WEAPONS SAFETY: A BAD DAY AT THE RANGE

KNOWLEDGE

VOL 5 JANUARY 2011

OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

HOW DID OUR ARMY DO?

- ZONED OUT
- SURVIVING BLACK ICE
- BACK TO BASICS

+

YOU'VE GOT IT, RIGHT?

U.S. ARMY
ARMY STRONG.

A BAND OF BROTHERS & SISTERS

Leaders:

Thanks to the leadership of our Army Soldiers, Families and Civilians, FY10 was a record year for lowering the number of accidents in our Army. During the past 30 years, we have transformed a force that lost an average of 415 Soldiers annually to accidents into one of the safest institutions in the world, losing 180 Soldiers in FY10, which is one of our lowest rates on record.

During the first years of our wars in Iraq and Afghanistan, our accidental fatality totals and rates steadily increased. However, from FY06 through FY10, Army leaders dramatically reduced accidental fatalities. This was due—in large part—to direct leader engagement, coupled with aggressive application of composite risk management. Leaders, Soldiers and Families taking care of each other, both on and off-duty, were also key contributors to this improvement.

Last year, nearly 72 percent of accidental deaths occurred off-duty, which presents a real challenge for our leaders. Risky behavior and indiscipline (especially involving privately owned vehicles and motorcycle) are cited as contributing factors in the overwhelming majority of these cases. And many were lost because of a failure to wear a seat belt or helmet when operating a vehicle, drinking and driving, or speeding.

This year, we ask each of you—as leaders—to make a renewed commitment to the safety for your Soldiers. Soldier safety is vital to maintaining our combat edge, restoring balance and sustaining the health of our force. Nine years of sustained war have demonstrated that no Soldier fights alone. Like combat, safety is also a team effort that requires everyone be engaged 24 hours a day/7 days a week. With your support, we are confident that 2011 will be another banner year for our force. Thank you for your continued commitment to keeping our Army both safe and strong!

Kenneth O. Preston
Sergeant Major of the Army

George W. Casey, Jr.
General, United States Army
Chief of Staff

John M. McHugh
Secretary of the Army

KNOWLEDGE
OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY
LEADERS SOLDIERS CIVILIANS FAMILIES

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U.S. ARMY COMBAT READINESS/SAFETY CENTER

ARMY SAFE IS ARMY STRONG

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Mission statement: The United States Army Combat Readiness/Safety Center (USACR/Safety Center) supports our Army by collecting, 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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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.

ARMY SAFE FOR THE NEW YEAR

> "Make safety a **PRIORITY** on your resolutions list, and **ALWAYS** remember the **PRECIOUS LIVES** of those **COUNTING ON YOU.**"

The start of a new year is always exciting. The months ahead are a blank slate for new beginnings and resolutions to do better in the things most important to daily life. But before we go "out with the old," it's important to reflect on where we've been — and for our Army, 2010 was a year to remember. The closure of combat operations in Iraq was a remarkable milestone for our force and a highly visible indication of the abiding hard work and dedication of our Soldiers, Families and Civilians. So too was the near-record safety performance we sustained throughout the fiscal year, culminating in an historic five-year reduction in on-duty fatalities.

The lead article in this month's Knowledge focuses exclusively on the specifics of our fiscal 2010 safety performance, but the big picture looks like this: Overall, fatalities were up slightly from fiscal 2009; however, our fatality rate per thousand Soldiers remained on par with the historic low achieved during the previous year. This accomplishment was due in large part to a 65 percent reduction in Army motor vehicle fatalities and a drop in deaths attributed to sedans and other privately owned vehicles, including SUVs and trucks. Sharp rises in off-duty motorcycle and pedestrian deaths, however, in addition to a spike in Army combat vehicle and aviation fatalities, resulted in seven additional Soldiers lost during 2010 than in 2009.

Our challenge for 2011 is applying the same principles that have worked both on and off duty, such as an emphasis on restraint system and seat belt use in AMVs and POVs, to our existing problem areas. Pre-combat checks and inspections are a great way for Leaders to engage with their Soldiers on the importance of restraint systems, safe driving habits and proper training both inside and outside the wire. Off duty, Leader, Soldier and Family engagement is crucial to countering the recurring problem of indiscipline, especially with regard to sedan, motorcycle and pedestrian fatalities. Active participation by all three groups is required for maximum effect, and that means Leaders must take the initiative by involving all their Soldiers and Family members in the unit's safety programs.

While Leader engagement has become a hot topic in Soldier safety during the past couple of years, we can't forget about the foundation of every successful safety program: composite risk management. A vital part of engagement is ensuring all Soldiers, regardless of rank or position, are equipped with the tools and knowledge to keep them safe. The best start any Leader can give their Soldiers is an in-depth education in CRM because, once learned, it's much more than a process — rather, it's a mindset and lifestyle that becomes second nature in all activities. As we embark on the new year, take a hard look at your unit to see if your Soldiers really understand the CRM process and conduct refresher training when necessary. The time and effort spent will reap exponential rewards for Soldier well-being and mission readiness.

Although 2011 has officially just begun, we got a great start to the new fiscal year with below-average fatalities throughout much of the first quarter. Ultimately, however, we must remember that every number in our fatality count represents another Soldier tragically lost to his or her unit, Family and our Army. By working together, I am confident we can maintain the positive momentum of the past few years and achieve another record year for Soldier safety. Our Band of Brothers and Sisters have demonstrated time and again their courage and sacrifice, and they deserve no less than our full focus, attention and concern, both on and off duty.

The USACR/Safety Center stands ready to help as you renew your commitment to safety during the new year. We have several initiatives planned for 2011, and you can find all our products and tools online at https://safety.army.mil. Please let us know what you think and how we can better meet your needs in the months ahead.

Thank you for what you do every day for our Soldiers, Families and Civilians. Make safety a priority on your resolutions list, and always remember the precious lives of those counting on you. On behalf of the USACR/Safety Center team, I wish each of you and your Families a happy, healthy and safe 2011!

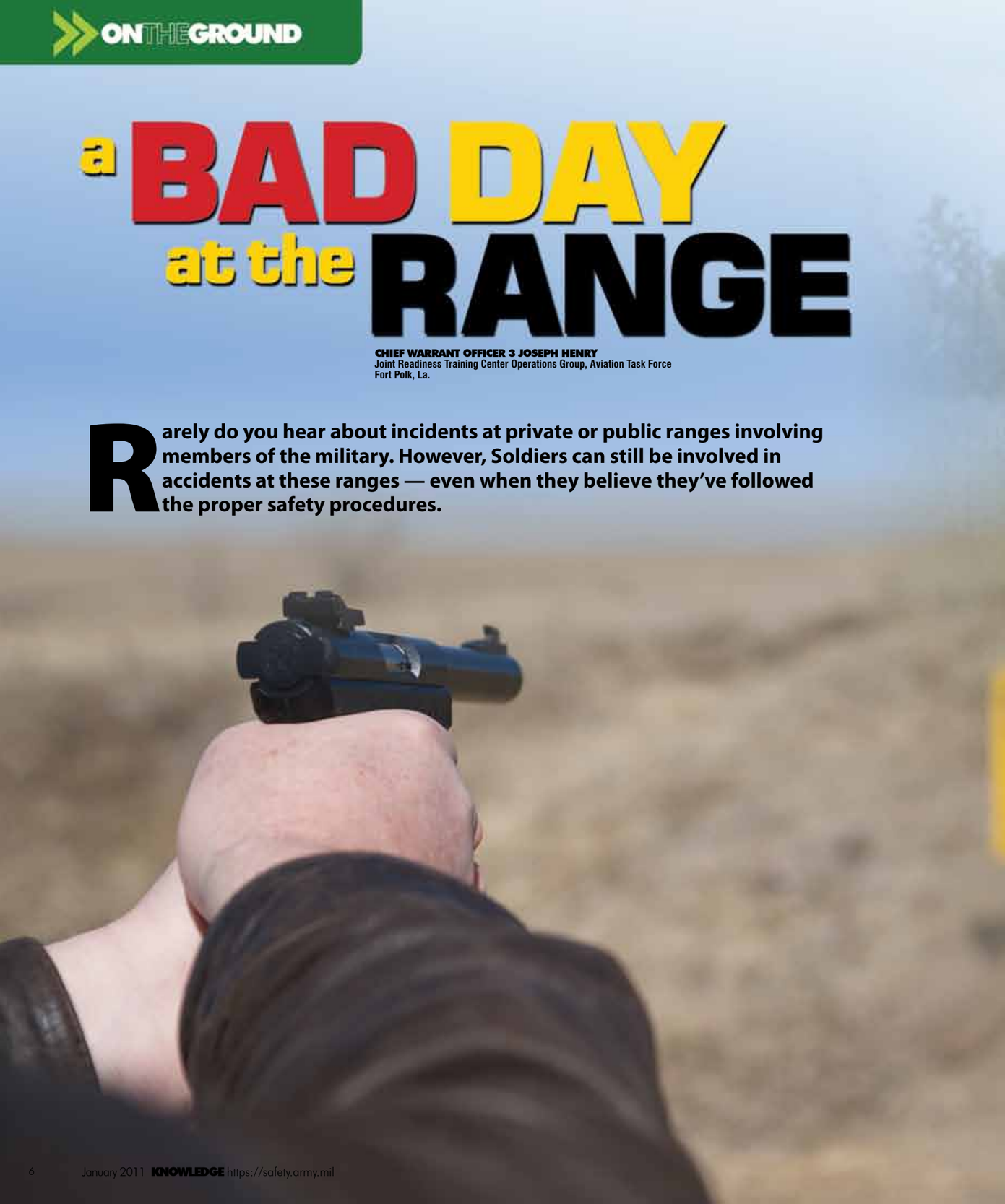
Army Safe is Army Strong!

