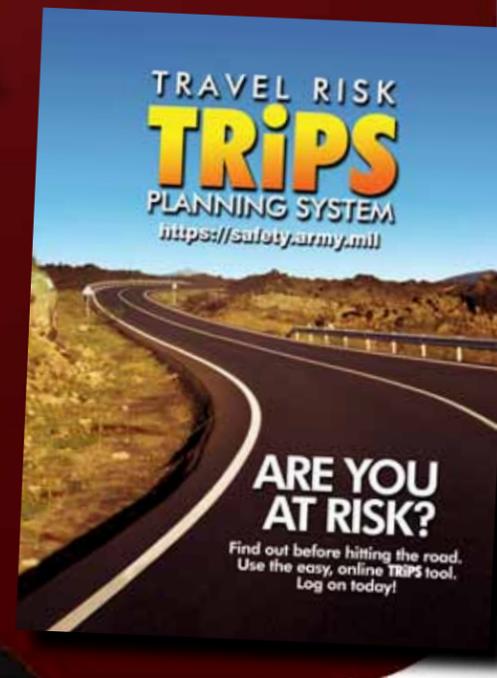
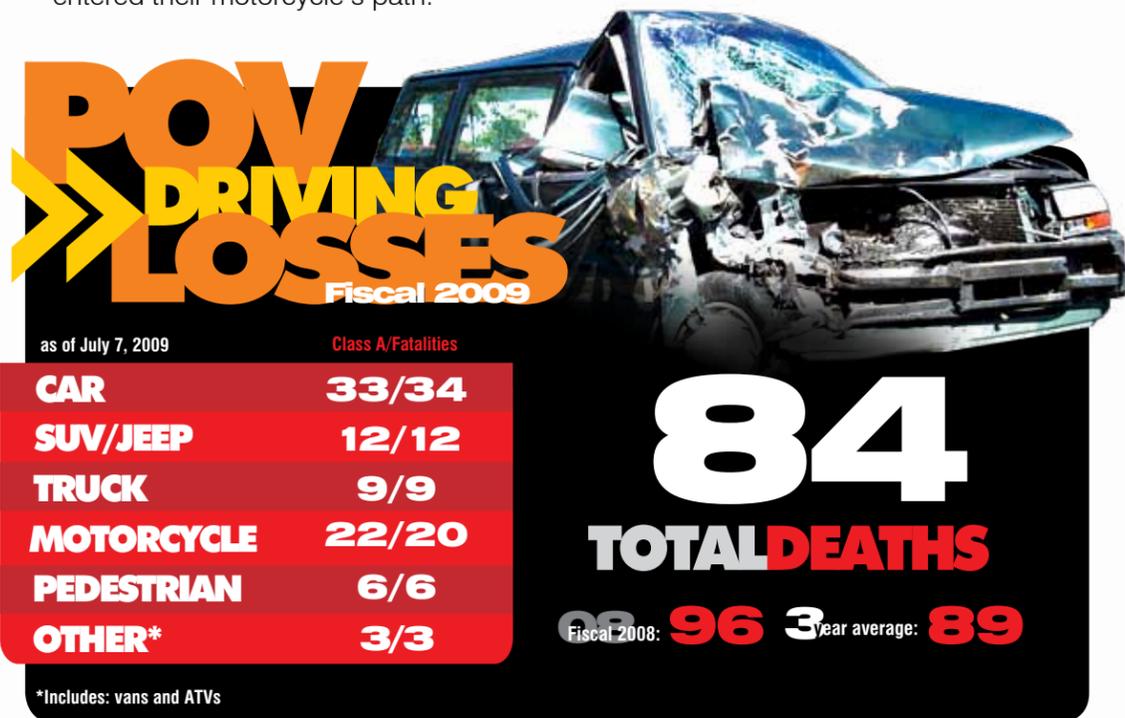
■ The Army lost 129 Soldiers in fiscal 2008 to POV accidents.

MAKE SURE YOU AND YOUR PASSENGERS BUCKLE UP!

ALSO, DON'T FORGET:

Plan for that road trip and complete a quick and easy **TRIPS** report.

Editor's note: Information published in the accident briefs section is based on preliminary loss reports submitted by units and is subject to change. For more information on selected accident briefs, e-mail safe.knowledge@conus.army.mil.



AIM FOR SUMMER FUN!

This summer, when out shooting your privately owned weapon, remember to always:

- Keep the gun pointed in a safe direction.
- Keep your finger off the trigger until ready to shoot.
- Keep the gun unloaded until ready to use.
- Be sure of your target before firing. Know what is around and beyond it.

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& SISTERS



KNOWLEDGE

VOL. 3 SEPTEMBER 2009

OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

BUILDING A CULTURE OF SAFETY

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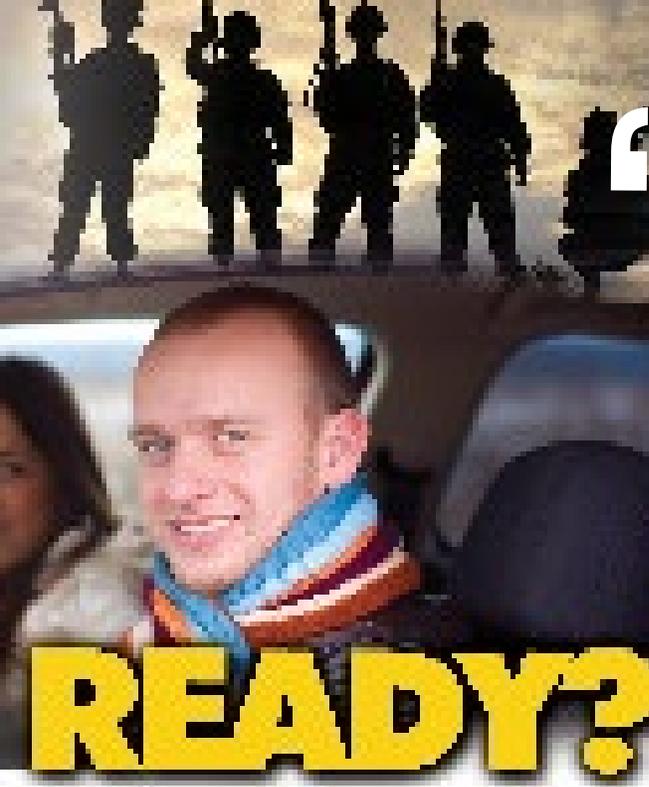
The lazy days of summer are slowly winding down and holiday decorations are already appearing on store shelves.

For some of us, the thought of frigid temperatures looming just around the corner is hard to imagine; but for many of our Soldiers and Families around the globe, the first snowfall is just a few weeks away.

This month, with temperatures dropping and days getting shorter, we will say goodbye to summer and officially bring the Army's Safe Summer 2009 campaign to a close. As our Safe Summer campaign wraps up following the Labor Day weekend, our Army Safe Fall/Winter campaign with online support materials will kick into gear. This year's campaign will focus on providing risk management information on a variety of cold weather topics, including winter driving safety and injury prevention. Using articles, posters, videos and more, the campaign will work to ensure that all members of our Army team understand the importance of being prepared for any situation when it comes to fall and winter safety. For this reason, we have selected "No Time to Chill" as this year's Army Safe Fall/Winter campaign theme.

In an effort to





“ **STATISTICS** show that when **SOLDIERS RETURN** from the **RIGORS** of the **BATTLEFIELD** they face an even **DEADLIER ENEMY** back home — **COMPLACENCY.** ”

READY?

encourage Army Families to remain prepared for all potential hazards, the Ready Army campaign begins this month as part of the Department of Homeland Security's National Preparedness Month. Using the motto "Get a Kit, Make a Plan, Be Informed," the campaign identifies steps that are vital to emergency preparedness. These important steps, which are outlined at www.ready.gov, include getting an emergency supply kit, making a Family emergency plan, becoming informed about potential emergency situations and getting involved in local community preparedness and emergency response efforts.

The Ready Army and Army Safe Fall/Winter campaigns are just two programs that help every member of our Band of Brothers and Sisters play an active role in ensuring the safety of the Army team. Maintaining an active commitment to safety and avoiding complacency is extremely important today as our forces are stretched around the globe doing vital work to protect our nation.

Our Army is extremely busy and going through a huge rotation of forces. We continue to operate at a high OPTEMPO, with units simultaneously

moving in and out of two theaters of operation and CONUS. This heightened OPTEMPO places additional stressors on Soldiers, civilians and their Families and causes the probability and severity of risk to increase significantly.

When we are asked to perform the same tasks time and again, the simplicity and repetitiveness can lead us down the dangerous path of complacency. Nothing we do in the training for, or execution of, a mission should ever be taken lightly or executed as "routine." Make sure your head is always in the game and on a swivel and that you are aware of your surroundings and the dangers that are present. We have seen that risk, if not properly planned for with effective mitigation measures, can have tragic results.

Statistics show that when Soldiers return from the rigors of the battlefield they face an even deadlier enemy back home — complacency. Just when they think they can lower their guard, forget their battle buddy and get into a "normal" routine, that's when accidents will most likely occur. The Band of Brothers and Sisters must follow our Soldiers home, especially during off-duty activities. Families, friends

and peers are our Soldier's battle buddies at home. They must provide the watchful eye and appropriate intervention our Soldiers need when their guard is down. Look to the Family Engagement Kit and the BOSS Safety Factor kit at the USACR/ Safety Center Web site at <https://safety.army.mil> to provide tools to assist you in having a meaningful and purposeful dialogue with your Soldier while they are home.

Finally, as many of you already know, the USACR/Safety Center has developed a safety "lite" version of its Web page. You are now able to access this site for many of our tools and programs at <https://safety.army.mil/lite>. Based upon feedback from users in the field, we continue to refine this site to ensure we are meeting your requirements. Please let us know if we are not hitting the mark.

Thanks for all the sacrifices you and your Families have made in the protection of our great nation. «

Brigadier General, USA
Director of Army Safety

BUILDING a CULTURE of

LT. COL. ROBERT ROOKER
2nd Brigade, 306th Field Artillery Battalion (TS)
Fort Stewart, Ga.

Building a positive safety culture within an organization is a challenge that blends mission accomplishment with minimizing risks. While those may seem like competing priorities in today's high operations tempo (OPTEMPO), they don't have to be. The Soldiers of the 2nd Battery, 306th Field Artillery Battalion, 188th Infantry Brigade train Army Reserve and National Guard Soldiers deploying to Iraq, Afghanistan and Kosovo. A recent Army Readiness Assessment Program (ARAP) survey showed a strong, positive safety climate in the unit. The unit didn't use "gimmicks" to get there. Rather, it followed a three-pronged approach to safety.



SAFETY



1. Leader emphasis on safety. Leaders in a training support battalion are always responsible for checking safety. Running training lanes and ranges along with situational training exercises for mobilizing reserve component Soldiers means nothing can be taken for granted. An infantry company might be on a live-fire range one day and a transportation company the next. Sometimes

2. Pay attention to the details. During training, the battalion uses a three-tiered risk assessment — a First Army standard. First, there is an overall composite risk management worksheet (changed frequently), followed by a daily unit-led risk assessment signed by the commander of the unit being trained, followed by a hasty risk assessment card filled out each morning by each observer

“What is the most dangerous thing I’m doing and what have I done to mitigate it?” These assessment sheets are laminated, reusable and, most importantly, dated.

3. Follow commander and higher headquarters directives. The First Army Division East and 188th Infantry Brigade already had effective, easy-to-follow safety programs. Maj. Gen. Mick Bednarek, Division East commander, provided clear and supportable guidance reinforced by brigade commander Col. George Geczy. Following that proven guidance was the best path to achieving safety while meeting the mission.

“WHAT is the most DANGEROUS thing I’M DOING and WHAT have I DONE to MITIGATE IT?”

the transporters shoot better than the infantrymen — anything can happen. The battalion command sergeant major’s commitment to safety sets the tone for everything the unit’s officers and noncommissioned officers (NCOs) do.

controller/trainer (OC/T). The hasty assessment gets the most attention. It’s a “five-minute mental exercise” that simply asks,

Mid-level Leaders Play a Key Role

The safety NCO position is popular in the battalion.





Two years ago, one of the battalion's best sergeants first class volunteered to be the safety NCO. He felt it was important and Leaders supported him. The following year, he made the master sergeant list. Since then, there has been a long list of NCOs eager to do the safety NCO job. The battalion's targeting warrant officer — the subject matter expert on lethal and nonlethal targeting — serves as safety officer. He is empowered to develop new ideas and is fully supported by the commander when following or enforcing directives. Being a warrant officer gives him an edge, having experienced both NCO and officer training.

Dealing with High OPTEMPOs

Despite the high OPTEMPO of a training support battalion, the Soldiers didn't feel overworked. Six- and seven-day workweeks

are the norm while training a constant mobilization load of 30,000 to 80,000 reservists headed to Iraq, Afghanistan and Kosovo. Mobilizations typically last from 40 to 60 days, with units varying from postal detachments through infantry brigade combat teams. The battalion's Soldiers view their training mission with the attitude of a sports team approaching a championship game. Rather than focusing on how hard the challenge, they focus on the satisfaction they'll feel when they have succeeded. For them, "winning" is helping deploying Soldiers be trained and ready.

Composite Risk Management Training

Risk management tools provided by First Army and the U.S. Army Combat Readiness/Safety Center — including the Travel Risk Planning System (TRiPS), Risk Management Information System

(RMIS) and Ground Risk Assessment Tool (GRAT) — are used to reduce accidents. To meet Division East, brigade and battalion standards, Soldiers assigned to the unit must complete the Commander Safety Course and Accident Avoidance Course, which many follow up with the Additional Duty Safety Course. The battalion also conducts quarterly safety training and participates in the brigade quarterly safety councils.

Off-duty is Included

Losing Soldiers to off-duty accidents impacts the battalion's mission. Below are a couple of ways off-duty safety is emphasized to Soldiers and their Families.

• **Brigade Safety Day.** Family safety days are held twice a year and cover a variety of topics. Earlier this year, the 306th Battalion organized a Family safety day. This included the organization's motorcycle club, along with local

“ Rather than **FOCUSING** on how hard the **CHALLENGE**, they **FOCUS** on the **SATISFACTION** they'll feel **WHEN** they have **SUCCEEDED.** ”

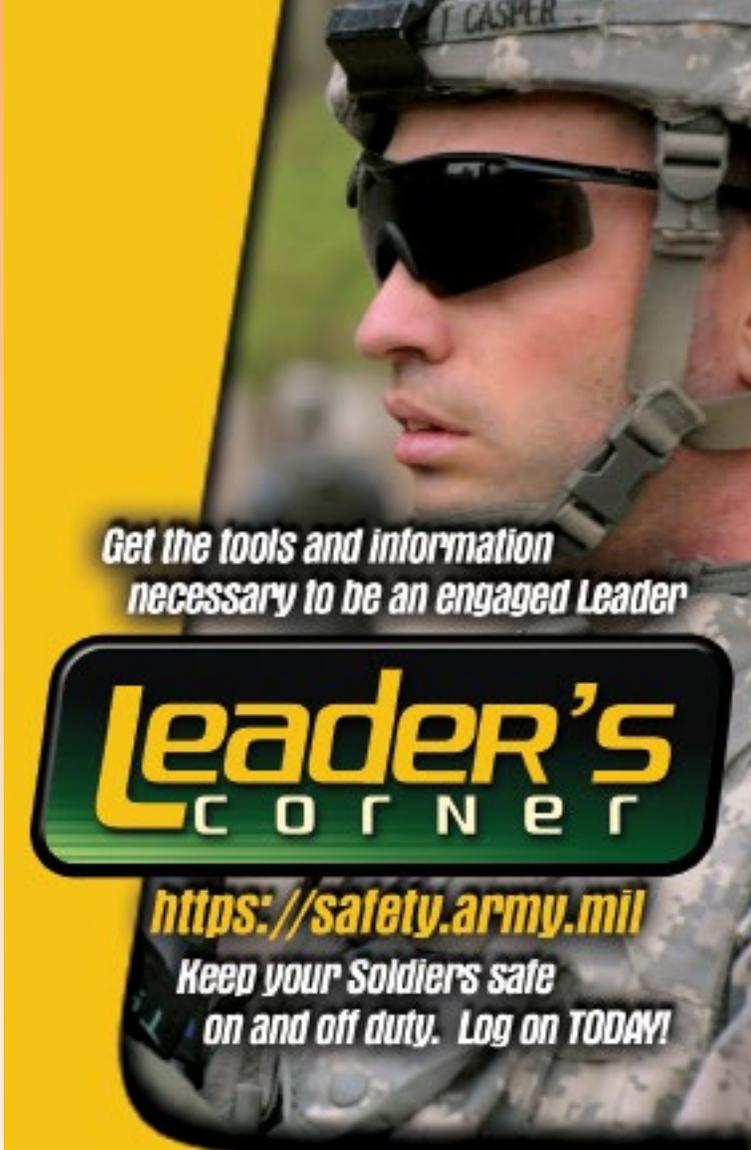


fire and police departments, giving safety classes to Soldiers, spouses and their children. Families were helped to understand the way motorcycles operate on the road and how important it is to watch out for them while driving. Using “drunk driving” goggles provided by the police and a unit-provided golf cart allowed drivers to replicate the effects of driving under the influence. The fire department conducted fire safety training with an emphasis on summer activities. The day culminated with a sports day and barbecue picnic.

• **Motorcycle Safety Program.** This actually began in the 306th Battalion but became a brigade-wide initiative with the arrival of brigade Command Sgt. Maj. Joseph Mayfield. The “Front Runnerz” motorcycle club is composed almost entirely of brigade Soldiers. The 306th Battalion’s motorcycle training goes beyond garrison requirements in two ways. First, senior mentors are assigned to ride with junior riders. This allows new riders to talk to another rider who is more experienced about safety and riding. In addition, the battalion mandates check rides, which are mostly voluntary and well-supported by Soldiers who are given time during training days (usually lighter work days) for the ride. Second, the brigade command sergeant major started an additional safety course matching Soldiers to the bikes they actually own — machines often more powerful than the 250cc machines used in garrison training. The brigade’s parking lot is turned into a driver’s course, complete with extra lines painted on the asphalt that riders must successfully execute before they can ride.

The Proof is in the Pudding

The battalion’s emphasis and training on safety resulted in the survival of a senior NCO in a motorcycle crash. The rider, a sergeant first class, was riding to a club charity function when a hit-and-run driver sent him sliding across the asphalt, ultimately dislocating his elbow. The ensuing accident investigation showed he had been wearing all of his required personal protective equipment, was properly trained and licensed and was riding with another rider. The fact he suffered a Class C injury accident rather than a Class A fatality demonstrated the effectiveness of the battalion’s safety programs.◀◀



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The Other Enemy

CHIEF WARRANT OFFICER 4 JOHN R. ASHLEY
Headquarters and Headquarters Company,
3/238th General Support Aviation Battalion
Michigan Army National Guard
Grand Ledge, Mich.

IND

From the first day of flight training and throughout our careers, aviators are taught that indiscipline and flying are incompatible. Every year, though, accident reports prove the consequences of indisciplined behavior, whether showboating in an aircraft or willfully violating regulations and/or other standards. There's probably a statistic somewhere to reflect that most Army aircrew members have demonstrated indiscipline at one time or another in their careers. This is my story.

DISCIPLINE

As a young warrant officer UH-60A co-pilot on my first assignment, I was flying with a well-respected chief warrant officer pilot in command (PC). The mission was to conduct an air assault, inserting combat loaded troops with rucksacks into a landing zone (LZ). En route to the LZ, the PC wanted to give our passengers “a ride” by executing a negative G.

I had previously flown with this PC and he had done the same maneuver under similar conditions. Although I was a bit apprehensive about his performing zero or negative Gs in the aircraft, I said I was OK with him doing another one. The PC maneuvered the aircraft, pushing over and lowering the collective to achieve the desired outcome. Everything within the aircraft that wasn’t tied down was flung through the air, including the dust and dirt on the floor.

The master caution light unexpectedly illuminated and the oil pressure gauges on the central display unit flashed yellow. I promptly scanned the caution advisory panel, noting all the oil pressure lights had illuminated. Out of the corner of my eye, I caught movement in the cabin. I turned to see a flying rucksack coming forward between the gunners’ seats. I quickly raised my hand to block the rucksack’s path, simultaneously shouting, “Stop!

Stop! Stop!” into the integrated communications system.

The PC, unaware of the hazard, increased the collective and the rucksack dropped to the floor behind the center console. I communicated to the PC what had happened and the prospect

to reason away the necessity to comply with whatever regulation or standard applies to their situation. Indiscipline is prevalent in the cockpit and behind the wheel of privately owned vehicles. Leaders at every echelon — unit commanders,

“**EVERYTHING** within the aircraft that **WASN’T TIED DOWN** was **FLUNG** through the **AIR**, including the **DUST** and **DIRT** on the floor.”

of what could have happened had the heavy rucksack actually made it into the cockpit. Regardless of rank, I told the PC this was the last “ride” we would be doing.

In 2004, a UH-60 aircraft crashed while performing a similar low-G flight maneuver when the wheel chocks entered the cockpit and jammed the collective. One crewmember suffered a fatal injury, three received serious injuries, 11 others experienced minor injuries and the aircraft was destroyed. When I reflect back to my incident from years ago, I realize how lucky I was.

Even today, Soldiers exhibit confidence beyond their experience level and are willing

platoon leaders, warrant officers or NCOs — should impose strict standards and discipline and remain vigilant about safety in all daily activities, both on and off duty. Don’t tolerate indiscipline; make consequences known if Soldiers disobey orders. Those who tolerate indiscipline unwittingly breed an environment ripe for more of the same.

Take a proactive approach to accident prevention and preserve our Band of Brothers and Sisters in combat and back home. Demonstrate to peers and subordinates the same type of disciplined behavior you want them to emulate. Don’t let the enemy win.◀

TREE FALLIN'

SGT. MAJ. TRAVIS L. STERNER

Headquarters, 1st Battalion, 109th Infantry Regiment
Scranton, Pa.

The next time you enter the woods for a hunting trip, ask yourself an important question: Did I execute composite risk management (CRM)? For my father, the answer to that question was a resounding “no.” As a result, he barely escaped death when he fell 22 feet from his treestand while deer hunting during the Pennsylvania archery season.

Several years ago, I was attending the Bradley Leaders Course at Fort Benning, Ga., when I received a frantic, late-evening call from my mother. “Your father hasn’t come home from hunting,” she cried. I calmed her down and explained there wasn’t much I could do since I was 972 miles away. I told her that I was sure everything was fine, but if he didn’t return within an hour, call one of his friends and then call me when he gets to the house.

She proceeded to question my rationale, but I explained that she wasn’t familiar with my father’s hunting area and would have problems finding his treestand location. I figured it would be a lot easier if I explained the directions to one of my father’s friends, who would be more familiar with the area.

About 11:30 p.m., my phone rang again. This time, however, it was my father calling from the hospital. He told me he dozed off while hunting and fell out of his treestand. He landed on his back, breaking four ribs, knocking out two front teeth and tearing off the tips of two fingers. He also received 27 stitches on the side of his head. Although he was pretty banged up, he said he’d survive. Relieved that he was OK, I decided to get to the bottom of how the accident really occurred.

“Dad, there is a big difference between falling asleep and passing out drunk,” I said.

“I know,” he replied. “Just don’t tell your mother.”

Every year, about 100 people are killed in hunting accidents. Many of these deaths might have been avoided if the victim had just used the five-step CRM process when planning their trip. Here’s how CRM could

have prevented my father’s accident:

- My father should have identified the hazards he would encounter on his trip. Although there are several hazards associated with hunting from a treestand, there were two major ones in my father’s case. Of course, being elevated 20-plus feet above the ground is the first one that comes to mind. And while it might seem obvious to some, drinking any amount of alcohol while perched in a treestand is also a very bad idea.

- Next, my father should have assessed those hazards. Getting drunk in a treestand could lead to a fall. Failure to wear a safety harness could lead to a serious injury, or even death, if he fell from the treestand.

- He then should have developed controls for those hazards and made risk decisions. Leaving the alcoholic beverages at home would have been a great place to start. Wearing the safety harness would have kept him safely in the treestand, not sprawled on the ground 22 feet below.

- Next, my father should have implemented those controls. What good is a plan if you’re not even going to bother following it?

- Finally, he should have supervised and evaluated his plan. Did he fall from the treestand? Did he pass out drunk? If so, then it’s back to the drawing board.

I share this information because no matter how or where you hunt, exercising CRM before you go into a field could possibly save your life. My father was lucky. His injuries could have been far worse. When he enters the woods nowadays, he carries a safety harness in his pack. We’re still working on the drinking part.◀◀



Ten Commandments of Hunting Safety

1. Treat every firearm with the same respect due a loaded firearm.
 2. Control the direction of your firearm's muzzle.
 3. Be sure of your target and what is beyond it.
 4. Be sure the barrel and action are clear of obstructions.
 5. Unload firearms when not in use.
 6. Never point a firearm at anything you do not want to shoot.
 7. Never climb a fence or tree, or jump a ditch or log, with a loaded firearm.
 8. Never shoot a bullet at a flat, hard surface or water.
 9. Store firearms and ammunition separately.
 10. Avoid alcoholic beverages or other mood-altering drugs before or while shooting.
- Source: New Hampshire Fish and Game Department

TREESTAND SAFETY GUIDELINES

- Always use a haul line to pull up your gear and unloaded firearm or bow to your treestand. Never climb with anything in your hands or on your back. Before descending, lower your equipment on the opposite side of the tree.

- Always select the proper tree for use with your treestand. Select a live, straight tree that fits within the size limits recommended in your treestand's instructions.

- Always read and understand the manufacturer's warnings and instructions before using the treestand each season.

- Always hunt with a plan and, if possible, with a buddy. Let others know your exact hunting location, when you plan to return and who you are hunting with.

- Always carry emergency signal devices — such as a cell phone, whistle, walkie-talkie, signal flare and flashlight — on your person at all times and within reach, even when you are suspended in your treestand.

- The recommended height for an elevated tree stand is less than 10 feet above the ground.

- Know your physical limitations and don't take chances. If you start thinking about how high you are, don't go any higher.

- While climbing with a treestand, make slow, even movements of no more than 10-12 inches at a time. Have proper contact with the tree and/or treestand every time you move and follow the three-point rule.

Source: Minnesota Department of Natural Resources

SMALL BULLETS, LARGE STATISTICS

TIM MAAS

Risk Management Division
U.S. Army Technical Center for Explosives Safety
McAlester, Okla.

Any current analysis of Army injuries and fatalities resulting from the unintended functioning of ammunition over a significant period of time will highlight one trend — the number of incidents related to the mishandling of small-arms ammunition and weapons.

Larger rounds may have greater explosive weight and inherent lethality and may result in more casualties when they detonate unexpectedly. However, the preponderance of accidents injuring troops involves rounds on the lower end of the size scale. Many of these accidents are attributable to preventable human errors rather than problems with the ammunition or weapons.

Perhaps one factor contributing to the high level of small-arms accidents is how often Army personnel come into contact with these weapons and rounds compared to larger systems. Using these smaller weapons and rounds is a primary task for most Soldiers, as well as their most readily available first line of defense against hostile forces.

This familiarity and availability

can lead to complacency in dealing with these items. The stress often associated with their use can also pose added hazards if safe handling procedures have not been reinforced through repetitive training. Some of the more common varieties of incidents involving these items include:

- Improper setting of headspace and timing on .50-caliber machine guns prior to firing, leading to

DID YOU KNOW?

Since the launch of the U.S. Army Combat Readiness/Safety Center's Range and Weapons Safety Toolbox in October 2008, users have provided some great feedback. In addition to positive comments, we have received

additional materials and recommendations for improvement. Based upon user input and some changes in information technology, the toolbox can now be accessed via Common Access Card (CAC).

If you've never visited the toolbox, or if it has

been a while since you last checked it out, give it a look. In addition to being CAC-enabled, the toolbox now contains additional features, including new tabs dedicated to categories such as privately owned weapons, shotguns and optical and laser

attachments. As we continue to improve the toolbox, we ask that you keep using the feedback button to share your ideas and training materials. The Range and Weapons Safety Toolbox is available at <https://safety.army.mil/rangeweaponssafety/>.



In fiscal 2008, the Army experienced 51 Class A-C negligent discharge incidents, 21 of which occurred off duty and 30 on duty. Of these accidents, 10 resulted in fatalities, with five occurring off duty. Three of the five on-duty accidents occurred in sleeping/living quarters in theater. To combat negligent discharges, Leaders must change the way Soldiers think about and handle weapons. Both Leaders and Soldiers have a responsibility to set the example for others and make on-the-spot corrections. Drill home that your Soldiers must THINK weapons safety!

- **T**reat every weapon as if it's loaded.
- **H**andle every weapon with care.
- **I**dentify the target before you fire.
- **N**ever point the muzzle at anything you don't intend to shoot.
- **K**eep the weapon on SAFE and your finger off the trigger until you intend to fire.

explosions that damage weapons and injure personnel with blast force and metal fragments.

- Failure to properly clear weapons of ammunition after use, leading to unexpected firing when handling or cleaning weapons that were mistakenly thought to be empty.
- Pointing loaded weapons at personnel when performing clearing or checking procedures.
- Dropping loaded weapons.
- Horseplay or known improper handling actions with weapons Soldiers believed were unloaded, either out of boredom or an overly casual attitude.
- Placing a hot weapon barrel on live rounds, causing a cook-off.
- Failure to perform weapon maintenance or barrel changes at prescribed intervals, resulting in cook-offs.
- Failure to wear required personal protective equipment when firing.
- Failure to remove components, such as cleaning rods, from weapons before firing.

It is unlikely we will be able to prevent all small-arms accidents. However, making Soldiers more alert to the dangers involved when handling weapons and ammunition will significantly reduce injuries and fatalities and protect the weapons upon which Soldiers depend.◀

ARE YOU A SHARP SHOOTER?

RANGE & WEAPONS SAFETY TOOLBOX

<https://safety.army.mil>



The Range & Weapons Safety Toolbox is a collection of resources to help commanders and leaders establish and maintain an effective range and weapons safety program.

CHECK IT OUT TODAY!

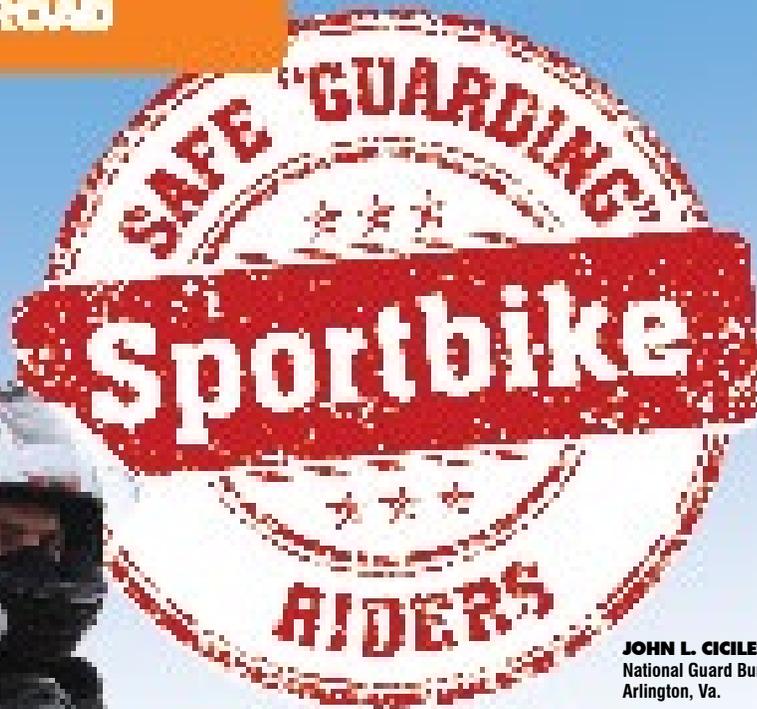


ARMY STRONG



<https://safety.army.mil>

ARMY SAFE IS ARMY STRONG



JOHN L. CICILESE
National Guard Bureau, Army National Guard
Arlington, Va.

The Army National Guard (ARNG) has opened a new front in its battle against sportbike fatalities by graduating 10 guardsmen from the first ARNG Military Sportbike RiderCoach Certification course. The certification augmented their existing Motorcycle Safety Foundation (MSF) certification as rider coaches for the MSF's basic and experienced rider courses.



Sportbike accident prevention became a top priority for Lt. Gen. Clyde A. Vaughn, director of the ARNG, when he reviewed fiscal 2008 Army motorcycle accident statistics and saw 37 Soldiers died on sportbikes. He tasked Maj. Gen. James Nuttall, deputy director of the ARNG and an experienced rider, with creating a safety program to make the ARNG self-sufficient in motorcycle safety training.

To implement that, Vaughn mandated that all guardsmen who ride motorcycles wear Army-required personal protective equipment (PPE), regardless their duty status or location. He also mandated they complete MSF training as required by Army Regulation 385-10, The Army Safety Program. The foundation of that training is the MSF Basic *RiderCourse*, designed for novice riders and comprising about five hours of classroom instruction and 10 hours of riding exercises in a controlled environment. The Experienced *RiderCourse* provides riders with follow-on education and training. A more recent development, the Military Sportbike *RiderCourse* (MSRC), combined the efforts of the U.S. Army and Navy safety centers to provide a one-day training course designed for sportbike riders.

The ARNG Motorcycle Riders Club was established in 2008. Guardsmen were encouraged to register online to help state motorcycle safety program managers plan effective training for them. As of June 2009, about 1,250 Soldiers and civilian employees have registered.

Nuttall has twice participated in the National Capitol Region Motorcycle Safety Event held at the Pentagon. He believes proper training and PPE are the right weapons to combat fatalities. In June 2008, he asked all Guard riders to actively assess their risks

when riding and encouraged experienced riders to mentor those who were less experienced. He challenged them to ask themselves, "Who will be the next rider in my formation to have a motorcycle accident?"

Nuttall tasked the ARNG Aviation and Safety (AVS) Division to develop a plan to enhance sportbike safety training. In April 2008, Lt. Col. Craig Lambert of the West Virginia ARNG became the first ARNG Soldier to be MSF-certified to train both riders and rider coaches in the MSRC. As a veteran motorcycle rider, he already had extensive track time on sportbikes.

A member of the AVS Division approached the U.S. Army Combat Readiness/Safety Center, Lambert and the MSF about providing Sportbike RiderCoach Certification Course training for

- Possess an exemplary driving record.

- Received continuing motorcycle riding education.

After the applications were reviewed, the guardsmen selected for the training were notified.

The three-day certification course was conducted on Fort Rucker. On the first day, Lambert and Glen Picklesimer, a motorcycle trainer affiliated with the MSF, trained the candidates. On the second day, Lambert and Picklesimer watched them practice teaching each other. On the third day, the candidates provided the MSRC to sportbike riders serving in the Alabama ARNG.

These newly certified MSRC rider coaches constitute the core of trainers who will provide the MSRC to their Soldiers. As such, they will provide training in their respective states and in those

IMPROVING rider SAFETY will reduce FATALITIES, INJURIES and LOST DUTY TIME ...

guardsmen already serving as rider coaches. The result was a plan recommending rider coaches who were also sportbike riders be trained to serve as MSRC rider coaches. After the plan was approved, application forms were sent to state safety offices for nomination of qualified rider coaches.

The applicants had to meet the following qualifications:

- Ride a sport motorcycle.
- Be an existing rider coach.
- Have taught the Basic *RiderCourse* and/or the Experienced *RiderCourse* at least six times.
- Have extensive riding experience.

states lacking qualified rider coaches. Currently, plans are being developed to expand rider coach training in the Guard, ultimately allowing the training of even more rider coaches to teach the MSRC. Each rider coach will be encouraged to become a rider coach trainer.

The Guard's goal of being self sufficient in providing motorcycle safety training to its Soldiers will be achieved as soon as possible. Improving rider safety will reduce fatalities, injuries and lost duty time and prevent the terrible impact on Families and units when Soldiers — each needed for their unit's mission — are lost to preventable accidents.◀

WAKE-UP CALL!

CHIEF WARRANT OFFICER 2 PATRICK MURRAY
A Company, 5th Battalion, 158th Aviation Regiment
Katterbach, Germany



The unit had been in country for nine months, flying the top commanders in Iraq. The mission was ever-changing and unique, but had become very familiar for the crews flying them. The company was young, with half the flying experience of the other companies in the battalion. Despite this, they were given the missions with the most visibility. This would be one of the leading factors in the accident on this particular day.

Like any other day in Iraq, it was hot and the sun was just on the horizon. The two Black Hawk crews woke up early and had morning chow. The crews preflighted their aircraft, conducted performance planning, obtained the company commander's approval on the risk assessment and then returned to the aircraft. Since this was a routine mission, the crew calculated the risk assessment as low, when, in fact, it was a medium-risk mission. The company commander did not correct this mistake.

The air mission commander was a junior captain with about 400 flight hours. Flight lead was a middle grade chief warrant officer with 850 flight hours. This made up the crew for Chalk 1. Chalk 2 consisted of a pilot in command (PC) that was a middle grade chief warrant officer with 700 flight hours and a pilot who was a junior chief warrant officer with about 400 flight hours.

The mission was to fly a general officer to a forward operating base in northern Iraq from Baghdad. The general planned to conduct a market

walk and then have the crews pick him up at a helicopter landing zone (HLZ). The crews had not been to that particular HLZ before; however, it was not out of the ordinary for the crews to land at these remote sites. Most landings in Iraq were accomplished in dusty conditions — it was the nature of the beast.

The mission was going well until it was time to pick up the general. To land at the HLZ, the crew had to enter from the east and land to the

from Chalk 1 stated a flyover wasn't necessary. The ground unit declared the HLZ was hot and there were improvised explosive devices (IED) found on the road. The aircrews waited for the ground unit to clear the HLZ and for the general to arrive.

Once given the confirmation, Chalk 1 turned to the east and Chalk 2 followed on his left. Both aircraft had planned to land in a loose formation to minimize brownout conditions, especially for the trail aircraft. The

“ MOST LANDINGS in IRAQ were ACCOMPLISHED in DUSTY conditions — it was the NATURE of the BEAST. ”

north because of the multiple hazards surrounding the area. The PC in Chalk 2 asked to do a flyover of the HLZ while they were orbiting to the east, waiting for confirmation from the ground unit that the boss was en route. The PC

winds were out of the northwest, which meant the trail aircraft had to land to the left and rearward from lead. This scenario was no surprise since it had been pre-briefed on the ground.

The flight turned to the north

and began their descents from altitude in preparation for landing. On approach, Chalk 1 slowly slid to the left and cut off the trail aircraft. The PC from Chalk 2 was on the controls and initiated a go-around to the left with the intention of making a turn back to the HLZ. However, when turning left, the PC noticed lead had stirred up a lot of dust and sand by the rotor downwash during landing.

Chalk 2 completed the go-around and began an approach to the southeast portion of the HLZ. The PC was on the controls with the crew chiefs in the back calling the dust. The aircraft was 10 to 15 degrees nose up with airspeed of 40 knots or less when it touched down. The PC had expected a big dust cloud and planned to roll out once the main landing gear contacted the ground. However, this didn't happen. The tail wheel struck the ground and sank about a foot. It then became a pivot point, causing the UH-60 to impact the ground hard with some forward momentum. The main landing gear was unable to absorb the initial impact, and the underside of the aircraft's nose sustained most of the impact damage.

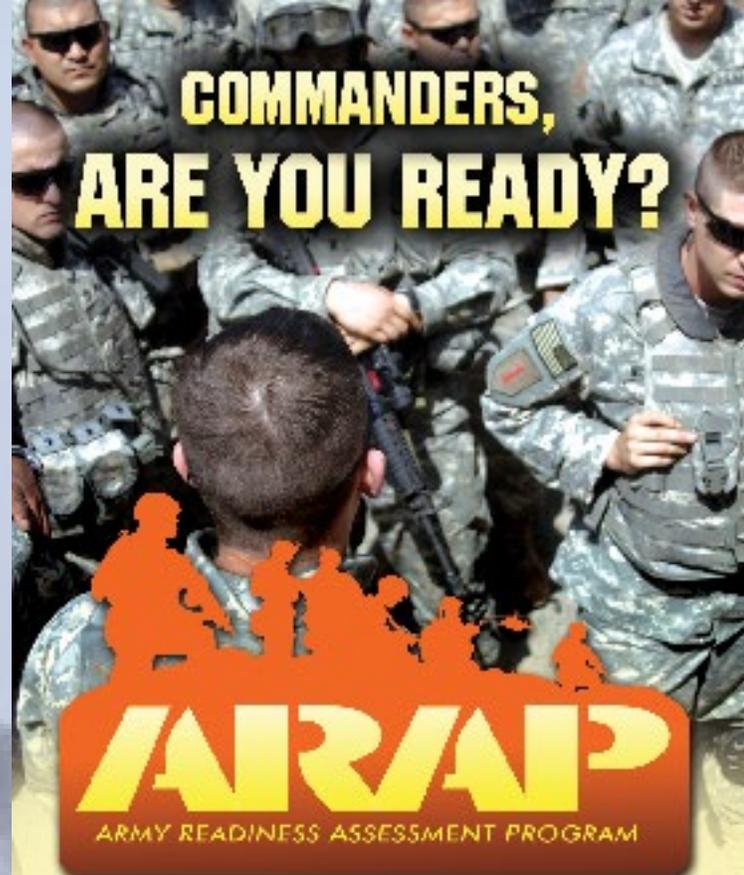
After landing, the crew analyzed the damage. They detected cracks at several points in the upper and lower cockpit area. In addition, both chin bubbles and overhead view ports were damaged. Both the systems and flight controls were functioning properly. As a result, the crew elected to fly the damaged aircraft to a secure location before shutting down.

Lessons Learned

This was a mission the crews had repetitively flown for nine months. The crews had performed many dust landings and considered this approach and landing to be a routine task. This goes to show how fast a situation can develop and how quickly things can go wrong.

Many factors played a key role in the accident. We discovered later that a vehicle-borne IED attack had ruptured a water line, causing water to leak into the HLZ. This condition caused the tail and main wheels to sink into the ground and bring the aircraft to a sudden stop. In addition, debris and surface irregularities littered the HLZ and forced the aircraft landings to be done in constrained spaces, ultimately compromising the safety of the crew and aircraft. Although the aircrews had experience flying in theater and in dusty conditions, they had minimal experience in flying a high-priority and high-visibility mission.

All of these factors essentially served as a wake-up call for our unit leadership. This influenced the command to reevaluate its crew mix policy and operating procedures. The unit was able to complete the remainder of its 15-month rotation accident-free. Sometimes, it takes a wake-up call like this to get your attention and possibly save a life or an aircraft down the road.◀◀



COMMANDERS, ARE YOU READY?

ARAP

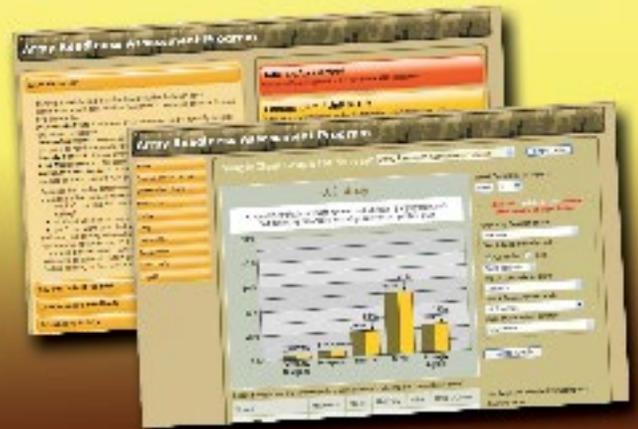
ARMY READINESS ASSESSMENT PROGRAM

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Don't you want to protect your combat power?

ARAP is a Web-based initiative that provides battalion-level commanders with data on their formation's readiness posture.



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BEWARE OF THE WOODS HOODS!

BOB MELOCHE
Robins Air Force Base, Ga.

You're cruising down the road when suddenly there is a loud crash and you're stopped, the victim of an ambush. There is no getting away. You might as well just hand over your wallet and everything in it. With a knot in your stomach, you know you might lose your car too. Although you'd heard about gang violence, you never thought it could happen to you. Nevertheless, even "Dateline NBC" hasn't dared to unveil the truth about America's most widespread street gang.

Think you're the only one? Not hardly! This has been going on for years. Chances are some of you have encountered these woods "hoods" and know the portrayal they received in movies like "Snow White" and "Bambi" is nothing more than Hollywood hype. I've had the chance to talk to some of their victims and here are a few of their grisly stories. I've changed their names to protect their privacy.

Cletus, 32, said, "I was driving down the road, minding my own business, when this cute little deer went scampering across the road in front of me. I slowed down and watched the little creature as it entered the woods and thought everything was fine. Suddenly, I heard a loud crash and lost control of my car. As I skidded to a halt in the gravel, I saw a very large deer jump up and run into the woods. I don't mind tellin' you I was scared! Later, I found out there was about \$1,000 in damages to my car."

It seems Cletus was a victim

of the infamous "bait-and-switch" tactic. That's where a decoy deer is sent across the road to distract a driver while a mega-deer waits for just the right moment to blindside you. Here's another case-in-point.

Eunice, 26, told her tale. "I was driving along when I saw a deer run into the road," she said. "I was alert and swerved hard to the right to miss the deer. I missed it all right, but I succeeded in hitting three trees and doing almost \$4,500 damage to my car in the process."

Eunice wanted to be a good person and not hurt the "cute little deer." She got what she wanted and the deer went unscathed. However, she did succeed in hitting three perfectly innocent trees and crunching her car. Perhaps the deer would have done less damage? We'll never know. However, many insurance companies count an animal strike under the comprehensive portion of the policy, potentially saving you the cost of the

deductable. The point is, once again the Woods Hoods have succeeded in making motorists like Eunice take for granted a challenging place to drive.

Take the case of another poor soul who was returning home after a long road trip. He was so excited about seeing a herd of deer near his house that he stopped and backed up to watch them in his headlights. This worked amazingly well, and everything would have been fine if he hadn't forgotten he was towing a trailer. You know, it's amazing the amount of damage a trailer can do when it's slapped against the side of a car. In this example, the "sweet, innocent deer" had lured an unsuspecting motorist into trouble.

Some folks believe "deer whistles" placed on the front bumper of their vehicle will scatter the deer to the four winds, keeping them clear of the road. Tom related an incident where his deer whistles so enraged a deer that it ran



directly in front of his truck. He struck the deer, launching it into the air to perform the infamous “Kamikaze Kilroy” dive (with 3 ½ twists) before landing on the windshield of an oncoming vehicle.

Now, as anyone vaguely familiar with the laws of physics can tell you, if you launch a 200-pound deer 30 feet in the air, it doesn’t just “come to rest” on the windshield. It actually lands in the lap of whoever happens to be unlucky enough to be driving the vehicle. This tends to upset that person quite a bit, and we’ll obtain a written statement as soon as the driver is allowed to handle pencils and other sharp objects again.

tend to be “on the move.” It’s inevitable they’ll be crossing the roadways more frequently.

- Deer do not care if you’re in a 3,000-pound car. Given half a chance, they’ll run straight in front of — into the side of — or across the top of — your vehicle.

they’re all headed in the same direction. Slow down until they figure out where they’re going.

- There are three things you should do whenever you encounter deer — first, slow down; second, slow down some more; and, if that doesn’t work, slow down to a crawl! This gives you more time to think and react.

- There may be times when you have to make a split-second decision to either hit a deer or steer for the trees. This may sound heartless, but a deer has a lot more “give” to it than your average tree. Fight against instinct and don’t aim for the trees.

OK, so the deer aren’t really out to get you. They do, however, add another exciting dimension to driving on roads with folks who believe the turn signal is just a place to hang the litterbag.

Take care and happy motoring!◀◀

“ I SLOWED DOWN and WATCHED the little CREATURE as it ENTERED the WOODS and THOUGHT everything was FINE. ”

When dealing with the Woods Hoods, keep a few simple things in mind:

- Keep an eye out for deer, especially during the cooler months of the year, when they become more restless and

- Deer tend to follow the same path, returning to where they started from. If you see deer on the side of the road, there is no guaranteeing which way they are going or even if

INJURY:

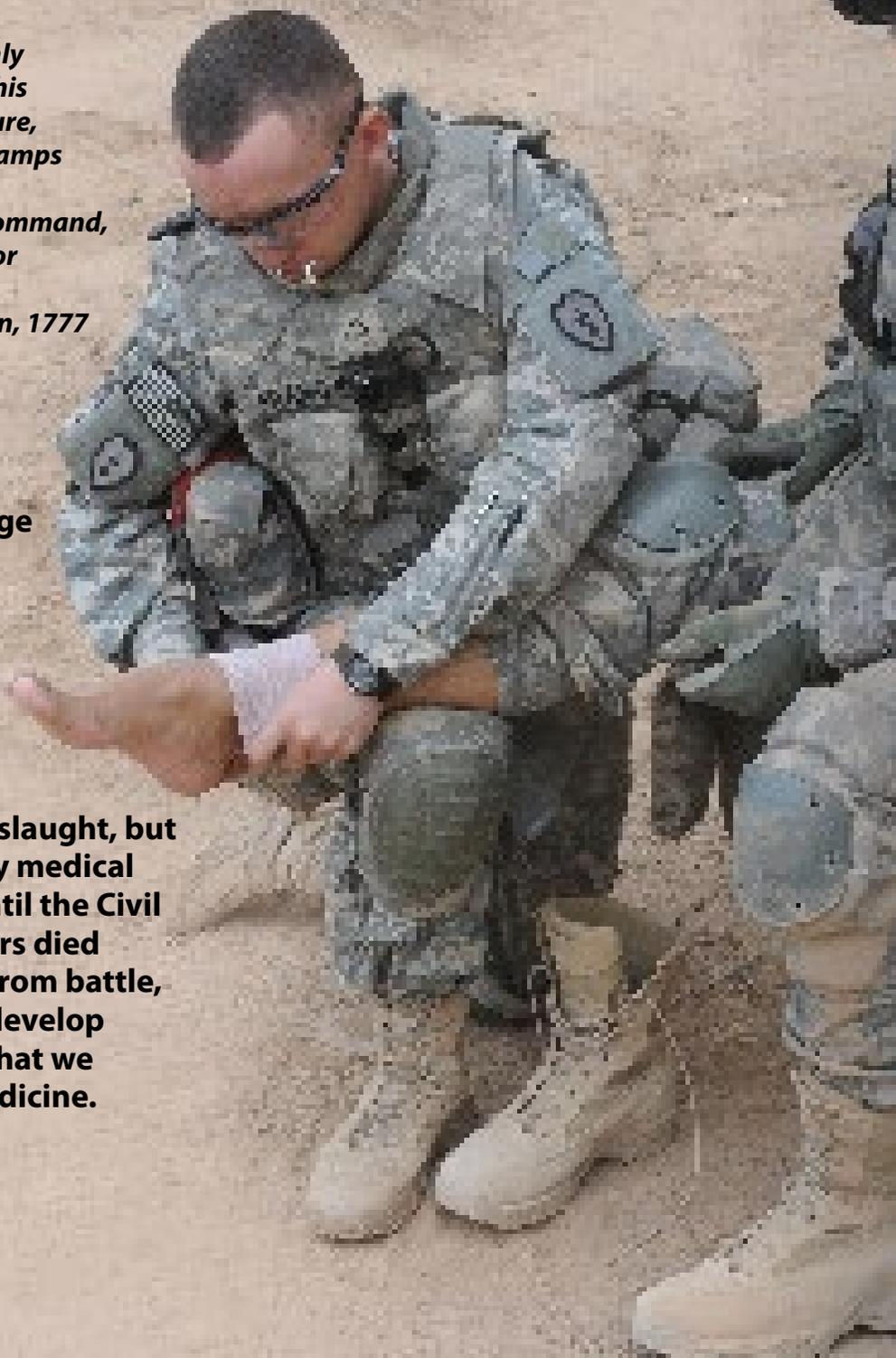
CAPT. VANCIL MCNULTY
U.S. Army Center for Health Promotion and Preventive Medicine
Aberdeen Proving Ground, Md.

The Military's Modern Epidemic

"For every Soldier by his neglect not only endangers his own life, but the lives of his companions. Nature, or the God of nature, has commanded that men who live in camps should be cleanly: Whoever proves too obstinate, or too slothful to obey this command, may expect to be punished with death or suffer under some dangerous disease."

~Gen. George Washington, 1777

This dire warning illustrates how seriously Gen. George Washington took disease prevention in his troops. He experienced firsthand the crippling effects disease and sickness caused to his ranks and was aware how ancient armies would crumble not by enemy onslaught, but by disease. According to an Army medical historical document, it wasn't until the Civil War, where twice as many Soldiers died from sickness and disease than from battle, that the Army began to further develop and modernize the concept of what we know today to be preventive medicine.





Over the next century, the fledgling U.S. Army Medical Department would make monumental advances in medicine to protect our Army against disease threats such as cholera, malaria, dysentery, yellow fever, smallpox and typhoid fever. Medical advances and a dedicated medical department have all but eliminated these once deadly threats to our military.

It's astounding that with such breadth and depth of experience in identifying and defeating threats to our readiness that a progressive, silent and seemingly unimportant foe has emerged as the No. 1 health threat to our armed forces. This problem is caused by neither virus nor germ, but by a tradition to perform, excel and exceed. Its name is injury and it represents the greatest threat to our military readiness.

Injuries are a burden to the U.S. armed forces in that they degrade health, fitness, morale and military operational effectiveness of servicemembers. They also consume a large portion of our limited healthcare dollars for treatment, rehabilitation and disability compensation.

So how common is the injury problem in the military? Here are some staggering Department of Defense statistics from 2007:

- Injuries accounted for more hospitalizations than any other adverse health condition except mental disorders; however, injuries were the leading cause of

outpatient clinical visits.

- There were 2.1 million injury-related medical visits affecting 900,000 servicemembers.

- Strain and sprain injuries required almost 110,000 days in the hospital, the second greatest for any condition.

- Twice as many servicemembers received medical care for injuries than for any other category of conditions.

- Musculoskeletal injuries accounted for 68 percent of all limited duty dispositions (profiles or limited duty slips) and amount to an estimated 25 million limited duty days per year.

The injury rate for the Army alone is 2,500 reported injuries for every 1,000 Soldiers. Think about that statistic for a moment and realize that this means that every Soldier can expect to go to sick call more than twice a year for a musculoskeletal injury. Injuries affecting the lower back, knee, ankle and shoulders account for most of the visits and are among the top seven diagnoses across the armed forces.

Think again if you believe these numbers are inflated due to the Iraq and Afghanistan conflicts. These numbers are all taken from the garrison, not the deployed, environment. If the definition for an epidemic is "extremely prevalent, widespread, affecting many persons at the same time," then the military and, specifically, the Army has an epidemic of injuries.

Referring to our injury problem as an epidemic is not new. Retired Col. Bruce Jones, M.D., a pioneer in the study of military injury and prevention, wrote a technical report in 1996 titled "Injuries in the Military: A Hidden Epidemic." The conclusion was "injuries have greater impact on the health and readiness of the U.S. armed forces than any other category of medical complaint during peacetime and combat." The most common type of injury identified was overuse related to physical training (PT) and sports that mostly affected the knee and back.

Unfortunately, more than a decade later, the trend continues. According to recent data, more than 50 percent of our injuries in the Army are a direct result of strenuous load- and impact-bearing exercise caused by PT and sports-related activities. More Leaders in the military must appreciate the magnitude and scope of the problem, as well as understand

their role in prevention.

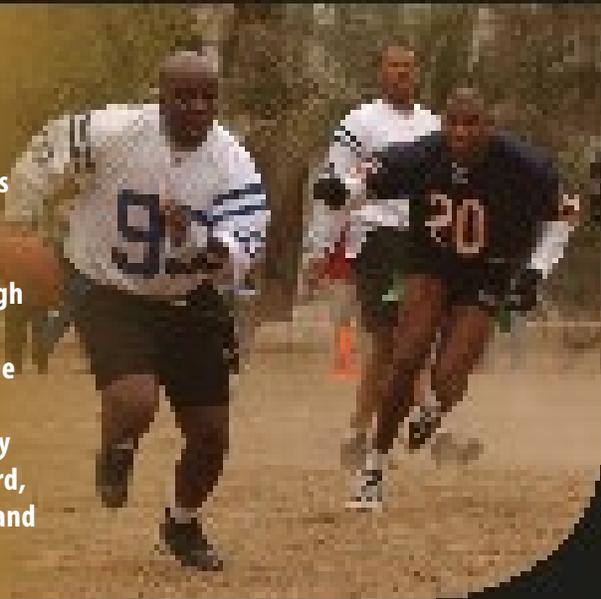
The efforts by both military and civilian agencies to understand the injury process and provide solutions have been ongoing for the last 25 years. As a result, we now have numerous scientific studies that tell us where all the injuries are coming from, as well as who is most at risk. A recent technical report developed for the armed forces by the Joint Services Physical Training Injury Prevention Work Group (JSPTIPWG) examined the available scientific data and presented intervention strategies that can potentially reduce PT and overuse injuries by 25 to 50 percent when implemented.

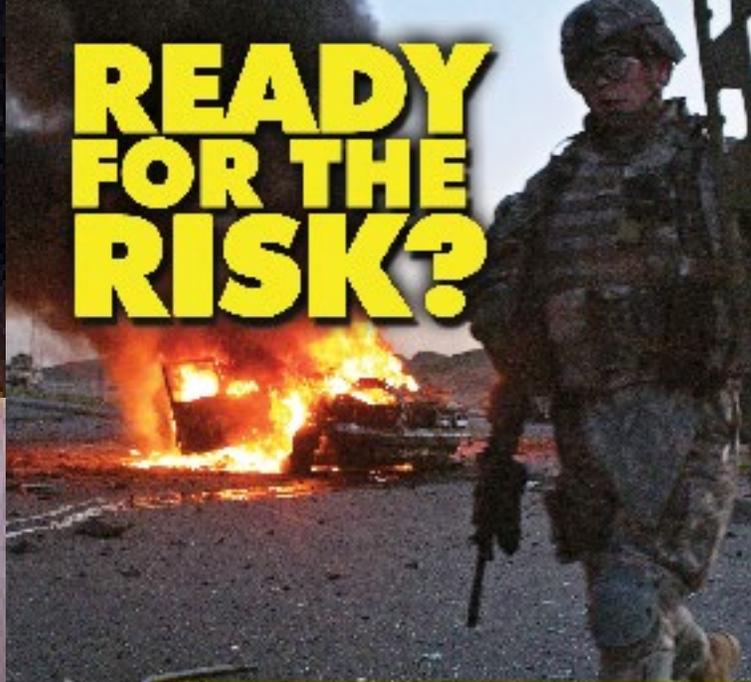
All the information in the world, however, will do nothing to reduce injury's threat to readiness unless action is taken. Every member of our armed forces, especially Leaders, must be educated on the basics of injury prevention. This is because unit Leaders, not the medical community, are in the position



DID YOU KNOW?

Across the U.S. armed forces, more than 25 million limited-duty days occur annually due to injuries, with physical training/sports being a top injury category. Leaders are in the best position to prevent injuries. The one-hour, interactive, online "Injury Prevention Through Leadership" course provides Leaders with concise, evidence-based information and guidance they can use to prevent many injuries. The course also teaches practical strategies to help Soldiers meet their fitness goals. To access the course, visit Combat Readiness University II at <https://crc.learn.army.mil>. Log in with your AKO ID and password, select the Courses tab, open the Joint Forces Safety Training folder and enroll today.



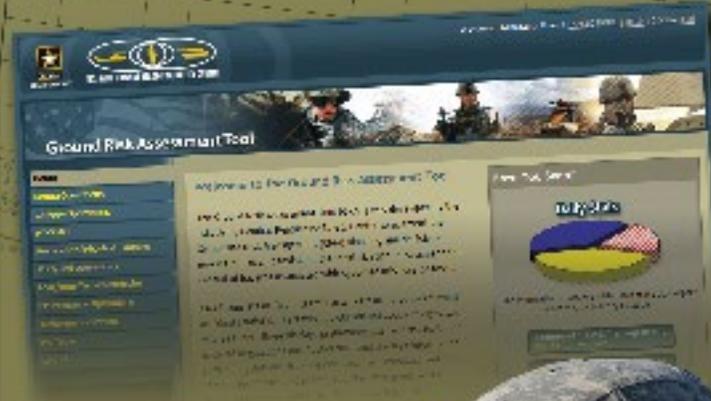


GRAT

GROUND RISK ASSESSMENT TOOL

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The Ground Risk Assessment Tool is designed to aid in mitigating risk by reinforcing the five-step composite risk management process.



GRAT-S

<http://safety.army.smil.mil>

GRAT-S is now available and allows Leaders in forward-deployed units access to GRAT on the SIPRNET.



to effectively implement and enforce change.

Where can a Leader find injury prevention information? Fortunately, the JSPTIPWG technical manual "Injury Prevention Through Leadership" is available as an interactive online video course at <https://crc.learn.army.mil>. This short course will introduce the viewer to the causes and extent of injury in the armed forces and then offer practical, evidence-based strategies. It can also be the foundation for proactive Leaders to start injury prevention

programs in their units.

The No. 1 threat to readiness is identified and can no longer remain hidden. Just as George Washington required basic sanitation to prevent disease, all Leaders must learn and implement basic injury prevention if we are to reduce that threat. It will take time and effort, but the result will be Soldiers who remain Army Safe and Army Strong.◀



The Summer of the 58

CHIEF WARRANT OFFICER 3 JAMES A. NIX
1-135th Attack Reconnaissance Battalion, 20th Aviation Brigade
Missouri Army National Guard
Whiteman Air Force Base, Mo.

I can remember that summer day like it was yesterday. Although it's been a few years since I nearly flew an OH-58 aircraft into the ground, I often reflect on that incident to remind myself of the things I did wrong and, more importantly, the lessons I learned from my mistakes.

The day started out like every other: readiness level (RL) progression training. In this case, I was the instructor pilot teaching RL-3 to RL-2 students. It was a great summer day — warm on the ground, but cool in the air. The doors were off and we were looking forward to flying.

We started with some basic

maneuvers at the airfield and then headed for our training area. The training area was a great place to fly. It was a panorama of nature, wildlife and clear water.

There were several landing zones (LZs) to choose from; some were large and flat, others small, sloped and challenging.

We started with the challenging

ones, of course. Things were going great and I couldn't have been more pleased with my student. No problems controlling the aircraft and, more importantly, he had the ability to think, fly and talk on the radio simultaneously.

We were "in the groove" and doing our thing. My student was doing so well that I chose



to take the maneuvers up a notch to simulated engine failures (SEF) at altitude. Sure, you're thinking, "SEFs in a 58 ... piece of cake!" You're correct. It's a simple maneuver — one we've performed many times in many places. Well, that's what I thought.

We set up for the maneuver, surveyed the winds and recited the emergency procedures verbatim from the dash 10. We executed the maneuver by the textbook. It was flawless. In fact, it was so good that we began repeating the maneuver, incorporating more of my "techniques" with every SEF.

Soon, my overconfidence and complacency caught up with me. I initiated the maneuver by rolling the throttle to idle and announcing, "Simulated engine failure." I then reduced collective in order to maintain rotor rpm and began an autorotation. My intent was to terminate with

power. Things were going good and I can remember thinking, "This is going to be a good one."

Well, as the ground quickly rushed into view, I had a sinking feeling that I had forgotten something. Indeed, I did; I forgot to roll the throttle back to 100 percent from idle! Amid my racing thoughts and, perchance, saying, "Oh, sh*t!" I somehow managed to get the throttle back to 100 percent to terminate the maneuver with power.

I landed the aircraft and remember looking at my student as he said, "Dude, that was close!" I said, "Yes, it was!" We both realized that we had just come close to dying.

Lessons Learned

Pilot confidence is a good thing; however, in Army

aviation, the saying, "You can't have too much of a good thing," isn't always the case. The message I would like to impart to my fellow aviators is that it is easy to become overconfident while performing what most would consider simple tasks. We all have a comfort zone that expands as we become more proficient.

I encourage you to take a look at your comfort zone. Overconfidence leads to complacency, just as familiarity breeds contempt. Next time you're flying and things are going great and your confidence is high, just remember ... that's when things go wrong.◀

The Silent Killer

CAPT. RUBEN I. ORTIZ
Headquarters Company, 1st Medical Brigade
Fort Hood, Texas

As the weather turns colder, many of us will rely on furnaces and portable heaters to stay warm. Some will also unknowingly invite a killer into their home.

The winter months are when individuals are most at risk for carbon monoxide (CO) poisoning. Known as the “silent killer,” CO is a colorless, odorless, tasteless and nonirritating gas. It kills more people annually in the United States than any other type of poisoning.

Carbon monoxide is produced from the incomplete combustion of wood, coal, oil, kerosene, natural gas, gasoline and propane. People are also poisoned when they heat their homes with outdoor grills, hibachis or gas

ovens with the oven door opened. The poisonous gas emitted from burning fuels or from car exhaust can build up very quickly and overcome you without warning, even in areas that seem to be well ventilated.

At lower levels, the initial symptoms of CO poisoning may include fatigue, headache, dizziness, nausea, visual disturbances, irritability and confusion. Unfortunately, diagnosis is problematic because these symptoms are nonspecific and may be mistaken for the flu or food poisoning. If you experience any of these symptoms in your home but feel better when you go outside — and then find the symptoms reappear once you’re back inside — you may have CO poisoning.

As exposure levels increase, the symptoms of CO poisoning become more severe. At moderate levels, individuals may experience

tightness across the chest, severe headaches, dizziness, drowsiness and nausea. Prolonged or high exposures may result in vomiting, confusion, muscle weakness, collapse and even death. Earlier this year, a Soldier and his wife were found dead in their home as a result of CO poisoning. The police investigation into the deaths revealed the home had high levels of CO.

Many of the deaths from CO poisoning might have been prevented with regular maintenance of heating systems and the installation of CO detectors. There are a variety of CO detectors on the market, and all monitor the air for high levels of CO. The CO detector is designed to detect CO from any source, but it will not detect smoke, fire or any other gas.

For safety’s sake, homes with portable heaters or gas or oil furnaces should have at least one

CO detector. The device should be installed near sleeping areas. Additional detectors should be placed in living areas or near, but not in, the furnace room. The detector should be in an area where everyone in the house will hear it — even those sleeping. The Environmental Protection Agency (EPA) warns, however, that CO detectors should never be considered as a replacement for properly using and maintaining fuel-burning appliances.

If you suspect you are experiencing CO poisoning, get fresh air immediately. Open the windows and doors for more ventilation, turn off any combustion appliances and leave the house. Once away from the source of exposure, seek prompt medical attention and call your fire department for CO detection. For more information about CO poisoning prevention, visit the EPA's Web site at www.epa.gov.◀



Family engagement kit

<https://safety.army.mil>

Army Safe is Army Strong and that starts with a Soldier's Family. Have the information to help you and your Family stay SAFE.



Be prepared and get your own Family Engagement Kit TODAY!

FYI

To reduce your chances of carbon monoxide (CO) poisoning, take the following precautions:

- Have your fuel-burning appliances such as furnaces, water heaters, ranges, ovens, dryers, space heaters, fireplaces and wood stoves inspected and serviced by a trained professional before the onset of cooler temperatures.
- Purchase appliances that vent fumes to the outside of your home. Have those appliances installed and maintained by professionals. Ensure you read, understand and follow the safety precautions for

each of these appliances.

- Never sleep in a room with an unvented fuel-burning space heater.
- Never use a gas oven to heat your home — even for a short period of time.
- Never idle your vehicle inside your garage — even if you have the door opened. Doing so can allow CO to build up and enter your home. Also, be sure not to operate other devices powered by combustion engines such as generators, chain saws, lawn mowers, etc., in an enclosed space.

Life in the Fast

Are you tired of slow drivers blocking the fast lane? Do you believe it is the slow driver in the fast lane, not the aggressive driver, who is the real menace to society?

Perhaps no other aspect of road travel is so laden with myth as the “fast lane.” The truth is, life in the fast lane can be deadly unless everyone knows the rules. So, here’s the scoop:

- The posted speed limit is a law that applies to all lanes. Technically speaking, there is no fast lane or slow lane. Slower traffic is generally expected to keep right. However, only emergency vehicles are permitted to exceed the posted speed limit and only when their lights and sirens are operating.
- Speed surveys indicate that the majority of drivers are exceeding the posted speed limit. The “slow driver” in your way may, in fact, be obeying the speed limit. Check your speedometer.
- Your speed, even when passing, should not exceed the posted speed limit. If you are driving the speed limit and the vehicle in front of you is driving the speed limit, there is no need to pass.
- Generally speaking, it is safest to stay out of the left lane except when passing. Twenty states have laws that reserve the left lane for passing, although states vary as to the types of roads and vehicles for which the restriction applies. Thirty states and the District of Columbia have no such law. Do you know the law in your state?◀◀

Lane

NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

TEST YOUR KNOWLEDGE

True or False

1. The speed limit applies to all lanes, including the far left lane on a multilane highway.
2. In some states, the left lane on divided highways is only for passing.
3. The left lane on divided highways is for left-handed drivers.
4. In some states, motorists who drive the speed limit in the left lane are breaking the law.
5. Your speed, even when passing, should not exceed the posted speed limit.
6. The left lane is reserved for motorists who wish to drive faster than the posted speed limit.
7. Drivers should pass on the left because it is safer than passing on the right.

-
- Answers**
1. **True.** The following states reserve the left lane for passing: Arkansas, Connecticut, Hawaii, Idaho, Illinois, Indiana, Kentucky, Maine, Massachusetts, Michigan, Mississippi, Missouri, Nevada, New Jersey, Ohio, Oregon, Rhode Island, Tennessee, Utah, Virginia and Washington. However, restrictions may vary from state to state. Check with your motor vehicle department.
 2. **True.**
 3. **False.** In states that reserve the left lane for passing only and apply that restriction to all vehicles, no one is permitted to cruise in the left lane, regardless of speed. In states that allow motorists to cruise in the left lane, no one is permitted to exceed the speed limit.
 4. **True.** Passing on the right is more risky because it places you in the blind spot of the vehicle you are passing.
 5. **True.**
 6. **False.** The speed limit applies to all lanes.
 7. **True.**

30 Y After

Few Americans will forget where they were when they first heard about the Sept. 11, 2001, terrorist attacks on our country. Like most, I was glued to the developing television news coverage. I watched as the World Trade Center towers crumbled to the ground, spewing clouds of debris through the New York City streets. With my environmental laboratory background as an asbestos sample analyst, I knew what was in those clouds and what it meant to the people exposed to them.

EARS

MELANIE CARNEY
Armament Research, Development and Engineering Center
Picatinny, N.J.

the Towers Fell

Asbestos was just one of the hazardous materials released that day. For those exposed either as a worker, responder or bystander, or if you're just intrigued by hazard exposures, the following are a few facts about asbestos and the occupational diseases caused by exposure to its fibers.

What is Asbestos?

Asbestos is a common name for six distinct, fibrous mineral silicates. According to the Environmental Protection Agency (EPA), the current federal

definition of asbestos is "the asbestiform varieties of chrysotile, crocidolite, amosite, anthophyllite, tremolite and actinolite." These naturally occurring silicates, resistant to both heat and chemicals, became a popular fire retardant in industrialized countries.

Asbestos is found in asbestos-containing materials (ACM), which are used to make thermal insulation, fireproofing, brake linings, paint additives and building materials. Workers came into contact with ACM in

shipyards, paper mills, foundries, chemical plants, garages, building construction and the telephone industry — virtually any area involved in construction or design.

ACM are a health risk when they are friable, which means the material can be crumbled, pulverized or reduced to powder by the pressure of an ordinary human hand. Asbestos fibers may be released from friable ACM and become airborne and potentially inhaled.

Asbestos fibers of

concern to human health are hundreds of times thinner than human hairs and too small to be seen with the naked eye. The Occupational Safety and Health Administration (OSHA) defines fibers of concern as at least five micrometers long and at least three times as long as their diameter. The microscopic fibers enter the body undetected by respiratory defenses and lodge in the lungs' air sacs. This foreign material is impervious to chemical degradation and remains permanently



ARE YOU BEING EXPOSED TO ASBESTOS?

Employees may be exposed to asbestos during the manufacture of asbestos-containing products or when performing brake and clutch repairs. In the construction industry, exposure occurs when workers disturb asbestos-containing materials (ACM) during the renovation or demolition of buildings. In addition, custodial workers may be exposed through contact with deteriorating ACM in buildings. Consult your safety office if you have any concerns.

“ The **MICROSCOPIC** fibers **ENTER** the body **UNDETECTED** by respiratory defenses and **LODGE** in the **LUNGS'** air **SACS.** ”

trapped in the exposed individual's respiratory tract.

The fibers irritate the surrounding cells and cause the four common asbestos diseases: pleural plaques, which is scarring in the lungs; asbestosis, a noncancerous lung disease; mesothelioma, cancer of the lung lining; and lung cancer. These diseases have a long latency period and may remain dormant for 10 to 60 years after exposure. Symptoms normally develop 20 to 30 years following exposure.

Protecting Against Asbestos

So how do we protect workers from asbestos hazards? An asbestos safety management program requires several controls and procedures to prevent exposures to the potential carcinogen. Both U.S. Army regulations and OSHA standards mandate engineering controls, specific worker practices, training and personal protective equipment in asbestos-containing areas.

The controls include

FYI

The regulations governing worker exposure to asbestos are extensive. For additional information and a complete listing of policy and guidance, visit the U.S. Army Center for Health Promotion and Preventive Medicine's (USACHPPM) lead and asbestos Web site at <http://chppm-www.apgea.army.mil/ihs/labp.aspx>.

The Deployment Health Clinical Center has additional information for those who deployed to Operation Noble Eagle at http://www.pdhealth.mil/deployments/noble_eagle_WTC/background.asp.

Other resources include:

- USACHPPM Fact Sheet 64-004-0302: Health Information for World Trade Center Support Personnel, <http://chppm-www.apgea.army.mil/documents/FACT/64-004-0302.pdf>.
- OSHA Safety and Health Topics: Asbestos, <http://www.osha.gov/SLTC/asbestos/index.html>.
- OSHA Safety and Health Topics: Respiratory Protection, <http://www.osha.gov/SLTC/respiratoryprotection/index.html>.

High-Efficiency Particulate Air (HEPA)-filtered fume hoods, wetting agents, respirators and protective clothing. Asbestos workers also receive an initial medical exam, annual exams and job termination exams. In addition, medical surveillance program standards require personnel records be maintained for 30 years after employment ends. Asbestos abatement technicians, supervisors, project managers and inspectors must be trained and certified before they are authorized to perform their duties. They must also attend refresher courses to maintain their certifications.

What does the future hold for those at ground zero the day the towers fell? It's not possible to accurately predict, but in the coming decades, they may show symptoms of an asbestos disease or other respiratory ailments. OSHA regulations pertain only to occupational injuries/illnesses, and our government still must address the possibility of nonoccupational compensation for respiratory disease of bystanders. One thing is for certain; the emotional scars from that day will be slow to heal, if at all.◀

SLOW CONNECTION? **LIGHTEN UP!**



<https://safety.army.mil/lite>

The Safety Center's home page is now available in a lite capacity to allow forward-deployed Soldiers with limited Internet connectivity access to the risk mitigation tools and resources they need.



HOW HOT

How hot is hot? Only the countless number of Soldiers who have deployed to Iraq and Afghanistan can answer that question. One might think I'm talking about the environmental conditions we deal with on a daily basis. However, I'm referring to the daily conditions our aircraft operate in while deployed: the dust storms, heavy rain that immediately turns to mud upon contact with the airframe and, of course, the heat.

The amount of flight time each aircraft has logged is staggering. Our battalion logged more than 20,000 hours in Operation Iraqi Freedom 06-08 in every environmental condition imaginable. Airframes were operating to the point that simple knobs were vibrating loose. Parts that had never been replaced during the life of the aircraft failed. This required maintenance personnel to increase their knowledge of those combat platforms.

I was just one of the maintenance test pilots (MTPs) in our battalion assigned to Logistics Support Area Anaconda in Iraq. I logged more than 100 hours of maintenance test flights (MTF) using night vision goggles (NVG). I was quite skeptical of this when I arrived, but I quickly realized the benefits would allow our battalion to meet the daily aircraft requirements. We conducted more than 300 ground runs, 94 engine flushes and countless trips to the flightline on this rotation.

To reduce the risk of flying MTFs under NVG, our battalion mandated two test pilots. This worked well, not only from an MTF standpoint, but from a training aspect as well. On this particular morning, 0430 hours to be exact, the other MTP and I completed the necessary paperwork for the test flight. The preflight, run-up and necessary checks were completed without any noted deficiencies. We entered closed traffic and began our in-flight checks. During our second traffic

is Hot?

CHIEF WARRANT OFFICER 4 RONALD G. SKIPPER
Army Aviation Support Facility No. 1
Alabama Army National Guard
Montgomery, Ala.

pattern on downwind, the strangest odor filled the cockpit and cabin. Being an experienced MTP, I knew something was burning. After a few moments, the failure advisory panel began to illuminate with various caution lights. Several cautions were blinking, mainly the No. 2 hydraulic pump light. The right-side crew chief extended his seat belt and observed a red glow coming from underneath the hydraulic deck cover. "We're on fire!" is one thing you are never prepared to hear over the intercom system while flying at 100 feet above ground level and 120 knots under NVG.

Turning base, I began a descent and determined that a roll-on landing would allow me to get the aircraft on the ground faster. The pilot (PI) contacted tower and informed them of our situation. Looking back, I thought it was

amusing to hear the tower respond with, "Are you declaring an emergency?" with the PI responding, "Yes, we're on fire!"

After the aircraft came to a stop, I performed an emergency engine shutdown. The crew chief and I exited the aircraft to find smoke and

the hydraulic deck. The rotor system was coasting down, reducing the hydraulic pressure. This reduced pressure slowed the loss of hydraulic fluid and, in turn, reduced the fire.

During this time, the fire truck was en route to our location. At least we thought they were until they turned the wrong way down the taxiway. The good news is the fire was out and everything was under control. After further inspection, two hydraulic lines were found touching and the vibrations had worn a hole in one line. While operating at 3,000 psi, hydraulic fluid atomizes and becomes highly flammable. The total damage included the No. 2 hydraulic pump, transfer module, primary servos, hydraulic deck cover and all the wiring associated with these components.

Three weeks later, I departed for Kuwait to oversee the washing of aircraft for port operations at Udari Army Airfield. The greatest

“**AIRFRAMES** were **OPERATING** to the **POINT** that simple **KNOBS** were **VIBRATING** loose.”

flames billowing out of the hydraulic deck. The crew chief attempted to extinguish the fire, but he couldn't reach the flames. I climbed upon the gunner's window and pushed the fire extinguisher underneath

lesson I learned was that even after a year of countless maintenance operations, auxiliary power unit fires, engine overspeeds and troubleshooting, Soldiers should always be prepared for the worst.◀

LOSSES

AVIATION



CLASS A

During a security mission, the aircraft crashed for unknown reasons. The pilot in command suffered fatal injuries; however, the pilot was able to egress. A postcrash fire consumed the aircraft.

CLASS B

During simulated single-engine failure, the aircraft contacted an obstacle while landing. Postflight inspection revealed damage to the lower portion of the tail boom.

CLASS C

Preflight inspection of the aircraft revealed the tail rotor connecting links sheared. The aircrew from the previous flight reported a "slight" tail rotor vibration during flight.



CLASS C

The aircraft was one in a flight of two conducting sling load operations when a crewmember inadvertently released the center hook. A pallet of ammunition fell to the ground and exploded.

As the aircraft landed to a simulated military operations on urban terrain site, rotor downwash from the helicopter blew a set of bleachers onto another set, resulting in injuries to seated onlookers. One spectator suffered a broken arm.



CLASS C

The engine cowling separated from the aircraft during departure and made contact with the main rotor system. All four main rotor blades (MRB) and the right-side crest fairing received damage.

OH-58A



CLASS C

While the maintenance test pilot (MTP) was conducting a simulated engine failure for an MTP standards checkride, the aircraft contacted the ground. The main landing gear spread, one MRB made contact with the tail rotor driveshaft and the left windshield popped out.

OH-58D(R)



CLASS A

The aircraft crashed on the runway during a maintenance test flight (MTF).

The MTP was executing an autorotation as part of a post-MTF when the aircraft's tail stinger struck the ground. Subsequently, the aircraft overturned and its tail rotor separated.

After a shudder and low rotor indication, the crew initiated an autorotation. The tail stinger contacted the ground and the aircraft overturned.

CLASS B

The aircraft contacted the ground during night vision goggle environmental training. Damage included spread skids, the wire strike protection system separated and the box beam buckled.

CLASS C

During manual throttle operations, the aircraft experienced an engine overspeed (124 percent for three seconds).

UH-60A



CLASS A

Following a hot refuel, a flight of three UH-60 aircraft were ground taxiing out of a

forward arming refueling point when Chalk 2's MRBs struck the tail rotor of Chalk 1.

CLASS C

The blade root fairing became detached from the aircraft, incurring damage to the tail rotor and attaching points.

UH-60L



CLASS B

The aircraft touched down hard during troop insertion to a pinnacle. The aircraft sustained damage to the fuselage, one MRB tip cap and one engine.

UAS

RQ-7B



CLASS B

The unmanned aircraft (UA) experienced an uncommanded deployment of the recovery chute following takeoff. The chute intertwined with the propeller and the UA impacted the ground.

The UA experienced loss of engine power shortly after takeoff and descended into trees.