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

a BAD DAY at the RANGE

CHIEF WARRANT OFFICER 3 JOSEPH HENRY
Joint Readiness Training Center Operations Group, Aviation Task Force
Fort Polk, La.

Rarely do you hear about incidents at private or public ranges involving members of the military. However, Soldiers can still be involved in accidents at these ranges — even when they believe they've followed the proper safety procedures.



One afternoon while on leave back in my hometown, a friend of mine and I decided to take our privately owned rifles and pistols to our local range. The range was a members-only facility with separate pistol and rifle shooting areas. The two ranges ran parallel to each other and were separated by a 15-foot berm that ran the length of them.

When we arrived that afternoon, there was no one else at the range. We parked at the pistol range area, set up our targets and began shooting. After finishing at the pistol range, we packed our pistols into my truck, grabbed our rifles and walked the 50 yards to the rifle range.

My friend wanted to set up a target at the farthest point away from the shooting benches, which was 300 yards away. We walked down the range, posted our targets at several distances, including 300 yards, and made our way back to the shooting benches. While we were shooting our rifles, another shooter parked at the pistol area and began practicing with his pistol. Little did we know this man would turn out to be a lifesaver.

When we finished with our rifles, we decided to collect our targets. Since the individual was shooting at the pistol range, we took our rifles with us simply for security's sake. We made our way down the range, gathering our targets as we went. Finally, we reached the 300-yard target and began admiring our handy work.

As we turned to walk back to the firing line, we heard ricochets through the trees just over our heads. We looked up to discover that while we were downrange, someone had pulled up to the rifle range, set up his targets at the 25-yard marker and began firing. We quickly sought refuge behind the nearest berm (which happened to be at the 250-yard marker) and began yelling for the shooter to ceasefire. Most of the rounds passed harmlessly overhead, but a few struck the berm we were behind.

After several minutes of waiting and yelling, there finally was a period of silence. The pistol shooter, who had seen us leave to collect our targets on the rifle range, heard our yelling, realized what was going on and ran to stop the rifle shooter. My friend and I made our way back to the shooting area to a very apologetic fellow shooter. We were upset with him, but we also felt a little responsible.

Lessons Learned

Our first mistake was leaving my vehicle at the pistol range. This didn't cue the rifle shooter to our presence on the rifle range. He said he'd scanned the range, but didn't see us, as his sight wasn't the best. Second, with others on the range, even the pistol range, one of us should have stayed back at the shooting benches for safety and security. And lastly, we could have told the pistol shooter we were headed downrange for a while and asked him to notify anyone who arrived of our presence on the range.

Luckily, nobody was injured that day. And while I still go to private and public ranges with family and friends while on leave, this incident is always in the back of my mind. When dealing with firearms, the smallest mistake can lead to a bad day at the range.«

THE CARDINAL RULES

NEIL MILES
561st Regional Support Group,
103rd Expeditionary Sustainment Command
Omaha, Neb.

With firearms ownership comes great responsibility. Carelessness can change lives forever.

As a state trooper, I volunteered to teach hunter safety courses for the Nebraska Game and Parks Commission. This involved teaching a 10-hour course to students of all ages, providing as much information as possible about firearm safety. Teaching hunter safety is a big responsibility in which the instructor hopes and prays to make new hunters safe at home and in the field.

Imagine my shock when three months after teaching the class, I saw one of my former students on the evening news. He had been playing with a loaded handgun — pointing it at a friend and laughing — when he inadvertently discharged it. His friend will spend the rest of his life in a wheelchair. I thought about that situation for a long time and how it could have been avoided if he'd just followed the Four Cardinal Rules of Firearm Safety.

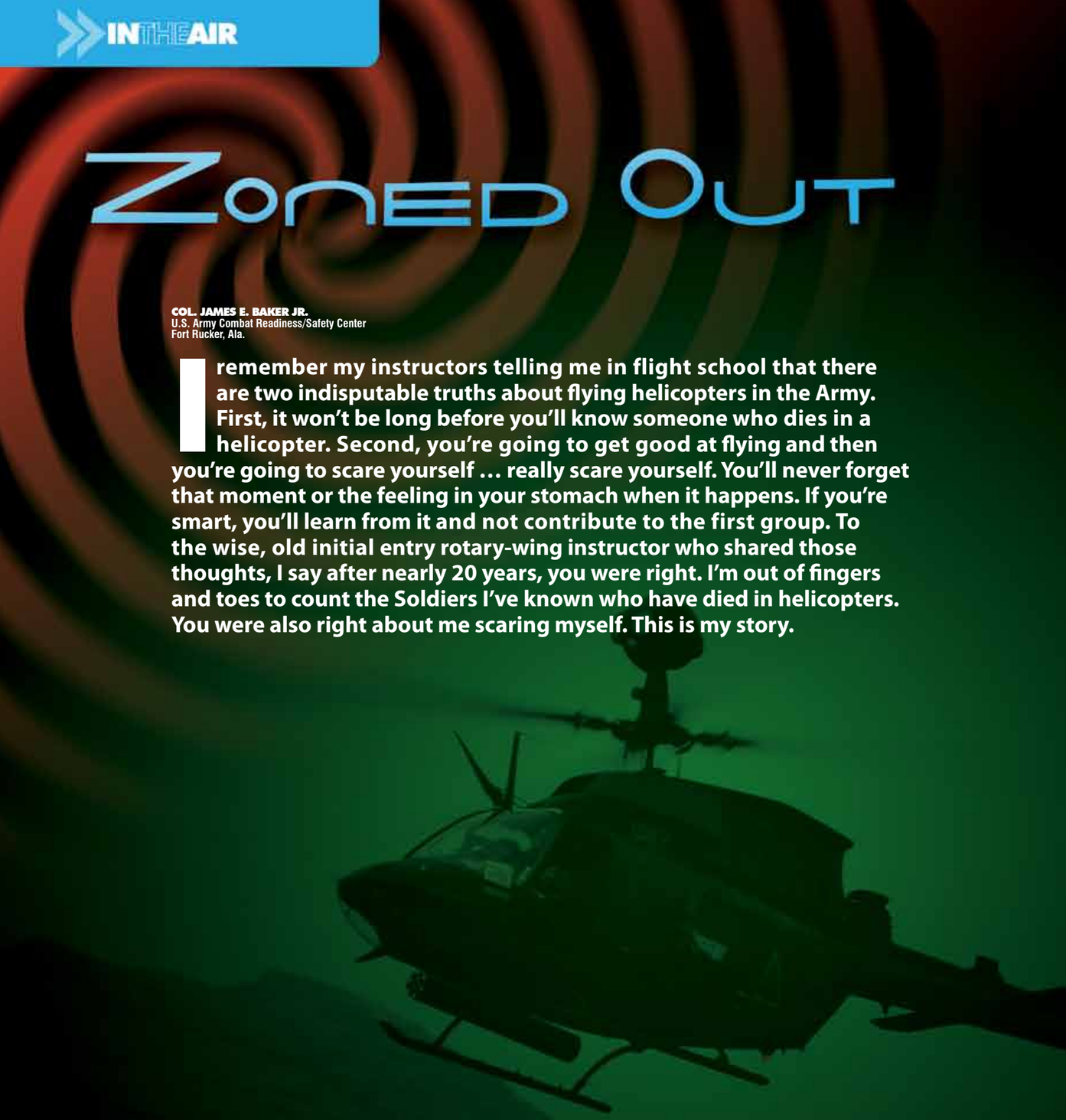
1. **All guns are always loaded.** This is the rule that must always be followed when handling a firearm. Even if someone else has cleared the firearm and hands it to you, it is still loaded until you visually and physically inspect it to ensure it is unloaded. If it leaves your control, then it is a loaded gun again. Don't place your future in the hands of someone else.
2. **Keep your finger off the trigger and outside the trigger guard until you are ready to shoot.** This rule is the key to firearm safety. A firearm cannot fire if you keep your finger away from the trigger. It is a must that the finger is placed flat along the receiver of the firearm and remains there. It only leaves that position when you are on your target and have made the decision to fire. This works for all firearms. Once this becomes a habit, it will lead to a much safer future when handling firearms.
3. **Never point at something you aren't willing to destroy.** Muzzle awareness is the key to this rule, as the muzzle is the business end of the firearm. When using a rifle or shotgun, muzzle control is much easier because two hands are in contact. Handguns, with their relatively short barrels, are more prone to being accidentally pointed in the direction of an object or person.
4. **Be sure of your target and beyond.** Know exactly where you're aiming. When in doubt, don't shoot. You must be sure that it is the trophy buck you have been waiting for and not a fellow hunter coming down the trail. When you are sure of the target, the second part of the rule must then be applied. "Is a house or my truck behind the buck?" "Beyond" is that place where an object or person is likely to be struck by your bullet should it miss its intended target. Make sure you know what is in the background before the final pull on the trigger.