GROUND

ACV



CLASS A

The gunner in an M1117 Armored Security Vehicle suffered fatal injuries when the vehicle overturned. The accident occurred when the driver lost control while trying to avoid an obstacle on the road. The Soldier was not wearing a gunner's restraint system.

A Department of the Army civilian (DAC) was killed during armored vehicle weapons testing when a round detonated in the

ARMY AVIATION LOSSES

Fiscal 2009
as of Aug. 6, 2009



ATTACK	1/1
RECON	9/4
UTILITY	6/2
CARGO	1/0
TRAINING	2/0
FIXED-WING	0/0
UAS	3/0

TOTAL 22/7

ARMY GROUND LOSSES

Fiscal 2009
as of Aug. 6, 2009



AMV	15/14
ACV	14/4
PERSONNEL INJURY	23/16
<small>Includes weapons-handling accidents</small>	
FIRE/EXPLOSIVE	5/1
PROPERTY DAMAGE	2/0

TOTAL 59/35

gun tube, resulting in a backfire/explosion. A second DAC and a contractor suffered unreported injuries in the incident.



CLASS A

■ A Soldier suffered fatal injuries when his privately owned vehicle was struck head-on by an M1165 HMMWV operated by an authorized crew. The Soldier was wearing a seat belt.

■ A Soldier was killed when the nontactical vehicle he was driving overturned as he swerved to avoid an oncoming local national vehicle. The Soldier, who was ejected, was not wearing a seat belt.



CLASS A

■ A Soldier suffered a permanent total disability injury when he dived into a 5-foot-deep above-ground swimming pool and struck his head.

■ A Soldier's body was recovered from a river two weeks after he fell from a recreational raft that overturned when it struck an underwater obstruction. The Soldier was not wearing a life preserver even though one was available. Three others on the raft were able to safely make it to shore.

■ A Soldier was paralyzed from the waist down when he was struck in the abdomen by an M9 round from another Soldier's weapon. At the time of the accident, the Soldiers were wrestling.

CLASS B

■ A Soldier suffered a permanent partial disability injury when he was struck in the face with an illumination round. At the time of the accident, the Soldier was carrying an M203 launch tube and reportedly spinning it in his hand when it fired. The Soldier is expected to have permanent loss of sight in his right eye.

■ A Soldier suffered a permanent partial disability injury to his hand after it was struck by a round from his personal .40-caliber handgun. The Soldier was dismantling the weapon and failed to properly clear the chamber after removing the magazine. The weapon discharged into his hand, resulting in the amputation of a finger.



CLASS A

■ A Soldier died after suffering second- and third-degree burns to his legs, arms and face when a commercial propane stove exploded as he tried to ignite it.

DRIVING



CLASS A

■ Five Soldiers were traveling in a rented vehicle when it left the road, overturned and crashed into a wooded area. The driver and two of his passengers were ejected and killed.

■ A Soldier was traveling 91 mph in a 65-mph zone in wet conditions when he lost control and drove into a ditch. After steering out of the ditch, he skidded across the highway into another ditch and struck two trees. Although he was wearing his seat belt, he suffered fatal injuries.

■ A mobilized National Guardsman was driving his pickup in rainy weather when he lost control and struck a tree. The Soldier, who was not wearing his seat belt, died at the scene.

POV DRIVING LOSSES
Fiscal 2009

	Class A/Fatalities
CAR	33/33
SUV/JEEP	13/13
TRUCK	10/10
MOTORCYCLE	27/25
PEDESTRIAN	6/6
OTHER*	3/3

TOTAL DEATHS
Fiscal 2009 **107** v **101**

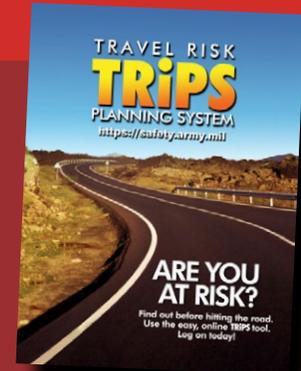
ALWAYS WEAR YOUR BELT



▣ A mobilized National Guardsman was driving his pickup in rainy weather when he lost control and struck a tree. The Soldier, who was not wearing his seat belt, died at the scene.

MAKE SURE YOU AND YOUR PASSENGERS BUCKLE UP!

ALSO, DON'T FORGET:
Plan for that road trip and complete a quick and easy **TRIPS** report.



▣ A National Guard Soldier was speeding while driving home from duty when he lost control, left the road and struck a tree. Emergency personnel used the Jaws of Life to remove him from his vehicle. He was flown to a local medical center, where he died from his injuries.



CLASS A

▣ A Soldier was operating a borrowed motorcycle when he lost control, went off the road and struck a fence post. The Soldier was thrown from the motorcycle and severely damaged his spinal cord. He was diagnosed with a permanent total disability.

▣ A Soldier was killed when he lost control of his motorcycle on a curved highway access ramp, slid and collided with a flatbed truck.

▣ A Soldier was riding at high

speed under the influence of alcohol when he struck a street pole, was thrown from his bike and crashed through a privacy fence. The Soldier was transported to a local medical center, where he later died. Although the Soldier had taken the required Motorcycle Safety Foundation (MSF) training, he was not wearing a helmet or other required personal protective equipment (PPE). Witnesses reported he had been racing his sportbike up and down the street prior to crashing.

▣ A Soldier was thrown from his motorcycle when he was sideswiped by a civilian in an automobile. The Soldier was transported to a local medical center, where he died from his injuries. The civilian driver was cited by local police.

▣ A Soldier was operating a newly purchased sportbike at high speed when he attempted

to negotiate a turn on an exit ramp, locked his front brake and lost control. Witnesses said the bike's rear tire lifted off the ground as the Soldier was catapulted onto the road, where he lost his helmet. He was pronounced dead at the scene. The Soldier had not attended the required MSF training, having only obtained his motorcycle learner's permit earlier that day.

▣ A Soldier was operating his motorcycle when, for unknown reasons, he collided with another vehicle and suffered fatal injuries. The Soldier had received MSF training, but was not wearing his helmet at the time of the accident.

Editor's note: Information published in the accident briefs section is based on preliminary loss reports submitted by units and is subject to change. For more information on selected accident briefs, e-mail safe.knowledge@conus.army.mil.

**Don't ride alone
this summer. Mentor
a battle buddy!**

MMP

MOTORCYCLE MENTORSHIP PROGRAM

***Mentoring can be fun and set
up in various ways.***

- Unit-level one-on-one mentorship
- Unit-level riding groups
- Private organization
- Combination unit program and private organization at the installation level
- Non-appropriated fund instrumentality

**Check out the USACR/Safety Center MMP Web site
for some examples of active mentoring programs:**

<https://safety.army.mil/mmp/>



KNOWLEDGE

VOL 3 OCTOBER 2009

OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

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ARMY STRONG.



U.S. ARMY COMBAT READINESS/SAFETY CENTER
<https://safety.army.mil>

ARMY SAFE IS ARMY STRONG



BAND OF BROTHERS & SISTERS

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U.S. ARMY COMBAT READINESS/SAFETY CENTER
<https://safety.army.mil>

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Mission statement: USACRC supports our Army by collecting, storing, analyzing, and communicating actionable information to assist Leaders, Soldiers, Families, and Civilians in preserving/protecting our Army's combat resources.

We welcome your feedback. Please e-mail comments to safe.knowledge@conus.army.mil.

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FROM THE DASAF

As your director of Army safety, it gives me great pleasure to introduce you to the newest member of our command team, Command Sgt. Maj. Michael Eyer. Command Sgt. Maj. Eyer is coming to us from the 170th Brigade Combat Team (previously the 2nd Brigade Combat Team), 1st Armored Division in Germany, where he served as their command sergeant major. He brings a wealth of experience and knowledge to the USACR/Safety Center and soon will be hitting the road to meet with your command's safety professionals and to talk to Leaders and Soldiers. I encourage each of you to create a meaningful safety dialogue with Command Sgt. Maj. Eyer and bring him your concerns on safety and listen to what he has to say. He's here to help.

Again, welcome, Command Sgt. Maj. Mike Eyer!

William T. Wolf
Brigadier General, USA
Commanding



I intend to work with that same **PASSION** as we strive **TOGETHER** to make **OUR ARMY SAFER** both **ON** and **OFF DUTY.**



I'M HERE TO SERVE YOU

Passion for the mission and a vested interest in the success of our Soldiers by every member of the team makes the total Army more effective.

I recently finished a tour of Iraq with the 2nd Brigade Combat Team, 1st Armored Division. On numerous occasions as I walked the streets of southern Baghdad with the Iron Brigade Troops, I found among the 2nd Brigade Soldiers a passion to make things better for the Iraqi people. This passion for the mission and commitment to excellence drove the brigade's success throughout a 14-month deployment.

In my new role with the USACR/Safety Center, I intend to work with

that same passion as we strive together to make our Army safer both on and off duty.

During more than 25 years of service, I have learned that every successful mission or duty — whether at home, in garrison or on a battlefield — begins with a commitment to safety. This month, the USACR/Safety Center launched the 2009 Army Safe Fall/Winter campaign to provide every member of the Army team the tools they need to make seasonal activities as safe as possible.

Whether hitting the slopes, planning a holiday party or packing your gear for a hunting trip, I encourage you to visit the campaign site at <https://safety.army.mil> to check out the wealth of articles, posters and videos that offer safety tips and reminders relating to many fall and winter activities.

Coming on the heels of one of the most successful summer safety campaigns ever, I am excited to see how this campaign will strengthen our Army team's commitment to safety and help us further reduce accidental Army losses during these colder months. I challenge each of you to incorporate important composite

risk mitigation measures into everything you do throughout the year.

As you incorporate these risk mitigation measures into your own lives, think about how what you do could be used to keep our entire Band of Brothers and Sisters safe and tell us about it. What works for you could absolutely work for someone else, and we want to hear about it.

This month, the Safety Center launched the second installment of the Peer-to-Peer video competition to help Soldiers spread off-duty safety awareness among their fellow troops. The competition is open to active-duty, Army Reserve and

National Guard Soldiers. Winners will receive a "Safety Emmy" and up to a \$2,000 cash prize courtesy of the Army's Better Opportunities for Single Soldiers program.

We received many wonderful, insightful videos during the first installment of the Peer-to-Peer competition, and I can't wait to see what our great Army Soldiers can come up with this time.

I would like to thank Brigadier General Wolf for this opportunity to serve our great warriors and their Families and the many civilians who make up our Army team. Additionally, I would like to thank Command Sgt. Maj. Tod Glidewell for his tireless efforts

over the past two years. He has truly made a change in the way we, as Leaders, view the safety of our force.

I am committed to keeping our Band of Brothers and Sisters safe wherever their lives may take them and look forward to working with every one of you as we constantly work to integrate risk mitigation measures into every aspect of our day. I'm here to serve you and your team.

Army Safe Is Army Strong!

Mike Eyer

Command Sergeant Major
U.S. Army Combat Readiness/Safety Center

Prevent

WINTER WEATHER Woes

STEVE BISHEL
U.S. Army Research and Development Command
Tank and Automotive Research, Development and Engineering Center
Detroit Arsenal, Mich.

Whether you're a newly licensed driver or an experienced 88M with a "gazillion" miles logged, reduced traction from snow, ice and rain can make driving during the winter months especially dangerous. However, while winter weather does pose additional risks to drivers, those risks don't have to result in an accident. There are several things drivers can do to operate their tactical vehicles safely when weather conditions take a turn for the worse.

Maintenance

Conduct preventive maintenance checks and services (PMCS) in accordance with your vehicle's technical manual (TM). It is especially important to ensure the antifreeze level and temperature protection are adequate for the winter environment. Also, make sure the windshield washer reservoir is filled with a washer fluid that provides proper cold weather protection. Because visibility is vital for safe driving, it's also a good idea to have new wipers installed. In addition, make sure your battery is in good condition and all lights (headlights, tail lights) are working properly.

Operation

To improve visibility, snow and ice should be cleared from a

vehicle's windows, mirrors, hood, roof, turn signals, taillights and headlights before operation. If you're driving on ice and snow, reduce your speed and maintain a safe stopping distance.

When climbing hills, accelerate slightly as you approach the hill and maintain a steady speed going up. This will allow the momentum of the vehicle to help carry it up the hill. Check the vehicle's TM for the proper gear settings for climbing and descending hills on ice or snow.

Also be aware of black ice, which is an invisible, thin layer of ice on road surfaces, including bridges and overpasses. (For more on black ice, see the info box on page 6.) Of course, you should always wear a seat belt and drive defensively regardless the weather conditions.

Braking

Operators must know what type of brakes are on their vehicle so they can use the proper technique for stopping on ice or snow. For vehicles with conventional hydraulic brakes (no antilock brakes (ABS)), use "threshold" braking by applying the brakes just short of lockup and then easing off the pedal slightly. Sudden braking will lock the wheels and cause the vehicle to slide out of control.

To stop a vehicle equipped with ABS, apply firm, steady pressure to the brake pedal. Do not pump brakes on a vehicle equipped with ABS. For vehicles equipped with air brakes, apply light, steady pressure and do not pump the brakes. For



The U.S. Army Combat Readiness/Safety Center's Driver's Training Toolbox has a series of winter driving presentations that can assist you in conducting training. It can be found on our Web site at <https://safety.army.mil/drivertrainingtoolbox/>.





vehicles equipped with an engine brake, do not apply the engine brake when operating on slick surfaces (ice, snow or rain). Refer to the TM for the type of brakes on your vehicle and specific recommended operations.

Tires

Make sure your vehicle's tires have adequate tread depth. Most tactical vehicles have a mud/sand/snow recommended pressure for added traction in these conditions. For vehicles equipped with the Central Tire Inflation System (CTIS), this would be the sand or snow setting. When no longer operating in snow, tire pressures will need to be increased as per the TM. Refer to the TM for the appropriate tread depth and pressure for your vehicle's tires.

Tire Chains

Use tire chains on your vehicle when conditions (ice and snow) require additional traction, such as in mountainous terrain. Select the appropriate tire chain as specified for your vehicle. If you are unfamiliar with using tire chains, conduct a trial fit on how to install and remove them before the start of a mission. Then you will already have the experience of using them when they are required.

Tire chains are designed to fit snugly; however, you should allow for some movement of the chain on the tire. Tighten chains by hand, rather than tools, to

reduce the possibility of over-tightening. Make sure you carry appropriate straps for tightening the chains if they become loose. The straps are listed by NSN below:

- 15 inches long, stretches 20 to 30 inches — NSN 5340-01-029-9084
 - 21 inches long, stretches 26 to 42 inches — NSN 5340-01-231-6015
 - 31 inches long, stretches 36 to 42 inches — NSN 5340-01-029-9085
- Reference the appropriate

TM for installation and restrictions regarding tire chains. When no longer operating in snow, the chains must be removed to avoid damage to the tires or vehicle.

Extreme Cold

Depending on the type of system, your vehicle may have a winterization kit that can be installed for operation in extreme cold. Refer to the vehicle's TM for information on the installation, operation and maintenance of this additional equipment.

Winter weather conditions can challenge any driver. Follow the suggested guidelines above when operating your tactical vehicle in snow and ice and you should arrive at your destination safely.◀

BEWARE OF BLACK ICE

Black ice — a thin sheet of ice on a dark roadway — is extremely dangerous because it's hard for drivers to detect before they're actually on it. Black ice forms when light rain or drizzle falls on a road surface below 32 F or when super-cooled fog droplets accumulate on bridges and overpasses. A roadway

covered with black ice appears wet when the ambient temperature is below freezing. Drivers must use extreme caution when driving on black ice. Vehicles that hit black ice have greatly reduced traction, very little braking capability and extremely poor directional control — all problems that heighten

the possibility of skidding. Ideally, vehicles should not be driven in black ice conditions. However, if the mission must go on, drivers should reduce their speed, accelerate very slowly, increase the following distance between vehicles, brake very lightly and make all turns gradually and slowly.



SEASONS CHANGE, SAFETY DOESN'T



GEAR UP!

GO TO
[HTTPS://SAFETY.ARMY.MIL](https://safety.army.mil)
FOR MORE INFORMATION

A Cocktail for Disaster

CHIEF WARRANT OFFICER 2 TYLER N. JOHNSON
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 Kentucky Army National Guard
 Frankfort, Ky.



O bviously, accidents are unplanned events. No one begins a mission planning to have an accident. Have you ever stopped to think about the mistakes you make in the cockpit? In most cases, one mistake doesn't result in an accident. More often, it's a chain of events that work together to trigger an accident. Soon, bad turns to worse and you've mixed a perfect cocktail for an accident.

We may be able to eliminate many, if not all, accidents if the human element were not a contributing factor in the event. Sadly enough, we, as humans, are not perfect and we're certainly going to make mistakes. What we can do, however, is identify, assess and control the hazards. The following scenario illustrates how a combination of several events and uncontrolled hazards almost led to a deadly cocktail.

I began adding "ingredients" to my very own accident cocktail one night in July, flying single-pilot instrument flight rules (IFR). The mission was a one-hour flight to Lexington, Ky., to drop off passengers and fly the routine empty leg home. As I arrived at the airfield that morning to preflight and fuel the airplane, dark clouds were forming. Why be concerned, right? Besides, I had flown this airplane for more than 300 hours and it had a great autopilot, which is a requirement for single-pilot IFR.

The morning went off without a hitch. The passengers were on time and the weather held as we got underway. We landed at Lexington Bluegrass Airport and the passengers informed me they would return by 5 or 6 p.m. and that I needed to wait for them while they conducted their business.

Fortunately, I had friends I could visit while in town for several hours. "This isn't such a bad change of plans," I thought to myself. The day passed and my passengers had not called me by 6 p.m. After a phone call came at 8 p.m. telling me they would be there shortly, I began to preflight the airplane in the now rainy weather. Get-home-itis had started to kick in several hours before, and standing in the rain

was not helping matters. Later on, the passengers called and said they had decided to stay the night, so I could return home and come back the next day to get them.

I suddenly became resentful and frustrated that I had stayed there all day waiting for them when I could have left in the first place and avoided the severe weather. My bitter attitude was now in control. Trying to beat the weather, I hurried to the airplane and forgot to update my flight plan. After starting the plane, I called the flight service station from my cell phone and quickly taxied out for a departure. I was behind the airplane and the power curve way before I ever took off. "No big deal," I thought. I had made this trip at night many times before.

As I climbed and passed through 1,000 feet, I lost all visual reference with the ground and transitioned to IFR. The trip went without incident until I was 30 miles from home station. While I was fortunate to have a great autopilot on board, I chose to disengage the system as I began my decent to 5,000 feet. I navigated the airplane while tuning in the frequency for the VOR (VHF omni-directional radio-range) approach by air traffic control.

I was cleared to 2,000 feet and told to maintain that altitude. My little "cocktail" was almost finished. I chose to trim out the airplane at 2,000 feet instead of re-engaging the autopilot. As I listened to the rain pound the windscreen, I retrieved my approach plates from my bag in the passenger seat. I turned on the cockpit light and reviewed the same old approach I had flown many times before in bad weather. I knew I was only killing

time. What I didn't know was that I was about to nearly kill myself.

The airplane that I trimmed out so perfectly had started a gradual right bank and pitched down slightly; however, I didn't recognize the change in attitude at the time. I continued to "kill time" by doodling on scrap paper when I heard the sound of screaming engines. As I looked at the instrument panel, all I remember seeing was 30 degrees right bank and 15 degrees nose down on the attitude indicator. I was working hard at stirring the cocktail and adding the final ingredient to become another statistic!

I'm here today to write this article because I was able, by the grace of God, to recover the airplane several hundred feet above the ground. Remember, I was flying at 2,000 feet when bad weather turned to worse. I placed myself in a situation that could've resulted in a tragic ending. Looking back, I had added more than enough mistakes to my accident cocktail — poor mission planning, failure to communicate, late mission changes, rushing to beat the weather and even overconfidence. This whole event was nothing more than poor judgment on my behalf.

Lessons Learned

I took a few lessons from this flight. Always keep your head in the game. Don't let external nonsense cloud your mind when you're making critical decisions in the cockpit. The minute the mission changes is the minute you need to reevaluate everything that's going on. The next time you're in a situation where you think you're in total control, ask yourself how many mistakes you are willing to mix into your cocktail for disaster. Fly safe and fly smart.◀

Three Who Survived

BOB VAN ELSBERG
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Staff Sgt. Mike Lewis glanced left and saw headlights glaring through his driver-side window. Trapped inside his crashed Ford Mustang as it straddled Interstate 24's westbound left lane, he thought, "This is it — I'm going to die."

Only moments before, Mike; his wife, Marnie; and their daughter, Phelan, had been driving home from a family fun day in Nashville, Tenn. It was Oct. 4, 2008, and visiting Nashville had been Phelan's idea. The 10-year-old wanted to tour the Grand Ole Opry Museum and Ryman Auditorium. She'd gotten her wish, after which the family drove to Opry Mills Mall for lunch and shopping. When they hit the road at 8:45 p.m. to return home to Clarksville, Tenn., traffic was light. They relaxed, expecting to be home within an hour.

But it didn't quite work out that way.

Brenda Gordon's red 2000 Mitsubishi Eclipse would have stood out boldly during daylight hours — but it wasn't daylight. It was about 9:15 p.m. when she inadvertently drove the wrong way up the Exit 8 off-ramp near Clarksville. She somehow avoided hitting anyone, but, in a couple of miles, that would change dramatically.

Somewhere between mile markers 10 and 11, Mike had overtaken a tractor-trailer in the right lane. Since he could legally go 70 mph — 5 mph faster than the 18-wheeler — he pulled into the left lane to pass. The Mustang eased around the big rig as the road curved gently

to the right and began to crest a knoll. As Mike guided the Mustang around the diesel, Marnie chatted on her cell phone with a friend while Phelan played with her new Build-A-Bear stuffed animal.

But as Mike crested the knoll, he wasn't alone. Brenda had escaped being hit head-on by other westbound traffic and was now cresting the knoll from the other side doing 100 mph. As both drivers reached the top of the knoll, the glare from each other's headlights filled their windshields. Mike desperately tried to swerve to the right. Marnie screamed and grabbed the

door handle to brace herself. Phelan, playing with her doll in the backseat, never saw what was coming.

At a combined collision speed of 170 mph, the impact forces were horrendous. As Mike, Marnie and Phelan flew forward, the Mustang's seat belt retractors quickly engaged. The lap and shoulder belts tightened

forcefully, bruising their shoulders and tearing Mike and Phelan's spleens. Because he'd swerved to the right, the Eclipse hit the Mustang's front bumper on the driver's side, crushing the dash and interior around Mike's legs and trapping him.

The impact sent both cars spinning counterclockwise out of control. The Eclipse struck the median guardrail, careened across both westbound lanes and then went off the road and onto the shoulder. The Mustang's right-rear bumper and

fender spun to the right, slamming into the left-front tires of the diesel's trailer, leaving blue paint smudges on the rims and tires. The Mustang rebounded and then crashed into the median guardrail, stopping sideways in the left lane. The

powerful collision forces had collapsed Mike's seat back onto the backseat. Had Phelan been sitting there, she'd have been crushed.

Still conscious but in tremendous pain and having trouble breathing, Mike heard Phelan crying out,



"What happened ... what happened?" He called out, "Phelan, Phelan!" and tried to twist out of his crushed seat to reach her. Trapped, he could not move. Then Marnie screamed again. Mike glanced up and saw headlights through his driver-side window. He was about to be T-boned. The last thought that flashed through his mind was, "This is it — I'm going to die!"

Heath Smith was driving his gray Honda Accord in the westbound left lane when his tires began hitting crash debris on the highway. Braking as he crested the knoll, he was shocked to see the Mustang sitting sideways, blocking the lane ahead. There was no way Heath could swerve in time to avoid hitting the Mustang and struck Mike's door, pushing it in deeply. In shock, Mike lost consciousness.

It was now 9:23 p.m. and, mercifully, the collisions were over. Drivers stopped to

render help. Passersby called 911 and tried to comfort Marnie. Her right arm was badly broken and she believed Mike, who was motionless and silent, was dead. Other motorists gently removed Phelan through the Mustang's shattered rear window, carefully brushing shards of glass from her hair and forehead. Fortunately, the cuts on her face and legs were only minor. One Good Samaritan wrapped Phelan in a blanket and, cradling her like a baby, held her until emergency responders reached the scene. It didn't take long.

"The ambulance got there pretty quick," Phelan said. She was placed inside, given an IV and later transferred to a helicopter that flew her to the Children's Center at Vanderbilt Medical Center in Nashville.

Getting Mike and Marnie out was much tougher. Emergency personnel used the Jaws of Life to remove Marnie's

door and extricate her from the wrecked car. To reach Mike, they had to cut off the Mustang's roof. He was still alive, but in critical condition. He and Marnie were flown in separate helicopters to Vanderbilt Medical Center, close to where Phelan was being treated.

It would be days before the family was reunited. Phelan was the first to be discharged, being released four days later to her grandmother. Mike and Marnie stayed much longer. Marnie's pelvis was crushed in five places and required extensive surgery and rehabilitative therapy. Mike spent 12 days in the hospital, during which a complex surgery implanted steel rods in his upper left leg to strengthen his damaged femur.

Eight months after his accident and surgery, he still walks with a limp. However, he is looking forward to the day he will return to his

duties as an explosive ordnance demolition specialist with the 723rd Ordnance Company at Fort Campbell, Ky. A veteran of Iraq who had detonated improvised explosive devices to protect other Soldiers, he'd almost died on the road a few miles from his home. But for the Army, that happens all too often. Accident trends consistently show Soldiers are more likely to die in their vehicles on the highway than by accidents in combat zones.

That is the moral of this story. Sometimes, Soldiers and their Families are the innocent victims of other people's irresponsibility. There was nothing Mike, Marnie or Phelan could have done to foresee or prevent this accident. The only thing they could do was increase their chances of surviving by buckling up when they got into the Mustang.

Mike is convinced those seat belts made

a huge difference that night for him and his family. They kept him and Marnie from being thrown through the windshield and onto the road. They kept Phelan in place in the backseat, preventing her from either being ejected from the car

or thrown behind the driver's seat and crushed.

As Mike thought back on that night and the 170-mph, head-on collision with the Eclipse, he said, "Seat belts definitely saved our lives. As fast as she was going and we were going, we'd have never

made it without them."

Mike's thoughts were echoed by Michael Browning, public affairs officer for the Tennessee Department of Safety. He has seen a multitude of accident reports and knows, from experience, the role seat belts play in saving lives.

"In crashes that would otherwise be fatal, you have a more than 70 percent chance of surviving if you are restrained," he said.◀◀



SEAT BELTS definitely **SAVED** our **LIVES**. As fast as **SHE** was **GOING** and **WE** were **GOING**, we'd have **NEVER** made it **WITHOUT** them.▶▶



FIGHTERS

CHIEF WARRANT OFFICER 4 CHRISTOPHER D. VOLKERT
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The Department of Defense and Army, along with defense contractors and manufacturers that support them, are always looking for ways to enhance safety and improve the survivability of Soldiers who operate equipment used on the battlefield. One such enhancement is the automatic fire extinguishing system (AFES) or fire suppression system (FSS).

Many of the Army's systems, including the Abrams, Bradley, HMMWV, Mine Resistant Ambush Protected vehicle and Stryker, contain either the AFES or FSS. These devices provide a line of defense between the vehicle crew and any fire that might result from an explosion. Within a fraction of a second after fire is detected inside the vehicle, the system can extinguish the flames before equipment is ignited and, more importantly, Soldiers are burned.

However, like any other mechanical device or system,

the AFES/FSS cannot perform its mission without some conditions being satisfied. It must be properly operated by trained crewmembers and regularly inspected. Any faults or shortcomings in the system must be reported to qualified maintenance personnel who can service, repair or replace the faulty components.

Crews must take the time to clean components to ensure they will function properly when needed. Also, the system must be regularly and properly serviced in accordance with the appropriate technical publications. If these conditions are met, Soldiers can be confident that the AFES/FSS installed in their vehicle will function "as advertised" to keep them safe.

While there are differences between the AFES and FSS that are dictated by the system they belong to, they operate based on the same principles. Both have some type of control panel or box which allows the operator to enable or disable the system as required. Both also have an infrared (IR) sensor system designed and positioned to quickly detect and analyze the initial formation of a fire. The sensor does this by measuring changes in IR light across a designated spectrum. When the detected flame exceeds the

prescribed threshold, the system engages to extinguish the fire. Of course, each system has a set of bottles that contain the fire-extinguishing agent. The AFES and FSS are most commonly installed in crew and engine compartments, but some vehicles may have additional coverage in other parts of the vehicle.

When operating a vehicle with an AFES/FSS, adhere to the following do's and don'ts:

Do:

- Have confidence in the system. It has been tested repeatedly by the Army at Aberdeen Proving Ground.
- Take the time to become familiar with the system. Learn how to operate and maintain the system in accordance with the required training manuals so it functions properly.

Don't:

- Block sensors or distribution nozzles. A sensor must be able to "see" the area it protects. Nozzles must be able to broadcast the agent throughout the area to be protected.
- Install, remove or handle the bottles without first ensuring the anti-recoil plug is installed in place of the discharge nozzle. Without

this device installed, the bottle could become a projectile (in other words, fly like a missile).

- Weld, cut or braze within three feet without disconnecting the system (see appropriate technical manual).
- Use high-intensity lamps pointed within a few inches of the sensor during hours of darkness.

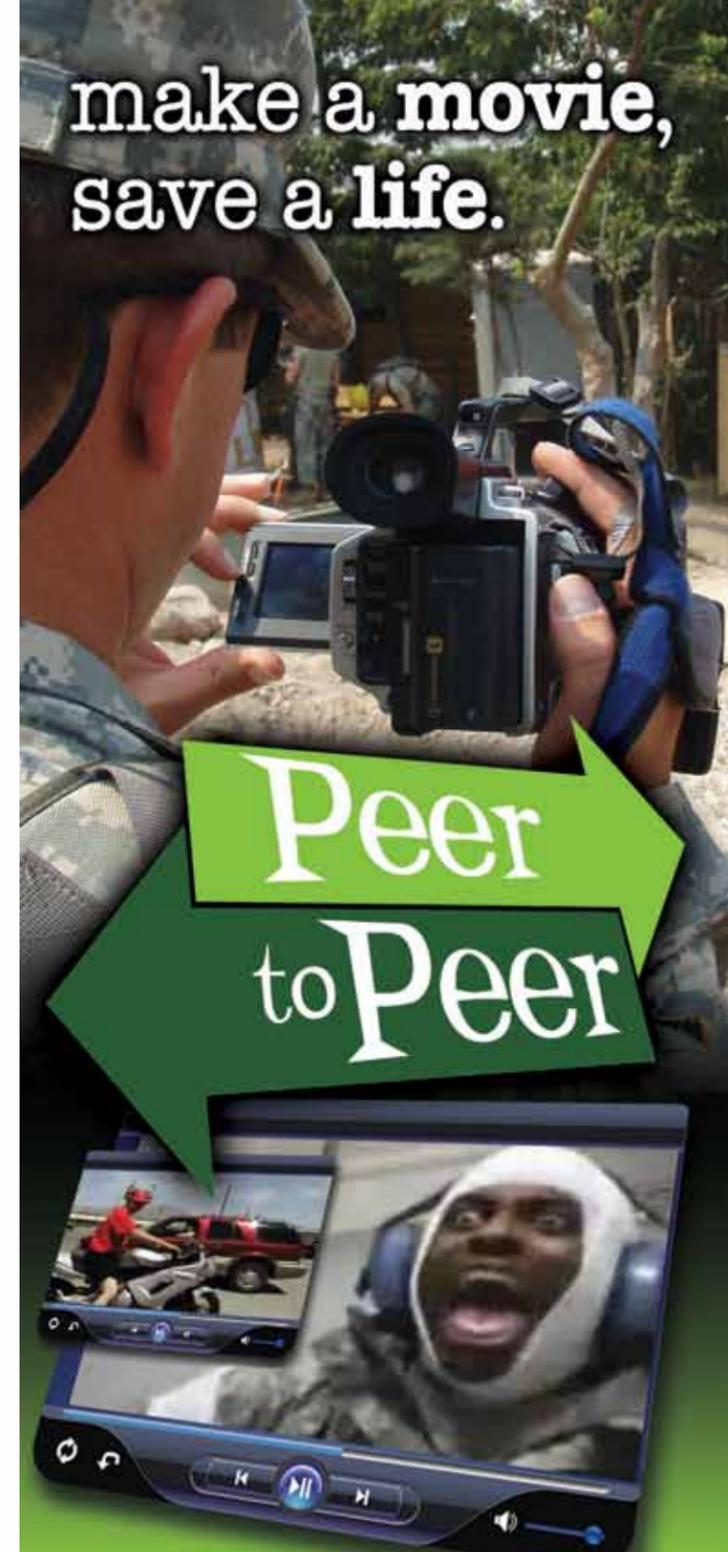
Most mistakes made by operators and crews working with an AFES/FSS result from Soldiers not being familiar with the system installed on their vehicle. This lack of knowledge and understanding often results in mistakes that lead to system errors or failures. Consequently, rumors may spread that the system was at fault. Unfortunately, this can diminish the confidence Soldiers and Leaders have in the system.

Mistakes are often made during transportation loading and unloading operations at the port or railhead. Operators who load or unload equipment must be familiar with the operation of an AFES/FSS to prevent unintended discharges. The accidental activation of an AFES/FSS by untrained personnel could be a source of rumors that the system "goes off whenever it wants." Pay special attention to ensure personnel detailed for loading operations are trained and carefully read the labeling on switches. A Soldier who is unfamiliar with a system can easily flip the wrong switch at the wrong time, causing an unintended discharge.

There are other myths associated with the AFES/FSS. Contrary to what many believe, Soldiers can remain inside the vehicle — if necessary — after the system has discharged, which allows enough time to drive out of a hostile area if the situation requires. It is also safe to be near the IR sensors, as they only receive IR and do not emit any signal.

The AFES/FSS is an effective means of keeping Soldiers safe. However, it's only as effective as the training given to the Soldiers who operate and maintain it. Technical manuals and publications from individual manufacturers provide all the required information on the systems found in your unit's vehicles. Use that information to prepare your Soldiers to operate this equipment properly. ◀

make a movie,
save a life.



Peer
to Peer

The competition runs
Oct. 1, 2009 to April 30, 2010

For more information and contest rules for Peer to Peer, go to <https://safety.army.mil/videocompetition>.



The U.S. Army Combat Readiness/Safety Center's Driver's Training Toolbox contains "smart cards" for the Kidde Automatic Fire Extinguisher System. The cards can be downloaded for local reproduction at <https://safety.army.mil/drivertrainingtoolbox/>. Look under the "Graphic Training Aids" tab.

RULES FOR the Ghouls

DON BURNS
842nd Transportation Battalion
Beaumont, Texas

Halloween is a time of endless imagination — when children can dress as anything they want, from monster to movie star. But before you open the front door to unleash your children on the neighborhood, did you warn them of the dangers they could encounter? If not, you need to explain the rules of the night.

The Quest for Treats

Before leaving the house, parents should carefully map the trick-or-treating route. Children must understand that this is the plan and they shouldn't deviate from it. For parents of children who are old enough to trick-or-treat on their own, this will allow you to check on them along the way.

Children should also know they must be especially careful when crossing the streets, looking both ways for traffic. It's a good idea to trick-or-treat in groups, which will make children more visible to

motorists. Flashlights are another good tool to make children more noticeable and will also help light dark pathways and driveways. If you or your children see a house that doesn't have decorations or lights on, chances are the owners don't have the Halloween spirit. Stay away! Also, instruct children to not talk to, or get into cars with, strangers.

The Inspection

For some children, the temptation of a bag full of candy is just too great, so they might try to "sample" their treats along the way. Make it clear that all

candy must be inspected before it's consumed. If your children want to eat candy while they trick-or-treat, give them some goodies you brought from your house.

Once the evening is over, inspect all candy and treats. Throughout the years, experienced trick-or-

treaters know what to look for in candy appearance. Candies that have loose or missing wrappers are suspect, so check them closely. If a treat appears tampered with in any way, throw it in the trash.

Halloween should be a night full of fun and laughter. If done right,

the memories will live in the hearts of your children forever. Make this Halloween one to remember by focusing on safety. That's the best "treat" you can give them. After all is said and done, just remember that Dad gets all the Tootsie Rolls!◀

FYI

Parents are responsible for their children's safety. To help keep your children safe this Halloween, follow these simple tips provided by the Home Safety Council:

- Be sure all children under age 12 trick-or-treat with an adult. Walking on dark streets can be dangerous.
- Only permit trick-or-treating at the homes of friends and neighbors you know well.
- If you buy a costume, read the box or label. Look for the words "flame retardant" or "flame resistant." These costumes are more fire-safe.
- Make sure the costume is the right size so your child won't trip on it. (Editor's note: Light-colored or reflective costumes make children more visible.)
- Give your child a flashlight or light stick to carry.
- Make sure your child can see well. Only use masks with large holes for the eyes, or use face paint instead of a mask.
- Be sure that costume accessories, such as knives and swords, are made of a soft material that bends easily.
- Never carry candles, torches or other open flames as part of a costume.
- Keep shoelaces tied. Be careful of pumpkins and things on porches that can trip your child.
- Make sure all children in the group carry an ID card with their name, address and emergency phone numbers (including area code) in case they get lost.
- Remind children to walk, not run, especially after dark. If possible, stay on sidewalks.
- Carefully look through your children's candy before you let them eat it.
- Throw away open treats and those not in their original wrapping. Discard homemade goodies from unknown sources.
- If you think your child has eaten something that made him sick, call 911 or the Poison Control Hotline at 1-800-222-1222.
- Tell children to sit down when they eat and to take small bites.
- Young children should never help carve a pumpkin. Instead, decorate pumpkins with markers, paint or stickers. For more information, visit www.homesafetycouncil.org.

BE CAREFUL WHAT YOU WISH FOR

CHIEF WARRANT OFFICER 3 KEVIN BELANGER
 Defense Contract Management Agency
 Bell Helicopter Textron
 Fort Worth, Texas

The day began just like any normal duty day. The mission was a standard OH-58D reconnaissance flight to prevent counter-insurgency indirect fire into outlying forward operating bases (FOB) and provide support as needed. I was flight lead in the left seat, allowing my platoon leader to get some right-seat stick time. It was just another routine goggle flight in Iraq.

The illumination was close to 100 percent and the night seemed like it was going to be a quiet one with no imminent threat. We had been operating in this area for the past few months and were very familiar with the individual sectors and the route structure. We made our way through the city staying above 250 feet, which was our hard deck for goggle operations at that time due to the number of towers in the city. We ensured our actions were unpredictable, paying special attention to often-used points of

origin (POO) sites of indirect fire.

We returned to the forward arming refueling point (FARP) as we were getting low on fuel. It was a particularly calm night and we needed to break up the monotony. We departed the FARP as soon as we refueled. This time we took a different departure route to break up any patterns we may have established. I made a comment to my trail aircraft that I hoped this bag of gas wasn't as boring as the last. It wasn't.

As we approached the edge of the city to make our way to another POO site a few kilometers

away, my aircraft simultaneously pitched up and turned abruptly to the right. Still flying left seat, I immediately grabbed the controls and, at the same time, looked toward my right-seater to see a flash of light coming up from the ground. It looked like a roman candle passing to our 6 o'clock. At the same instant, trail came on the radio stating, "I have the POO!" He was about to engage when he saw me do a 180. He suddenly aborted his engagement to avoid hitting me.

I checked the aircraft's systems and identified the loss of tail rotor

control along with a complete loss of hydraulic power. As I attempted to regain aircraft control and get the altitude and airspeed stabilized, I noticed we had lost airspeed and altitude. We had been flying fairly straight and level at roughly 65 knots and 250 feet above ground level. By the time I took the controls, the airspeed had slowed to roughly 40 to 45 knots and I had zero tail rotor control, which meant full pedal movement resulted in no aircraft response. I checked the aircraft instruments and didn't see any abnormal conditions or indications. Now, keep in mind this all happened within a couple of seconds —

although it felt like an eternity. I had multiple subsystem failures as well. The multifunctional display had various caution, warning and advisory messages. My main concern was trying to regain aircraft control. My airspeed was still about 40 knots and I knew I needed forward airspeed to get the aircraft streamlining and under control again. I managed

to establish communication with my co-pilot by transmitting over UHF, as my internal communications were gone. I got my point across that I needed to recover some forward airspeed and he assisted by helping me push the cyclic forward. Once we gained airspeed and stabilized our altitude, I managed to recover and fly the aircraft back in a left sideslip and perform a

run-on landing at the airfield.