The Four Cardinal Rules of Firearm Safety must become a way of life. They should be committed to memory and passed on to others. Remember, you can never recall a bullet you fired accidentally. However, if you follow the Four Cardinal Rules of Firearm Safety, you won't need to recall your bullet. It went where you intended.«

Zoned Out

COL. JAMES E. BAKER JR.
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

I remember my instructors telling me in flight school that there are two indisputable truths about flying helicopters in the Army. First, it won't be long before you'll know someone who dies in a helicopter. Second, you're going to get good at flying and then you're going to scare yourself … really scare yourself. You'll never forget that moment or the feeling in your stomach when it happens. If you're smart, you'll learn from it and not contribute to the first group. To the wise, old initial entry rotary-wing instructor who shared those thoughts, I say after nearly 20 years, you were right. I'm out of fingers and toes to count the Soldiers I've known who have died in helicopters. You were also right about me scaring myself. This is my story.



It was the spring of 1997 and I was commanding a scout troop of eight Kiowa Warriors. My unit had deployed to Kingsville Naval Air Station, southwest of Corpus Christi, Texas, for a month in support of Joint Task Force Six. I had been in command for nearly two years and was the pilot in command in the aircraft. I was comfortable with my job and the Soldiers in the unit, and I understood our mission very well.

We had been flying reconnaissance missions in south Texas for nearly two weeks and, by all accounts, things were going well. It has been more than a decade since this incident and experience has taught me that anytime you grow that comfortable, you are at risk. I didn't see it at the time, but complacency almost got the best of me.

On this particular night, we had great weather with cloudless skies and no precipitation forecasted throughout our mission period. It was a standard reconnaissance mission like every other one we had flown since our arrival. We went through our standard routine (plan, file, team brief, preflight, run-up and pre-combat checks) and departed to look at our first few named areas of interest (NAI) just south of the airfield. We "goggled up" before departure and I was lead. Everything went as expected and, after nearly an hour and a half, we returned to the airfield for refuel.

We departed to the southeast for the second half of our mission and had a relatively long route planned with NAIs along the way. Much of the first leg of the route occurred over water along the inlet adjacent to Baffin Bay, Drum Point. With our first NAI nearly 30 minutes away, we talked among ourselves and with the trail aircraft, which was flying well back and 300 feet above me as briefed. I was on the controls and had comfortably settled in after more than two hours in the aircraft.

There's an old adage among professional aviators that flying is simply long periods of boredom punctuated by moments of stark terror. I suspect those words were coined in the context of combat, but I can assure you they are just as relevant anytime you realize you're in a bad situation. I had "zoned out" in the cockpit. I wasn't asleep, far from it, but I wasn't fully engaged in what I was doing. How many times have you been driving a car and realized you hadn't actively seen anything for the past few miles? The countryside had been moving past your windows, but you couldn't describe any of it. You realized it only when you ran over the rumble strips on the side of the road. That's where I was in the cockpit … zoned out.

> "How **MANY TIMES** have you been **DRIVING** a car and **REALIZED** you **HADN'T** actively **SEEN** anything for the past **FEW MILES?**"

In an instant, I saw the water. It didn't register immediately, but when I looked at my radar altimeter, I snapped out of it. It read 13. I was flying 90 knots and had been in a slow descent for quite a while. I was flying with a junior aviator and he never said a word. To this day, I don't know if he even noticed. My trail aircraft was well above me and had less contrast than I did over the water. I don't think either pilot realized how low I had gotten. I casually corrected the condition without making any fuss over it, but, from that moment on, I was a changed man. I realized just how close I had come to splashing an aircraft and killing my co-pilot and myself. Since then, it has never happened again in my aircraft or truck.

For most, the moment of terror comes between the first 500 and 1,000 hours of flight. For many, it's a manifestation of three of our branch chief's "five deadly words": an overconfident, undisciplined and unsupervised pilot willfully disregarding standards by performing unauthorized maneuvers. This unacceptable behavior puts Soldiers and equipment at risk. Disciplined, well-trained aviators die every year without willfully jockeying their aircraft. Why? We're human and complacency is an ever-present and real threat. Understanding complacency and its well-documented causes and, sometimes, catastrophic results is our best means of ensuring we aren't the next victim. It was almost me.

WHAT'S IN YOUR BLIND SPOT?

SANDY ROBLES
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How NOT to impress the general on your second day at work …

I was thrilled when I got a call from the civilian personnel office and was offered a job with a promotion in Georgia. As it turned out, the PCS move proved to be more complicated than I thought, but I finally got to Atlanta and checked into a motel on a Saturday night. Sunday, I did a recon run to ensure I knew my route to work and where to park.

Monday came and I arrived as planned, entering the parking garage and selecting a specific spot. I'm one of those people who needs to park in the same place each day — it makes it easier to find my vehicle after work. The butterflies in my stomach were working overtime that day as I met the staff, found my desk and began in-processing. I didn't quite get everything done, but I figured I could finish up Tuesday.

Tuesday morning I climbed into my H3 Hummer and drove to work. As I entered the parking garage, I drove slowly while trying to remember where I'd parked the previous day. I drove a short distance and then turned left and started going up a ramp. Suddenly, I realized I'd turned too soon and hit the brakes. I looked in my rearview mirror to see if anyone was behind me, but didn't see anything. I took a few moments to look around and then decided to back up and find where I'd parked yesterday.

ELIMINATING "NO-SEE-UM" ZONES

Despite the funny aspects of the story on page 12, blind spots aren't always a laughing matter. All too often, unseen vehicles or pedestrians become casualties when accidents occur in "no-see-um" zones. While some vehicles incorporate television cameras to help improve a driver's view to the rear, most motorists still have to rely heavily on properly adjusted mirrors. Fortunately, there is a proven method for adjusting rearview and side mirrors to eliminate most blind spots. Tom and Ray Magliozzi, hosts of National Public Radio's popular "Car Talk" program, suggest the following tips.