I kept my airspeed up and slid along the active runway, using a good portion for my run-on landing. I maintained heading with the throttle as I was sliding along and I made sure I didn't overcontrol the aircraft. I continued to apply throttle to maintain aircraft heading while slowly lowering the collective. As the aircraft began to slow down, I rolled the throttle to idle and slid about 50 feet, finally coming to a stop 90 degrees off the active heading. Upon postflight, we identified foreign object debris damage from a weapon system that punched through our aircraft without detonating. The rocket that hit us severed the tail rotor push-pull tube, directional control hydraulic lines and a few other subsystems.

Our flight crew is happy to be alive today. However, during the time I was attempting to regain control, my air mission commander (AMC) was worried we might not recover and had already

notified the military police (MP) patrolling the streets to move to our location. We had also been supporting missions for a couple of special ops communities and worked out a partnership of sorts. Our AMC, knowing they were leaving the FOB shortly, contacted them to move in as well. In a matter of minutes, I had MPs and ground special operations teams moving to our location.

The point I'm trying to make is although we have a system established in theater as the "fallen angel" call, it still takes time to get ground assets moving in the right direction. Having personally been involved in providing security during an actual fallen angel, I can say that it takes time to relay info to your tactical operations center and then get forces moving.

Get to know the assets in your area of operation, including those on your own FOB. Establish a close working relationship — or at least develop a plan of action — so you can contact them in the event of

an emergency. Know the missions of adjacent units and where they will be conducting them. At the very least, talk to them, get their frequencies and keep them as a quick reference on your kneeboard so you can contact them.

When we had our after-action review, it was comforting to know those assets aborted their missions and were en route, just in case we needed them. At least for me, having aerial security is good, but having ground forces roll into your area quickly is even better. Lastly, continue flying the aircraft no matter what happens.◀

“ Get to **KNOW** the **ASSETS** in your **AREA** of **OPERATION**, **INCLUDING** those on **YOUR OWN FOB**. ”

Who Took the Picture?



1ST LT. SHELTON D. JOHNSON
177th Armored Brigade Safety Officer
Camp Shelby, Miss.

Editor's note: The names of the individuals mentioned in this story have been changed to protect their privacy and that of their Families.

1st Lt. Anthony Gonzales was preparing for one of the greatest challenges of his life as a Soldier — a deployment to Iraq — and decided to take some time off. Even though he loved being with his Soldiers at Camp Shelby, Miss., he wanted to take a four-day pass to travel to North Carolina to see his wife, who was expecting a baby girl any day.

Gonzales, a platoon leader, mentored his Soldiers and they respected him for being a good Leader. Several weeks earlier, he and some of the other Soldiers bought motorcycles with the extra funds they had received now that they had been mobilized. They all attended Motorcycle Safety Foundation training — a requirement for all Soldiers who ride —

and then were counseled by leadership on motorcycle safety.

Gonzales planned to take Friday through Monday for his four-day pass. As he got off duty at 4:30 Thursday afternoon, 1st Lt. Brian Woodard reminded Gonzales of a get-together to watch a game that night. Since he wasn't leaving until the following day, Gonzales decided to attend the party and rode his bike. When the game ended, he called his wife to tell her he was headed back to his apartment. As he was leaving, Woodard shook his buddy's hand and told him to be safe.

Heading home on U.S. 49, Gonzales gunned it on a straight stretch of road and bent the speedometer needle past 100 mph. He'd reached 110 mph when a driver failed to see him approaching, pulled into the road and blindsided him. The impact threw Gonzales more than 50 feet through the air before he landed on the road, where he died on impact. Tragically, Gonzales never took that four-day pass. He'd never see his wife again or meet their baby girl.

Gonzales' unit investigated his death. Some of the answers the

investigating officer got during his interviews led him to check out Gonzales' MySpace page. When he opened it, he saw pictures of Gonzales performing dangerous stunts on his motorcycle. Most surprising — almost prophetic — were those photos showing Gonzales speeding on U.S. 49. A person riding in a car alongside him took a photo titled, "This is me at 110 mph."

I wondered who took that picture because they could have helped save his life. Instead of encouraging him to risk his life for a "cool" photo, they could have warned him to consider the possible consequences. Yet, time and again, Soldiers egg each other on to take needless, even deadly, risks just to prove they can do it. Sure, Gonzales was responsible for his decision to ride recklessly, but he didn't make that decision in a vacuum — others encouraged him.

So, what about you? What will you do when you see a buddy taking needless risks? Will you warn them of the dangers or egg them on to see what happens? Will you mentor them or set them up to be a fallen comrade? The moment you know a buddy is at risk, you've stopped being an "innocent" bystander. You are responsible. You have a choice. What will you do? <<

“ **HEADING HOME** on U.S. 49, Gonzales **GUNNED IT** on a **STRAIGHT** stretch of **ROAD** and **BENT** the speedometer needle **PAST 100** mph. ”

Share street smarts while helping your battle buddy!



MMP MOTORCYCLE MENTORSHIP PROGRAM

Mentoring can be fun and set up in various ways.

- Unit-level one-on-one mentorship
- Unit-level riding groups
- Private organization
- Combination unit program and private organization at the installation level
- Non-appropriated fund instrumentality

Check out the MMP Web site for some examples of active mentoring programs:

<https://safety.army.mil/mmp/>



When Sparks Fly

MICHAEL WOOD
Ground Task Force
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

In combat, Soldiers are constantly scanning the surrounding area, looking for enemy contact from weapons and improvised explosive devices (IED). Maintaining situational awareness on the battlefield assists them in identifying enemy hazards so they can make correct decisions to prevent serious injury and death. Yet, when some Soldiers enter the forward operating base (FOB), that high state of alertness often diminishes, which leaves them vulnerable to hazards that can cause accidents.

Improperly operated equipment such as heaters, stoves and generators can cause property damage, severe injury and, in some instances, death. The Army experiences these types of accidents each year. The following two fires occurred in 2008 and are typical of accidents that happen to Soldiers during training exercises and while deployed.

The first accident occurred on a range in a sleeping tent. The potbelly stove had gone out, so a Soldier attempted to restart it by pouring fuel into it. The

heater had not properly cooled and the fuel ignited, sending flames into the Soldier's face. The Soldier received first-degree burns on his face and eyes.

In the second accident, a Soldier was tasked to refuel a non-Army-standard 25K FG Wilson P250 HE generator — an operation he had conducted successfully many times during his deployment. The 5-gallon fuel can he was using was plastic with a metal spout and filled with JP-8. The generator was still operating as the Soldier began the refueling operation.

As the Soldier brought the fuel can up to the fuel reservoir, the metal fuel spout came into contact with the live electrical wires connected to the generator starter. This contact produced an electrical spark that ignited the fuel, causing the fuel can to explode and engulf the Soldier in flames. The Soldier received burns on more than 60 percent of his body and now has a permanent total disability.

There were two major factors in these accidents. The first Soldier did not let the heater cool before trying to relight,

and the second Soldier refueled the generator while it was still in operation, which meant the starter wires were producing an electrical current. Fortunately, fires involving equipment and fuel are preventable if the following precautions are taken:

- Leaders must ensure all Soldiers are trained and licensed on the equipment they will operate.
- Soldiers should follow the equipment technical manual on operation, refueling and preventive maintenance checks and services.
- Proper personal protective equipment must be available and used to allow Soldiers to safely conduct the operation.
- Each generator must be properly grounded.
- A fully operational fire extinguisher must be in close proximity, and fuel storage should not be located next to the piece of equipment.

For the most part, Soldiers do a great job protecting themselves outside the wire. However, they can't let their guard down once they return to the FOB. Leaders can help stop this needless loss of equipment, serious injuries and deaths by ensuring Soldiers are trained to Army standards on each piece of equipment they operate. This will allow them to recognize hazardous operations and stop any unsafe acts.◀

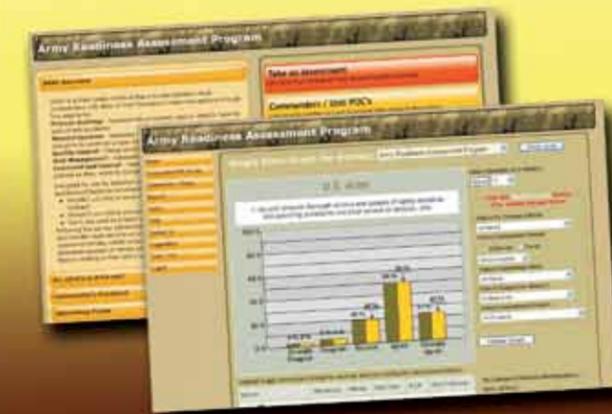


Wouldn't you like to know if your unit is about to experience a mishap?

Wouldn't you like to prevent the loss of personnel and equipment?

Don't you want to protect your combat power?

ARAP is a Web-based initiative that provides battalion-level commanders with data on their formation's readiness posture.



Sign up for your assessment today!
<https://unitready.army.mil>

It's "zero-dark-thirty" on a Saturday morning and you're cranking your car to drive to weekend drill. As you set your coffee cup in the holder, did you realize you are already on duty? That's right — as a Soldier in the Army National Guard or U.S. Army Reserve, your on-duty time includes trips to and from drill. This means that when you pull out of the driveway, you must obey the driving statutes of your city, municipality and state, as well as Army Regulation 385-10, The Army Safety Program.

BENJAMIN A. BAILEY
Driving Task Force
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

"DRILLING IN" DRIVING SAFETY

So, what does this mean as you start your trip? Here is a summary of things you need to do:

- Check your vehicle's mechanical condition before starting your trip. Make sure your tires are in good condition and properly inflated. Lift the hood and inspect your vehicle's oil, transmission, power steering, power braking and coolant levels. Check your lights, signals, horn and windshield wipers.
- Ensure you and all passengers are wearing seat belts.
- Make sure you — or whoever is driving — is properly rested.
- Drive safely, observing speed limits and obeying traffic laws.
- Don't drive distracted by talking or texting on your cell phone.
- Clean your windshield, windows and mirrors. Also, take a few moments to adjust your mirrors to eliminate any blind spots.

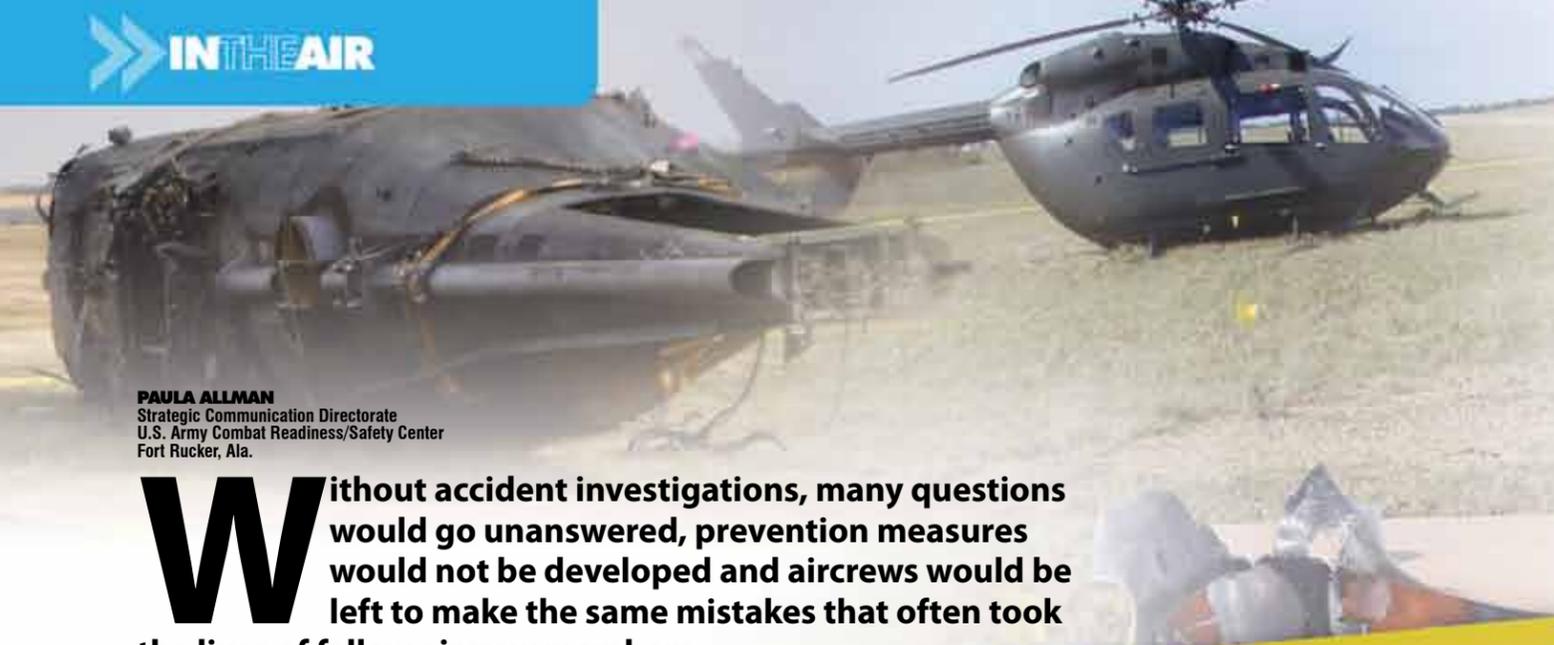
- Make sure your direct supervisor knows if you use any prescription or nonprescription medications that could reasonably impair your driving or alertness.
 - Notify your commander of any traffic violations on or off post.
 - If you're a passenger, be a battle buddy and help the driver spot any hazards on the road.
- Do you ride a motorcycle to duty? Most of the above safety precautions still apply except for the use of seat belts and certain maintenance items. One key requirement for operating motorcycles is to wear personal protective equipment (PPE) every time you ride. That PPE includes:
- A Department of Transportation-approved helmet (regardless of state helmet laws).
 - Impact- or shatter-resistant goggles, glasses or shields (must meet or exceed American National Standards Institute Z87.1).

- Sturdy footwear, leather boots or over-the-ankle shoes.
 - A long-sleeved shirt or jacket, long trousers and full-fingered gloves or mittens.
 - A brightly colored outer upper garment (day) or reflective upper garment (night).
- Still got questions? Visit http://www.apd.army.mil/pdffiles/r385_10.pdf and go to chapter 11. Got an additional duty safety officer or NCO? Pick their brains; they have a wealth of knowledge. Remember, you're a Soldier from the moment you don your uniform for drill until you take it off at home after drill. Drive safely so you'll be around for next month's drill.◀

ARE WE THERE YET?

Be realistic about the distance you can cover in a day. Find out before hitting the road. Use the easy, online **TRIPS** tool today!

TRAVEL RISK
TRIPS
PLANNING SYSTEM
<https://safety.army.mil>



PAULA ALLMAN
Strategic Communication Directorate
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

Without accident investigations, many questions would go unanswered, prevention measures would not be developed and aircrews would be left to make the same mistakes that often took the lives of fellow aircrew members.

ACCIDENT INVESTIGATION — *A Necessity for Safety*

Obviously, the most asked question following an accident is “what happened?” Was materiel failure a cause? Were environmental factors responsible? Or was human error to blame? We must also know why it happened. If a weakness in leadership, training, standards or support functions led to the tragedy, then we must find that weakness.

When an accident occurs, determining the circumstances surrounding the accident and finding answers to these questions becomes a driving force. Following an accident, the very reliability of the aircraft is sometimes questioned. If a mechanical malfunction caused the accident, the possibility exists

that the same malfunction could strike other aircraft. Although mechanical malfunctions do occur, the majority of accidents result from human error. We need to know why the errors occurred.

Before prevention measures can be developed, we must determine what happened, what caused it to happen and why specific errors occurred. If cause factors can be determined, then the question becomes “what can we do to prevent this kind of accident from happening again?”

Centralized Accident Investigation

These basic questions (what happened, why it happened and what can be done to prevent

this from happening again) are sometimes referred to as the “3-W” questions. They are not new ones, and they do not apply only to aviation accidents; they are relevant to all accidents. They are questions the U.S. Army Combat Readiness/Safety Center (USACR/Safety Center) has been attempting to answer since April 1978, when the Army began a trial period of centralized accident investigations (CAI).

These CAIs have proven so effective that they are still the process used today to answer the 3-W questions. Currently, the USACR/Safety Center investigates all Class A aviation accidents Armywide. The success of the program was such that on Oct. 1,

1982, the Army expanded these investigations to include selected Class A and B ground accidents.

The Quest for Answers

As this issue of Knowledge is being prepared, accident investigators are deployed and diligently searching for answers, trying to determine what happened and why. But it will be some time before those answers are known.

Sometimes, despite all the

focus is then diverted to finding ways to enhance the safety of our aircrews. Sometimes the “fix” is at unit level, such as improving unit training or enforcing standards. Other times, the fix is at Army level, such as improving school training or changing equipment design or operating procedures.

Safety is about helping units conserve resources and maintaining readiness through

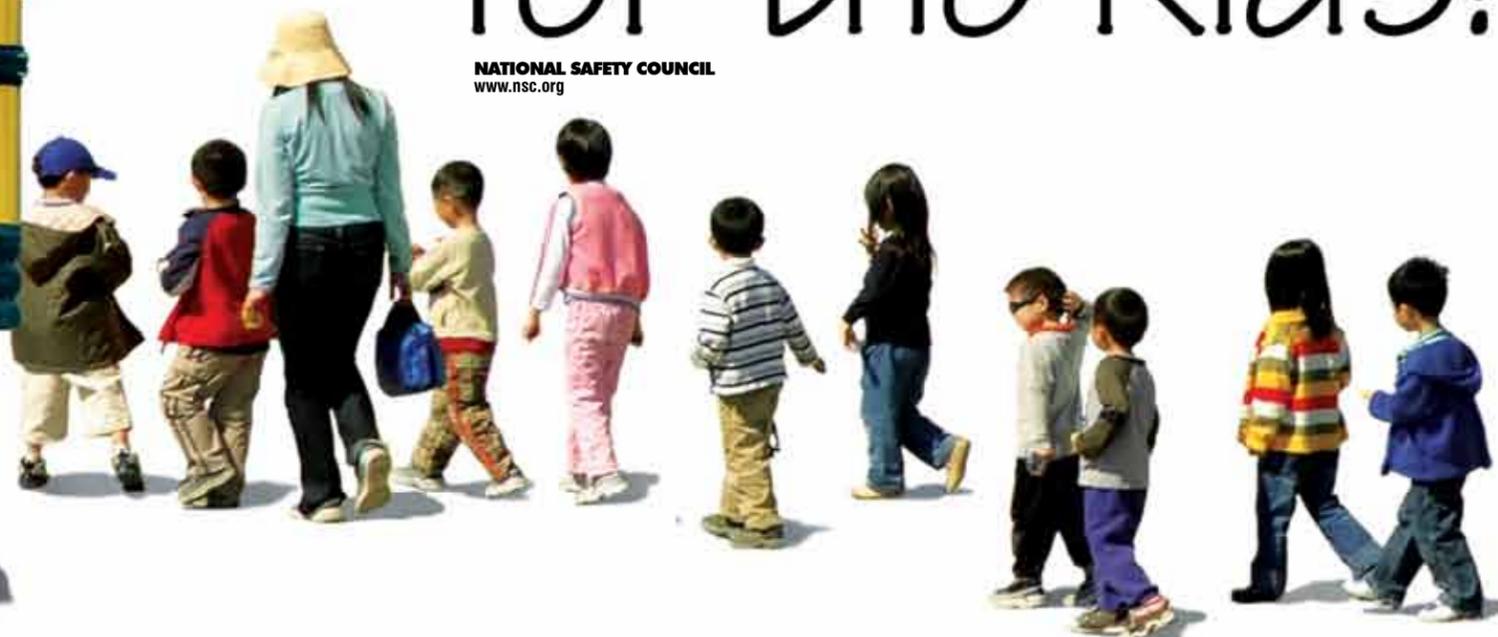
accident prevention. Accident investigation is a necessity in our safety program. With the information obtained from accident investigations, safety programs and prevention measures can be developed to protect our aviation resources in similar situations, bringing safety back as our first line of defense.◀◀





WATCH OUT for the Kids!

NATIONAL SAFETY COUNCIL
www.nsc.org



Got kids in school? Did you know October 18-24 is National School Bus Safety Week? Here are some tips from the National Safety Council to help keep your children safe.

Getting on the School Bus

- When waiting for the bus, stay away from traffic and avoid roughhousing or other behavior that can lead to carelessness.
- Do not stray onto streets, alleys or private property.
- Line up away from the street or road as the school bus approaches.
- Wait until the bus has stopped and the door opens before stepping onto the roadway.
- Use the handrail when stepping onto the bus.

Behavior on the Bus

- When on the bus, find a seat and sit down. Loud talking is not allowed because noise can distract the bus driver.
- Never put your head, arms or hands out the window.
- Keep aisles clear. Books or bags are tripping hazards and can block the pathway in an emergency.
- Before you reach your stop, get ready to leave by getting your books and belongings together.
- At your stop, wait for the bus to stop completely before

getting up from your seat. Then, walk to the front door and exit, using the handrail.

Getting off the School Bus

- If you have to cross the street in front of the bus, walk at least 10 feet ahead of the bus along the side of the road until you can turn around and see the driver.
- Make sure the driver can see you.
- Wait for a signal from the driver before beginning to cross.
- When the driver signals, walk across the road, keeping

an eye out for sudden traffic changes.

- Do not cross the centerline of the road until the driver has signaled that it is safe for you to begin walking.
- Never cross the street behind the bus. Stay away from the rear wheels of the bus at all times.

Correct Way to Cross the Street

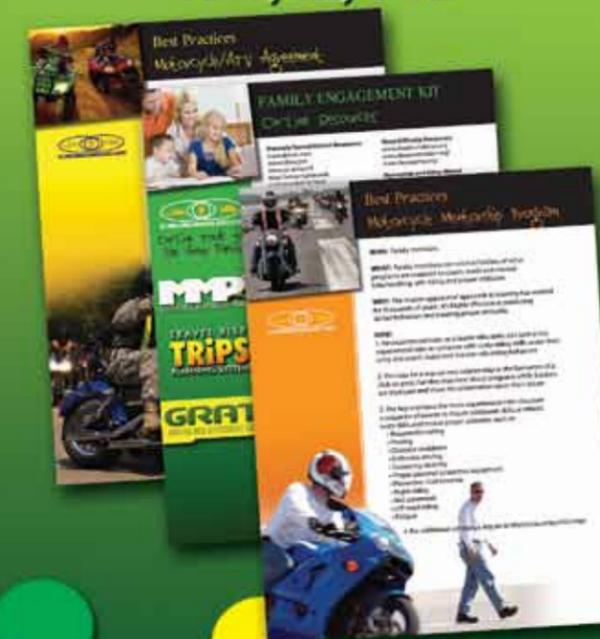
Children should always stop at the curb or the edge of the road and look left, then right and then left again before crossing. They should continue looking in this manner until they are safely across. If a child's vision is blocked by a parked car or other obstacle, he should move out to where drivers can see him and he can see other vehicles, then stop and look left-right-left again.◀



Family
engagement kit

<https://safety.army.mil>

Army Safe is Army Strong and that starts with a Soldier's Family. Have the information to help you and your Family stay SAFE.



Be prepared and get your own Family Engagement Kit TODAY!

HOW DO I Get Out of Here?



VICKI ARNESON-BAKER
G5
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

We see exit signs inside buildings all the time, but many of us don't give them a second thought. If there was a fire or other emergency and you had to make a quick exit from a building, would you know where to go?



Creating an emergency exit strategy probably isn't at the top of your "to-do" list. Yet, every day, people lose their lives because they're unable to get out of a burning structure. As you look around your home or office, you might think that you wouldn't have any problem finding your way to safety. But what if your normal exit is blocked by flames? What happens if you become disoriented in the heavy smoke? Will you still be able to make it out of this situation alive?

Exiting a burning building can even challenge those who fight fires for a living. On the night of Dec. 3, 1999, in Worcester, Mass., two firefighters who responded to a warehouse fire became disoriented while searching the building for homeless people. Two additional teams of firefighters entered the building to conduct a search and rescue of the first team, but they, too, became lost inside the maze of doors, hallways and windowless rooms.

All six firefighters died in this fire. Think about that. Six highly trained, career firefighters who fully understood the nature of the situation were unable to exit a building they had entered just minutes earlier. If it happened to them, you better believe that it could happen to you.

Consider all the places you visit throughout the day — the office, supermarket, warehouse supercenters, hotels, restaurants and motorpools. Do you always know where to find the closest exit? Do you know of an alternate exit if your first choice is too crowded or blocked?

How long would it take you to find an emergency exit when you're in a state of panic

inside a room full of smoke and desperately gasping for air? Would it take 15 seconds? How about 30 seconds? Longer? Next time you're in one of these places, see if you can locate an exit sign. Remember, every second counts in an emergency and every hesitation reduces your chance of survival.

There are a variety of regulatory requirements for the design and construction of exit routes, doors, stairs and lighting and multiple actions we can all take to ensure the components of an exit route are maintained and operational, including:

Exit Routes

- Ensure exit routes are free and unobstructed by materials,

equipment, locked doors or dead-end corridors.

- Keep exit routes free of explosives or highly flammable furnishings and other decorations (i.e., don't store a flammable cabinet in an exit hallway or next to the door).
- Arrange exit routes so employees will not have to travel toward a high-hazard area unless the path of travel is effectively shielded from the high-hazard area.
- Maintain exit routes during construction, repairs or alterations.

Exit Doors

- Mark doors or passages along an exit access that could be

mistaken for an exit as “Not an Exit” or with a sign identifying its use, such as “Closet.”

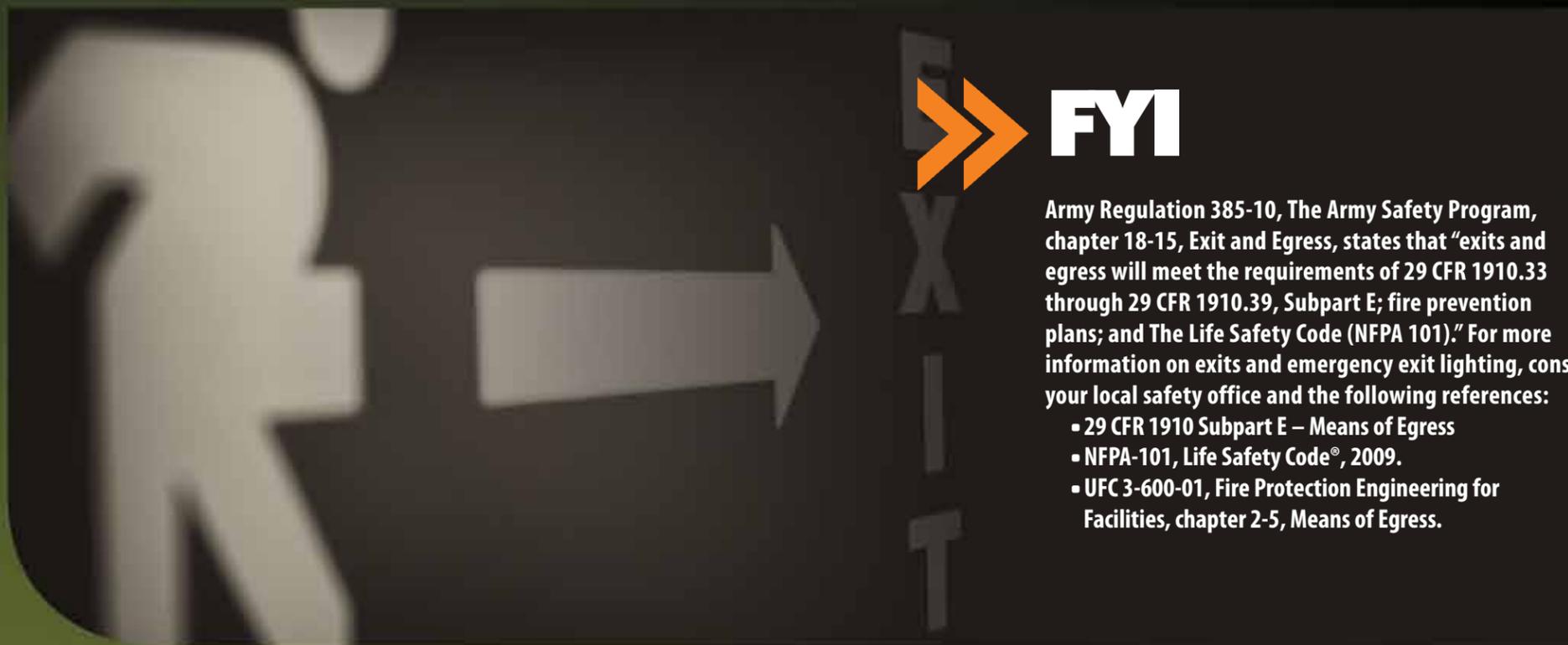
- Keep exit route doors free of decorations or signs that obscure their visibility.
- Ensure emergency exit doors are unlocked when the building is occupied and panic bars operate properly.

Exit Lighting and Signage

- Provide adequate lighting for exit routes.
- Post signs along the exit access indicating the direction of travel to the nearest exit, especially if that direction is not immediately apparent.

- Perform monthly and annual tests on emergency lights and exit signs.

When time is critical, you don’t want to waste it searching for the nearest exit. Have a plan in place. When disaster strikes, don’t get stuck yelling, “How do I get out of here?”



Army Regulation 385-10, The Army Safety Program, chapter 18-15, Exit and Egress, states that “exits and egress will meet the requirements of 29 CFR 1910.33 through 29 CFR 1910.39, Subpart E; fire prevention plans; and The Life Safety Code (NFPA 101).” For more information on exits and emergency exit lighting, consult your local safety office and the following references:

- 29 CFR 1910 Subpart E – Means of Egress
- NFPA-101, Life Safety Code®, 2009.
- UFC 3-600-01, Fire Protection Engineering for Facilities, chapter 2-5, Means of Egress.

TESTING EMERGENCY LIGHTS AND EXIT SIGNS



Unfortunately, emergency lighting equipment is often installed and forgotten until a power failure. Testing of emergency lighting equipment is required by the National Fire Protection Association (NFPA)-101, Life Safety Code®, section 7.9.3, Periodic Testing of Emergency Lighting Equipment: “Functional testing shall be conducted monthly with a minimum of 3 weeks and a maximum of 5 weeks between

tests, for not less than 30 seconds. ... Functional testing shall be conducted annually for a minimum of 1½ hours if the emergency lighting system is battery powered. Written records of visual inspections and tests shall be kept by the owner for inspection by the authority having jurisdiction.”*

Most emergency lights or exit signs have a small “push-to-test” button somewhere on the casing. To test your equipment, push and hold the button

for 30 seconds to test the bulbs and battery. The lights should come on and remain at the same brightness level for the full 30 seconds. It’s important to test for the full 30 seconds to ensure the batteries have more than just a surface charge. Submit a work order if the light dims right away or if some of the bulbs don’t work. Remember to record your inspection.

To conduct the 1½-hour annual tests, it may be easier to throw a circuit

breaker and observe the lights for 90 minutes. You may want to ensure that you first saved any computer data if they are connected to the same circuit. In some larger buildings, such as a hospital, emergency power for emergency lighting and exit signs is provided by a generator that is tested on a monthly basis by a full-time building maintenance staff. For additional support, contact your local safety office or fire inspector.



** The test interval is permitted to extend beyond the 30-day interval with the approval of the authority having jurisdiction and with the completion of an evaluation of 21 additional criteria found within the Life Safety Code®.*

LOSERS

AVIATION

AH-6M

CLASS C
 The crew experienced a malfunction of the aircraft's M134 mini-gun during live-fire training. Shrapnel injured one crewmember and damaged the aircraft.

AH-64D

CLASS C
 Preflight inspection revealed the camlock had separated from the L540 panel and punctured the stabilator during a previous flight.

CH-47D

CLASS C
 Postflight inspection revealed damage to the forward rotor system blades. Damage to the blades was consistent with a tree strike. Recon of the flight route identified a tree with damage from a main rotor blade (MRB) strike.

CH-47F

CLASS A
 The aircraft experienced an apparent droop-stop failure during aircraft shutdown and one aft rotor blade contacted the fuselage.

CLASS C
 The crew noticed a No. 2 engine oil temp spike during departure from the traffic pattern. Inspection revealed oil in the reservoir was low and the return lines were loose.

MI-17

CLASS A
 The aircraft was in a flight of three ground taxiing to parking when its main rotor system contacted a hangar on the airfield. All MRBs and the tail boom sustained damage.

OH-58A

CLASS A
 The aircraft descended into a river for unknown reasons. Potential water damage could result in uneconomical repair.

CLASS B
 During autorotation with power recovery, the aircraft experienced a low rotor RPM. The aircraft yawed to the right and the MRBs made contact with the tail rotor driveshaft, severing it.

OH-58D(1)

CLASS A
 The aircraft contacted the ground during a simulated engine failure at altitude. No crew injuries were reported.

CLASS C
 The aircraft experienced an NG overspeed of 108 percent for one second during a simulated engine failure maneuver.

TH-67A

CLASS A
 The crew was conducting simulated engine failure training when the aircraft crashed into an open field. The instructor pilot suffered fatal injuries.

UC-35A

CLASS C
 The crew encountered instrument meteorological conditions with heavy precipitation during flight. Postflight inspection revealed hail damage to the nose cone, right-hand wing, deice boot and antennas.

UAS

MAV

CLASS B
 The air vehicle operator experienced degraded input. While attempting to land, the engine failed and the unmanned aircraft (UA) impacted the ground. The UA was recovered but deemed a total loss.

RQ-7B

CLASS C
 The UA experienced an engine failure during controlled flight. The recovery chute deployed and the UA was recovered upon ground contact.

GROUND

ACV

CLASS A
 A Soldier serving as the gunner in a Mine Resistant Ambush Protected vehicle was killed when the vehicle went off the road and overturned. Personal protective equipment (PPE) use was not reported.

CLASS B
 Two Soldiers were injured when a fire started in the cab of their M88A2 Hercules recovery vehicle.

AMV

CLASS A
 A Soldier suffered fatal injuries when he was ejected from an M1151 HMMWV he was operating. The vehicle overturned as the Soldier maneuvered it off a trail near an observation post. Seat belt use was not reported.

ARMY AVIATION LOSSES

Fiscal 2009
 as of Sept. 8, 2009



ATTACK	1/1
RECON	9/4
UTILITY	9/6
CARGO	1/0
TRAINING	2/0
FIXED-WING	0/0
UAS	4/0

TOTAL 26/11

ARMY GROUND LOSSES

Fiscal 2009
 as of Sept. 8, 2009



AMV	17/16
ACV	15/4
PERSONNEL INJURY <small>includes weapons-handling accidents</small>	28/21
FIRE/EXPLOSIVE	6/1
PROPERTY DAMAGE	4/0

TOTAL 70/42

■ A Soldier serving as the gunner on an M1151 HMMWV was killed when the vehicle was broadsided by a fuel tanker and overturned. At the time of the accident, the driver of the HMMWV was making a U-turn to respond to a stalled vehicle. The fatally injured Soldier was wearing a gunner restraint system. The drivers of the HMMWV and fuel tanker were not injured.

CLASS B

■ Three Soldiers in an M1151 HMMWV were injured when the driver fell asleep and the vehicle ran off the road, hit a small berm and overturned. The HMMWV's passenger-side front and rear doors were ripped off, and the tires on the left side of the vehicle were torn off. The Soldiers were wearing seat belts, helmets and other PPE.

Personnel Injury

CLASS A

■ A Soldier collapsed and later died after participating in organized flag football physical training.

CLASS B

■ A Soldier suffered a permanent partial disability injury to his hand when it was caught in the fan blades of a running generator. The injury resulted in the loss of the Soldier's thumb to the first joint and index and middle fingers to the second joint.

EXPLOSIVE/FIRE

CLASS A

■ A Soldier was injured and an M119 Howitzer was damaged when a 105 mm HE round detonated in the gun tube during live-fire iteration.



ALWAYS BE PREPARED WHILE ON AN ATV

BEFORE RIDING, DO THIS:

- Get trained.
- Always wear a helmet, eye protection, gloves and over-the-ankle boots.
- Never allow children on adult ATVs.
- Don't ride tandem.
- Don't ride on pavement or asphalt.
- Never ride under the influence!

<https://safety.army.mil/povmotorcyclesafety>

Editor's note: Information published in the accident briefs section is based on preliminary loss reports submitted by units and is subject to change. For more information on selected accident briefs, e-mail safe.knowledge@conus.army.mil.

DRIVING

POV 

CLASS A

■ A Soldier on rest and recreation leave was driving his privately owned vehicle (POV) early in the morning when he struck a curb, overturned several times and then struck a metal pole. The Soldier was not wearing his seat belt and thrown from the vehicle. He later died at a local medical treatment facility. His passenger, who was wearing a seat belt, was treated and released.

■ A Soldier was speeding when his POV struck a dirt mound, vaulted into the air, struck a utility pole 15 feet above its base, overturned twice and ejected him before landing in a tree. The Soldier, who was not wearing a seat belt, was transported for medical treatment but later died.

■ A Soldier was speeding when he lost control of his POV, crossed three lanes of traffic, left the road, struck a tree and partially rolled over. The Soldier, who was

wearing his seat belt, died at the scene. His passenger suffered only minor injuries.

■ A Soldier was driving his pickup with two passengers when he lost control, left the roadway, rolled down an embankment and was ejected. The Soldier died at the scene.

■ A Soldier was speeding when he lost control of his POV and struck a tow truck and then a sedan and a tree, causing a multivehicle fire. The Soldier died at the scene.

■ A Soldier was killed when he crossed the centerline in his pickup and collided with a sport utility vehicle and a sedan. The Soldier, who was not wearing his seat belt, was transported to a hospital, where he later died.

■ A Soldier in absent-without-leave status was driving his POV when he lost control and overturned several times. He was not wearing his seat belt and suffered fatal injuries.

POM 

CLASS A

■ A Soldier was riding his

motorcycle during emergency leave when he rear-ended a vehicle in his lane. The Soldier, who was not wearing his helmet or his other personal protective equipment, was transported to a hospital, where he later died.

CLASS B

■ A Soldier lost control while riding his motorcycle and was pinned beneath it while it slid down the road. The Soldier suffered severe injuries to his leg, resulting in it being amputated above the knee.

ATV 

CLASS A

■ A Soldier crashed while riding his all-terrain vehicle (ATV) on an improved road. The Soldier, who was not wearing a helmet and had not attended an ATV rider safety course, was taken to a medical center, where he later died.

POV DRIVING LOSSES
Fiscal 2009

as of Sept. 8, 2009 Class A/Fatalities

CAR	34/34
SUV/JEEP	15/15
TRUCK	11/11
MOTORCYCLE	31/29
PEDESTRIAN	6/6
OTHER*	3/3

98
TOTAL DEATHS

Fiscal 2008: **123** 3 Year average: **114**

*Includes: vans and ATVs

KNOWLEDGE

VOL 3 NOVEMBER 2009

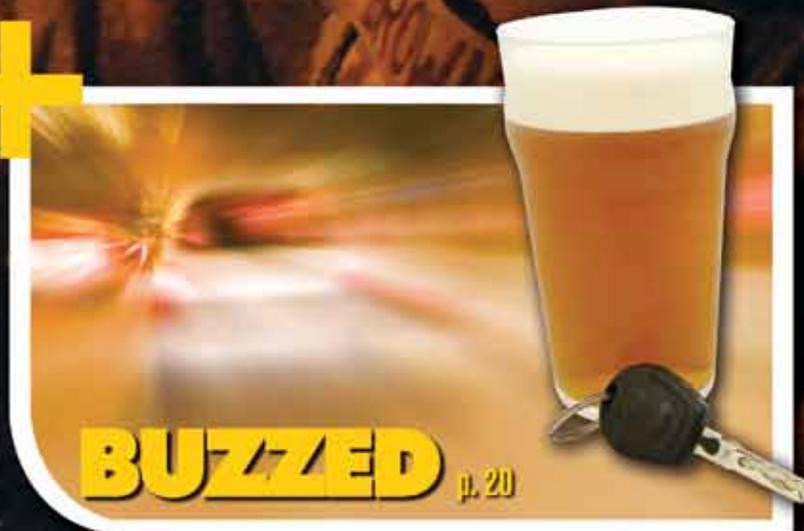
OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

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ARMY STRONG.



U.S. ARMY COMBAT READINESS/SAFETY CENTER
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ARMY SAFE
IS ARMY STRONG



BAND OF BROTHERS
& SISTERS

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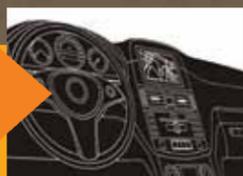
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Mission statement: USACRC supports our Army by collecting, storing, analyzing, and communicating actionable information to assist Leaders, Soldiers, Families, and Civilians in preserving/protecting our Army's combat resources.

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Knowledge provides a forum for Soldiers, Leaders and safety professionals to share best practices and lessons learned and maintain safety awareness. The views expressed in these articles are those of the author and do not necessarily reflect the official policy or position of the U.S. Army, Department of Defense or the U.S. Government. Contents are specifically for accident prevention purposes only. Photos and artwork are representative and do not necessarily show the people or equipment discussed. Reference to commercial products does not imply Army endorsement. Unless otherwise stated, material in this magazine may be reprinted without permission; please credit the magazine and author.