- **Step 1: Start by setting your rearview mirror as you normally would.**
  Then, lean your head all the way to the left so it touches the driver's window. From that position, set your left side-view mirror so you can see the back corner of your car. Now lean the same distance the other way, and set your right side-view mirror the same way.
  Now, here's what happens. When a car comes up behind you, you should first see it in your rearview mirror. But as it passes you (let's say on your left), you'll see it move to the left side of your rearview mirror. And as its left headlight disappears from your rearview mirror, it should instantly show up in your left side-view mirror. There should be no delay. It should slip from one to the other, so you can always see it.
- **Step 2: Left-side mirror alignment.**
  Set your left-side mirror so that as soon as the passing car's left-front headlight disappears from your rearview mirror, it appears in your left-side mirror. You might need to make some slight adjustments to your side-view mirrors to make everything line up perfectly. And pulling up next to a line of parked cars (to simulate another lane of traffic next to you) is a good way to do that.
- **Step 3: Right-side mirror alignment.**
  Then do the same thing on the right.
- **Step 4: End result — no blind spots!**
  Driving with the mirrors this way takes some getting used to. You have to learn to rely on your rearview mirror first. And you'll have to get used to what your side-view mirrors are now looking at. The good news is your blind spots should now be gone!

Because I'd only gone a short distance, I figured backing up would be a piece of cake. I'd barely put the Hummer in reverse and touched the gas when I felt a bump. I stopped and checked the mirrors, but didn't see anything. Putting the transmission in park, I got out to see what had happened. As I walked toward the back of the Hummer, I saw a parked car. I thought, "This is just great!" By that time another car had entered the parking garage, so I hopped back into my Hummer and found a place to park. I decided to write down the license number and ask security if they could tell me whose car it was so I could let them know what happened.

> "I **APOLOGIZED** to the **MAJOR**, but he **SMILED** and said it wasn't his car — **IT WAS** his **BOSS'**..."

I grabbed a pen and paper and headed through the garage toward the car. As I got closer, I could see the flashing lights from a couple of police cruisers. Next to the car, I saw four police officers talking to a major. I walked up and told them I'd backed into the car and was coming to leave a message for its owner. I apologized to the major, but he smiled and said it wasn't his car — it was his boss'. He didn't mention who that was, but when I looked down, I noticed the letters "DCG" (deputy commanding general).

My heart sank to my stomach and I thought I was going to be sick. My second day on the job and I'd backed into the general's car! How unlucky could I be? I thought for sure I'd be fired. It took the police a couple of hours to do their thing. Needless to say, the whole process was painful for me. They called my boss and he came out and stayed with me, reassuring me everything was going to be OK. The incident only cost me $40 — but it cost me a lot more than that in embarrassment.

When I finally headed into the office, everyone came down to find out "what had really happened." After everything settled down, I finished in-processing. I didn't get fired, but it made me realize how important it is to know your vehicle's blind spots. Since this experience, I've been checking the market for a back-up alarm or camera. After all, I don't have the luxury of a ground guide for my Hummer!

GET THE PICTURE?

NAME WITHHELD BY REQUEST

After serving 20 years in the military, I've found that, in many cases, accidents and mishaps are due to a lack of situational awareness. It nearly cost me my life during my first assignment in the U.S. Army.

I was a combat medic assigned to the 2nd Armored Calvary Regiment and had participated in the Battle of 73 Easting during Desert Storm. I treated and evacuated wounded in a bullet-riddled vehicle and lived through the 100-hour war. Shortly after, my regiment was given marching orders to establish checkpoints and humanitarian aid along the Euphrates River.

Over the next couple of months, we provided medical support to many Iraqi citizens. In every case, I remained cautious of them — feeling they were still a threat. I sometimes wondered, "Does he or she have a weapon or a bomb, just waiting to kill an American Soldier?" I never felt safe unless I was inside the unit compound or in my trusty M113 armored personnel carrier. Eventually, the peace accord was negotiated and the regiment was given a short timeline to depart Iraq.

Our route out of Iraq was pretty much the reverse of how we entered and involved little rest along the way. This meant we traveled west for a time, then south to Saudi Arabia. Throughout the mission, our first sergeant and commander constantly stressed situational awareness and the importance of the buddy system.

Unlike most convoys, where movement is usually single file, we traveled in tactical formations. Throughout the war, I always positioned the vehicle to the left flank of the other combat vehicles. This provided extra protection since there wasn't much of a weapon system on a medical vehicle besides two M-16s.

Once we made our turn south, our pace picked up to meet our mission timeline. We soon came upon a large assortment of battle-damaged enemy vehicles. As the unit continued its movement, my tactical commander (TC) took pictures of the damaged vehicles while I focused on our position and movement.

At the next rest and refueling, the commander came over the net and said we needed to remain focused because there were still many threats. We continued the tactical march and soon came upon more battle damage. As I drove, my TC once again began taking pictures. Before long, I was doing the same.

Suddenly, there was an explosion that lifted my M113 off the ground and sent a shower of flames over the vehicle. My combat vehicle crewman helmet struck the back and front of the driver's entrance as we came down and rolled to a stop. I saw my TC lying on the floor of the vehicle and called out to see if he was OK. He said he was fine and asked the same of me. I sat there for a few minutes, making sure I wasn't bleeding and still had control of my faculties.

Within seconds of the blast, the first sergeant radioed to check on us and told us not to move. We acknowledged his orders and informed him we were both OK. My TC and I then climbed out of our hatches to assess the situation. While we were busy taking pictures, we had driven into a field of unexploded ordinance. This incident resulted in two damaged road wheels, the driver-side shroud was half blown off and we had four damaged track shoes. Fortunately, our mechanics were able to get us back up in a couple of hours so we could continue our mission.

In the Army, we often hear the saying "Stay alert, stay alive." On this day, my TC and I failed to stay alert and we're lucky to be alive. We both lost situational awareness — something that had kept us safe during the previous five months of our deployment. This incident was a wake-up call. No matter how routine the task, never let your guard down. «

Surviving Black Ice

CHARLES D. BETONEY II
633rd Air Base Wing Safety
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It's a typical mid-January Monday morning. The weekend ended too soon and the long grind of the work week looms ahead. You start your normal morning routine — making coffee, eating breakfast, taking a shower, dressing and warming up the car. The sun still hasn't peeked over the distant horizon, and the temperature dropped well below freezing last night. Looks like a good time to try out that new winter jacket you got for Christmas.

Thankfully, the winter has been rather mild this year and you haven't had to deal with the hassle of constant snowfall. You're beginning to run late, so you back out of the driveway before your car fully heats up and head down familiar roads to work. Even with the new coat on, the inside of the car is still frigid. You're fumbling with the heater knob when your car suddenly begins skidding and goes into a spin. You've just driven across one of the most perilous and often unseen hazards on winter roads — black ice.

Black ice can be a serious driving hazard when the temperature dips near or below freezing. Black ice forms when snow, water or other types of condensation melt onto the road surface and refreeze. It's called black ice because it is difficult to see and can blend in with the road's color. It is most common on bridges, overpasses and in shaded sections of the road where it can remain frozen after other parts of the road have thawed.

You need to follow certain precautions when driving in winter weather or when there is the potential for black ice to form on the roads. The first precaution is to always wear your seat belt — something you should be doing anyway. Then, as you drive, watch out for black patches or what appears to be water on the road, as this could be black ice. Just as when driving in the rain, avoid using your cruise control or overdrive because these can cause wheel spin and send your car out of control. Allow a generous following distance behind the vehicle ahead so you'll have ample room to stop or maneuver if you hit ice or need to react quickly. Accelerate slowly to maintain traction and never slam on the brakes, which can cause a skid. If you notice a possible trouble spot ahead, shift into a lower gear to reduce your speed and give you more control of your vehicle.

Should these precautions fail and you find yourself beginning to skid, here are a few driving techniques to help you regain control. If you feel your vehicle beginning to skid, quickly take your foot off the gas, as accelerating only increases your chances of spinning. Also, don't slam on the brakes. Hitting your brakes will send you skidding out of control. If you have a stick shift, push in the clutch or put the transmission in neutral and allow the vehicle's momentum to carry you straight across the ice. In the event that the car begins to skid, turn the steering wheel in the direction of the skid to get the vehicle back on track.

Using these techniques can mean the difference between driving out of a skid and spinning out of control. While winter driving has its risks, being prepared and alert can keep you on the road and out of an accident.

DRIVING SAFELY ON ICY ROADS

Here are some additional winter driving tips to help keep you safe.

- Turn on your lights to increase your visibility to other motorists.
- Make sure your tread is in good condition.
- Keep your headlights and windshield clean.
- Use low gears to keep traction, especially on hills.
- Don't pass snowplows and sanding trucks. These drivers have limited visibility, and you'll likely find the road in front of them worse than the road behind.
- Don't assume your vehicle can handle all conditions. Even four-wheel and front-wheel-drive vehicles can encounter trouble on winter roads.

Know When to Go

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Fort Campbell, Ky.

Do you remember Gary Larson's "The Far Side" comic strip where two pilots are flying in an airplane when one of them asks the other, "Say, what's a mountain goat doing way up here in a cloud bank?" I'm sure a lot of pilots got a chuckle out of that. However, inside, we were probably thinking how messed up they were for getting into that situation.

I remember the undertone when I was going through the Scout track during flight school seemed to be "whatever you do, stay away from the clouds." On more than one occasion, I heard the quote, "All clouds have rocks." Of course, at the time, I was flying OH-58A/Cs, a non-instrument-rated aircraft.

Fast forward a few years to when I was a pilot (PI) flying a UH-1H on a parts run from Salinas, Kan., to somewhere in Missouri when we ran into some unforecasted bad weather. Rather than turn around or commit to an instrument flight, the senior pilot in command (PC) instructed me to fly the instruments while he attempted to maintain visual contact with the ground. By this point in my career, I'd logged about 300 PC hours in Scouts where I had held the belief that all clouds have rocks. Nevertheless, I wasn't about to suggest instrument flight rules (IFR) even though the UH-1H was an instrument-rated aircraft. Obviously, we survived. However, the impression of "stay out of the clouds no matter what" was still there.

Fast forward again to when I was the PC in a CH-47 returning to the Pendleton, Ore., airport from a night unaided training flight to the Tri-Cities, Wash., area. The weather forecast had called for clear weather with maybe some high clouds. However, as I contacted the tower for landing, they advised me that the field was IFR. After requesting special visual flight rules (VFR), I was instructed to remain outside of the airspace due to a commercial flight inbound on the instrument landing system.

I turned my junior PI to the west to skirt the airspace. We were flying along at 100 KIAS and 700 feet above ground level when our landing light illuminated some low-flying clouds scudding across the sky. I'll admit that it initially looked like a brick wall coming at us. But then I realized you could see through the clouds to the city lights on the horizon beyond. In that split second, my PI executed an abrupt turn to the left and dove toward the ground. After I recovered the aircraft, which was quite a bit closer to the ground, and had a "discussion" with him about his actions, he remained convinced he had taken the correct action and saved the aircraft. Obviously, I wasn't the only one to come out of flight school with the impression of "all clouds have rocks."

Well, then it happened to me. I was returning to Pendleton from a night vision goggle training flight to Fort Lewis, Wash., when we encountered unforecasted bad weather in the mountains southeast of post. This time I had no choice but to go instrument meteorological conditions (IMC) inadvertently. I survived the initial shock, leveled the aircraft and started the climb. My technique was not perfect by any means. Luckily, my co-pilot was an experienced airline pilot. He maintained his composure better than I did. When I told him to contact air traffic control (ATC) and declare an emergency, his calm response was, "They know what just happened. A declared emergency is not necessary."

Sure enough, after we maintained control of the aircraft, we established contact with ATC. They were expecting our call. Remember, in a radar environment, ATC watches a 1200 code getting slower and lower. They have a good idea about weather conditions. Then all of a sudden, that same 1200 code is climbing like a rocket. ATC had steered IFR traffic away from us before we even made the call. That's not to say an emergency call is not appropriate. It just may or may not be necessary depending on the circumstances. Anyway, we made it to Pendleton IFR without incident. That's when I started to have my own attitude shift toward IFR.

So, what's my point to all this? Whether intentional or not, pilots are still coming out of flight school with a reluctance to commit to IFR. Army aviators, as a whole, seem to maintain the attitude that all clouds have rocks. We continue to see accident reports where someone tried to fly VFR in IMC and impacted either the ground or an obstacle. I'm not advocating the use of IIMC as a primary contingency course of action. However, unforecasted IMC does happen. I remember reading an article in Approach magazine (the Navy and Marine Corps aviation safety magazine) about ejection. Their recommendation was, "Know when it's time to go. And then go." The same can be said about IFR. If you encounter IMC/IIMC, know when it's time to go IFR and then go. Don't hesitate. Don't think twice about it. Go! ATC is not going to jump on you. Your commander shouldn't jump on you. Even if he or she does, at least you and your crew are there to take the butt chewing. Butt chewings aren't so bad. They beat the alternative.

How Did Our Army Do?

Fiscal 2010 End-of-Year Review

U.S. ARMY COMBAT READINESS/SAFETY CENTER
Fort Rucker, Ala.

The history books will show 2010 was a significant year for our Army in many respects: the closure of combat operations in Iraq, renewed focus on stabilizing Afghanistan and, in regard to safety, another year of near-record lows in fatal accidents.

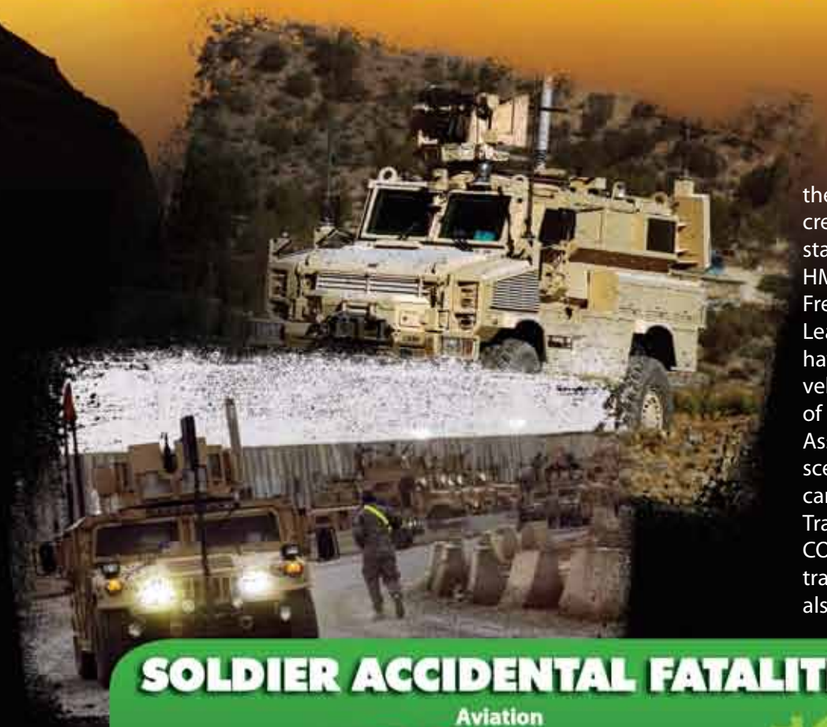
Looking back at the past decade, this accomplishment is more remarkable when considering the steady rise in accidental fatalities we experienced every year from the Sept. 11, 2001, terrorist attacks to fiscal 2005, when 299 Soldiers were lost to accidents. The turnaround since fiscal 2005 has been amazing, leading us to where we stand today with the lowest accident rates ever recorded in our Army's statistical history. The commitment of our Leaders, Soldiers, Families and Civilians to the mission and safety is clear, even as we begin the next chapter of combat operations overseas.

The numbers of accidental fatalities for fiscal 2010 offer proof of our Army's steady improvement in the fight against accidental loss. Total Class A accidents were down 6 percent from 2009 numbers, an achievement that helped sustain an unprecedented five-year reduction in on-duty fatalities. Every success is met with some challenges, however, and in 2010 we lost seven more Soldiers to accidents than in 2009 (180 deaths versus 173). This number is by no means insignificant — rather, every Soldier, regardless of rank or position within the unit, is a vital and irreplaceable part of the team and their Families. By taking a look at where we were in 2010, we can develop a sound game plan for preventing similar tragedies in 2011.