Caring for Soldiers and **AVOIDING COLD WEATHER PROBLEMS** are both an **INDIVIDUAL** and **LEADERSHIP** responsibility.



SO MUCH TO BE THANKFUL FOR

The season of giving thanks is upon us and with it comes an opportunity to pause and reflect on the many blessings that have touched our lives this year. This time of year always reminds me how lucky we are to be part of an amazing Band of Brothers and Sisters that remains steadfast in the quest to protect each other and the United States of America.

For more than 234 years, this great Army's mission has been to fight and win our nation's wars and, during the past several years, our team has been fighting overseas contingency operations in places like Iraq and Afghanistan. I am tremendously thankful for these great men and women who continue to stand point to protect our nation and remain dedicated to preserving our way of life.

My gratitude for our Soldiers and the great work they do every day extends beyond traditional unit boundaries to encompass the Family members who make their Soldier's success possible. The men and women who keep the home fires burning while their Soldier is busy training and fighting

hold a very special place in our Army Family and I am very thankful for their many contributions.

Because of your individual and collective efforts and skills, we have been successful where others before us have failed. Your skills in identifying and assessing hazards and defining and implementing controls to reduce risks have contributed greatly to this success, and I thank you for your dedication to our Army's safety.

Although it is appropriate to celebrate our successes, now is no time to let our guard down when it comes to safety. With the full effects of winter being felt

across our installations, careful attention must be paid to prevent cold weather injuries. Caring for Soldiers and avoiding cold weather problems are both an individual and leadership responsibility. Leaders must train Soldiers to the standard in prevention, recognition and first aid for cold weather injuries and enforce those standards.

The extra time we take preparing our Soldiers for cold weather will reduce injuries and result in a huge payoff in increased unit readiness. For additional information and tools you can use to manage risk and decrease the chance of fall/winter incidents, accidents and injuries, visit <https://safety.army.mil> and look for the Army Safe Fall/Winter campaign logo at the bottom of the Web page. We are a Band of Brothers and Sisters, both on and off the battlefield. And with the arrival of colder temperatures, it's "no time to chill" when it comes to safety.

Many of you will enjoy the comforts of home and joys of being with Family this holiday season.

If you are traveling, I urge you to be extra cautious on our nation's highways, as POV accidents are still the No. 1 off-duty killer of our Soldiers. Be extra vigilant in identifying, assessing and controlling hazards by using the online TRIPS planning tool. Remember, a moment's lapse in awareness can easily result in tragedy.

As we bow our heads and give thanks during November's Veterans Day and Thanksgiving celebrations, know that a grateful nation acknowledges the many sacrifices made by you and your Family members this year. To all of you who put your lives on the line every day to defend this great country, know that we, as a nation, are truly grateful for your service.

WILLIAM T. WOLF
Brigadier General, USA
Director of Army Safety



'Tis the Season to Celebrate Safely

STAFF SGT. RONALD JEROME BROWN
Fire Prevention
6th Military Police Detachment,
Directorate of Public Safety
Fort Rucker, Ala.

As the holiday season approaches, many of us are finalizing our Christmas wish lists, planning big meals and decorating our homes. During this exciting time, however, we must not forget that the holidays also bring an increased risk of home fires.

According to the National Fire Protection Association (NFPA), December and January are the peak months for home fires, deaths and injuries. Families looking to spread holiday cheer should be aware that each year an average of 240 home fires start with Christmas trees and an additional 1,300 begin with various other seasonal decorations. When decorating your home this holiday season, keep the following tips in mind.

Trees

Fire is the primary concern with a live Christmas tree, which is often brought on by the combination of electrical malfunctions and a drying tree. To help cut the risk of tree fires, you should always purchase a freshly cut tree. A good test of a tree's freshness is to hold a branch between your thumb and forefinger and pull your hand toward you. If the tree is fresh, it should lose very few needles.

It's also a good idea to do the "bump" test. Bump the base of the trunk against the ground and see if an excessive amount of needles fall off. It's normal for a tree to lose a few needles; however, a lot of falling needles could signal the tree is drying out and could become a fire hazard.

Once you've selected a tree, be sure the water reservoir on the tree stand is large enough for the tree and keep it full at all times. Stands should provide one quart of water per inch of trunk diameter. The average 6-foot tree has a 4-inch diameter trunk and can consume as much as four quarts, or one gallon, of water per day. For those who forget to keep their tree watered, an automatic tree waterer would be a wise investment.



When selecting a location for the tree, make sure it is not close to a heat source such as a radiator or furnace vent, which could cause it to dry out faster. Never place a tree near a fireplace because sparks can ignite the branches, decorations and gifts underneath. Keep your tree at least three feet from fireplaces, radiators, space heaters, heating vents and other sources of heat, and don't place it where it could block an exit.

It's also important to consider how long you plan to display your tree. The NFPA recommends you take down even a well-watered tree after four weeks. So, if you decorate your live tree immediately after Thanksgiving, it should be discarded the week after Christmas, not the week after New Year's Day.

Lights

Another concern with a live Christmas tree is the fire danger brought on by electrical malfunctions. Examine holiday lights, extension cords and other electrical items whether they are new or old. All of these items should feature the Underwriters Laboratories (UL) mark (the letters "UL" inside a circle), which means samples of the product have been tested for risk of fire, electric shock and other hazards.



Before plugging in lights and other electrical decorations, inspect for frayed cords, cracked sockets, broken bulbs or burned plugs and signs of wear and damage. It's best to position the tree in a corner or a less-traveled area near an outlet to eliminate the use of an extension cord. If you do need an extension cord, make sure you run it along a wall so it won't be a tripping hazard.

Ensure your indoor-only lights, decorations and extension cords have green holographic UL marks. Light strings intended for indoor and outdoor use have red holographic UL marks. Also, don't use nails or staples to hang your lights. Instead, purchase plastic hooks or clips that are designed for hanging light strings. Always be sure to unplug tree lights and decorations before leaving home or going to bed.



For more information on holiday electrical safety, see the story "Deck the Halls" on page 7.

Candles

December is also the peak time for home candle fires. In fact, Christmas Eve, Christmas Day and New Year's Eve are among the top five days of the year for home candle fires. Candles are responsible for at least 71 percent of December home fires due to improper decorating practices or candles left unattended.

Candles should be kept away from decorations, curtains, walls, bedding, paper, furniture and other combustible material, as well as places or paths where they

could be accidentally knocked over. Make sure you use sturdy, noncombustible candleholders that will collect dripping wax. Candles should never be used as Christmas tree ornaments. Remember to always blow out your candles before you leave your home or go to sleep.

Of course, all homes should have working smoke detectors installed. Make sure you test your smoke detectors every month to ensure they're in proper working condition, and change the batteries every six months. A good rule of thumb is to use Daylight Saving Time as a reminder to replace the batteries.

Decorations are supposed to

brighten the holiday season. When decorating your home this year, make safety a priority. With just a little bit of effort, you can help ensure your Family has a safe and happy home for the holidays.◀



DID YOU KNOW?

According to the National Fire Protection Association, nearly 13,000 people visit the emergency room each year with holiday decorating-related injuries.

DECK THE HALLS

MATTHEW CHURCH
Watervliet Arsenal Safety Office
Watervliet, N.Y.

Decorating the home for the holiday season is a great tradition. However, don't forget that an essential part of stringing the lights and putting up the Christmas tree is keeping an eye on electrical safety. Here are a few simple steps to help ensure you have a safe holiday season:

- Don't overload electrical circuits. Check fuses or circuit breaker panels to see what your home can handle and stay well within the limits.
- Avoid putting too many strings of lights together and plugging them into a single outlet.
- Watch for flickering lights; sparks from appliances or wall outlets; warm plates, plugs or outlets; and dimming lights or television screens. These signal potential danger spots that could cause an electrical fire.
- Make sure there's a bulb in each socket. If a bulb burns out, leave it in until you have a replacement. Immediately replace any broken bulbs that have exposed filaments.
- Use only Underwriters Laboratory (UL)-approved equipment. Check for frayed cords, cracked insulation and damaged plugs.
- Surge protector strips are a safe option if you need more outlets.

- Match plugs with outlets. Never force a three-pronged plug into a two-hole outlet or extension cord.
- Don't run extension cords under rugs, around furniture legs or across doorways.
- If you have children in the house or are expecting young visitors, inspect your home for cracked or missing outlet covers. Use safety caps to cover outlets.
- Keep live Christmas trees well watered to prevent bulbs from igniting dry branches. Never use electrical decorations on metal trees. Instead, place colored spotlights beside or above the tree. If using an artificial tree, make sure you purchase one that is inflammable.
- Fasten outdoor lights to the house with plastic hooks or clips to protect the lights from wind damage. Do not nail, tack, pinch, nick or stress wiring.
- Outdoor lighting should have insulated electrical cords and be plugged into a ground fault circuit interrupter-protected receptacle only. Keep all plugs and connectors off the ground and away from puddles and snow.◀

Food for Thought

SGT. CASSANDRA JAMERSON, SPC. MATTHEW LAIRD AND PFC. ANNEL TORRES
Veterinary Food Inspection Section
Fort Rucker, Ala.

With Thanksgiving and Christmas fast approaching, many people are thinking about what they'll be preparing for their holiday feasts. Most will likely center their meals around a plump turkey, juicy ham or both. Before settling down at the table for your holiday meals, make sure you review the following tips to help eliminate any potential food safety issues.

Proper Hand Washing

Before and after handling any raw foods, wash your hands thoroughly with soap by rubbing them vigorously for 15 to 20 seconds until you work up a lather. Make sure you scrub between your fingers and under the fingernails. Rinse your hands well under warm water and dry them with a paper towel. Work surfaces and utensils, knives, cutting boards, sponges and towels should also be washed in hot, soapy water after every use. This will help prevent cross contamination.

still in its original wrapper, in the sink and covering it with cold water. Change the water every half hour to maintain the temperature. Allow the turkey about a half hour per pound to defrost. Therefore, a 15-pound turkey should thaw in a little more than seven hours. Do not thaw a turkey in the microwave because it does not heat evenly.

No more than an hour before

you're ready to pop the turkey into the oven or deep fryer, remove it from the refrigerator to bring it to room temperature. Make sure you rinse the whole bird, to include the neck and body cavity, by running it under cold water. Rubbing your hands over the surface will help remove any physical contamination. Now the turkey is ready to be cooked.

FYI

Make sure you follow proper food safety guidelines when preparing your holiday feasts. The U.S. Department of Agriculture recommends the following as minimum safe internal food temperatures:

- Beef, veal, lamb, steaks, roast: 145 F
- Fish: 145 F
- Pork: 160 F
- Ground beef, veal and lamb: 160 F
- Egg dishes: 160 F
- Turkey, chicken and duck (whole, pieces and ground): 165 F

Thawing the Bird

It's best to allow a frozen turkey to thaw in a refrigerator. To determine how long it will take to thaw, calculate five hours per pound. If you have a 15-pound turkey, it should take about 75 hours, or a little more than three days, to thaw.

A turkey can also be thawed using the cold water method. This is done by putting the bird, while

Is it Ready Yet?

The internal temperature of the turkey must reach a minimum of 180 F in the thigh, while the center cavity should reach 165 F. Turkey and ham both reach doneness at a temperature of 170 F when checked in the turkey breast or the thickest part of the ham. You can also prick the leg joint of the turkey with a fork to test the color of the juices. The turkey is done when the juices run slightly pink or clear.

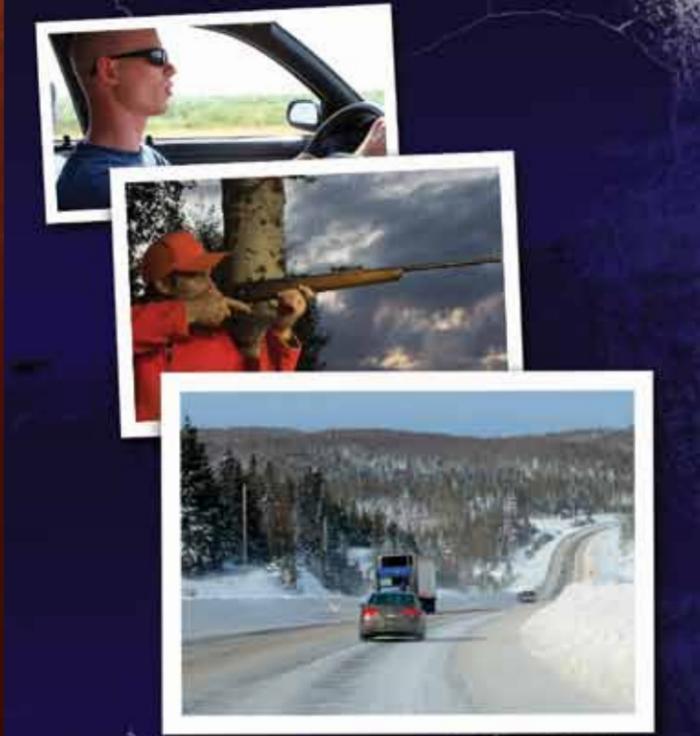
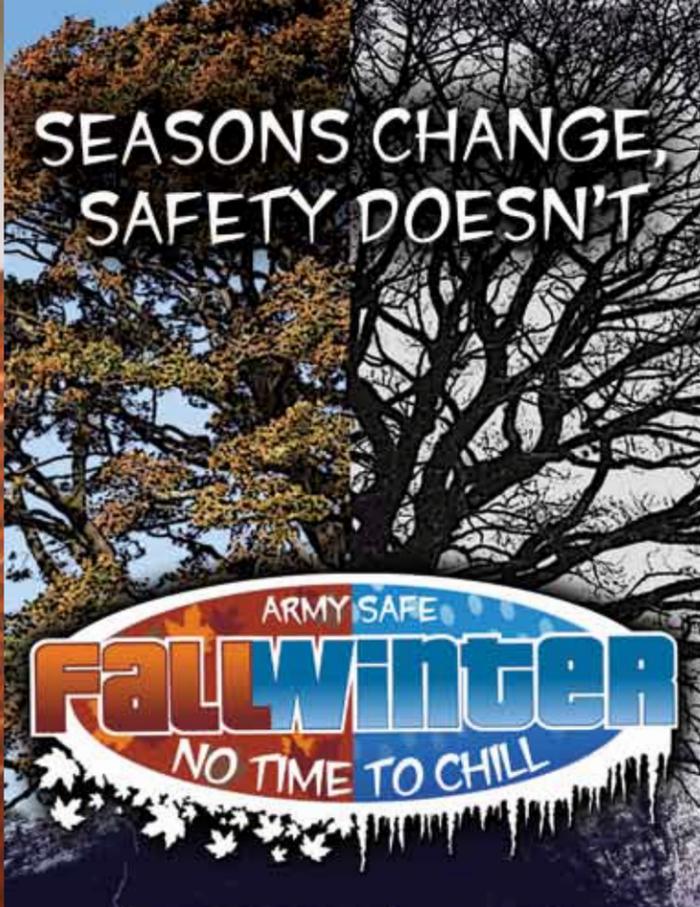
Storing Leftovers

Refrigerate the cooked turkey or ham and other leftovers within two hours of cooking. The turkey should never be stored with the stuffing still inside. Instead, remove the stuffing and refrigerate it in a separate container. Divide large amounts of leftovers into shallow containers for quicker cooling in the refrigerator. When you're ready to eat the leftovers, reheat them to a temperature of 165 F. Remember to consume or throw away the leftovers within three days of cooking.

Fresh Fruits and Vegetables

If your holiday meals include fresh fruits or vegetables, make sure you properly wash and/or rinse them before consumption. When slicing or chopping fruits and vegetables, make sure no meat or raw materials have been processed on that cutting board.

Nothing ruins the holidays quite like a case of food poisoning. Stick to the food safety guidelines above when preparing your meals and you'll give your Family one more reason to be thankful this holiday season.◀



SEASONS CHANGE, SAFETY DOESN'T

ARMY SAFE

FALL WINTER

NO TIME TO CHILL

GEAR UP!

GO TO

[HTTPS://SAFETY.ARMY.MIL](https://safety.army.mil)

FOR MORE INFORMATION

In-flight

ICING

Almost Causes Disaster

CHIEF WARRANT OFFICER 2 PARKER H. PRIEST
 Detachment 1, Company H, 171st Aviation Battalion
 Florida Army National Guard
 Brooksville, Fla.

Editor's note: This incident was briefed by the pilot in command and pilot in an after-action review. All crewmembers gave their permission for the author to tell their story.

The mission was to fly a C-23B twin-engine turboprop aircraft from Lima, Peru, to the United States with sensitive cargo onboard. The crew consisted of an experienced pilot in command (PC) with 3,000 hours of fixed-wing time, a pilot (PI) with 600 hours, a flight engineer (FE) with more than 4,000 hours and a civilian contract mechanic.

The crew conducted a thorough risk assessment and determined the mission to be low risk. En route weather was expected to be fair with the possibility of light icing at their planned flight level (FL). No mechanical issues were found with the preflight, and the weight and balance was well within the aircraft's center of gravity limitations.

After a quick weather update and crew brief, the crew started the aircraft and taxied out to begin their mission. After final run-ups and ground checks, the crew determined that all equipment, including aircraft anti-icing and deicing equipment, was operating correctly. The crew took off and climbed to their assigned altitude of FL 190. After reaching

their assigned altitude, the crew performed their level-off checks, noting the outside air temperature was minus 2 C and visible moisture was present. The crew then turned on all aircraft deice and anti-icing equipment, including the ice detector. Considering the current conditions, the flight crew discussed the need for added vigilance by all crewmembers to recognize and react to severe icing conditions because the aircraft was operating near its service ceiling.

Two hours into the flight with the autopilot engaged, the aircraft flew through what appeared to be normal clouds at their FL. The PI noticed the aircraft starting to pitch up slightly and he felt a slight vibration in the flight

controls. He immediately checked the airspeed indicators and saw that the airspeed was decreasing rapidly from 140 to 120 knots indicated airspeed. He informed the PC of the indications. The PC verified the indications and took manual control of the airplane while advancing both power levers to the maximum power available. The airspeed was still dropping and the aircraft began to buffet — the first onset of a stall. The PC executed the stall recovery procedures outlined in the aircrew training manual (ATM) by lowering the nose to regain airspeed with full power applied. Despite full power and the lowered nose, the aircraft continued to lose altitude and entered a robust buffet, losing

more than 1,000 feet. Both the flight engineer and mechanic noted heavy, immediate, clear ice accumulation on all leading edge surfaces of the aircraft.

The PC continued trying to recover the lost altitude and noticed the prop levers had not been advanced to their maximum power. He pushed both props full forward and the aircraft began to level off and recover. After a short time, the aircraft was able to climb and recover its lost altitude. The flight continued without further incident at the same FL.

Lessons Learned

What happened? Was it a bad judgment call on behalf of the PC to fly the mission and assess the risk as low? Did the crew follow incorrect procedures? Was there a lack of crew coordination? Did the crew overestimate their capabilities of flying in icing conditions with their experience? Did aircrew training factor into this? Or was it simply the environmental conditions that led to the aircraft stalling? Perhaps the reason for the stall was a combination of all of these possibilities.

- **What could the crew have done differently?** The route of flight required them to cross the Andes Mountains. The lowest possible minimal en route altitude was 17,000 feet and the service ceiling for the aircraft was 20,000 feet. The icing conditions existed between 15,000 and 23,000 feet. The crew knew about the icing conditions and not having the option to climb or descend. They had discussed this situation in detail during the crew brief that morning and still assessed the hazard as low risk and proceeded with the flight. It wasn't a concern for the crew because the aircraft was equipped with deice and anti-icing equipment and had been operated in similar conditions many times without incident.
- **Instrument meteorological conditions (IMC) were forecast for the flight-planned altitude; however, no precipitation was**

expected. The C-23B was well equipped for icing and had flown in moderate to heavy icing conditions many times in the past. There is always a chance of encountering IMC over high mountains; however, no other route was available. For that reason, the crew acknowledged a need for added vigilance and painstakingly guarded the fuel and alternate requirements.

- **Did the aircrew follow incorrect procedures?** Per aircraft flight manuals and crewmember training, the crew deployed all of the aircraft's anti-icing and deicing equipment once entering into visible moisture with the outside air temperature at 10 C or less. However, the Federal Aviation Administration's (FAA) Advisory Circular (AC) 91-51A, Effect of Icing on Aircraft Control and Airplane Deice and Anti-Ice Systems, recommends disengaging the autopilot and hand flying the airplane. The autopilot could mask important cues or actually self-disconnect and present unusual attitudes or control conditions. Although the AC is not regulatory, had the aircrew been aware of the FAA's recommended procedures, they might have noticed the aircraft was accumulating icing much sooner, therefore noticing when the aircraft first pitched up and began to lose airspeed and altitude.
- **Would crew coordination prevented this incident?** The PI noticed the decreasing airspeed and executed good crew coordination practice by announcing what he saw to the crew. When the PC took control of the aircraft, he quickly noticed the propellers were not at maximum power. After the PC placed the propellers to maximum power, the aircraft regained altitude and airspeed.
- **Could more realistic training prevented the PC from making a potentially fatal error?** The C-23 ATM stall recovery procedures are

performed with the propellers pre-configured at the maximum (full props) before the stall occurs. Therefore, pilots train by using power and pitch to recover from stalls versus using power, props and pitch. The PC executed the stall recovery as he was trained, not thinking about the propellers because the propellers are preconfigured. It's important to remember that in an emergency, the instinctive reaction of the flight crew will be directly in accordance to their training.

- **Did the environment cause the incident?** Yes, unquestionably, icing caused the aircraft to stall. As it turned out, the aircrew had flown through a cloud containing "super-cooled" precipitation that overwhelmed the aircraft anti-ice system with large amounts of ice in a very short time. Nevertheless, this was the only factor the aircrew could not change. They could have simply avoided the icing conditions by canceling the mission altogether; however, at the altitudes required for this flight, delaying was not an option to avoid the icing. The aircrews had limited experience in flying in icing conditions and were not fully aware of various practices outside of their training. Unfortunately, the crew didn't find this out until this flight.

Conclusion

The lessons learned from this near accident are a reminder of what's at stake every time Army aviators take off to execute a mission or perform a training exercise. Many contributing factors typically lead to an accident and this chain of events can transpire at any given time — from preflight planning, through the en route phase of flight to the final landing rollout. Had this crew not conducted detailed pre-mission and in-flight planning, strong aircrew coordination skills and reacted in prompt time, an accident would have occurred, destroying an aircraft with a resultant loss of four lives. ◀

KEEP GOIN' in the Snow

MASTER SGT. RAYMOND CADORET
 Command Readiness Center
 Rhode Island Joint Force Headquarters
 Cranston, R.I.

Driving is a challenging task. Traffic, road construction, rain, kids making noise, the radio and ringing cell phones can all be very distracting. Couple that with slick wintry roads, black ice, snow and sleet, and you've added a whole new element to driving. Toss in those four-wheel-drive owners who think they can still go 60 mph on these roads and the risks rise considerably.

While you can't control the weather or other drivers, you can apply composite risk management (CRM) to reduce your driving risks.

First, identify the hazards. Among those are things such as black ice, snow accumulation and other traffic, including snowplows and vehicles spreading sand or salt. Checking your local weather forecast and road conditions can help keep you on top of these hazards.

Second, assess the hazards. Examine each one in terms of its probability and severity should an accident happen. Consider historical lessons learned, experience levels and judgment.

If you've had an accident driving on icy roads, you know the possible consequences. Ask yourself, "Is this trip necessary?"

The third and fourth steps — developing controls and making risk decisions, and implementing controls — can begin well before the first snow falls. One important part is winterizing your vehicle.

One of the most overlooked parts of vehicle maintenance is replacing the windshield wiper blades. Automobile experts recommend these be changed annually because torn, cracked and dry-rotted blades can fail to keep your windshield clear when driving through rain, sleet or snow.

Also, fill your windshield washer reservoir with a fluid designed for the cold temperatures where you'll be driving. If needed, you can supplement your washer fluid with concentrates designed to keep your windows clear at extremely low temperatures. Keep an extra bottle of fluid in your vehicle so you won't run out in the middle of a trip.

Check your battery and charging system. Overlooked batteries can lose power when temperatures drop, making it hard to start your vehicle.

Tires are also a vital part of safe winter driving. Maintaining the best possible traction with

the roadway is crucial in determining how well your vehicle rides, turns and stops. Make sure your tires have plenty of good, deep tread and are properly inflated. Remember, your tire pressure drops about 1 psi for every 9-degree-Fahrenheit drop in temperature. While you're at it, check your spare tire for proper inflation. While checking your spare, locate your jack and the other equipment you'll need for changing tires.

Check your radiator to make sure it has the proper amount of coolant and has been properly serviced. It is important to have

WATCH your FUEL LEVEL, keeping your TANK at least HALF FULL to REDUCE moisture BUILDUP INSIDE the fuel TANK.

the radiator flushed and the coolant changed periodically. Your owner's manual will tell you when that needs to be done. While many antifreeze products are pre-mixed, if yours isn't, a 50-50 mix of coolant to water is normally appropriate. When in doubt, check your owner's manual.

Watch your fuel level, keeping your tank at least half full to reduce moisture buildup inside the fuel tank. Knowing you have

enough fuel can give you peace of mind when stuck in traffic. Remember, as long as you have fuel, a properly maintained engine can idle indefinitely, keeping you warm inside your vehicle.

There are also some useful items I recommend you keep in your trunk. Those include a blanket or two, a snow shovel, some cat litter or sand, a fire extinguisher, an old pair of boots, jumper cables, proper-fitting



tire chains, flares and a first aid kit. And, of course, you'll need a snow brush and ice scraper to clear off your windows, mirrors, headlights and brake lights. This will help you to better see and be seen by others. Warming up

your car before driving is also a good idea. This allows your oil and coolant to reach operating temperature and your heater to warm up and clear your windows.

Here are some tips to use while driving. Everyone knows hurrying increases the risk of an accident, so allow yourself extra time to get to your destination. When driving in snowy conditions, allow extra stopping distance when approaching intersections. Begin braking early just in case you begin sliding on the snow or ice. On primary and secondary roads, increase your following distance to allow ample stopping time in poor weather.

You can use your vehicle's transmission to help maintain control. By downshifting a manual or automatic transmission, you can use your engine's braking power to help slow you. Some

newer automatic transmissions offer a second gate for the shift lever that allows you to upshift or downshift through the gears as desired.

Don't panic if you go into a skid. If your vehicle has an antilock braking system (ABS), brake firmly and steer in the direction you want to go. If you don't have ABS, steer into the skid and avoid braking. A good tip to remember is to always look in the direction where you want your car to go.

On the road, drive with low-beam headlights and stay in the right-hand lane. Should you become stranded or stuck in snowy conditions, don't panic. If blizzard conditions make it hard to see or you're unable to shovel out of the snow, remain in your vehicle. Stay as warm as possible and limit your exposure to the wintry conditions.

Turn on your flashers or set up flares. Run the car in 10-minute intervals to provide heat while conserving fuel. Make sure your tailpipe is free of snow and slightly open a window on the downwind side of your vehicle to prevent the buildup of carbon monoxide. Use your blanket to help stay warm, but avoid falling asleep or staying in the same position for too long. Also, monitor yourself and other passengers for frostbite and hypothermia.

The final step of CRM is to evaluate how well your control measures worked. Did you arrive at your destination without an accident? If you did have problems, ask yourself what you could have done differently and make that a part of your controls in the future.

Taking your time, maintaining good situational awareness and planning for the possible hazards on the road will greatly improve your chances of arriving safely at your destination this winter. And by the way, keep an eye out for those overconfident drivers who flew by you in their 4x4s. Chances are you'll see them again a few miles up the road — in the ditch.◀



SLOW CONNECTION? LIGHTEN UP!



<https://safety.army.mil/lite>

The Safety Center's home page is now available in a lite capacity to allow forward-deployed Soldiers with limited Internet connectivity access to the risk mitigation tools and resources they need.

AIRCRAFT MAINTENANCE

PAULA ALLMAN
Strategic Communication Directorate
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

Vital in Cold Weather

Army aviation missions encompass the globe in all kinds of environments — from hot to cold, arid to wet and clear to cloudy. As the winter months approach, you must be vigilant, not only in your flying, but in the care and feeding of your aircraft. Just as in the Challenger accident below, if you do not perform proper cold weather maintenance procedures, Old Man Winter can reach up and bite you.



None of us will ever forget the Challenger space shuttle exploding shortly after launch in January 1986. Severe cold temperatures that had reached into normally warm Florida had reduced the resiliency of rubber O-rings on the right solid rocket booster, paving the way for hot exhaust gases to escape. Despite all the science and technology involved, the Challenger fell victim to the effects of cold temperatures on a simple O-ring. Is it any wonder that we want to remind you that cold weather can have adverse effects on the aircraft you fly?

Air and hydraulic fluid leaks are amplified as the temperature drops. Hydraulic cylinders and actuators can leak fluid

because O-rings, seals and gaskets are less pliable and become deformed at lower temperatures. In addition, ice crystals in hydraulic fluid may cut seal materials. Air leaks develop as seals and line connections contract at different rates.

Mechanical and hydraulic controls become sluggish in cold weather. Unauthorized lubricants that seemed to work properly in warm weather will stiffen and cause bearings to require added force to move as the temperature decreases. Moisture condensation causes water to accumulate in fuel tanks, especially in tanks that are not kept full. If the water freezes, it could close filters, fuel lines and valves.

Hydraulic accumulator pressure

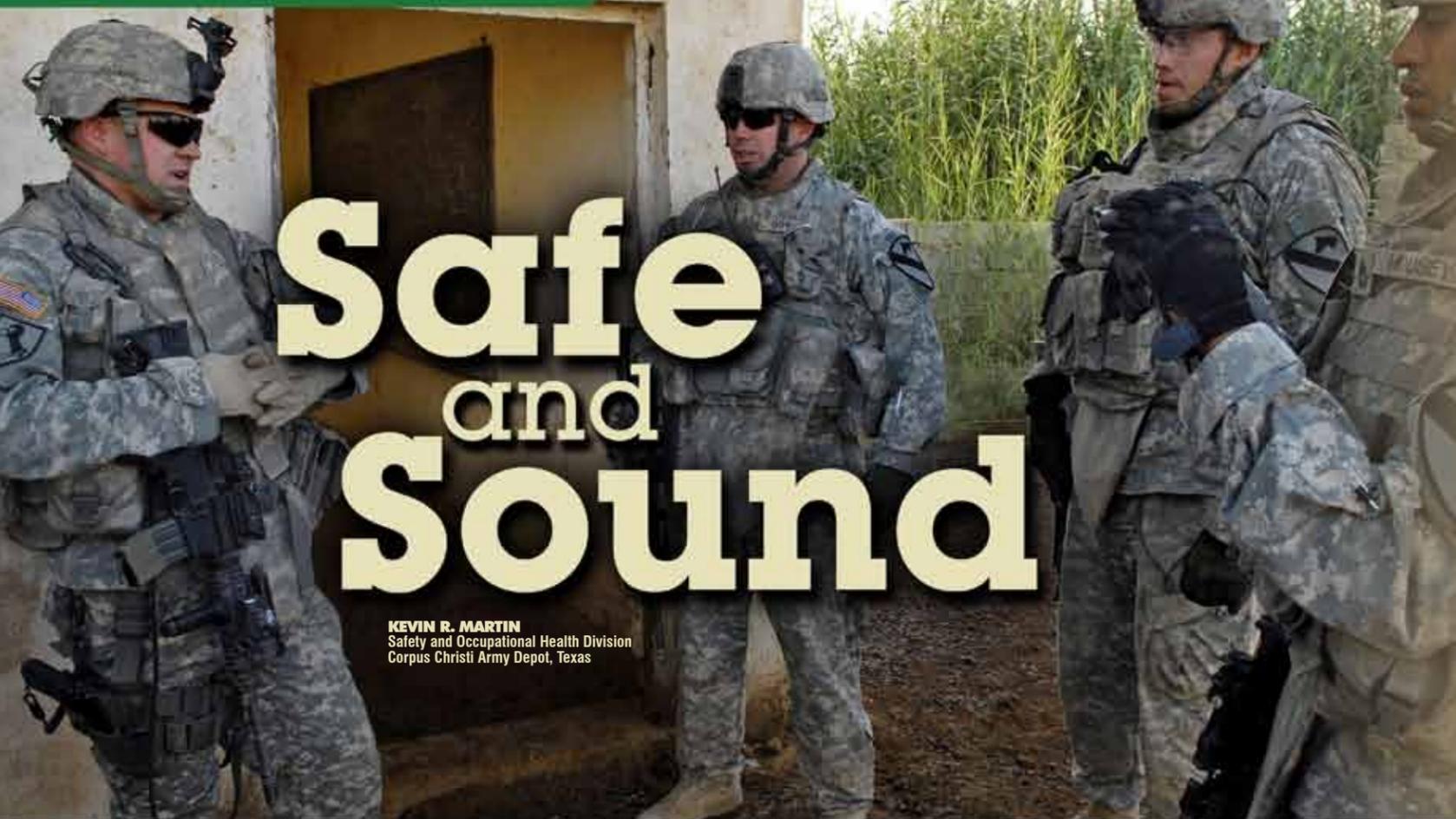
differs with ambient temperature and rotor damper vent valves have temperature restrictions. These and other factors make by-the-book maintenance and operation mandatory.

Many of the procedures dictated in maintenance and operator's manuals were developed as the result of lessons learned the hard way. Therefore, when units move from a warm environment to a much colder one, it is important that all personnel carefully review manuals to ensure adjustments are made for the new environment. Simple actions such as wiping down exposed hydraulic pistons and thoroughly preheating the aircraft helps alleviate problems

associated with extreme cold weather. Most manuals contain specific guidance on how to do these tasks to standard.

In addition to maintenance and operator's manuals, Technical Manual 1-1500-204-23-8, General Aircraft Maintenance, is an excellent reference for cold weather operations. Chapter 10, Arctic, Desert and Tropic Maintenance, outlines steps to prevent the adverse effects of cold weather.

The key to successfully dealing with the negative effects of extreme cold temperatures is planning and preparation. Knowing what to do and having the equipment to do it are critical for safe cold weather operations.◀



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In the world of safety professionals, the focus on safety culture is aimed at the whole organization. This is also the case for the Army, but every commander is responsible for having safety in his or her organization. However, to make it effective, every Leader down to the lowest level must be engaged.

If you're a small-team Leader, developing a safety culture should be your highest priority. No Leader can afford to lose personnel due to injury or illness, especially those at the small-team level. You depend on every Soldier/individual to fulfill a vital function, and you're

personally invested in their lives.

There are several ways you can cultivate your team's safety culture. The first step is to know where your team rates in its sense of attitude, approach and involvement. Take the survey on page 19. Answer each question honestly to gauge your team's performance. For an even better sense, let each member of your team take the survey and average the results. When you are finished, tally your results and continue reading this article.

Awareness of your team's dynamic safety culture is only a starting point. What you do with it is what will make the difference. Carefully review the areas needing attention from the survey. Where do you need improvement and how can you accomplish that? Set specific objectives; be sure to include timelines, responsibilities and measures of achievement. Contact your safety officer/

manager for advice and answers to questions on policy.

Remember that safety culture is an ongoing process. What you accomplish at the team level will reflect upward and outward. Share your successes and lessons learned. Don't be afraid of change and encourage every member of your team to work toward the goal of returning home each day.◀

KEY

Yes = definitely happens in my group
? = not sure, sometimes or partially true
No = seldom or never happens in my group

Author's note: The checklist on page 19 was adapted from "Managing the Risks of Organizational Accidents" by Dr. James T. Reason. The information provided in this article is given solely for information and guidance. This is not an Army program.

SAFETY CULTURE CHECKLIST	YES	?	NO
MINDFUL OF DANGER. The team Leader is mindful of the human factors that can endanger the operations.			
ACCEPT SETBACKS. The team Leader anticipates that personnel will make errors and trains them to detect and recover from errors.			
COMMITMENT. The team Leader is genuinely committed to safety and provides resources to achieve it.			
REGULAR MEETINGS. Safety is discussed in every planning session, not just after an accident.			
ACCIDENT REVIEW. Every accident is reviewed and lessons learned are reported and reacted to.			
IMPROVED METHODS. Lessons learned are used to improve methods and systems, not to assign blame.			
CONTINUOUS IMPROVEMENT. The team Leader assesses the safety culture routinely and looks for ways to improve.			
INSTITUTIONAL FACTORS CONSIDERED. Standards of performance are adhered to, but challenged if found to produce an unsafe situation or environment.			
DATA. The team Leader reports mishaps and near misses to the safety manager.			
HOLISTIC VIEW ON SAFETY. The team Leader treats safety as a culture and not just a reaction.			
SAFETY MEETINGS. The team is involved in regular safety meetings and contributes to the meetings.			
CAREER BOOST. Additional duty as a safety officer is seen as career enhancement, not a job burden.			
ECONOMICS. The team Leader makes a reasonable assessment of cost verses safety in determining appropriate levels of protection.			
REPORTING ENCOURAGED. The team Leader encourages personnel to report all events.			
INDEMNITY. The individual/Soldier can report mishaps and near misses without fear and is aware of Army policy on reporting.			
BLAME. The individual Soldier understands that the safety program does not administer punishments; however, negligent behavior may be a criminal act under the Uniform Code of Military Justice.			
NONTECHNICAL SKILL. The mental knowledge and attitude to identify and use safe work practices.			
TECHNICAL SKILL. The team Leader identifies hazards and risks (composite risk management) and trains the team to respond and recover from mishaps.			
ACKNOWLEDGE ERROR. The team Leader has the will and courage to acknowledge errors and apply the lessons learned.			
TOTALS			

About your score:
Each "yes" answer is worth 1 point; each "?" answer is worth 0.5 points; and each "no" answer is worth 0 points. How do you rate?
16-20 points. Exceptional dynamics; stay on focus.
11-15 points. Good safety culture; continuous improvement will take you higher.
6-10 points. Typical performance; look for ways to improve your group.
0-5 points. Need for change; your group is vulnerable.



Buzzed

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“If I’ve heard it once, I’ve heard it a thousand times.” These are the words uttered by many Soldiers who have received safety briefings or been reminded by Leaders before a long weekend to be safe and “don’t drink and drive.” Yet, time and time again, Soldiers get into their vehicles after drinking too much alcohol and drive home impaired.

The night starts off innocently enough. You meet a group of friends at a local hangout to wind down from a long and stressful work week. Throughout the night, you focus on having fun and enjoying your friends’ company.

After consuming your fair share of alcohol, you decide to take your chances and drive home.

Stumbling out to your vehicle, thoughts rush through your head: “I’m OK to drive. No problem, I’ve got this.” You get into your vehicle, put the keys in the ignition and drive off into the night, not realizing the impact your decision may have on the rest of your life — or those you may encounter on the journey home.

Not surprisingly, you make it home safely as you have hundreds of times before. You wake up the next morning with a slight headache or queasy stomach as the only reminder of the past evening. You then spend the rest of the day planning another evening out with friends.

For many, this is a typical weekend. If not, it’s certainly an experience to which most can relate. For others, however, the evening doesn’t go quite as

described. Rather, the night ends with bright, colorful lights flashing in the rearview mirror. Or, we don’t remember anything except waking to a smashed windshield and blurred vision from the blood dripping into our eyes. Even worse, we wake in an unfamiliar place, either behind bars or in a hospital room with a medical examiner reporting the results of a horrific accident that occurred because an alcohol-impaired driver thought they were “OK to drive.”

This is a problem that continues to raise its ugly head. But there is a response. Army safety professionals and researchers continue looking at what motivates Soldiers to place their lives and those of others at risk by driving under the influence. While the battle remains ongoing, there have been some tactics — best practices — that have proven helpful. Here are some examples:

- Never allow a battle buddy to drive after having “one or more” drinks.
- Never allow yourself to ride with a driver who has consumed alcohol.
- Volunteer to be a designated driver.
- Plan your evening ahead of time by ensuring a safe return home (make arrangements for a ride home, call a cab), or just stay home and drink responsibly.

Don’t let being lucky in the past make you foolish in the future. Ask yourself, “Have I ever been out drinking and later couldn’t remember how I drove home?” If the answer is “yes,” then take a moment to ask yourself, “What price am I willing to pay to continue drinking and driving? Am I willing to sacrifice the rest of my life? Am I willing to live with the knowledge that I killed one or more of my friends or some other innocent motorist because I thought I could drive with a “buzz?” Remembering the answer you gave yourself when you were sober should help you make a safer decision when you’re not.◀◀

Share street smarts while helping your battle buddy!




MMP

MOTORCYCLE MENTORSHIP PROGRAM

Mentoring can be fun and set up in various ways.