On Duty

Overall, on-duty losses were down 2 percent for the year, attributed in large measure to a 65 percent decline in Army motor vehicle (AMV) fatalities from 2009. Yet, a nearly equal increase in Army combat vehicle (ACV) deaths, in addition to a 33 percent rise in aviation-related deaths, threatened to spoil the gains made in AMV safety. Fortunately, the positive five-year downward trend in on-duty fatalities was not disrupted, and we can improve our performance in the year ahead by applying the same principles that have worked so well in AMVs to ACV operations, specifically those involving the Mine Resistant Ambush Protected (MRAP) vehicle.

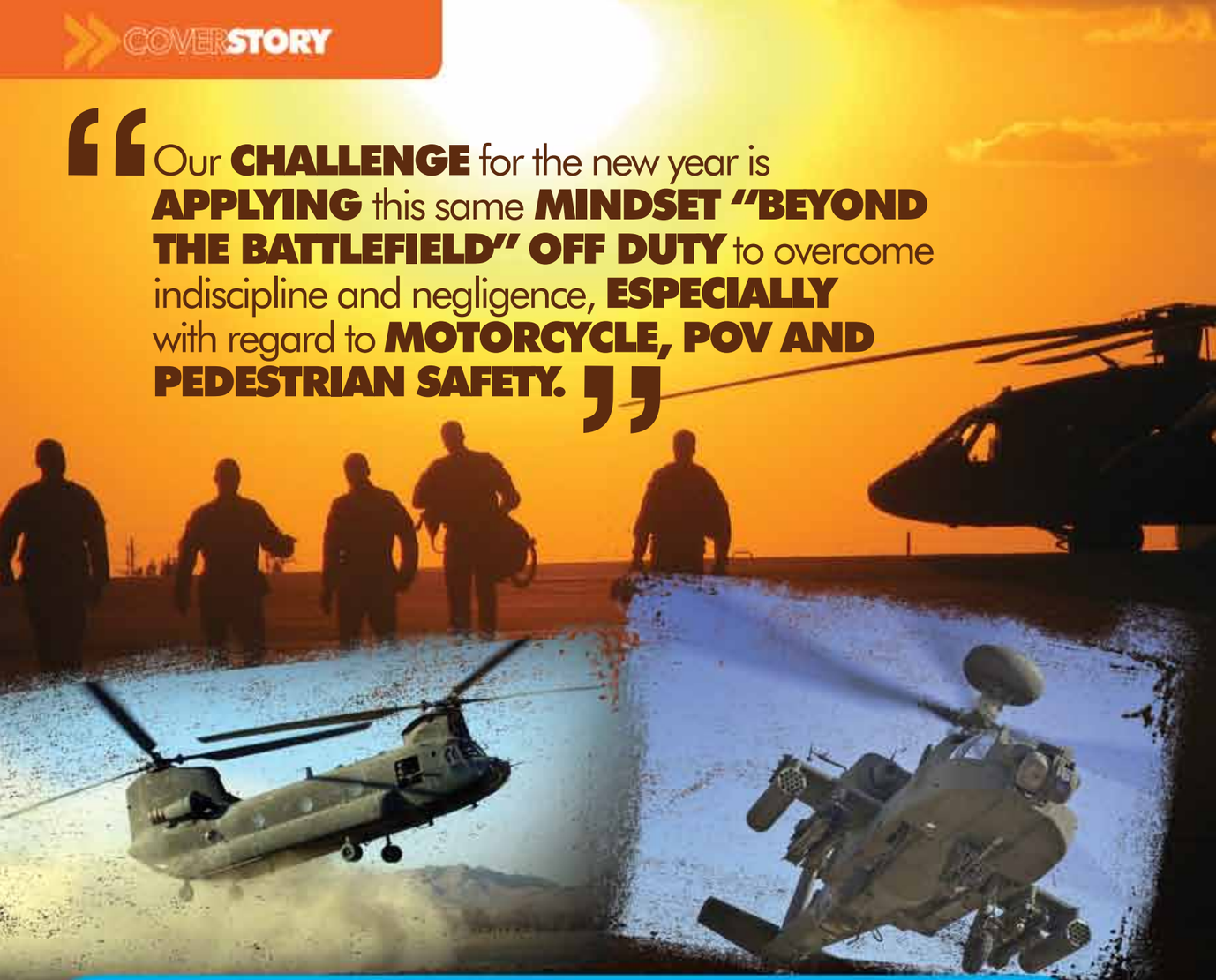
There is no doubt the MRAP family of vehicles has saved thousands of lives through its subsequent iterations, but the massive protection

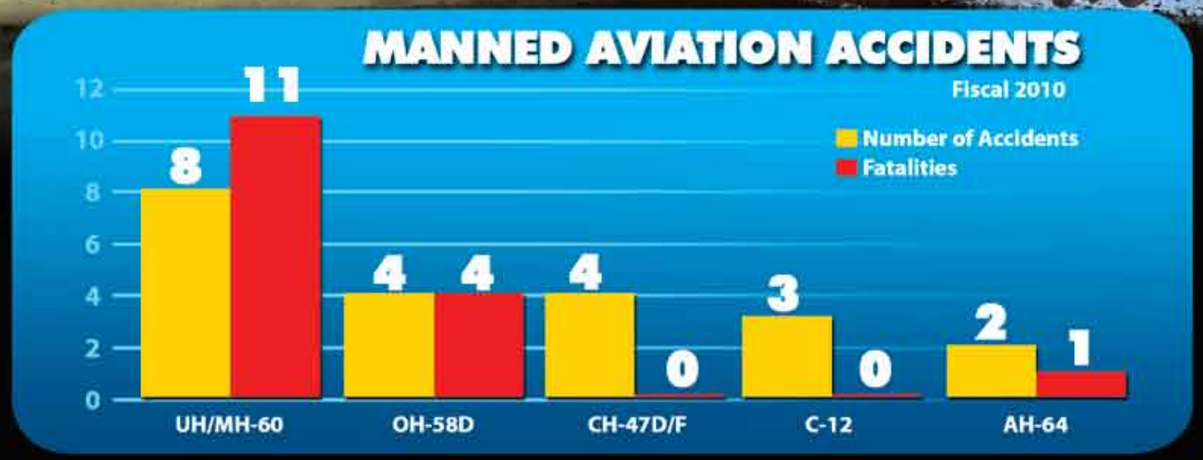


these vehicles afford is also what makes them so unsafe when crews neglect to wear restraint systems or disregard other standards. We saw similar problems when the up-armored HMMWV was introduced to the field during Operation Iraqi Freedom, but aggressive training and a renewed emphasis on Leader engagement in pre-combat checks and inspections have helped counter the hazards of these equally important vehicles. For several years, a vital tool in ensuring the safety of up-armored HMMWV crews has been the HMMWV Egress Assistance Trainer, a device that provides crews with realistic scenarios during rollover drill training. The MRAP community can now benefit from a similar initiative, the MRAP Egress Trainer (MET), at certain installations in theater and within CONUS. These trainers offer the toughest and most realistic training available outside actual combat operations and also provide Leaders a prime opportunity to engage with their crews on the importance of restraint systems and proper mission planning.

In addition to the MET, several other MRAP-centric tools were released to the field during fiscal 2010 and early fiscal 2011. In January 2011, the Army Maneuver Center of Excellence will publish Training Circular (TC) 7-31, MRAP Family of Vehicles Driver Training, for Leaders and trainers in the field. This manual is a welcome addition to driver training kits and fills a void that has existed almost since the MRAP's inception. Complementing TC 7-31 is the U.S. Army Combat Readiness/Safety Center's MRAP Safety Awareness toolkit, available now online at https://safety.army.mil. The kit includes a training support package, safety presentation with speaker notes, graphic

> "Our **CHALLENGE** for the new year is **APPLYING** this same **MINDSET "BEYOND THE BATTLEFIELD" OFF DUTY** to overcome indiscipline and negligence, **ESPECIALLY** with regard to **MOTORCYCLE, POV AND PEDESTRIAN SAFETY.**"





training aid, equipment stowage guide and informational videos highlighting a variety of MRAP safety issues. However, training guides and videos are merely tools, so Leaders must continually reinforce the importance of rollover drills, restraint system use and adherence to standards on every mission, for these are the only proven methods for both surviving and reducing MRAP accidents.