- Unit-level one-on-one mentorship
- Unit-level riding groups
- Private organization
- Combination unit program and private organization at the installation level
- Non-appropriated fund instrumentality

Check out the MMP Web site for some examples of active mentoring programs:
<https://safety.army.mil/mmp/>

» FYI

According to the National Highway Traffic Safety Administration, a motorist is likely to drive 200 times under the influence before being charged with their first DUI; or for every 10 vehicles on the road with you, one is being operated by an impaired driver; or every 30 minutes, someone in the United States is killed as a result of an accident caused by an impaired driver.

According to the Insurance Institute for Highway Safety, 1 in

50 alcohol-impaired drivers are arrested. While this may seem to some like the odds are in the favor of the impaired motorist, others may realize how unsafe our roads must be because of all the impaired motorists who have not yet been caught, or those who are repeat offenders.

Research and organizations such as Mothers Against Drunk Driving report more than 30 percent of alcohol-impaired drivers arrested are repeat offenders.



MERGING SAFETY WITH DRIVING

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During last year’s winter holiday season, my Family and I drove from North Carolina to Florida to visit my in-laws. As we made the roughly 600-mile, 10-hour trip, I was reminded how important it is that people share the road courteously and responsibly. One place where that is particularly important is when merging with highway traffic.

Even though we do it every day, merging into traffic is a feat that even seasoned drivers sometimes have a hard time safely accomplishing. When it comes to merging, there are several factors that play into safety, including yielding to right-of-way, matching speeds and one-to-one merging. We’ll look at these below.

Yielding

One of the definitions for “yield” in Webster’s Dictionary is “to give or render as fitting, rightfully owed or required.” The problem is we Americans can be a greedy lot when it comes to yielding possession of the road. Yet, despite that, yielding is important to the safety of both those drivers already on the road and those trying to merge.

Merging drivers are responsible to yield to highway traffic and to signal their intentions early enough for other drivers to properly plan and react. However, it’s not just

merging drivers who need to yield. Although drivers on the road have right-of-way, they should be willing to yield, as needed, to allow space for merging drivers to safely enter the flow of traffic. Matching speeds, as described below, can help make that process easier, safer and less aggravating for both drivers.

Matching Speeds

Matching speeds is important to reduce the difference in speed between drivers on the road and those attempting to merge. To do that, merging drivers need to use the onramp and, if available, merging lane to accelerate to just below the traffic speed. Highway drivers should slow down slightly to provide merging drivers room to enter the road and reach highway speed.

Another option for drivers on the road is, when possible, to signal and change lanes to their left. This frees the right-hand lane for merging traffic to

enter safely. It is important to know the state’s rules about driving in the left lane so that you don’t “camp” there if it is not legal. You should reenter the right lane when it is safe to do so.

One-to-One Merging

Another alternative is one-to-one merging, which alternates a vehicle on the road with a merging vehicle. Drivers on the road and merging drivers effectively alternate “taking their turn” in the right lane, allowing them to share the road in a predictable, equitable fashion. To make this work safely, drivers on the road should keep, at a minimum, a two-second following interval behind the vehicle ahead. This leaves room for merging drivers to enter the roadway and helps avoid tailgating — a dangerous situation that can lead to road rage.

All the Rage

Speaking of anger on the road, there’s a reason many police officers park near merging lanes and watch

the traffic; such places are common locations for road rage. A vehicle gets cut off or someone speeds, blocking a driver from merging and forcing them to stop in the merging lane, and the blood starts boiling. Such incidents can lead to road rage as drivers seek to get "even" with those who have offended them.

Because of increased traffic congestion and driver distraction as motorists try to move to the proper lane, it's especially important to yield without letting

tempers flare. Acting out road rage is against the law and can land a driver in jail, in addition to paying stiff fines and penalties.

Don't Pick a Fight

If you're on the highway and approaching an onramp, remember the advice about matching speeds. Slow down and leave room for the merging vehicle to enter the road ahead of you. Remember to use the two-second following rule on the road to leave a safe interval.

Understand it's not worth your life or someone else's to save those two seconds. Speeding up to block someone from merging can earn you a ticket for tailgating or aggressive driving. Check your ego; you'll get over being ticked a lot faster than you'll get over being ticketed.

Chilling Out

Merging on wintry roads covered with snow or ice requires extra care if you want to avoid a collision or winding up in a ditch. If you're on the highway, it's best to

signal and move to the lane on your left. This allows merging drivers the extra room they need to slowly accelerate on the onramp, get onto the highway and gradually speed up to match the traffic flow. The last thing you want yourself or anyone else to have to do is suddenly brake on a slick road.

The "Squeeze" Play

Not all merging situations involve traffic entering a highway. Sometimes, road construction or accidents force drivers to merge

into a single lane. Planned lane closures, such as for road construction, are normally well marked in advance, alerting drivers to what lies ahead. Temporary lane closures, such as those caused by accidents, require drivers to be alert to the road situation ahead. In both cases, there will be some drivers who will stay in the lane being closed until the last second and then attempt to merge. While this "cutting in line" often angers other drivers, trying to block them could lead to serious consequences, such as

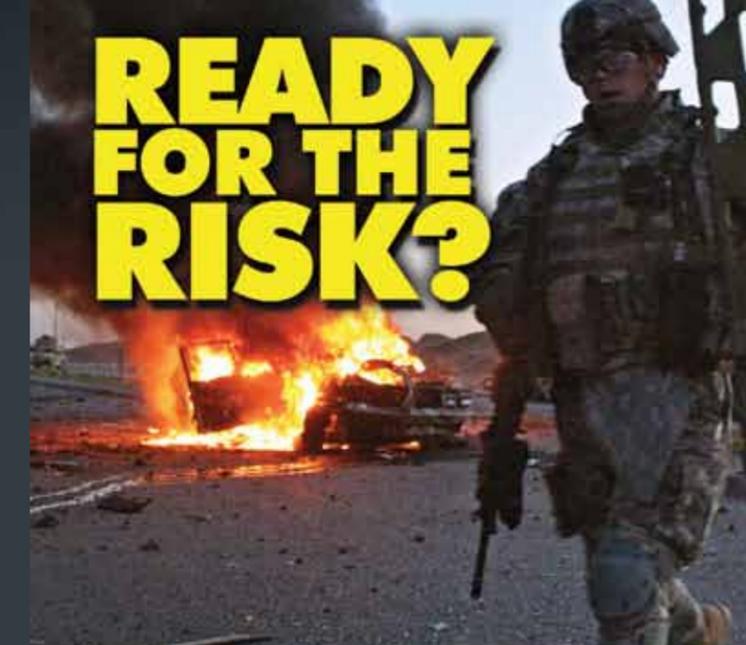
driver confrontations or multiple-car crashes.

Bottom Line

While it's easy to feel we "own" the stretch of road we are on, it's a lot wiser to be willing to share it with others. After all, which would you rather be behind on the road — a merging driver or a tow truck?◀

Editor's note: Information for this story was derived from the American Safety Council's SafeMotorist Web site, which is available at www.safemotorist.com.

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UH-60

TAIL ROTOR

ISSUES

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Since 2004, the Black Hawk community has experienced five Class A accidents involving tail rotor issues.

The Directorate of Evaluation and Standardization (DES) has provided subject matter experts (SMEs) to assist the U.S. Army Combat Readiness/Safety Center with the investigation of three of those accidents.

After conducting analysis and developing findings, both contributing and noncontributing, we have concluded that aviators may lack the individual training to adequately diagnose and apply the correct procedures for some tail rotor malfunctions. In addition to a lack of training for certain tail rotor malfunctions, we discovered several written documents providing guidance to trainers, as well as manuals educating aviators in aerodynamics, are lacking when referencing anti-torque emergencies and tail rotor control authority.

Beginning in January 2009, DES standardization pilots conducted an informal poll. The goal was to assess how well aviators recognize and

react appropriately to a tail rotor malfunction when given a specific scenario, either verbally or in the Synthetic Flight Training Systems.

The scenario: "After you receive a takeoff clearance from air traffic control or following an extraction of troops in a landing zone, you apply approximately 80 percent of your maximum torque available. On takeoff and just below effective translational lift, you begin a left turn with left pedal and the aircraft begins an uncommanded left yaw that you cannot stop. What are your actions?"

Shockingly, 96 percent of aviators, to include trainers, replied with "autorotate." From that, it did not take long for us to realize we had

a training failure in our branch. Based on further queries and investigations, we concluded that aviators, following their transition to the Black Hawk, receive little additional training or education on the aerodynamics or flight characteristics of a tail rotor that is either applying too little or too much thrust for a given situation.

After visiting several aviation units in garrison and combat, we found that training for tail rotor and loss of control malfunctions focused primarily on loss of thrust conditions in cruise flight. Although this is a major concern to any single-rotor helicopter, we learned through these accidents — including four of the five Class A accidents since 2004 — that a left spin condition at low airspeeds, or at a hover, can be just as catastrophic.

In addition to the training analysis, we reviewed several documents, including Army Regulation (AR) 95-1, Flight Regulations, and Training Circular (TC) 1-237, Aircrew Training Manual, Utility Helicopter, H-60 Series. As stated in the current AR 95-1, "In multi-engine helicopters, touchdown autorotations and anti-torque touchdown emergency procedure training is prohibited." This regulation prohibits the touchdown anti-

torque emergency procedures that our single-engine helicopter brethren have enjoyed for many years (remember the good ol' days of manual throttle operation to control heading?). However, it does not preclude trainers from creating scenarios that would induce fixed-pitch settings in the tail rotor, and training without landing the helicopter.

Delving into Field Manual (FM) 3-04.203, Fundamentals of Flight, we perceive a lack of information explaining the aerodynamics of the UH-60 tail rotor. For many years, we shared the benefit of an anti-torque system that appears to have complete control authority in every situation. Because we do not fully understand the total authority, it is possible aviators have, due to a lack of discipline, applied an excessive amount on takeoff and were unable to recover from the maneuver. This was the case in at least one of the accidents.

Although investigations are ongoing to identify the root causes of these accidents, we are working toward solutions to ensure aviators are better prepared to confront this situation from both a knowledge and skills perspective. In addition to this article, DES, with the assistance of other SMEs and in conjunction with other aviation agencies, completed a

rewrite of the Tail Rotor Emergency Procedures to be included in change No. 3 in the operator's manuals of all H-60 series aircraft. In addition, revisions to task 1070, Perform Emergency Procedures, from TC 1-237 may be forthcoming to include a greater emphasis on anti-torque malfunctions. As we continue on the road ahead, revisions to FM 3-04.203 and other manuals will include more detailed information on the aerodynamics of the tail rotor system to aid in our understanding.

While we may never know exact causes of accidents, we will continue to ensure Army aviators are properly trained to give them the best chance of survival. To quote an unnamed source, "Army aviation training includes 10 percent learning to fly and 90 percent on what to do when something goes wrong." We are asking the field to immediately address this training deficiency by including routine emergency procedure training specifically addressing anti-torque malfunctions during all modes of flight, including not only lack-of-thrust conditions, but fixed-pitch high-power settings as well. We hope these accidents will cease; but since hope is not a method, we, as professional aviators, must train our force to manage these situations.◀◀

Bells, Whistles and Other Distractions

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Driving today's vehicles is a lot more challenging than when I started in 1984. Back then, my father drove a 1981 Chevrolet pickup truck. It had power steering and air-conditioning and was considered "fully equipped." For its time, it was the top of the line. I was so proud my father taught me to drive in this American classic.

As time went by, I graduated from a learner's permit to a driver's license and got to drive my mother's 1984 Subaru hatchback sedan. The Subaru was definitely a step up in comfort with its power windows, cassette player, air-conditioning and electric seats. While it was safer to drive than the truck, it also had a lot more distracters.

Last year, I purchased a 2008 Chevrolet Tahoe LTZ. When I walked into the dealership and chose a salesman, I specifically told him I wanted a vehicle with all the bells and whistles. The salesman kindly escorted me to the vehicle lot with keys in hand to show me the most remarkable sport utility vehicle (SUV) I had ever seen.

Chevrolet spared no expense designing this SUV with all the creature comforts a driver or passengers could want. It came equipped with leather power seats, air-conditioning, an iPod connector, OnStar car phone, touch-screen DVD player, radio and navigation screen. But why



BELIEVE IT OR NOT!

Think you've seen wackiness behind the wheel? During 2008, Nationwide Mutual Insurance Company conducted a distracted driver study where participants listed the most outlandish things they'd done while driving. The results were broken down by gender, generation (Gen Y, 18 to 27 years old; Gen X, 28 to 44; Baby Boomers, 45 to 60) and location. With Nationwide's permission, here is their "Top Ten" most bizarre driving list.

10. Trying to kill a spider in the backseat with my son, while driving car with a manual transmission. (Gen Y female, Richmond)
9. Study for a test with open notes/books while driving about 75 mph down the highway. I did this more than once. (Gen X female, Sacramento)
8. Probably holding the phone with one hand, curling my hair with the other and driving using my knee. (Gen Y male, Phoenix)
7. Painting my toenails. (Gen X female, San Antonio)
6. Peed out the window while going down the road. Well, you asked! (Baby Boomer male, Sacramento)
5. The most risky thing I have done in a moving car would have to be trying to change my shoes to a pair of heels with straps that were getting tangled on the brakes. (Gen Y female, Dallas)
4. Fed my baby a bottle that was in the backseat while I was driving. (Gen Y female, Memphis)
3. I wear sandals or slip-on shoes 90 percent of the time. So, I always take my left shoe off and put my foot up on the seat. I have a drink in one hand, a smoke in the other hand, and drive (steer) with my left foot. (Gen X female, Memphis)
2. Staring contest with passenger. (Gen Y male, Los Angeles)
1. Shaving legs, eating a taco, putting on make-up and drinking alcohol at the same time. (Gen Y female, San Antonio)



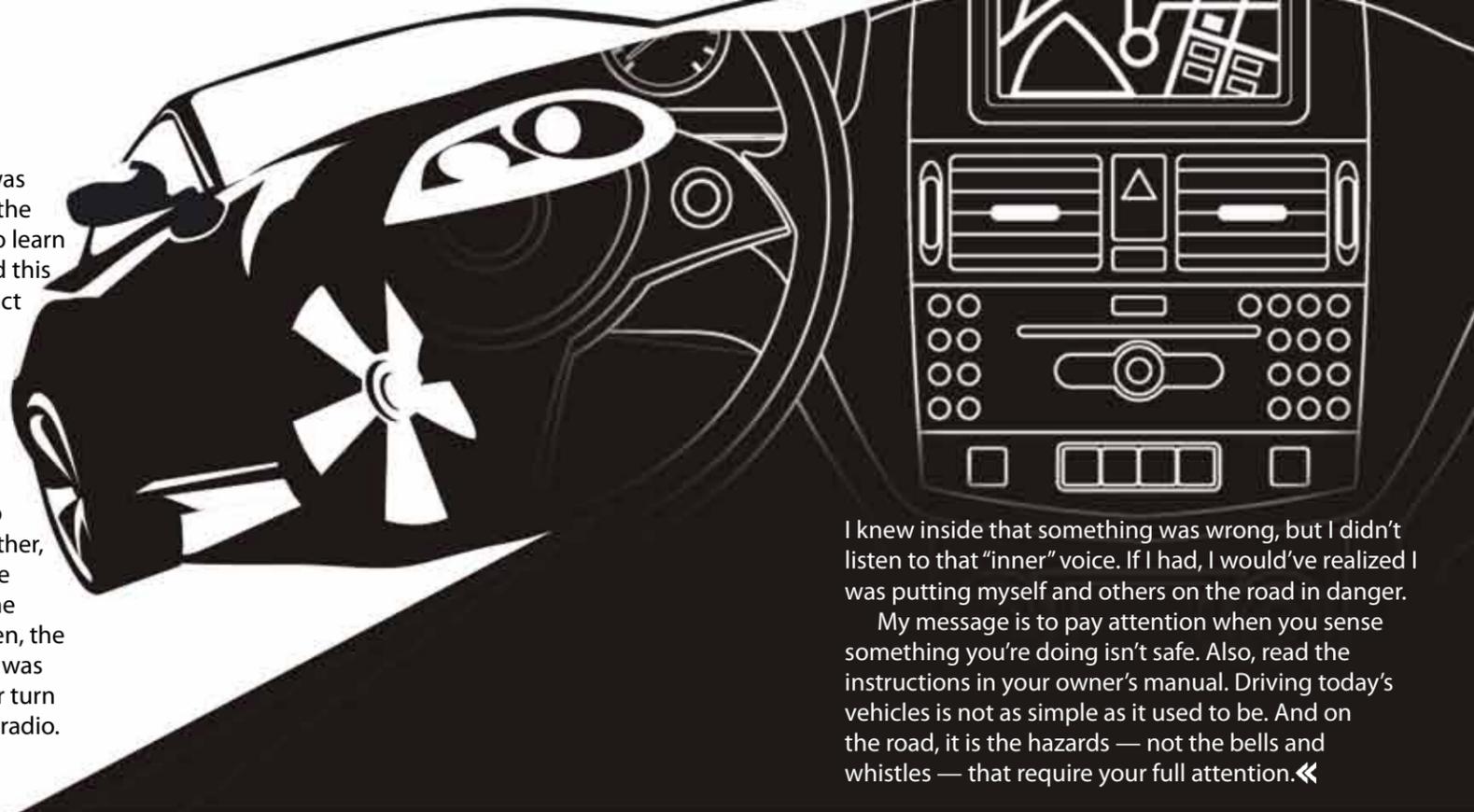
would I, the driver, need so many options? How could I safely navigate on dangerous highways while trying to operate all these options?

Within the first few days, I had so many near misses that it scared me. One night, I decided to read the owner's manual. When I bought the Tahoe, the salesman gave me a 10-minute overview of the truck's features, after which I thought that I was prepared. As I read the owner's manual, I noticed many cautions — including several that really caught my attention. The most important stated, "Do Not Operate Equipment While Driving." It finally dawned on me that this is what I had

been doing wrong. As I was learning how to operate the Tahoe, I was also trying to learn its new features. I allowed this learning process to distract me from my driving.

Many times, I'd thought about stopping to make the necessary adjustments, but always seemed to get by while driving. I thought back to my instructors and my father, who always cautioned me to keep both hands on the wheel. However, back then, the hardest thing I had to do was roll down the windows or turn on the air-conditioner or radio.

I was lucky to have survived my near misses.



I knew inside that something was wrong, but I didn't listen to that "inner" voice. If I had, I would've realized I was putting myself and others on the road in danger.

My message is to pay attention when you sense something you're doing isn't safe. Also, read the instructions in your owner's manual. Driving today's vehicles is not as simple as it used to be. And on the road, it is the hazards — not the bells and whistles — that require your full attention. <<

WHO ROLLED DOWN MY WINDOWS?

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Imagine coming back from a two-week vacation and discovering the windows on your vehicle — left parked in your driveway — were down. That happened to us! We looked inside to see if anything was missing. Fortunately, nothing was amiss.

Then there were the times we parked the car at night, ensured the windows were up and the doors locked, only to come out in the morning and find the front windows down. We drove to the dealership to find out what was happening. They couldn't provide an answer. We

were frustrated. I bet you'd be too. I surfed the Internet looking for recalls or technical service bulletins. I found a lot of people had the same problem and kept searching until I found an answer. It turns out that with our Nissan Altima (and other makes and models of vehicles), this was a feature designed for the driver's convenience.

If you've ever gotten into a car on a hot day with the windows rolled up, you know what an oven feels like. Nissan's answer was to create a way to roll down your windows before getting into the car. Simply pressing the door "unlock" button for three seconds or longer accomplishes that feat.

Sounds great, right? Well, occasionally there's a small "glitch." I'll sometimes dump the Nissan's keys into my pocket where they'll bounce against change, my pocketknife and other keys. Every so often, the unlock button will get depressed long enough to roll down the windows. Even if I am in the back of our house, the signal can still reach the car.

That got me thinking about security and safety concerns. What if your car's front windows accidentally rolled down while you were inside a restaurant or at a friend's house? What if someone crawled in the backseat? Could you see them hiding there or would you even look? If not, you might be in for an unpleasant surprise.

So what can you do? The answers are simple. First, don't assume your dealer knows everything; that's why you get an owner's manual. Had I read mine, I would have found this feature described in the "Pre-driving checks and adjustments" chapter. If your vehicle has a feature like this, test it to see how far away from the car it works. Also, test it from inside a building — especially your house or apartment. Make sure nothing presses against the button while you're in range.

Modern technology is wonderful — as long as you understand it. However, learning by doing isn't always the best approach. You might get caught with something more than your windows down. <<



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LOCKOUT TAGOUT

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Take a look at the three accidents below. Do you know what they have in common?

- A sanitary landfill worker was killed when he tried to clear a jam in a large trash compactor. Unfortunately, he failed to stop, de-energize and lock out the equipment. When he slipped and fell into the hopper, the baling cycle automatically activated, amputating his legs.
- A janitorial worker died after he was trapped inside a hospital laundry dryer while cleaning debris from the inside of the drum. He had propped the door open and entered the dryer drum to begin cleaning, but failed to de-energize or lock out the dryer. When a co-worker restarted the system, not knowing the victim was inside, an overhead conveyor dropped 200 pounds of wet laundry into the dryer, knocking out the prop holding the door open, trapping the victim inside and automatically starting the drying cycle.
- A worker at a concrete pipe manufacturing facility died from injuries he suffered while cleaning a ribbon-type concrete mixer. The procedure

was to shut off the power at the breaker panel, push the toggle switch by the mixer to make sure that the power was off and then enter the mixer to clean it. The victim didn't know that the operator, who went to make a phone call, had already de-energized the mixer at the breaker. Thinking he was turning off the mixer, the victim activated the breaker switch and energized the mixer. He then entered the mixer and began cleaning without first pushing the toggle switch to ensure the equipment was de-energized. The operator returned from making his call and pushed the toggle switch to check that the mixer was de-energized. When the mixer started and the operator heard the victim scream, he went immediately to the main breaker panel and shut off the mixer.

So what do these accidents have in common? First, each is an actual case investigated by the National Institute for Occupational Safety and Health (NIOSH). Second, in each case, the resulting outcome was a fatality. Finally, each could have been prevented by implementing an effective lockout/tagout (LOTO) program.

According to the Occupational Safety and Health Administration (OSHA), LOTO refers to specific practices and procedures designed to safeguard employees from the unexpected energizing or startup of machinery and equipment, or the release of hazardous energy during service or maintenance activities.

OSHA estimates about 3 million workers who service equipment face the greatest risk for injury if the appropriate LOTO standards are not in place. In addition, unprotected workers injured on the job from exposure to hazardous energy lose an average of 24 days of work time

to recuperate. Organizations that comply with the LOTO standard prevent an estimated 120 fatalities and 50,000 injuries each year.

What is Hazardous Energy?

According to NIOSH, hazardous energy is any type of energy that can injure or kill a worker should they be exposed to a sufficient quantity. Common sources include electricity, mechanical motion, pressurized air and hot and cold temperatures. Workers can be exposed to hazardous energy releases during installation, maintenance, service or repair of machines, equipment, processes or systems. The following are forms of hazardous energy:

- **Kinetic (mechanical) energy:** Energy in the moving parts of the mechanical system.
- **Potential energy:** Energy that is stored in pressure vessels, gas tanks, hydraulic or pneumatic systems and springs. (Potential energy can be released as hazardous kinetic energy.)
- **Electrical energy:** Energy from generated electrical power, static sources or electrical storage devices (such as batteries or capacitors).
- **Thermal energy:** Energy (high or low temperatures) resulting from mechanical work, radiation, chemical reaction or electrical resistance.

Prevention Measures

On-the-job accidents, such as the ones described at the beginning of

this article, are all preventable. The key is for management to develop and implement a LOTO program that clearly delineates the standards and ensures those standards are strictly enforced at all worksites within the organization. Elements of a good LOTO program can protect workers from the forms of hazardous energy described and should consist of the following as a minimum:

- Ensure LOTO plans are developed, established and implemented.
- Ensure affected employees are properly trained in LOTO procedures.
- Survey work areas to identify all sources of hazardous energy potentially impacting machines/equipment to be serviced and lock out all sources.
- Ensure any stored energy (mechanical, hydraulic, air, etc.) has been released or blocked before equipment is locked out for repairs.
- Ensure employees working on a piece of equipment apply their personal (individually keyed) safety lock and tag to the lockout device, and that only the employee exposed to the hazard place or remove them.
- When maintenance activities must extend beyond the current shift, replace the personal locks and tags of the leaving shift with the personal locks and tags of the arriving shift. The leaving shift must ensure the arriving shift

understands the maintenance process and hazards.

- Once locks and tags are in place, try to operate the equipment to ensure no lockouts have been missed.
 - Locks should not be removed until the maintenance workers and the authorizing employee are satisfied that the equipment is ready to be operated safely.
- To develop your LOTO program, be sure to review OSHA Standard 1910.147 and the supplemental information available at <https://safety.army.mil/INDUSTRIALSAFETY/LockOutTagOut/tabid/553/Default.aspx>.

FYI

Department of the Army Pamphlet 385-10, paragraph 14-3, Lockout/tagout, establishes the minimum requirements for the lockout or tagout of energy-isolating devices required to control hazardous energy. It ensures the machine or equipment is isolated from all potentially hazardous energy and locked or tagged out before employees perform any servicing or maintenance activities where the unexpected energization, startup or release of stored energy could cause injury.

DID YOU KNOW?

“The control of hazardous energy (lockout/tagout) shall be developed for each piece of equipment being used and provided to personnel servicing and maintaining that equipment in accordance with 29 CFR 1910.147.” — Army Regulation 385-10, paragraph 18-16, Lockout/tagout





The GREAT HORNED OWL Attack

COMMAND SGT. MAJ. RONALD OROSZ
3rd Brigade Combat Team, 1st Infantry Division
Fort Hood, Texas

read the story in the March edition of Knowledge titled “The Deer Catcher” and couldn’t stop laughing. It was funny, yet it reminded me to keep my distance from wild animals. I have a similar story that I would like to share.

My wife, Sue, and I loved to go walking in our quiet little neighborhood just outside of Fort Benning, Ga. Late one afternoon while pushing our son around in the stroller, I noticed an owl in a neighbor’s front yard. At first, I thought it was one of those fake owls people use to keep birds from nesting around houses. My wife and son stayed on the road while I took a closer look. As I got closer, I could see the head following me ever so slowly and, out of the corner of my eye, I saw a large bird fly above me.

Well, it turned out the owl was, in fact, real and the bird

flying over me was the momma owl. I learned later it was a great horned owl and she was guarding her (baby) owlet, which apparently couldn’t fly. I moved back to my wife and we discussed what to do. All the while, the mother owl was watching us very carefully.

As we were talking, I noticed cats moving in as if they were surrounding the owlet for a late-night snack. I told Sue we had to save it. The only question was, “How do you save an owlet with its angry mother hovering above?” I quickly came up with a plan. I told my wife to head home and call the Humane

Society, hoping someone could come out and capture the owlet and save it from the cats.

I stayed and guarded the owlet while the mother owl flew back and forth between two trees, keeping an eye on me. I stayed near the owlet for about an hour, but there was no sign of my wife or the Humane Society. Meanwhile, it was getting dark and things weren’t looking good. I was concerned the owlet would not make it through the night, but there was no way I could

pick it up without the angry mother owl doing something.

I stayed with the owlet for another 10 minutes or so. I looked around and didn’t see any cats, so I decided to go home to see what Sue had done. I turned and started walking down the road. I hadn’t gone 10 steps when, all of a sudden — “BAM!” — something hit me in the back of my head so hard it made me see stars. I never heard it coming.

I grabbed my head, went to the ground and quickly turned to see the mother owl moving back to her perch. Wow, did that hurt; she knocked the @\$ out of me! I felt my head and it was wet. More than likely, she cut me with her razor-sharp talons.

I backed off, quickly turned around and ran home. I burst through the front door of my house and told my wife I was hit. “Hit by what?” she asked. I said, “An owl — what else?”

I asked her to check my head. She confirmed I had talon marks imbedded in my scalp and was bleeding. My wife cleaned my

wounds with alcohol, as owl talons are pretty dirty with all the critters they catch and eat.

After my head was cleaned, I found out my wife couldn’t get through to the Humane Society, or anyone else for that matter (I wondered when she was going to come down the street to tell me). I decided the owlet still needed saving, so I headed back down the street. When I arrived, I looked for the owlet in my neighbor’s front yard, but it was gone. I didn’t see the mother owl perched overhead in any of the trees. I looked around to see if the cats had found the owlet, but there weren’t

any signs of the cats either.

I stayed in the area for about 30 minutes, looking all over the place, and couldn’t find the owlet. As I turned to walk away, I saw movement in the backyard of a house across the street. It was the mother owl checking on the owlet.

I couldn’t help thinking about the owlet all night — probably because the talon marks etched into my head constantly reminded me to let nature take care of its own. I learned the hard way that when you see a wild bird of prey, you definitely want to stay away!◀



FYI

Have you ever heard the warning, “Never get between a mother and her cubs?” Owls aren’t the only animals that aggressively protect their young. Even small birds will harass larger predators while defending their nests and their young. As the author of the previous article found out, good deeds can sometimes backfire. Before you get a nasty surprise, take a look at the following tips from the U.S. Forest Service.

- You are responsible for your safety and the safety of wildlife. Please help keep wildlife “wild” by not approaching or feeding them. Animals that get food from people may become aggressive. Our foods may also harm an animal’s digestive system or even cause them death.
- Do not approach wildlife. All wild animals can be dangerous. Alter your route so you will move away from animals without disturbing them. Do not block an animal’s line of travel.
- Photograph and watch wildlife from observation areas.
- Use binoculars, spotting scopes and telephoto lenses to minimize stress to animals and to provide a safe viewing distance for you.
- If an animal approaches you, it is your responsibility to move away and maintain a safe distance.

Accidents occurred between July 1-31, 2009



LOS

AVIATION

AH-64D

CLASS B
 The aircraft experienced an Nr (main rotor speed) peak of 121 percent during a demonstrated simulated dual-engine failure.

CLASS C
 The crew experienced a No. 1 engine-out indication during the engine health indicator test (HIT) check. The No. 1 engine inlet cover cushion "REMOVE BEFORE FLIGHT" banner was ingested by the engine.

CH-47D

CLASS B
 The aircraft sustained damage to three aft rotor blades during landing to a confined area. The blades required depot-level repair.

CLASS C
 The crew was conducting a mission under night vision goggles (NVG) when the aircraft contacted a rock berm during landing, causing the front-left landing gear to separate from the aircraft. The rear-left landing gear also received damage.

MH-6M

CLASS C
 The aircraft experienced an engine/rotor overspeed during flight. The crew received cockpit indication of an electronic control unit failure.

CLASS C
 The aircraft experienced an engine overtorque condition of 116 percent during flight.

OH-58D(R)

CLASS A
 The aircraft descended to ground contact on an incline

during flight. The main rotor system contacted the ground and the aircraft sustained major damage. The crew had ambulatory injuries.

CLASS A
 The crew noted a vibration and executed an emergency landing. The aircraft entered a right yaw and contacted the ground left-side low. The crew exited without injuries.

CLASS C
 The aircraft contacted the ground during a manual-throttle operation for readiness-level progression.

TH-67A

CLASS A
 The aircraft contacted the ground as the crew was performing a hover taxi. The instructor pilot suffered significant back injuries and the pilot trainee was treated and released.

UH-60A

CLASS C
 The aircraft experienced an overtemp during a HIT check. Inspection revealed the No. 2 engine inlet cover was in place.

UH-60L

CLASS A
 The aircraft struck a 15-foot-high T-barrier during landing under NVG, potentially damaging the engines, transmissions, driveshafts and main rotor system.

FIXED-WING

C-12U

CLASS C
 The aircraft sustained a lightning strike during flight. Postflight inspection revealed damage to one right engine blade and loss of one static wick.

UC-35A

CLASS C
 The aircraft experienced a bird strike during takeoff.

UAS

RQ-7B

CLASS B
 The unmanned aircraft (UA) experienced an ignition failure following launch and crashed. The UA was recovered.

GROUND

ACV

CLASS A
 A local national was killed when his vehicle was struck by a Mine Resistant Ambush Protected vehicle.

CLASS B
 An M88A2 was damaged when a fire started in the engine compartment. The crew recovered items, initiated the internal fire suppression system and evacuated the vehicle. The fire later reignited and the local fire department responded.

ARMY AVIATION LOSSES

Fiscal 2009
 as of Oct. 5, 2009



ATTACK	2/1
RECON	10/4
UTILITY	10/7
CARGO	2/0
TRAINING	2/0
FIXED-WING	0/0
UAS	3/0

TOTAL 29/12

ARMY GROUND LOSSES

Fiscal 2009
 as of Oct. 5, 2009



AMV	20/20
ACV	16/6
PERSONNEL INJURY <small>includes weapons-handling accidents</small>	31/24
FIRE/EXPLOSIVE	5/1
PROPERTY DAMAGE	4/0

TOTAL 76/51

■ A Stryker was damaged when it overturned during a convoy movement. At the time of the accident, the driver was negotiating a turn on a downslope.



CLASS A

■ A Soldier serving as the gunner in an M1115 HMMWV was fatally injured when the vehicle overturned in a sharp curve in the road. The Soldier was not wearing a seat restraint.

CLASS B

■ A HEMMT wrecker was damaged when it overturned while towing a 5-ton truck. At the time of the accident, the Soldier driving the wrecker was attempting to reenter his lane after passing a vehicle. The Soldier lost control of the wrecker, causing it to overturn.



CLASS A

■ A Soldier was killed when he was struck in the head with a round from an M9 that another Soldier was cleaning.

■ A Soldier drowned while swimming in a river at an organizational day event.



CLASS A

■ A Soldier was driving his

privately owned vehicle (POV) when it drifted off the left side of the road, entered the median, went up an embankment and overturned twice. The Soldier was not wearing his seat belt and was ejected and killed.

■ A Soldier was driving his pickup home from his annual tour location when he lost control, overturned and struck a tree. The Soldier was wearing his seat belt and was transported to a medical facility, where he died five days later.



CLASS A

■ A Soldier was operating his sportbike, accompanied by a friend on another bike, when they tried to avoid an animal in the road and crashed into each other. The Soldier was evacuated to a hospital, but died two days later. The Soldier had

been wearing his helmet and personal protective equipment (PPE).

■ A Soldier was operating his sportbike while on transition leave when he lost control, left the road, crashed and died at the scene. The following morning, the Soldier's brother found him lying in a ditch. The Soldier had a half-empty flask of alcohol in his back pocket and, at the time of his crash, was wearing a helmet, T-shirt, jeans and flip-flops.

■ A Soldier was on a ride that included another Soldier and two civilians when he drifted onto the right shoulder, lost control on the gravel, struck a guardrail and was fatally injured. The Soldier was thrown forward 84 feet and died after striking a guardrail support. The Soldier was riding with a nonsanctioned

SET THE STANDARD

Before you ride, always wear:

- A helmet manufactured to meet U.S. Department of Transportation or Snell standards.
- Eye protection that meets ANSI code Z87.1.
- Long pants and a long-sleeve shirt.
- Sturdy, over-the-ankle footwear.
- Full-fingered gloves.



motorcycle club that had a reputation for unsafe riding.

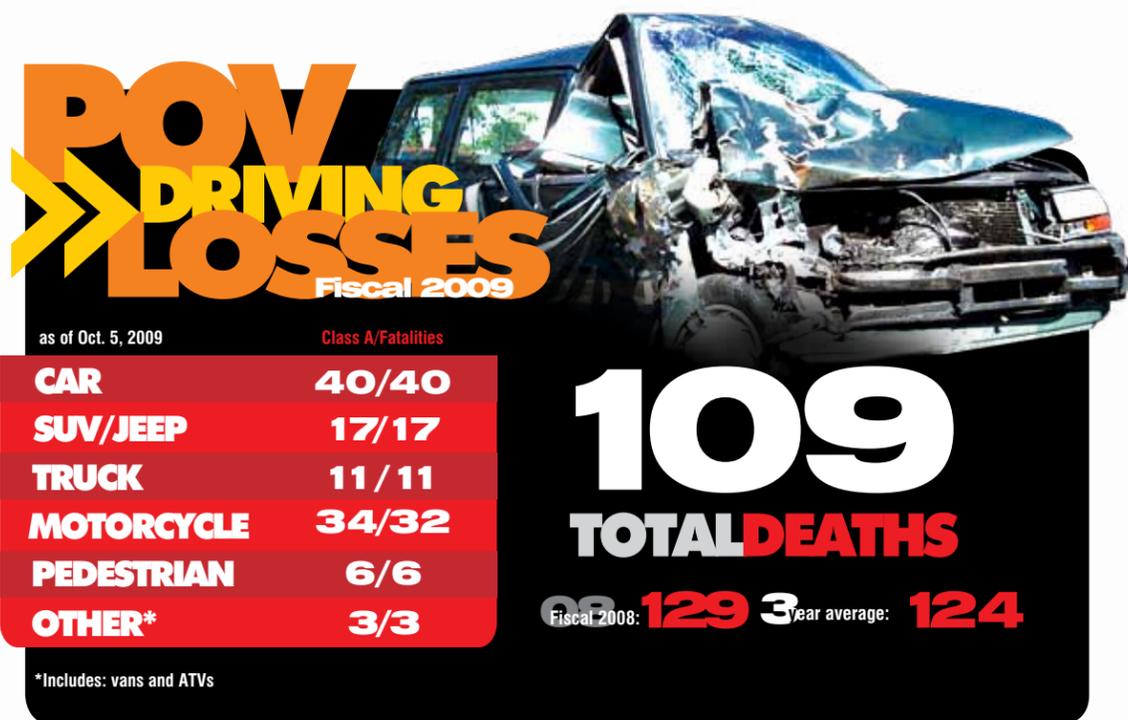
■ A Soldier was operating his cruiser-type motorcycle during transition leave when he struck an SUV that entered his path of travel and was killed. The Soldier was wearing his helmet and PPE.

CLASS C

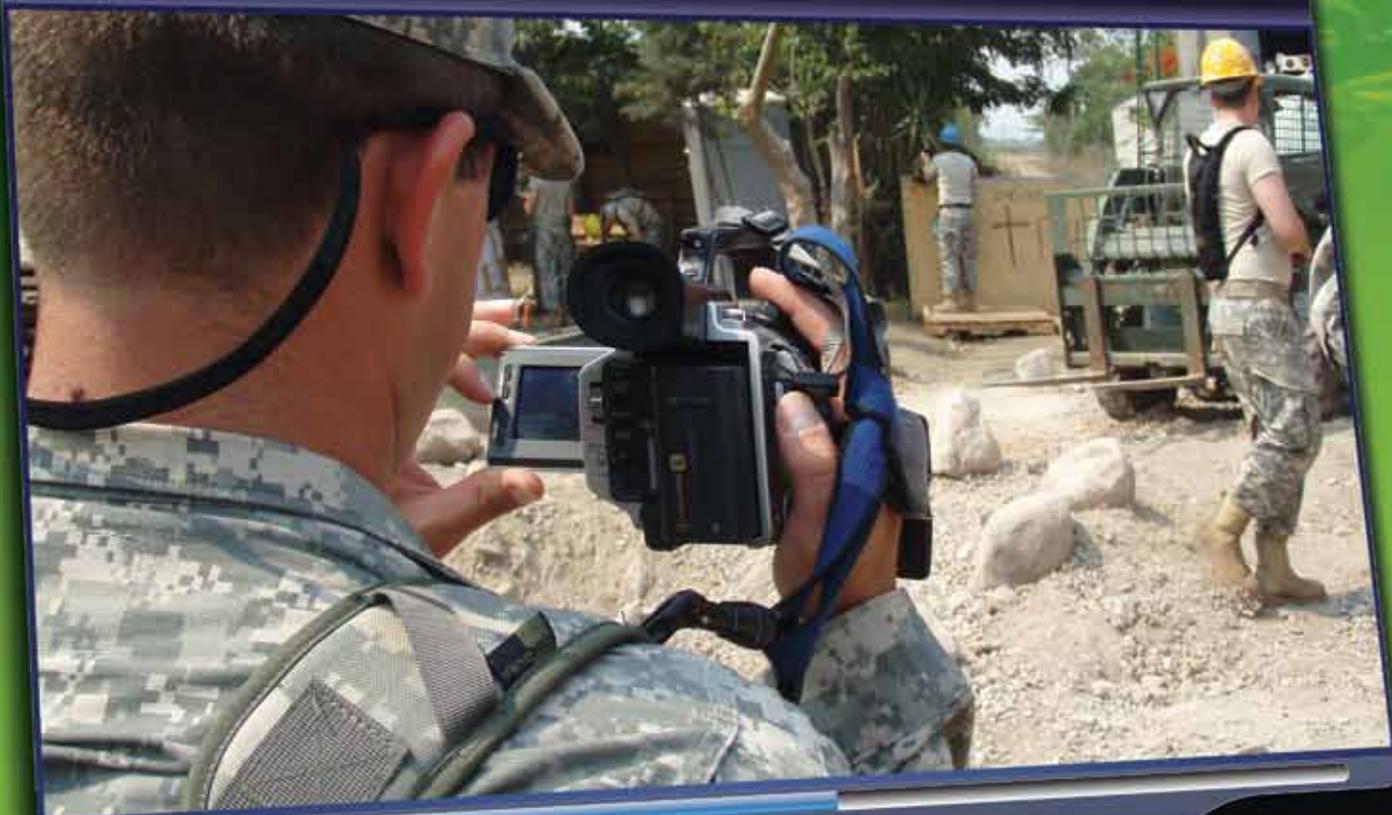
■ A Soldier, accompanied by a passenger, was operating his motorcycle while intoxicated and lost control and crashed. The Soldier, who was not wearing any PPE, was hospitalized for five days and lost 10 workdays.