When compared to safety performance on the ground, fiscal 2010 was a tough year for the Army aviation community. Total Class A aviation accidents were down 7 percent from 2009, but fatalities remained above the previous year's numbers through the end of fiscal 2010. Tragically, we closed the year with a UH-60 accident in Afghanistan that killed five Soldiers and four additional service members. This incident and our other fatal aviation accidents highlight several prominent training concerns, including operations in environments with degraded visibility and issues with power management, crew coordination and mission planning. To keep our aviation numbers from creeping higher, aviation Leaders must heighten their emphasis on tough, realistic training and ensure all their Leaders, especially those inside the cockpit, are committed to the safety of their crews, passengers and aircraft.

During the past several years, the Army has increased its investment in high-altitude and environmental training facilities, including the High Altitude Mountain Environmental Training (HAMET) and High Altitude Army Training Site (HAATS). Training through these two programs closely replicates conditions in theater and provides an excellent opportunity for pilots and crews to familiarize themselves with safe operations in adverse environments. Leaders must also take advantage of the Army's Aircrew Coordination Training-Enhanced program, which prepares crews to work together and communicate clearly in every situation. This is more than an annual requirement and should be an on-going training tool. They should also stay focused on emerging aviation trends to prevent similar accidents from occurring within their own formations.

As important as manned aircraft are to our Army's missions, we cannot forget the contributions of small unmanned aircraft systems (SUAS) to our operations overseas. While SUAS accidents might not seem as urgent as manned incidents with fatalities, the fact is these systems are vital combat multipliers that can cost millions of dollars, qualifying as Class A Army losses. Leaders must ensure their units have up-to-date reporting systems in place and a safety officer designated for reporting duties when mishaps occur. Only by sharing this data can we report lessons learned and keep our fleet of SUAS available to commanders and Soldiers.

Off Duty

Overall, we ended the year slightly above fiscal 2009 in regard to off-duty accidental fatalities, with increases in motorcycle, sports and pedestrian deaths. On the flip side, sedan fatalities fell slightly,

but our largest decreases were in the "other" privately owned vehicle category (trucks, SUVs, vans, mopeds and all-terrain vehicles), where the total dropped by more than 25 percent for the year, and personnel injury-other deaths, which saw a 27 percent reduction. Unfortunately, a 22 percent increase in motorcycle fatalities compounded the rise in pedestrian deaths and, with all categories added together, a total of eight additional Soldiers were lost off duty than in 2009.

Not surprisingly, indiscipline — speed, lack of seat belts or personal protective equipment, alcohol or drug use and sometimes all three — were cited as primary contributing factors in the overwhelming majority of our fiscal 2010 off-duty fatalities. While Soldiers are ultimately responsible for their actions, Leaders and Families play a critical role in helping them make smart decisions about their off-duty activities. Off-duty safety can be the most difficult of all areas for Leaders to address and enforce, but engagement remains one of the most valuable safety tools available.

Numerous programs exist to help Soldiers stay safe on their motorcycles, including local Motorcycle Mentorship Programs, scenario-based simulators and the progressive training model, which incorporates four Motorcycle Safety Foundation courses to improve and sustain rider skill sets on a continuous basis. These initiatives and others like POV trainers offer commanders and Leaders a great opportunity to make a positive impact on their Soldiers and engage with them in all aspects of motorcycle and driving safety.

Other tools are available to assist Leaders in keeping their Soldiers safe off duty. Although weapons fatalities as a whole were down during fiscal 2010, weapons safety remains a top concern, especially regarding negligent discharges with privately owned weapons. These incidents are often attributed to lack of knowledge or experience with the particular weapon involved, a risk that is multiplied exponentially by alcohol use. Late in the year, the USACR/Safety Center released the interactive Firearms Safety Techniques website to raise awareness of the dangers of private weapons. The site offers several challenges where Soldiers and Family members can test their weapons skills and experience in a variety of conditions and learn what right looks like.

The recently updated Better Opportunities for Single Soldiers (BOSS) Safety Factor is another tool designed for Leaders and NCOs specifically to reach their Soldiers on the risks of off-duty activities. A media kit and presentation designed jointly by BOSS and the USACR/Safety Center, the Safety Factor consists of a four-part presentation featuring video clips from some of today's top comedians taking a humorous look at the hazards of Army life. The idea is to engage and disarm Soldiers with laughs while reinforcing a positive safety message applicable to all off-duty activities. Parts one and two of the presentation are available online now via the USACR/Safety Center and BOSS websites, with additional modules to be released at the beginning of each quarter through fiscal 2011.

OFF-DUTY FATALITIES Fiscal 2010 vs Fiscal 2009

Vehicle/Activity	Fiscal 2010	Fiscal 2009	Increase/Decrease
Motorcycle	39	32	+7
Sedan	39	41	-2
Other POV	24	31	-7
Pedestrian	12	5	+7
Sports	8	4	+4
Personnel Injury-Other	7	8	-1

as of 1 November 2010

Fiscal 2010 Safety Initiatives

In addition to the MRAP Safety Awareness training package, Firearms Safety Techniques challenge and BOSS Safety Factor, the USACR/Safety Center released two seasonal campaigns during the fiscal year, one each for spring/summer and fall/winter; updated the Travel Risk Planning System with a "comments" field for supervisor and subordinate input; and gave the Risk Management Information System a complete upgrade with new and improved search functionality. Safety professionalization was a top priority for the year as well, with the Army's Civilian Career Program-12 receiving recognition and accreditation from the American National Standards Institute and recognition from the Department of Defense as the service leader in safety training. Active and Reserve Component ground safety officers received official recognition as well with the 6Q skill identifier, a step that will help ensure our ground units are staffed with highly trained uniformed safety personnel. Several other initiatives are planned for 2011, so stay tuned to the USACR/Safety Center website and our social media sites for the latest safety information.

Conclusion

Our Army's safety performance in fiscal 2010 proved our Leaders, Soldiers, Family members and Civilians are achieving remarkable things by working together and staying engaged. The five-year decline in fatal on-duty accidents, even in the midst of a near-record OPTEMPO and continuous rotations to and from theater, is a significant accomplishment that highlights the power of Leader and Soldier engagement. Our challenge for the new year is applying this same mindset "beyond the battlefield" off duty to overcome indiscipline and negligence, especially with regard to motorcycle, POV and pedestrian safety. Training and continuous refinement of the composite risk management process remain critical tools in our fight against preventable accidents, but the keys to driving down all losses are engagement across our total force and Soldiers working together to keep our Band of Brothers and Sisters safe. Wherever you are and whatever the mission, always remember Army Safe is Army Strong!

Editor's note: At the time this article was written, information on fiscal 2010 accidental fatalities was still being received by the USACR/Safety Center. Once that information is entered into the database, the statistics and findings may change.

JUST A 'SHORT'

CHIEF WARRANT OFFICER 4 BENJAMIN WILLIAMS
U.S. Army Priority Air Transport-Pacific Flight Detachment
Joint Base Pearl Harbor/Hickam Air Force Base, Hawaii

I thought I was about to launch into a giant "black hole" …

The "PCS gods" had smiled upon me and I had orders from Fort Rucker to Korea with a follow-on assignment in Hawaii. "What a deal!" I thought. I'll just drive my Jeep Wrangler to California and have it shipped to Hawaii, where it can be waiting for me. And, to boot, during the drive, I'll stop in Salt Lake City for a few days to visit my daughter.

I'd driven cross-country three times in the past and (thought) I knew my limits. I particularly enjoyed driving at night because there was less traffic. However, in the past there was at least one other person in the vehicle with me. This time I would be going solo.

All went well until I got to Denver. There I'd planned to get off Interstate 70 West and go north on I-25. Ultimately, I intended to go west on I-80 and then take I-84 to Salt Lake City. I was feeling pretty good when I got to Denver and it was still daylight, so I decided to continue on. If I kept my pace, I figured I could make it to Salt Lake City by early evening.

But wouldn't you know it; things didn't quite go as planned. Maybe I was daydreaming, but somehow I missed my turn onto I-25. By the time I caught my mistake, I had already gone 25 miles. As I looked at the map, I figured I'd lose too much time going back and if I continued on I-70 West, I'd be going too far south.