Editor's note: Information published in the accident briefs section is based on preliminary loss reports submitted by units and is subject to change. For more information on selected accident briefs, e-mail safe.knowledge@conus.army.mil.

BEFORE A LONG RIDE, DO THIS:



make a **movie**, save a **life**.



Peer to Peer

Winners will receive:

First Place: A gold medal certificate and a gold "Safety Emmy" trophy and up to \$2000 from the Army BOSS program.

Second Place: A silver medal certificate and a silver "Safety Emmy" trophy and up to \$2000 from the Army BOSS program.

Third Place: A bronze medal certificate and a bronze "Safety Emmy" trophy and up to \$2000 from the Army BOSS program.

The competition runs
Oct. 1, 2009 to April 30, 2010

For more information and contest
rules for Peer to Peer, go to
<https://safety.army.mil/videocompetition>.



ARMY SAFE
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KNOWLEDGE

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U.S. ARMY
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U.S. ARMY COMBAT READINESS/SAFETY CENTER

ARMY SAFE IS ARMY STRONG

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We welcome your feedback. Please e-mail comments to safe.knowledge@conus.army.mil.

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I ENCOURAGE you to ensure your junior LEADERS are actively engaged with their SOLDIERS and reinforce the principles and PRACTICES we know to be SUCCESSFUL in MITIGATING risk and preventing ACCIDENTAL losses.



CELEBRATING THE SEASON

As we observe the holiday season, Soldiers both here and abroad have many reasons to celebrate. Many of you will be spending time with Family and friends, while others will be celebrating a safe return home from an extended overseas deployment. There is additional cause for celebration as we at the U.S. Army Combat Readiness/Safety Center continue to review accident statistics for fiscal 2009. During this single year, our Army's total accidental fatalities dropped to their lowest number since the terrorist attacks on Sept. 11, 2001. As a result of your engagement and dedication to safety each and every day, approximately 30 more Soldiers are alive in 2009 to spend the holidays with their loved ones.

Even with these successes, there is more work to be done. In the first few weeks of fiscal 2010, our Army experienced a rash of off-duty fatalities that threaten to reverse the positive gains made

in 2009. The circumstances leading to each of these accidents is nearly identical: speed, lack of seat belts, late evening or early morning travel and alcohol are often all listed as contributing factors. In one particular accident, a 27-year-old Soldier was killed when he lost control of his SUV on an icy interstate highway. The vehicle rolled over three times, ejecting both the Soldier and his fiancée, neither of whom were wearing seat belts. The Soldier was reportedly driving too fast for the road conditions, which had deteriorated due to rain and freezing temperatures. While alcohol was not suspected as a contributing factor, the combination of speed, no seat belts and dangerous road conditions proved lethal for this Soldier.

This accident clearly illustrates a simple but deadly fact that has troubled Army Leaders for many years. When on duty, we expect our Soldiers to adhere to standards of discipline and personal accountability. However, this mindset often fails to carry over into off-duty time. Although we have made impressive progress in reducing off-duty fatalities, indiscipline remains

a primary factor in a majority of Soldier-involved, off-duty accidents.

Please continue to encourage your Soldiers to eliminate the distinction between work and play. I encourage you to ensure your junior Leaders are actively engaged with their Soldiers and reinforce the principles and practices we know to be successful in mitigating risk and preventing accidental losses.

But, as you're aware, engaged leadership is only part of the formula for success. If we are to eliminate risk and reduce these off-duty tragedies, our approach must also include Soldiers taking care of Soldiers, personifying the Band of Brothers and Sisters philosophy. Families embracing risk management and reinforcing the principles and practices we know to be successful in preventing accidental losses during this time of year when holiday stress is high and traveling for most is increasingly hazardous is also a critical part of success.

Winter is upon us at home and in most of our operational theaters. Sleet, snow and ice are creating treacherous driving conditions across much of the United States,

necessitating extra caution for all drivers on our nation's roadways. Some Soldiers are also gearing up for winter sports such as skiing and snowboarding and must be mindful of the risks associated with these activities. The USACR/Safety Center team has developed several new posters, videos and other media as part of our current Army Safe Fall/Winter safety campaign, all available for your use on our Web site (<https://safety.army.mil/>).

Our Army has made great strides over the past eight years, and I am confident we will continue this downward trend as we move forward into the New Year. Thank you all for what you do every day to keep our Band of Brothers and Sisters safe. I wish each of you and your Families a happy, healthy and safe holiday season!

Army Safe is Army Strong!

WILLIAM T. WOLF
Brigadier General, USA
Director of Army Safety

DRIVEN TO SUCCEED

LT. COL. DAVID WILSON
121st Brigade Support Battalion, 4th Brigade,
1st Armored Division (HBCT)
Fort Bliss, Texas

A good driver's training program can set the stage for a successful deployment. For the 121st Brigade Support Battalion (BSB) "Iron Hammer," 4th Brigade, 1st Armored Division, Fort Bliss, Texas, this training not only netted licensed and proficient drivers, but also logistics achievers. The result: In the first 100 days of battle, the battalion drove more than 148,000 miles and conducted more than 65 combat logistics convoys without an accident.



The 121 BSB began its preparation for deployment to Operation Iraqi Freedom in July 2008. The unit had just undergone a significant personnel turnover as a result of Army Force Generation. The unit's training strategy was simple: look at its capacity to shoot, move, communicate and sustain. This required the Iron Hammer to establish a driver's training program that would be sustainable even in battle. This was essential since the unit was only at 67 percent strength at the time it started retraining for combat operations.

Building a Winning Training Program

The commander's focus was establishing the building blocks for a quality driver's training program that would set the conditions for success. The first step was identifying previous master drivers and instructors within the formation, as well as identifying candidates who could be trained and certified to assist in setting up and running the program. This allowed the unit to take advantage of the existing experts within the formation to establish a program that would include training, testing, certification and sustainment phases with composite risk management (CRM) incorporated throughout.

The next step was to recertify existing master drivers and certify new ones. The unit also focused its attention on getting personnel interviewed and scheduled for new training — including recertifying drivers who no longer met the existing licensing requirements in Army Regulation (AR) 385-10, The Army Safety Program. Concurrently, the unit safety council worked to establish metrics for safety, participated in the training and incorporated lessons learned into daily battalion operations.

Looking ahead to the upcoming deployment and potentially



falling in on the new Mine Resistant Ambush Protected (MRAP) vehicles, the brigade senior maintenance technician was able to acquire several training slots at MRAP University at Red River, Texas. This training certified senior Leaders to train and license personnel for all variants of the vehicles; this would serve us later as we hit the Central Command area of responsibility. Our senior mechanics were also able to take advantage of a four-week maintenance course at Red River.

Back at Fort Bliss, 121 BSB established a driver's course that consisted of on-road, off-road, highway and obstacle negotiation. Keeping in mind that operating recovery equipment could present some challenges in theater, particularly with MRAPs, 121 BSB coordinated with Aberdeen Proving Ground, Md., and arranged to have the Ordnance Center and School send its recovery mobile training team to Fort Bliss to assist in training and certificating recovery personnel and drivers on the safest and most effective recovery techniques in both tactical and garrison environments.

Without external support, the battalion was also able to build a recovery lane with a mire pit in training area 2E at Fort Bliss. As soon as 121 BSB completed its training, post-wide training was made available for all recovery personnel.

In the end, more than 75 recovery personnel from the various units on post were trained and certified. The new recovery lane, constructed solely by the Iron Hammer Battalion with the approval and support of the installation, was also certified.

Development of the Iron Hammer Program of Instruction (POI) took on two forms. One form was a four-day POI designed to recertify existing drivers and bring them up to speed on the regulations for military vehicle operations on and off post. The other form involved a seven-day training program built upon the installation's standard 40-hour course. It included on- and off-road driving, driving during daytime and night — including using night vision devices — and how to handle obstacles. This all culminated with the drivers taking a check ride, performing preventive maintenance checks and services and a written test to demonstrate their understanding of CRM.

As we worked through both POIs, it was evident we would have to adjust them since newly assigned personnel were not as thoroughly trained as 121 BSB Soldiers at Fort Bliss. The battalion command sergeant major's "Soldier Gage" program ensured junior Leaders designated new Soldiers for driver's training and evaluated their fitness to successfully operate military equipment. From this



assessment, the junior Leaders recommended candidates for the Iron Hammer Driver's Training Academy to their unit commanders. This enabled Leaders to track their Soldiers' progress through the training, ensuring they achieved proficiency operating the vehicles on which they trained.

Leaders Ensure Standards are Met

The battalion selected a warrant officer and a senior maintenance noncommissioned officer to serve as the officer in charge (OIC) and NCOIC of the Iron Hammer Driver's Training Academy and provided them with all the necessary resources and equipment to execute the program to standard. Training was conducted at the battalion level to ensure standards were consistently enforced and so the same subject matter experts provided the training to all the participating Soldiers. This allowed us to reach and maintain a "band of excellence" for driver's training within the battalion.

Upon building a baseline core of drivers, we shifted our efforts to ensuring everyone was assigned to a vehicle as a crewmember, whether they were a driver, truck commander (TC) or passenger. From there, we traversed our attention on the TCs and found some personnel

designated as TCs were not licensed on that piece of equipment. Seeing this as a shortfall, units enrolled those individuals in the Iron Hammer Driver's Training Academy for training and certification.

Knowing that having a sufficient number of qualified operators was critical, the battalion expanded training to create redundant capabilities within the ranks that would create a buffer and compensate for Soldiers identified as nondeployable. The battalion set a goal to get 80 percent of the formation licensed on equipment within the battalion. By the time they deployed to the National Training Center (NTC), the battalion had reached 74 percent.

Taking the Iron Hammer Driver's Training Academy with them, they were able to close the gap at the NTC during preparatory training/certification, which allowed the battalion to move into the "box" in one trip without making flips or requiring assistance. As the battalion touched down in Kuwait for reception, staging, onward movement and integration (RSOI), it was able to enroll its convoy security element immediately into MRAP driver's training at Camp Buehring, where drivers received instruction on the MaxxPro variant of the MRAP. This was good familiarization

training; however, once we pushed into southern Iraq, the unit we were conducting RIP/TOA with was completely outfitted with the Caiman Plus variant of the MRAP.

Because the training we received at Camp Buehring did not cover the Caiman, our drivers needed an additional 150 miles of daytime training and 75 miles of night driving before they could be certified to operate their MRAPs. Since the battalion had sent personnel to MRAP University prior to deployment and the program manager of MRAP New Equipment Training (NET) in Iraq honored this training, we instituted the Iron Hammer Driver's Training Academy using our seven trained master drivers. We were then immediately able to train and certify drivers on the Caiman Plus MRAP variant and mobilized this team to reach our outlying forward operating bases.

Additionally, we sent NCOs to the Logistics Support Area Balad to attend the MRAP Theater Master Driver's Course. This training focused on the Caiman Plus and MaxxPro Plus MRAPs, further enhancing our instructional capability on operations with the Caiman Plus. We ran a monthly driver's training course to license new drivers and provide sustainment training, which helped us fill the gaps for

personnel going on rest and relaxation leave, emergency leave and for illnesses and injuries that affected our driver pool. We were able to license half of the formation within the first 45 days. Our priority was training the sustainment replenishment operations (SRO) security team, as well as the platoons of the distribution company and forward support companies of the BSB.

Based on CRM and the Soldier's unfamiliarity with our routes for the SRO mission, for the first 30 days of operations, the commander directed that the combat logistics convoy speed for MRAP vehicles would not exceed 25 mph, with a catch-up speed of 35 mph, as necessary. This allowed Soldiers to become familiar with the route — which was critical due to the threat of improvised explosive devices and the handling characteristics of the MRAPs, such as breaking distance and the swaying caused by the high center of gravity.

The intent was to follow a crawl-walk-run model as we executed our mission. This approach not only built the drivers' confidence with their MRAPs, it also enabled them to become familiar with every bump, rock, trash pile and dirt berm. This resulted in valuable input into the unit's route-focused intelligence preparation for the battlefield program.

The result of placing a high value on training and teamwork was success on the battlefield. This success is tied to the success of the Iron Hammer Driver's Training Academy and ultimately is attributed to the vision and foresight of the battalion's leadership to build this capacity within the formation. This enabled the unit to rapidly adjust to changing conditions and continually provide seamless support to the brigade combat team.◀

Get the tools before the road gets rough.



<https://safety.army.mil>

Bad Company

COMPILED BY THE KNOWLEDGE STAFF

Editor's note: The names of the individuals mentioned in this story have been changed to protect their privacy and that of their Families.

It was almost 97 F and the sun was lowering onto the western horizon as Sgt. Larry Robinson crouched over the tank of his Suzuki GSX-R600 and rolled on the throttle.

He was third in a group of four riders straightening out the turns on a series of country roads skirting a large lake. The roughly 29-mile route was a favorite with riders, including those whose sportbikes could propel them to 150 mph in the straights.

Leading the ride was Staff Sgt. Victor Hernandez, a friend who served in the same unit with Robinson. Hernandez rode with an off-post, nonsanctioned riding group that Robinson wanted to join. He'd been riding as a prospect, but a pending permanent change of station nixed his plans.

Although Hernandez and one of the other riders belonged to the group, it was not a group-sponsored ride and neither rider wore the group's distinctive vest. The group was known for its riding culture, which was displayed on its Web site. There, videos showed stunting on streets and interstates and a member exceeding 150 mph. And there was history here as far as the Army was concerned.

During the previous 13 months, three Soldiers affiliated with the group had

suffered motorcycle accidents. Two of those Soldiers died, while the third suffered a permanent disability. That afternoon, the culture that had killed and crippled those Soldiers was on display as Hernandez led his friends on their ride.

The riders turned north on a road bordering the east side of a lake. Hernandez had lengthened his lead and was playing "catch me if you can" as he pulled out of sight of the other riders. As they approached a dam, they saw a slower-moving cruiser motorcycle in their lane and decided to pass it. The rider in front of Robinson ignored the double yellow line indicating a "no-passing" zone and whipped around the cruiser. Now it was Robinson's turn.

As he approached the slower bike, the road curved to the left as it crossed the dam. Robinson passed the

cruiser quickly and pulled back into his lane. However, during the process, he ended up too far to the right — dangerously close to the gravel-surfaced shoulder. The Suzuki was Robinson's first street bike and he'd only been riding for about a month. He'd taken the Motorcycle Safety Foundation's (MSF) Basic RiderCourse; however, he was no longer on the course's slow-speed, controlled environment. Now, he was in a sticky situation for which he wasn't prepared.

Unable to handle the curve, gravel crunched beneath the Suzuki's tires as he drifted onto the narrow right shoulder, which was bordered by a guardrail. Now, everything was up for grabs. The Suzuki lost traction and struck a guardrail support. The impact launched Robinson 84 feet through the air and down the shoulder until

Robinson **IGNORED** the **POSTED** speed limits, not realizing **THEY** were **THERE** for his **SAFETY.**

he slammed head-first into a guardrail support.

Chris and Mary Burkhart were driving in the southbound lane when they saw the accident unfold in front of them. Mary Burkhart stopped the car, grabbed her cell phone and called 911. She and her husband rendered aid to Robinson, following the instructions of the 911 operator. The rider behind Robinson also called 911. Hernandez was stopped two miles ahead, waiting

for his friends to catch up. When they didn't, he rode back to see what had happened.

The county volunteer fire department was near the dam and emergency medical services (EMS) personnel arrived within three minutes. They checked Robinson and called for a helicopter as they attempted to resuscitate him. By the time the helicopter arrived 12 minutes later, Robinson had not revived, so the EMS technicians

contacted the county justice of the peace. An hour earlier, Robinson had been racing down the road. Now, he was lying dead beside it, the victim of blunt-force trauma to his head.

Why did he die? Robinson ignored the posted speed limits, not realizing they were there for his safety. With scarcely a month's street-riding experience, he didn't know how to handle the situation he was in. As a result, when things went bad, he made a poor decision that ended his life.

Then there was Hernandez. As Robinson's Leader and friend, he was responsible for the younger Soldier

during their off-duty time together. He set an example by the way he rode that afternoon. It was an example other riders could die trying to follow.

That afternoon's bad decisions cost a Family their son, Hernandez his friend and the Army an experienced Iraq-war veteran. Those decisions, however, didn't happen in a vacuum. Coloring them was a dangerous culture lurking outside the gates of many Army installations. That culture will be addressed below in the article "Divided Loyalties."◀



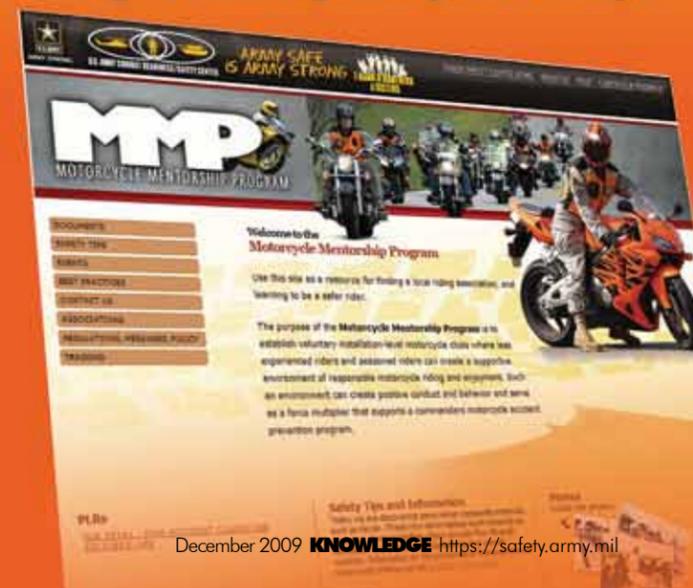
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MMP
MOTORCYCLE MENTORSHIP PROGRAM

Check out the MMP Web site for some examples of active mentoring programs:

<https://safety.army.mil/mmp/>



DIVIDED LOYALTIES

COMPILED BY THE KNOWLEDGE STAFF

One of the statements in the Soldier's Creed is, "I am a Warrior and a member of the team. I serve the people of the United States and live the Army values." This and other statements define the principles by which Soldiers live and fight. But what if some Soldiers give their loyalty to a different "team" than the Army and Soldiers die as a result? Think that doesn't happen? Think again. It has on multiple occasions.

Soldiers are being drawn into nonsanctioned, off-post motorcycle groups whose

reckless, thrill-seeking culture forces them to divide their loyalties. The requirement that riders be loyal to these groups can pit Soldiers against their loyalty to the Army. While the Army expects Soldiers to ride lawfully, these clubs often encourage the opposite.

And what happens when Soldiers die while riding with such groups? Typically, these groups have been uncooperative with Army efforts to find out how the Soldier was killed. Loyal to the group, Soldiers sometimes view protecting it as more important

than preventing future deaths — including those of their own comrades. So how does being willing to set up a buddy for a fall stack up against the statement, "I will never leave a fallen comrade"?

Not every non-Army-sanctioned riding group has this kind of culture. Some provide a positive alternative for Soldiers who don't have the option of joining a motorcycle mentorship program. The key is discovering the group's culture before trying to join, and that's easy to do. Most groups have Web sites showing their activities. Visit those sites and

look at the images and videos. It shouldn't take long to discover the group's culture.

Why should this matter to you? In his article "Helping New Riders" in the July 2009 Knowledge, Sgt. 1st Class Frederick McMullen — a sportbike enthusiast — had this to say about these groups: "These groups don't care about the safety of new riders; all they want to do is show these "newbies" how to "really" ride. They don't care who is weak and might need some help; they just want to get an adrenaline rush. When new riders find themselves in such groups, peer pressure and lack of experience can lead to horrific endings."

That's what happened to Sgt. Larry Robinson in the article "Bad Company."◀

DES OBSERVATIONS for 2009 Aviation Trends

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I wrote an article in the April 2008 issue of Knowledge entitled "Breaking the Cycle" that focused on the aviation branch posture being influenced by the requirements of the Overseas Contingency Operations (OCOs). Since then, we've made great strides as a branch in tackling many of the issues identified in that article. While we've seen improvements in certain areas, we must not be lulled into a false sense of security by our successes.

Our challenges in 2008 included short unit dwell times, hasty readiness level (RL) progressions to meet crew requirements for deployment, high-flying-hour operating tempos in theater, aviators with extensive flight time in one mission set and frequent permanent changes of station from redeploying to deploying units. As members of the Directorate of Evaluation and Standardization (DES) visited units around the world, we observed several trends related to these challenges. These trends included excessive use of waivers, aviators never completing an annual proficiency and readiness test, weak aviator instrument skills, gunnery skill atrophy in combat, low simulation utilization rates and weak air mission commander (AMC) training programs. Because of these inadequacies, human error accidents increased.

Since the changes to Army Regulation 95-1, Flight Regulations, we have seen a marked reduction in waivers to aircrew training program (ATP) requirements. However, the real change has been in the attitudes of commanders. Every commander we visited in the past year has stressed to his or her

aviators the need to complete their ATP requirements. Commanders understand that proficiency in certain individual aviator skills (e.g., perform unusual attitude recovery, respond to inadvertent instrument meteorological conditions or other emergencies) aren't routinely used in a combat environment. Nevertheless, these skills are critical to saving lives in combat and when the unit returns to home station.

An Enterprise Approach

Our branch chief, Maj. Gen. James O. Barclay III, recognized many of the challenges of our Combat Aviation Brigade (CAB) commanders and directed our branch to take an Enterprise Approach to training aircrews for deployment. As a result of collaborative efforts of aviation Leaders from the U.S. Army Aviation Center of Excellence, U.S. Army Forces Command, Headquarters-Department of the Army G-3/5/7, U.S. Army Aviation Missile Command, Program Executive Office-Aviation, National Guard Bureau and the U.S. Army Reserve, we have tackled some of the toughest issues faced by CABs and initiated solutions.

We coordinated assistance for RL progressions, provided mobile training and assistance teams to allow Soldiers more time at home station and moved residual aircraft from deploying units to units that needed them most for training. These initiatives have had a positive impact on the CABs' preparation for deployment. Despite these successes, many units continue to have training shortfalls in all airframes, including power management/environmental training, emergency procedures training and AMC training.

**Power Management/
Environmental Training**

As the Army increases forces in Afghanistan, we've noticed more units are sending their aviators to the Army National Guard's High Altitude Aviation Training School (HAATS) in Gypsum, Colo., as well as conducting collective

training in the higher elevations of Fort Bliss. Although this training has proven effective for environmental awareness, we continue to see aviators forgetting some of the basics of power management.

Leaders must ensure aircrews are discussing performance planning card (PPC) information during crew briefs. Crews should also discuss PPC information during team briefs (e.g., when crews are flying in mixed aircraft formations). This is a critical point so all flight crews understand each aircraft's capabilities and limitations. One of the important limitations to understand is when an aircraft will have safe single-engine airspeed capability. If a crew understands this limitation, they can be better prepared to jettison the wing stores, if necessary. They can also be cognizant of potential forced landing areas should an engine fail in flight. Leaders must reiterate to aviators not only the environmental considerations of mountain flying, but also the tactical considerations.

Emergency Procedures Training

When emergencies occur in combat, they are usually not single

emergencies like those we typically practice in the traffic pattern. There is no better place to train for such contingencies than in one of our simulators. Despite this, we still see low simulator use by our deployed Longbow crew trainers (LCT). We also have commanders who question the need to take the devices to theater.

With the fielding of transportable simulators for the CH-47F and UH-60L and M models, our assault battalions and general support aviation battalions now have the same capability as our Apache battalions have had with the LCT. We need to take advantage of this tremendous capability. We should be deploying these systems with our units and putting our crews through a rigorous emergency procedures training program that forces them to recognize and react to multiple emergencies.

AMC Training Program

DES is seeing great improvement in AMC training, but we still have a way to go. A strong AMC program is important because it is our junior warrant and commissioned officers who are leading our formations. We shouldn't expect them to learn

all it takes to be an AMC simply from flying as part of a team. The best programs have commander involvement using various training vignettes in the aviation combined arms tactical trainer (AVCATT) or even in the actual aircraft. One unit we visited even had a tiered approach to AMC. The first tier served as the AMC for a similar aircraft team, the second tier served as the AMC for a mixed formation and the third tier served as the AMC for the most complex missions.

Conclusion

One year ago, we thought we would see some relief from the realities of the OCOs as we drew down forces in Iraq. Although we've drawn down brigade combat teams, we haven't seen a comparable reduction in aviation forces. At the same time, we've seen an increase of aviation requirements in Afghanistan. These additional requirements will place an added burden on our already stretched force.

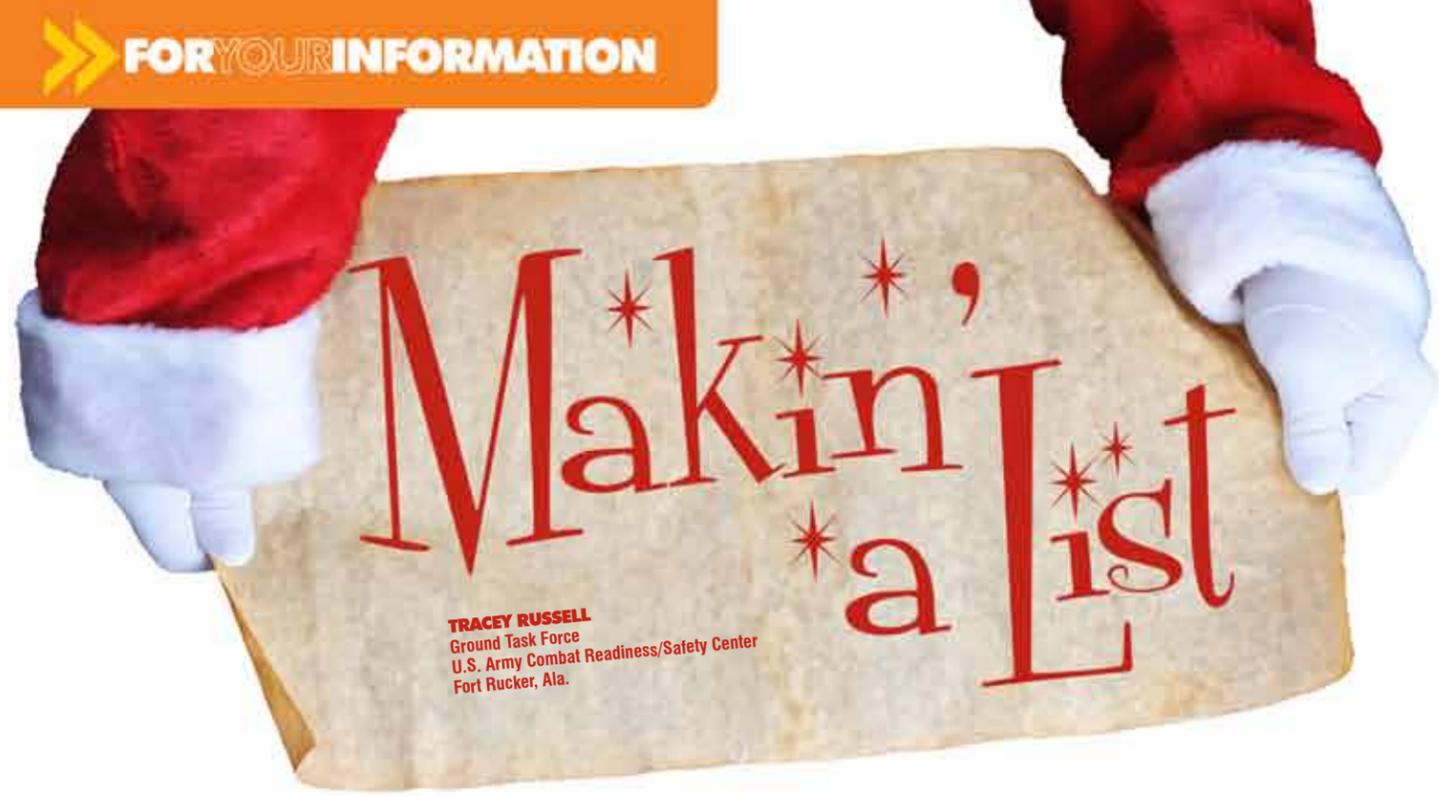
It is paramount for commanders to ensure their crews focus on the basics I've listed above if aircrews are to be adequately prepared for the rigors of combat and prevent needless accidents. If necessary, it is also important for commanders to seek assistance from the Aviation Enterprise to help train their aviators in these times of short unit dwells. Just as important, commanders must ensure their crews continue training in combat to maintain their readiness. If we can accomplish these goals, we might be able to not only "Break the Cycle," but also prevent another deadly cycle from beginning.◀



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The month of December is host to various holidays to be celebrated with Family and friends. As you make plans to enjoy your favorite traditions, take time to add safety to your holiday "to-do" lists.

Fire

Fire safety is particularly important this time of year. Typical holiday traditions include lights on Christmas trees and homes, the lighting of candles on menorahs and kinaras, and

fireworks to celebrate the New Year. All present fire hazards that should be taken into consideration when planning your holiday activities.

According to the U.S. Fire Administration (USFA), fire departments respond to an estimated 128,700 fires each December. These fires result, on average, in 1,650 injuries and 415 deaths. The National Fire Protection Agency (NFPA) provides the following safety tips for holiday decorations:

- Choose a tree with fresh, green needles that do not fall off when touched. Before placing the tree in the stand, cut off 1 to 2 inches from the base of the trunk.

- Make sure the tree is at least three feet away from any heat source, such as fireplaces, radiators, candles, heat vents or lights, and that it's not blocking an exit.
- Add water to the tree stand. Be sure to add water daily and always turn off Christmas tree lights before leaving home or going to bed.
- Choose decorations that are flame resistant or flame retardant. If you have an artificial tree, be sure it is labeled, certified or identified by the manufacturer as fire retardant.
- Keep lit candles away from decorations and other items that

can burn. Never use lit candles to decorate a tree.

- Use lights that have the label of an independent testing laboratory.
- Replace any string of lights that has worn or broken cords or loose bulb connections.
- Connect no more than three strands of mini-light sets and a maximum of 50 bulbs for screw-in bulbs.
- Use plastic clips, not nails, to hang lights so the cords do not get damaged.

Food

Make sure your holiday food preparations are near the top of your safety list.

Statistics from the USFA indicate that cooking is the leading cause of residential fires during the month of December, accounting for 41 percent. Remember the old adage "the cook who leaves the kitchen burns"? Adhere to that message and never leave cooking fires unattended. Watch out for items such as oven mitts and dish towels, which can catch on fire if kept near an open flame or heating element. Don't forget to keep an eye on children and pets to ensure they're not injured.

While you don't want to overcook your meal, you also should be careful not to undercook it. To ensure turkeys and hams are adequately cooked, it is recommended they reach a minimum internal temperature of 170 F. Check the temperature in the breast for a turkey and the thickest part of a ham.

Before cooking, it is recommended meats are thawed in a refrigerator. Do not leave unthawed meat unrefrigerated for more than one hour. These precautions, along with frequent hand washing and cleaning of food and preparation surfaces, will go a long way in preventing food-borne illnesses.

Travel

Many of us will be traveling to spend the holidays with Family and friends. Before you embark on your trip, take time to ensure your vehicle is in proper working order (tires, lights, emergency items, etc.), check the weather and get plenty of rest. When it's time to hit the road, wear your seat belt and make sure your passengers also buckle up.

If your "holiday cheer" involves alcohol, use a designated driver. Fatigue, alcohol and speed are common factors in automobile accidents. Making frequent rest stops, refraining from alcohol when you will be driving and obeying posted speed limits are simple ways to make your holiday more enjoyable.

Shopping

As you head off to the local shopping center in search of that perfect gift, consider that large crowds of holiday shoppers and adverse weather conditions can make parking lots and stores difficult to navigate. Injuries resulting from slips, trips and falls are one of the leading causes of emergency room visits each year. Be particularly cautious on wet or icy

surfaces. It's also a good idea to wear low-heeled shoes with a treaded sole. When heading back to your vehicle, make sure you don't overload yourself with packages and always remain aware of your surroundings.

When selecting gifts for children, make sure you choose items that are age appropriate. Many toys will have the appropriate age range printed on the side of the box. It's best to avoid toys that have sharp edges, present an electrical or choking hazard or shoot projectiles. Don't forget the proper safety gear — such as helmets and pads — when purchasing gifts like bicycles and skateboards. Also make sure you have the right tools available when you come across those three dreaded words: "Some assembly required."

Fireworks

If you are planning to ring in the New Year with fireworks, be extremely cautious and pay particular attention to any children in the area. According to the Centers for Disease Control and Prevention, an estimated 9,800 people were treated in emergency rooms for injuries from fireworks in 2007. Of those, more

than half were children.

Fireworks should always be supervised by adults, and young children should never be allowed to handle them. Even fireworks some might consider "safe" can injure. For example, there are more injuries to children under five from sparklers than from any other type of fireworks.

Before you start lighting fireworks, make sure there is a bucket of water or a garden hose handy in case of a fire. Never point or throw fireworks at another person; light them one at a time and move back quickly. State and local laws on fireworks vary, so be sure you are following the appropriate laws.

In the midst of the holiday season — and the chaos that often accompanies it — it's easy to lose sight of safety. A bit of preplanning can assist you in alleviating holiday stress and trips to the emergency room. Enjoy a wonderful holiday season with those you hold near and dear by following Santa's example: making a list and checking it twice!◀



Be a "WRECK"-less Winter Driver

BOB VAN ELSBERG
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An Army accident report last winter read, in part: "Soldiers hit a patch of black ice after crossing a bridge and spun out of control, going into a narrow ditch and rolling the vehicle one complete time. Vehicle (was) traveling approximately 45 mph. Soldiers were all wearing their seat belts. All Soldiers were transported to local hospital ... treated and released."

This group of Army National Guardsmen encountered an extra "surprise" as they drove to their weekend drill. Fortunately, they chose to wear their seat belts and walked away from the experience wiser and none the worse for wear.

But Guardsmen heading to drill won't be the only Soldiers on the road this winter. During the holidays, many Soldiers will be on the road to visit family and friends. However, unlike the Guardsmen above, your trip doesn't have to end with you in the hospital and your car in a ditch. Check out the following tips from the National Safety Council so your winter trips will have happy endings.

Weather

At any temperature, whether it is minus 20 F or above 90 F, the weather affects road and driving conditions and can pose serious problems. Because of that, it is important to plan your trip in accordance with the weather forecast.

Your Vehicle

Prepare your vehicle for winter. Start with a checkup that includes:

- Checking the ignition, brakes, wiring, hoses and fan belts.
- Changing and adjusting the spark plugs.
- Checking the air, fuel and emission filters and PCV valve.
- Inspecting the distributor (if you have an older vehicle that has one).
- Checking the battery.
- Checking the tires for air, sidewall wear and tread depth.
- Checking the antifreeze level and freeze line.

Your vehicle should also have a tune-up to ensure better gas mileage, quicker starts and faster response for pick-up and passing power. Check your vehicle's owner's manual for the recommended intervals for tune-ups.

Necessary Equipment

An emergency situation on the road can arise at any time and you must be prepared. Following the tune-up, ensure you have a full tank of gas and fresh antifreeze in your radiator. In addition, you should carry the following items in your trunk:

- Properly inflated spare tire, wheel wrench and tripod-type jack
- Shovel
- Jumper cables
- Tow and tire chains
- Bag of salt or cat litter
- Tool kit
- Flares

Essential Supplies

Be prepared with a "survival kit" that should always remain in the vehicle. Replenish it after each use.

Essential supplies include:

- Working flashlight and extra batteries
- Reflective triangles and brightly colored cloth
- Compass
- First aid kit
- Exterior windshield washer fluid
- Ice scraper and snow brush
- Wooden stick matches in a waterproof container
- Scissors and string/cord
- Nonperishable, high-energy foods like unsalted canned nuts, dried fruits and hard candy

In addition, if you're driving long distances in cold, snowy and icy conditions, you should also carry supplies to keep you warm such as heavy woolen mittens, socks, a cap and blankets.

If You Become Stranded

In case you do become stranded, follow these tips:

- Do not leave your vehicle unless you know exactly where you are, how far it is to possible help and are certain you will improve your situation.
- To attract attention, light two flares and place one at each end of the vehicle a safe distance away. Hang a brightly colored cloth from your antenna.
- If you are sure the vehicle's exhaust pipe is not blocked, run the engine and heater for about 10 minutes every hour or so, depending upon the amount of gas in the tank.
- To protect yourself from frostbite and hypothermia, use the woolen items and blankets to keep warm.
- Keep at least one window open slightly. Heavy snow and ice can seal a vehicle shut.
- Eat a hard candy to keep your mouth moist.

Tips

As a Soldier, you have the Travel Risk Planning System (TRiPS) available online at <https://safety.army.mil>. All you have to do is log into TRiPS and follow the easy directions to see areas where you can increase your margin of safety on the road. By taking an overall look at your travel plans, TRiPS can alert you to dangers you may not be aware of and, at the same time, evaluate the level of risk for your trip. This handy online tool helps you to avoid hazards rather than having to confront them on the road.◀◀

DO YOUR JOB, NOT THE OTHER GUY'S

CHIEF WARRANT OFFICER 2 ERIK T. HERR
T Troop, 4th Squadron, 3rd Armored Cavalry Regiment
Fort Hood, Texas

Nothing will make you reflect on how lucky you are more than escaping a bad situation unscathed and beating the odds that were stacked against you. Predicting weather in Iraq is difficult at best. And even though the Air Force weather forecasters are highly trained professionals, if they give you a weather brief now, it can change quickly.

On an early fall morning, my mission was to fly pilot (PI) as Chalk 2 of a flight of two UH-60s conducting a VIP movement from Victory Base Complex to Talil, Iraq. This was a routine mission for our unit, and both crews had flown it several times. The weather brief that morning showed good visibility for the moment, but decreasing slowly throughout the day. Our mission window looked good; however, we knew when we got over open stretches of desert, the weather could quickly turn bad.

During our crew brief, we addressed the weather issue methodically, listing alternate global positioning system (GPS)-based approaches, fuel stops if maintaining visual meteorological conditions (though visibility was dropping) and even the dreaded

"land where you are and stay put until weather improves." Carrying a general officer and division sergeant major made the last option the least desirable.

I had been a pilot in command (PC) for less than 100 hours, but I felt it was my responsibility to raise several questions concerning this mission. My gut instinct was to oppose flying this mission. However, by the time we finished assessing the mission, I felt better and agreed we were making the correct choice.

We departed on time with good weather and made our first stop on schedule, but not with the weather we had planned. As we approached Talil, weather deteriorated to just over a mile and was decreasing steadily as we shut down the aircraft. After checking with the weather

briefers, we found the weather was "supposed" to be good for our next leg of the flight. As predicted, weather improved to our re-briefed minimum and we launched to our next destination.

We experienced no en route problems as we proceeded to our next destination, a small combat outpost with tall light poles in the landing zone (LZ). The general and his sergeant major departed the LZ and we shut down the aircraft to preserve fuel. As we waited, we saw dust picking up on the horizon, but it was still not close enough to cause us problems. We launched on time with at least three miles visibility and headed north into open desert and increasing winds.

Visibility began to drop as we proceeded on our route; not bad at first, but it certainly was rapidly

deteriorating. Before we realized it, the visibility was less than a mile and worsening with the ceiling coming down to the deck. We deliberately maintained visual contact with the ground. We did not want to execute instrument flight rules or GPS approaches because we had not been practicing those tasks and were not proficient on them. Moreover, we had insufficient fuel for a go-around if we didn't break out of the clouds.

Both crews decided to fly to the closest secure forward operating base, which was Dywaniah. Lead found Route Tampa and we changed course. Using the classic IFR procedures (I Follow Roads), we headed for safety. Flying lower and slower, the crew's anxiety and "pucker factor" escalated in the cockpit and the crewmembers grew more impatient with each other. The thought of landing in the sand and waiting even sounded good.

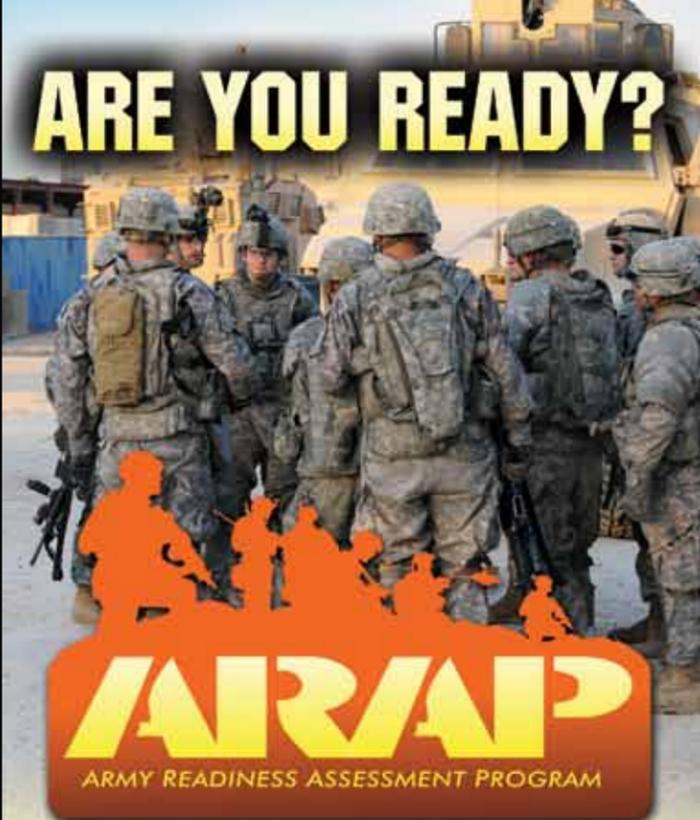
Luck brought us safely through the weather and we were able to land at Dywaniah with visibility less than three-quarters of a mile. Fortune seems to favor the foolish.

Lessons Learned

We could've done many things differently or, perhaps, better on this mission. As we all know, being there is what drives decisions, actions and results — good or bad. Pilots, especially PC-rated pilots, want to be in charge and masters of their own fate. In this case, I was the PI — though a rated PC — flying for a less experienced PC who had less total hours and PC time than I did. I wanted to take over, I wanted the controls and I knew I could do it better. Or could I?

The PC, while he had fewer hours, was still an excellent pilot. He maintained the controls since he already had them. The best thing I could do was to keep doing my job as the pilot not on the controls. The PC brought us safely to our chosen point to land. I didn't need to have the controls.

This mission turned into a great example of crew coordination. The PC maintained the controls and the outside situation, keeping us from hitting light poles, water towers, power lines and/or the ground. I kept all distractions inside the cockpit to an absolute minimum. In the end, we landed safely because the entire crew — pilots and crewmembers — knew their duties and responsibilities and conducted proper crew coordination. Stick to procedures; they can save you, even if they can be uncomfortable.◀

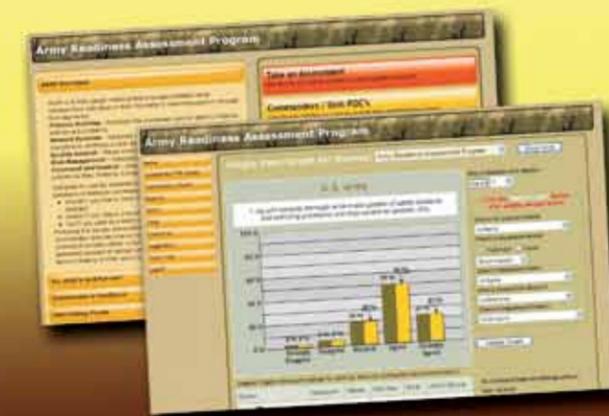


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UP IN FLAMES

MELISSA ALLEN
U.S. Army Aviation and Missile Command
Redstone Arsenal, Ala.

Technological advances over the past 50 years have certainly made our lives easier, but they should never be a substitute for common sense. Despite what some may think, microwaves, toasters and other kitchen appliances are not personal chefs. When left unattended, bad things can happen.

It was a beautiful morning and I was enjoying my complimentary breakfast at a hotel when I noticed a bad smell. It didn't take long to spot the source. Copious amounts of smoke were billowing out of one of the microwaves in the break area. Several people rushed over, unplugged the appliance and carried it outside, where it would not cause harm to anything. Fortunately, no one was injured.

What bothered me most about this incident was it was preventable. Someone had put sausage biscuits in the microwave without first removing the plastic

wrapping and then left the microwave unattended. I hate to break it to you, but, unless your microwave has a sensor cooking feature, it will not automatically stop cooking when your meal is perfectly done. It won't even stop cooking when the food inside catches fire. A microwave will stop cooking when you tell it to stop cooking — whether that's 30 seconds or 30 minutes.

This incident is a prime example of why you should never leave toasters, microwaves or other appliances unattended. These devices do not have the ability to sense when food



The Home Safety Council recommends the following tips when cooking:

- Always stay in the kitchen while cooking.
- Keep items that can burn, such as dishtowels, paper or plastic bags and curtains at least three feet away from the range top.
- Before cooking, roll up your sleeves and use oven mitts. Loose-fitting clothes can touch a hot burner and catch fire.
- Always stay by the grill when cooking. Remember that a grill may stay hot for a long time after cooking. Also keep children and pets away from a hot grill.
- Keep grills at least 10 feet away from other objects, including the house and any shrubs or bushes.

DID YOU KNOW?

According to the Home Safety Council's State of Home Safety in America™ Report, fires and burns are the third leading cause of unintentional home injury and related deaths. Fire safety and survival begin with everyone in your household being prepared. Follow these tips to reduce the chance of fire in your home:

- Make a fire escape plan. Find two exits out of every room and pick a meeting place outside. Remember, practice makes perfect, so hold a Family fire drill at least twice a year.
- Install smoke alarms on every level of your home, preferably near or inside every bedroom.
- Know how to put out a small pan fire by sliding a lid over the flames.
- Teach every Family member to "Stop, Drop, Roll and Cool." If clothes catch fire, drop immediately to the ground, cross your hands over your chest and roll over and over or back and forth to put out the flames. Cool the burned area with cool water and seek medical attention for serious burns.
- Consider having a home fire sprinkler system installed in your home.
- Learn how and when to use a fire extinguisher.





is starting to burn and turn themselves off. We have to be the ones responsible for that.

Sure, we're all guilty of doing it at one time or another. You use a commercial break to put your popcorn in the microwave and then go back to the TV until you hear the beep. Most of the time, nothing bad happens. But isn't missing a few minutes of your show worth it if it prevents the possible destruction of your home or the injury or death of you or a loved one?

If a fire does start in your microwave or toaster, follow these tips from the U.S. Fire Administration:

- Keep the microwave or toaster door closed.
- Turn off the appliance.
- If you can safely reach the outlet, unplug the appliance.
- Before using the appliance again, have it checked and serviced by a professional.
- If you are unable to put out the fire, leave immediately and call 911.

Next time you pop a frozen dinner into the microwave or toast a bagel, stick around while it cooks. You might lose five minutes of your day doing something as boring as watching toast brown or leftovers spin in the microwave, but it sure beats what you'd lose in a fire because of your carelessness.◀



WHERE THERE'S SMOKE ...

HOME SAFETY COUNCIL
http://homesafetycouncil.org

Smoke alarms can save your life in a fire, but only if you have enough and they work properly. Do you have enough smoke alarms in your home? Are they located in the right places? Without working smoke alarms, you and your Family may not wake up in time to get to safety if a fire breaks out in your home.



Installing Smoke Alarms

- Smoke rises, so smoke alarms should be mounted high on walls or ceilings. Ceiling-mounted alarms should be installed at least four inches away from the nearest wall. Wall-mounted alarms should be installed four to 12 inches away from the ceiling.
- Make sure the alarm is away from the path of steam from bathrooms and cooking vapors from the kitchen. These can cause false alarms.

- Don't install smoke alarms near windows, doors or ducts. They will not work correctly.

Ensure it Works

- Test your smoke alarms once a month. Push the test button until you hear a loud noise.
- Replace the batteries in your smoke alarms at least once a year, or any time they make a "chirping" sound. This means the battery is low.
- If your smoke alarms are more than 10 years old, get new devices.

Purchasing New Smoke Alarms

- Get enough to cover every level of your home, including the basement, and every bedroom.
- If you can, buy "interconnected" smoke alarms. When one alarm goes off, they all sound. This means the alarm nearest you will go off sooner. It gives you more time to get your Family to safety.
- There are two kinds of smoke alarms: photoelectric and

ionization. If possible, get some of each kind or buy combination smoke alarms that have both types of sensors.

- Make sure your smoke alarms have been tested for safety by a laboratory. Look for a mark on the box such as ETL, UL or CSA.

For more information, visit <http://homesafetycouncil.org>.◀



<https://safety.army.mil>

Army Safe is Army Strong and that starts with a Soldier's Family. Have the information to help you and your Family stay SAFE.





CHIEF WARRANT OFFICER 4 PATRICK J. COAKLEY
 AH-64D Longbow Apache TAFT
 U.S. Army Security Assistance Training Management Organization
 Kuwait

BEST PRACTICES: THE GUNFIGHTER MONTHLY SAFETY PACKET

This article is a success story about our battalion's carefully developed, deliberate and proactive safety training program aimed at teaching composite risk management skills to the men and women of the "Gunfighter" regiment. The monthly safety packets enabled us to recognize when we were most at risk for making a mission-threatening error and, as a result, prevented those mistakes from occurring. This called for effective training skills and levelheaded individual decision-making.

I attended the Senior Aviation Safety Officer (ASO) Course at the U.S. Army Combat Readiness/Safety Center from April 27 through May 1, 2009. One of the course requirements was to brief fellow attendees on an effective safety management technique that I had employed as an ASO. For my best practice, I chose to describe the Gunfighter Monthly Safety Packet, which I used while assigned as the task force/battalion ASO for the 1st Attack Reconnaissance Battalion, 1st Aviation Regiment, Combat Aviation Brigade, 1st Infantry Division, Fort Riley, Kan., and during Operation Iraqi Freedom (OIF) 07-09.

During my brief, Chief Warrant Officer 5 Will C. Chance, U.S. Army Forces Command (FORSCOM) G-3/5/7, Aviation Resource Management Survey (ARMS) team safety inspector, pointed out units that employ

monthly safety packets have better documentation of their safety programs and typically do well on ARMS inspections. He also invited me to share my best practices brief at this year's FORSCOM ARMS Conference in Orlando, Fla.

I cannot take credit for developing the safety packet concept, as I'm not sure who originally created it. My first exposure to the safety packet was as a company ASO working for Chief Warrant Officer 4 Kelvin Holt with the 1st Battalion, 501st Aviation (ATK) Regiment, Hanau, Germany. The safety packet focuses on efficiency, education and involvement. These three principles allowed me, along with my team of safety personnel (see author's note on page 27), to spend less time in our offices and more time flying missions and getting involved in the task force's daily operations.

The safety packet increased our safety program's efficiency by providing a structure and timeline for the completion of monthly safety activities by subordinate units (company/troop). This occurred regardless of geographical location or daily schedule (i.e., conducting split-based operations and 24/7 operations for our 15-month deployment).

I distributed the packets at the beginning of the month, either at command and staff meetings or through distribution. The packets contained the required instructions, references, forms and inspection checklists and memoranda templates necessary for safety officers to execute their command support program activities each month.

Some of the specific items in the safety packets included inspections for the following areas: foreign

object damage, fire prevention, hearing conservation, environmental control, hazardous materials, radiation (if applicable to the individual subordinate unit) and personal protective equipment (not depicted in the flow chart below, but included in the actual packet). The packet also included a standardized hazard log (HAZLOG) that company and troop safety officers used to record/track their unit's hazards. I subsequently consolidated all the company/troop HAZLOGs into one consolidated master task force/battalion-level HAZLOG to maintain and control all hazards.

The company and troop safety officers also incorporated the standardized memoranda formats to document the completion of their respective unit's monthly safety meeting, as well as the various types of safety awards requests (e.g., flight, ground, driving and impact). The awards requests were subsequently forwarded to the appropriate level chain of command for approval/disapproval, pending write-up verification.

The packets increased the Soldiers' knowledge in many ways. It ensured the assignment of command support programs additional duty personnel and established guidelines for these additional duties. Soldiers, noncommissioned officers (NCOs) and officers assigned to these additional duty positions also became subject matter experts (SMEs) in their areas. This increased Soldiers' awareness of the many areas that required oversight. It also prevented omissions that safety programs historically experience, especially when a unit deploys.

The packets contained curricula for aviators, aviation maintainers and all Soldiers. Classes were given to all company and troop members at monthly safety meetings by the respective SMEs, in addition to company and troop safety officers. These classes provided safety education and professional development for Soldiers, NCOs and officers. Videotaping or hardcopy PowerPoint slides in a make-up book facilitated training for Soldiers not in attendance.

The packet, by design, involved many people in the Gunfighter organization. We believe the more people who are involved in a unit's safety program on

a daily basis, the better. Everyone's role is to be a safety officer. Both the task force and company/troop chains of command were involved in reviewing the packets and in the unit safety awards process (see an example of monthly safety packet flow below).

The result was that Task Force Gunfighter was able to safely and efficiently complete predeployment activities comprised of multiple gunneries, rotations at the National Training Center and Joint Readiness Training Center, and deployment in support of OIF 07-09 without a serious incident. We flew more than 28,500 AH-64D Longbow Apache flight hours and 12,000 OH-58D Kiowa Warrior flight hours accident-free.

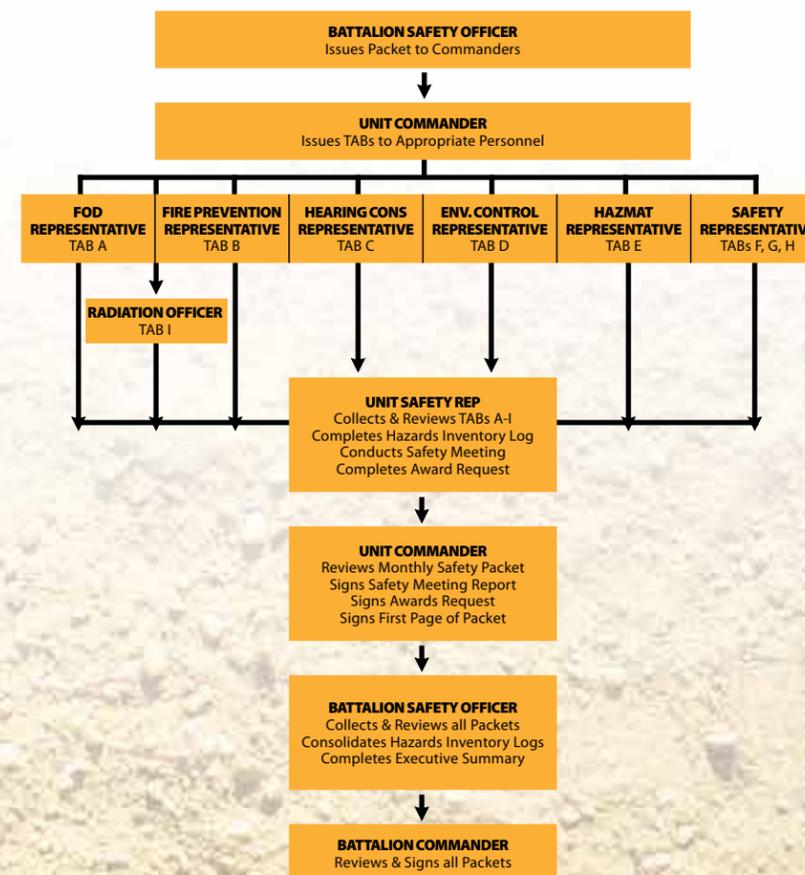
These accomplishments speak volumes about the effectiveness of individual decisions made by Gunfighter Soldiers while training for combat at the training centers,

deploying to Iraq or on block leave at home station. The Gunfighter Monthly Safety Packet was one technique that helped my battalion achieve success.

Author's note: I cannot take complete credit for the success of the packets while assigned to the Gunfighters. Credit certainly needs to be shared with Sgt. 1st Class Duane Moore, Staff Sgt. Joseph Breen, Chief Warrant Officer 3 Philip Hettich, Chief Warrant Officer 3 Michael Robertson, Chief Warrant Officer 3 James Cobb, Chief Warrant Officer 4 Thad Menold, Staff Sgt. Matthew Ruffley, 1st Lt. Mikhail Ovsijenko, Chief Warrant Officer 3 Eric Ries, Chief Warrant Officer 4 Attila Herrera, Task Force 1-1 ARB chain of command/staff/individual Soldiers, and the many additional duty personnel assigned to our command support program. If you would like examples of the safety packet, contact me at patrick.j.coakley@us.army.mil.

EXAMPLE OF MONTHLY SAFETY PACKET FLOW

(Packet configuration/requirements can be tailored due to regulatory/SOP changes.)





KNOW YOUR LIMITS

MAJ. MIKE BLADES
HHD, Joint Force Headquarters
Helena, Mont.

On a beautiful winter day, the Blades brothers set out for a snowmobiling trip at Island Park, Idaho. Although all three of us were experienced and seasoned riders, it had been awhile since my older brother and I had ridden. My younger brother owned his snowmobile and was more experienced, so he led the way through the trees on the winding, groomed trails.

As we went along the trail, I noticed how it began to narrow as the terrain became more challenging. My younger brother attempted to communicate via hand signals and calling out directions as we approached an opening. As we climbed the hill, I noticed my younger brother — who was ahead of us — had disappeared from sight.

Feeling confident in our snowmobiling skills, my older brother and I took on the challenge. However, the trees and terrain altered our perception of the trail's steepness. Unfortunately, we did not realize how steep the slope was until we were already committed.

We soon realized we had placed ourselves in a dangerous situation. My snowmobile tracks began to spin and I did not have the power or momentum to reach the top of the hill. Knowing my older

brother was behind me, I veered to the right to turn around and go downhill. As I began my rapid descent, I quickly realized the trail's steepness was going to prevent me from stopping or controlling my snowmobile.

Racing down the slope toward a stand of pine trees, I realized I only had two options. I could ride it out and attempt to avoid the trees or I could bail off the rented snowmobile, for which I had luckily purchased full-coverage renters' insurance. Bailing off into the 3-foot-deep powder, I watched my snowmobile disappear into the pine trees and surrounding snow bank. As I lay in the snow regaining my composure, I realized this experience was not one I wanted to repeat.

This experience taught me that I am never too experienced to ignore safety. My brothers and I still tell the story of how our fun

vacation could have turned tragic. During future trips, we made it a point to familiarize ourselves with our machines and the terrain and know our limits. We also made it a point to use standard snowmobiling hand signals.

Even though I survived my scare, snowmobiling accident statistics are alarming. During 2008, avalanches and speeding on snowmobiles were the main causes for more than 128 deaths and 1,352 injuries. Officials believe many more incidents went unreported.

While there are many resources on snowmobiling safety, I have found www.snowmobilers.org to be particularly useful. Here is some additional information to keep you safe on the snow:

Safety Tips

- Wear a helmet and eye protection at all times. Goggles with

colored lenses are indispensable on bright days. In addition, amber or yellow lenses are useful on dark days or late in the afternoon.

- Dress for the ride. The outside of your snowmobiling outfit should have a hood and be windproof and waterproof. Beneath that, dress in layers, making sure the clothing is not too tight. Thermal underwear will help insulate you from the cold. Protect your hands with snowmobiling gloves designed to allow your thumb and fingers to operate the controls. Wear rubber-bottom, leather-top boots or rubber-bottom, nylon-top boots to help keep your feet warm and improve traction. Woolen socks can help keep Jack Frost from

nipping at your toes. Avoid loose clothing that could get caught on the snowmobile's moving parts.

- Do not let young or inexperienced riders operate snowmobiles without proper training and supervision.
- Do not use alcohol or other drugs when you ride.
- Learn your riding skills from an experienced rider or qualified trainer and practice them before going to the mountains.
- Always maintain a safe distance between riders. Following too closely can lead to collisions and injuries.
- Ride with other snowmobilers and let someone who is not riding know where you're going and when you plan on returning.
- Before riding, review all local snowmobile laws and obey them.
- Check local weather conditions and dress appropriately.
- Know the terrain where you will be riding so you'll be aware of potential hazards.
- Always use the proper arm and hand signals when riding with others.

- Always ride safely and responsibly. Know your abilities and those of your snowmobile and don't exceed them.
- Make sure your equipment is in top working order before hitting the trails.
- Carry a map or a global positioning system receiver to help you navigate the trails. Mark your route on a map and provide it to someone you know.
- Frequently clear the ice and snow off your snowmobile so it will run properly and others can see your lights.
- If you're going into an area where avalanches are a potential threat, get the latest avalanche forecasts and bring the proper gear and equipment.
- Be prepared for anything and use common sense.

Etiquette

- Be considerate of others on the trail and keep to the right.
- Slow down when passing.
- Ride only where permitted.
- Leave gates as you found them.
- Yield right of way to animals and hikers.
- Carry out what you carry in.
- Wave and say "hello" as you pass.
- Report downed trees and trail maintenance to land managers.
- Always help those who look in need. One day, that may be you.◀

READY FOR THE RISK?

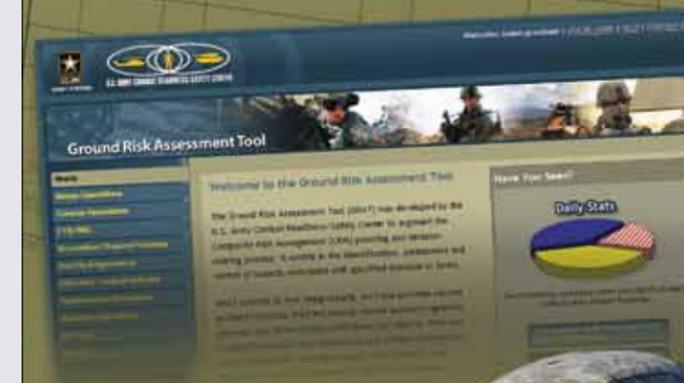


GRAT

GROUND RISK ASSESSMENT TOOL

<https://safety.army.mil>

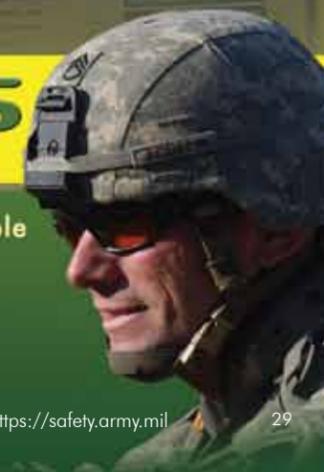
The Ground Risk Assessment Tool is designed to aid in mitigating risk by reinforcing the five-step composite risk management process.



GRAT-S

<http://safety.army.smil.mil>

GRAT-S is now available and allows Leaders in forward-deployed units access to GRAT on the SIPRNET.



jammed collective

CHIEF WARRANT OFFICER 5 MARK A. MEYER
Department of Defense Field Research Activity
Fort Meade, Md.

I was a chief warrant officer company instructor pilot assigned to a Black Hawk unit. We were part of an air assault battalion, flying night vision goggles (NVG) in support of an upcoming 10-day field training exercise (FTX). Our mission was to conduct 10-ship air assaults.

We deployed to Camp Lejeune, N.C., for the exercise. It was a typical Carolina summer with temperatures hitting 100 F-plus and 95 percent humidity during the day and cooling off very little in the evening. My job was to give pilot in command (PC) checkrides.

For the first mission, I had a warrant officer in the left seat. He was a strong pilot and a "good stick" for his hour level. I flew the first several nights in the right seat. Everything seemed to be going fine for the first couple of flights; however, I noticed the overhead map light cord stretched out, allowing the light to reach the cabin floor. I noted this as a possible hazard to the flight controls and briefed

the other pilot of the potential problem. We switched seats to complete the requirements of the checkride. Again, I mentioned the problem with the map light cord. I recommended that he not use the map light; however, I did not forbid him from using it. After all, it was his checkride.

We flew the next several nights without incident, giving us a false sense of security. On this particular evening, we departed the landing zone as the trail aircraft in a flight of 10. Our mission was to conduct an air assault mission at low-level altitude.

Toward the end of the four-hour NVG mission en route to the forward arming refueling point, the warrant officer in the

right seat asked if I was on the collective. I told him "no" and asked why he wanted to know. He said he could only pull partial power and that the collective was stopping midway. I immediately transferred my attention into the cockpit to assist the other pilot on the controls. Together, we still could not pull the collective past the midpoint. The UH-60 was descending at about 50 feet per minute toward the trees. I instinctively checked my collective in the left seat to ensure nothing was blocking it. Then I took my right hand and swept over the right seat collective, checking to see if something was resting on or blocking it, but I felt nothing.

Our mission had us over the

swamps of eastern North Carolina. The crew chief on the right side exclaimed that we were about to impact the trees. I made a quick scan around the area for a flight path with the fewest obstacles. To the left, I saw the dark green outline of a river running through the swamp. I was able to slow

the airspeed and rate of descent as we headed toward the river. This maneuver gave us another 50 feet to solve the problem.

As we descended below the trees, I announced, "Brace for impact." In a last-ditch effort, I took the collective with both hands, slammed it to the floor and then yanked up with all my strength. Whatever had jammed the collective broke loose and the 'Hawk screamed into the night air. As the yellow chicklets returned to green, I told the warrant officer that I was no longer on the controls with him and we headed home.

With some altitude under us for a safety cushion, I reached over and checked out the right seat collective. I found the map light under the seat past the collective. The light had been

detached from being stuck between the collective and seat support.

As a crew, we all took a few deep breaths to regain our composure and continued a quiet flight back to the field site. Once on the ground, we debriefed as a crew and informed the command of our near accident. Some of the lessons learned include:

- Never let anything near the collective; strap everything down.
- If you note a problem, no matter how minor, either get it fixed or write it up.
- "Circle Red X" the aircraft from use of the right-seat map light.
- Use strong crew coordination skills and work as a team. Seasoned crew chiefs using proper crew coordination techniques assisted with the positive outcome.
- Stay focused on the task regardless the mission routines. Complacency from flying much of the same-style missions had lulled us into a false sense of security.

For the record, this young warrant officer did much better on his PC re-evaluation and went on to become an upstanding member of the standardization community.◀

“As we **DESCENDED** below the trees, I announced, “**BRACE FOR IMPACT.**” In a last-ditch effort, I took the **COLLECTIVE** with both hands, **SLAMMED IT** to the floor and then **YANKED** up with **ALL MY STRENGTH.**”

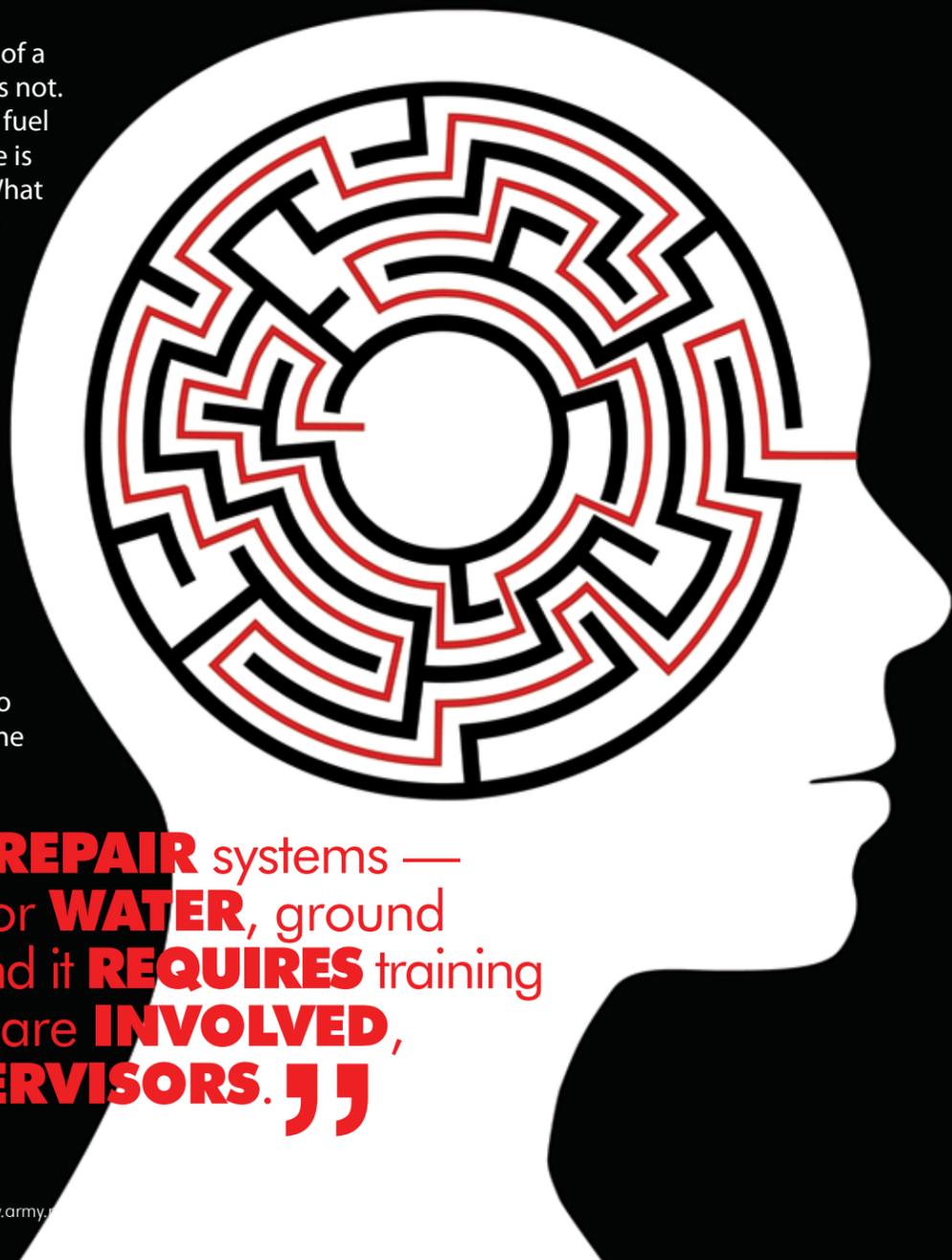
LOST IN SPACE

STAFF SGT. KIRK JOHNSON
Kenner Army Health Clinic
Fort Lee, Va.

How many times has a supervisor sent a young private into a confined space without first assessing the hazards? The aviation community has always been aware of the dangers of confined spaces when it comes to aviation fuel cells. But how many ground maintenance personnel are aware of the dangers that may exist in the water buffalo or fuel tanker even when they are empty?

Sometimes, we might think of a task as simple, when, in fact, it's not. Let's say a private is sent into a fuel tank, discovers the atmosphere is compromised and collapses. What do you do — send someone in there to save him, only to have that person collapse too? Half the confined space deaths happen to would-be rescuers. Even more are reported by the employer as heart attacks or other medical issues.

I recently completed a college class on urban technical rescue. We were allowed to dangle from a rope from a power plant while four stories above the ground; however, we weren't allowed to do any confined space work. The



“ We HAVE TO REPAIR systems — whether FUEL or WATER, ground or aviation — and it REQUIRES training FOR ALL who are INVOLVED, including SUPERVISORS. ”

fire department and college system didn't want to take responsibility for confined space training, even though they had a controlled trainer on hand to do the work. That's how dangerous it can be.

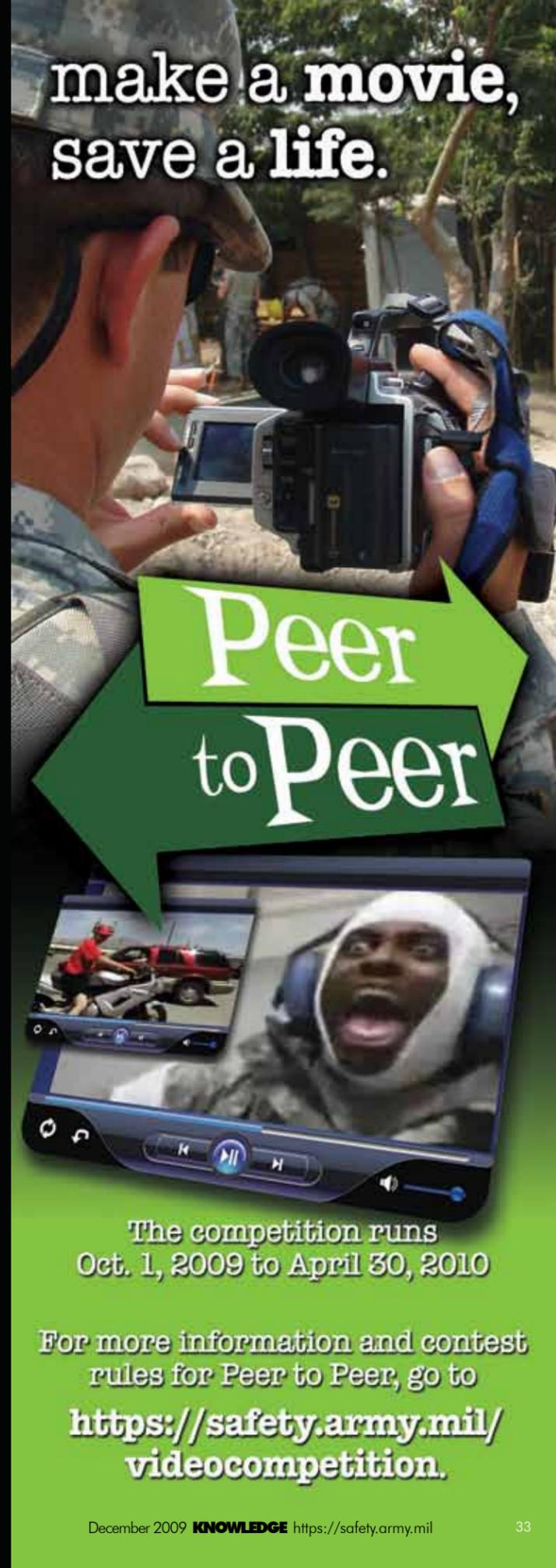
To spread the message about confined space hazards, I held a class in my home state for the aviation community. The turnout was great, but I had to convince several of the shop chiefs that they also did confined space work. I finally persuaded them to send people to the class. However, they still do not consider going into a HEMTT or water buffalo to be confined space work. Are we failing to train shop chiefs about what is expected of them or their personnel?

As professionals, we need to look at everything that can injure or kill Soldiers. Do we? How often do we look at safety issues from outside of the box? We view our training and jobs as something we have to do to check the block. Why can't we conduct training outside our comfort zones?

We have to view confined spaces as hazards. We have to repair systems — whether fuel or water, ground or aviation — and it requires training for all who are involved, including supervisors. There is confined space training available, and we must seek it out to perform the mission safely.

We, as Leaders, need to know what is required of us. Sometimes we get so mission-focused that we fail to allow ourselves and our personnel to get the training we need. It's easy to ignore safety when we don't look at the hazards.◀

make a movie,
save a life.



Peer
to Peer

The competition runs
Oct. 1, 2009 to April 30, 2010

For more information and contest
rules for Peer to Peer, go to
[https://safety.army.mil/
videocompetition.](https://safety.army.mil/videocompetition)

KNOWLEDGE

OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

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LOS

AVIATION



CLASS B

■ The aircrew detected a burning odor in the cockpit during refueling at the forward arming refueling point. Maintenance reported fire emanating from the No. 2 engine. The aircrew conducted emergency shutdown procedures without further damage.



CLASS B

■ The aircraft landing gear contacted a ground obstacle

during a landing approach in dust conditions. The landing gear separated from the aircraft; however, the aircrew was able to land the aircraft without injuries.



CLASS A

■ During high-altitude training, the aircraft crashed into the side of a mountain, resulting in four fatalities.



CLASS A

■ The crew experienced brownout conditions while landing under

night vision goggles. The aircraft touched down hard and overturned.



CLASS A

■ The aircraft settled into trees during final approach. The four main rotor blades sustained damage. No personnel were injured.

CLASS B

■ The aircraft touched down hard during landing under dusty conditions, causing structural damage.

FIXED-WING

C-12N



CLASS B

■ During run-up for a fuel control replacement, a fire started in the No. 2 engine, resulting in the flames encompassing the right main landing gear. The aircraft was shut down without further incident.

UAS

MQ-5B



CLASS A

■ While in flight, the rear engine quit and the unmanned aircraft (UA) lost 4,000 feet. The flight termination system was deployed, resulting in the UA touching down nose first, causing damage to the front of the fuselage and leading to the forward engine separating from the aircraft.

RQ-7B



CLASS B

■ The air vehicle operator experienced an uncommanded spike in the RPM and cylinder temp indicators. This caused the UA to perform an uncommanded climb and eventual descent to ground contact. The UA was a total loss and recovered.

GROUND

AMV



CLASS A

■ A Soldier was killed and two other Soldiers were injured when an M1083 ran off the road and 150 feet down an embankment during a resupply mission.

The fatally injured Soldier was wearing a seat belt.

CLASS B

■ Eight Soldiers were injured when their M923 5-ton truck overturned as they returned from a field training exercise. At the time of the accident, the driver had braked to avoid a deer in the road. The vehicle veered off the left side of the road and, as the driver attempted to re-enter the road, the bumper caught the edge of the pavement, causing the truck to overturn.

Personnel Injury



CLASS A

■ A Soldier was conducting a recreational skydiving class when he lost his balance, fell out and struck the tail end of the aircraft.

■ A Soldier drowned while swimming during a Family outing at a lake.

■ A Soldier suffered fatal injuries while performing maintenance on an M4K forklift when the supporting chain snapped and dropped the hydraulic assembly, pinning him to the ground.

■ A Soldier died after experiencing heat-related symptoms during a road march.

CLASS B

■ A Soldier suffered a permanent partial disability injury when he struck his head on the ground while attempting to go through a low wire obstacle.

ARMY AVIATION LOSSES

Fiscal 2010
as of Nov. 3, 2009



ATTACK	0/0
RECON	0/0
UTILITY	2/1
CARGO	1/0
TRAINING	0/0
FIXED-WING	1/0
UAS	0/0

TOTAL 4/1

ARMY GROUND LOSSES

Fiscal 2010
as of Nov. 3, 2009



AMV	2/1
ACV	0/0
PERSONNEL INJURY <small>includes weapons-handling accidents</small>	3/3
FIRE/EXPLOSIVE	0/0
PROPERTY DAMAGE	0/0

TOTAL 5/4

Three Soldiers experienced heat-related injuries during a 15-kilometer night road march. The Soldiers were admitted for medical treatment, but none suffered permanent injuries.

A Soldier lost a portion of his toe and fractured three other toes when he slipped in mud while mowing his lawn and his foot was caught in the mower blade.

DRIVING



CLASS A

A Soldier was driving his pickup truck when he lost control in a curve, exited the road and overturned. The Soldier was pronounced dead at the scene.

A Soldier was driving his sport utility vehicle when he drifted off the side of the road, overcorrected and slid sideways until the vehicle overturned. The Soldier was not wearing his seat belt and was ejected. He was taken to a local medical center, where he was pronounced dead.

A Soldier was speeding when his vehicle left the road, went down an embankment, struck a tree and overturned several times. The Soldier was fatally injured.

A Soldier's vehicle struck an embankment, went airborne and then landed upside down in a water-filled creek. The Soldier was not wearing his seat belt. His body was found inside the car, where he had drowned.

CLASS C

A Soldier was driving home from drill when her left-rear tire blew out, causing her to lose control and roll the vehicle. The Soldier was wearing her seat belt and hospitalized for one day.



CLASS A

A Soldier was exiting a roadway when she lost control of her sportbike on the off-ramp and struck a guardrail. The Soldier was transported to a hospital, where she was pronounced dead. The Soldier was wearing her helmet.

A Soldier was riding on the back of her husband's motorcycle when they were struck by a vehicle that ran a red light. The Soldier, who was not wearing her helmet, was thrown from the motorcycle and killed.

Two Soldiers were riding their motorcycles when they collided. One Soldier was killed and the other suffered a permanent partial disability.

A Soldier was riding his motorcycle with a group of riders during a cross-country day ride. Two of the riders collided, causing a collision with a third rider that resulted in a fatality.

Editor's note: Information published in the accident briefs section is based on preliminary loss reports submitted by units and is subject to change. For more information on selected accident briefs, e-mail safe.knowledge@conus.army.mil.

DRIVE THE LIMIT!

Speeding reduces a driver's ability to steer safely around curves or objects in the roadway, extends the distance necessary to stop a vehicle and increases the distance a vehicle travels while the driver reacts to a dangerous situation.



POV DRIVING LOSSES

as of Nov. 3, 2009

Class A/Fatalities

CAR	7/8
SUV/JEEP	1/1
TRUCK	1/1
MOTORCYCLE	3/3
PEDESTRIAN	0/0
OTHER*	0/0

*Includes: vans and ATVs

13
TOTAL DEATHS

Fiscal 2009: **8** 3 year average: **10**

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