So what could I do? I looked at the map and saw a highway through the mountains that would take me to Salt Lake City. I decided to take it — thinking I might make it to Salt Lake City even sooner than originally planned. Unfortunately, I was way off on that calculation. Just because a highway is on a map doesn't mean it's a major road. The highway went through several towns, and with the resultant stop lights and stop signs, it was much slower going than on the interstate. By the time I got to the Colorado-Utah border, the sun had gone down and it was already past my original arrival time. At least the highway had transitioned to four lanes with a faster speed limit. I finally made it to the Utah side and was driving down a mountain. I figured everything was still going to work out and that I'd get to visit with my daughter that night. That is, until it started to snow.

My headlights were little help. They only illuminated the area about 50 feet in front of me and using my high beams didn't help (as you would expect, that's why you're advised not to use your high beams when it's snowing or raining). To mitigate my risks, I slowed to 35 mph. However, now I was losing time and, since no one else was on the road, I decided to speed up a little. As I pushed down on the gas pedal, I lost control and the Jeep began sliding. I spun 1½ times and wound up facing the wrong direction. Good thing no one else was on the road.

After I got myself together, I turned around and started driving again. As before, I started out slowly and, as my confidence increased, so did my speed. After all, I was in a four-wheel-drive vehicle. I thought that would keep me out of trouble. All was going well until I increased to about 35 mph and started spinning again — only this time it was worse than before. As I tried to regain control, I glanced to the right and saw it was pitch black and there weren't any guardrails. Apparently, there was a drop off on the right side of the road and I was heading toward it. I figured I was about to launch into a giant "black hole" when, suddenly, there was a jolt and loud "thud."

Thankfully, the Jeep stopped. I'd struck a cement barrier on the highway's shoulder — the last impediment before I would've launched into the "wild dark yonder." Once my heart began beating again, I got out to assess the situation and the damage to my Jeep. I'd hit the first barrier only about two feet from where it began. How lucky was that! If not for the barrier, I'd have gone down a very steep slope. The Jeep would've probably rolled and everything inside bounced around and knocked me unconscious. Who knows how long it would have been before someone found me.

The damage to my Jeep was limited to having the left-rear tube bumper bent in about 4 inches. This event could've ended up much worse; but the truth is this didn't even have had to happen in the first place.

Fortunately, I survived and gained some useful lessons learned. First, I should've stayed on the interstates as planned. Even though the distance may be farther than traveling on an interstate, the higher speed limits and lack of cross traffic, stop signs and signals make them safer and often quicker. Second, check the weather before you head out and have some emergency supplies in your vehicle just in case you get stranded. Third, check how your vehicle handles in the snow. Understand that just because you have a four-wheel-drive vehicle doesn't mean you'll always be able to maintain traction on slippery roads. Fourth, let someone know your route and inform them of any changes you make along the way. And finally — as I learned the hard way — don't be in a rush and drive fatigued. You might end up missing your destination — permanently.

Editor's note: At the time the author took his trip, the Army had not yet developed aids such as the Travel Risk Planning System (TRiPS) program, available online at https://safety.army.mil/, to help Soldiers stay safe on the road. Also, despite many popular misconceptions, four-wheel-drive vehicles are not impervious to the snow, and unwary drivers can get into serious trouble. For valuable information on handling snowy driving conditions along with some mind-tugging challenges, visit 4-Wheel Freedom 4x4 Driving Tips online at http://www.4x4road.com/tipssnow.html.

BACK TO BASICS

1ST LT. ERIK JOHNSON
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Few events are more regrettable than a Soldier dying because someone was careless. Following basic safety principles and using good, common-sense judgment are essential to maintaining a secure environment in theater and at home. For Army mounted operations, these principles are outlined in numerous ground safety guides.

We must be diligent about safety in and around all Army vehicles, whether they're wheeled or tracked. Leaders must perform a risk assessment before all mounted operations. It's the responsibility of every Leader to manage the risks — including those posed by the enemy — once the risk assessment is complete.

Training, Ground Guides, Seat Belts and PMCS

A good driver's training program is crucial for a successful deployment. All vehicle operators must be licensed and properly trained for their vehicle. Ground guides are another essential element of safe driver practices, as is the use of seat belts in all Army vehicles. All too often we've seen the terrible harm unbelted Soldiers suffer, such as severe neck and abdominal injuries.

Preventive maintenance checks and services (PMCS) must also be performed before any vehicle is used. Mechanically unsafe vehicles, such as those with faulty brakes, errant steering systems or even exhaust problems, should never be driven before all deficiencies are corrected. Drivers should conduct a 360-degree search around their vehicles to detect problems. The 360-degree search also allows drivers to ensure no one is close to or under the vehicle before they move it.

Troop and Cargo Loads

Another consideration is the vehicle's physical dynamics, which change when it's loaded with troops or cargo. Vehicles must not be operated under conditions where passenger or cargo loads exceed their carrying capacity. Every vehicle's –10 includes factory-specified load limits. Vehicle loads should be inspected and secured before departure, and troop and cargo straps must always be used. Soldiers also must not ride on top of cargo. Leaders must brief all drivers, assistant drivers and the highest-ranking vehicle occupant before each mission. Hazardous areas or conditions must be identified and discussed during this brief, along with safe following distances, proper speed, route of travel, rest periods and signals.

Carbon Monoxide Poisoning

Hazards such as slippery or unimproved roads can result in vehicle rollovers or collisions, but less obvious threats also exist. Carbon monoxide poisoning is a potential danger in vehicle operations. Carbon monoxide is a gas emitted from many sources, including internal combustion engines. It's colorless, odorless, tasteless and deadly. Soldiers have died from carbon monoxide poisoning in a variety of situations.

To counter this threat, Soldiers must not sleep in vehicles with the engines running. Carbon monoxide is heavier than air and concentrates in low-lying areas, so Soldiers should use extreme caution around vehicles parked in depressions. Electric generators in the field should be considered an equal hazard since they also emit high concentrations of carbon monoxide. Symptoms of carbon monoxide poisoning include headache, dizziness, sleepiness and tightness across the forehead. Seek medical attention immediately for any Soldiers exhibiting these symptoms, and move them to fresh air as quickly as possible.

Noise Dissociation

Noise dissociation occurs when Soldiers hear the noise of vehicles or equipment but fail to observe the direction of the noise. In effect, noises are heard but subconsciously silenced. Soldiers are more likely to be run over if they're suffering from this "masking effect" when noise doesn't trigger an alarm to get out of the way.

Soldiers must always find the source of any new sound. If all Soldiers practice this, ground safety will be enhanced greatly. Additionally, Soldiers must never sleep or rest on vehicle trails.

Sleep Deprivation

The human body can't function without sleep. Unfortunately, those of us in uniform often must perform extended missions with little rest. After all, how would it look for a Soldier to admit he can't keep up with his comrades because he's tired? Fatigue causes errors in judgment, slowing of the reflexes and a general dulling of the senses. A fatigued Soldier is at higher risk of making potentially deadly mistakes than a well-rested one.

Soldiers should get a minimum of four hours of continuous sleep every 24 hours. However, four hours of sleep per night isn't a routine anyone should keep for more than a week or two. An abbreviated sleep pattern can wear on the mind and body. As we all know, the general recommendation is roughly eight hours of sleep per night.

Conclusion

Whether you're on a peacekeeping or combat mission or on post at home, it's important to manage risks. Excluding combat losses, driving accidents kill the greatest majority of our Soldiers. Don't become a statistic — take care and drive safe!

You've Got It, *Right?*

CHIEF WARRANT OFFICER 2 JULIAN JULES-MACQUET
7th Squadron, 17th Cavalry Regiment, 159th Combat Aviation Brigade
Fort Campbell, Ky.

How many times have you been in the cockpit and heard, or said, these fateful words — "You've got it, right?" I admit I've been guilty of this infraction a few times. Most often, a flight can get away with these words because the activity at that time does not require immediate action. On the other hand, it's amazing how quickly things can get dangerous following those words, even in the close confines of an OH-58D(R) cockpit.

It was a cool autumn evening at Saber Army Heliport at Fort Campbell, Ky. This was just another night vision goggle readiness level-three progression flight with my usual instructor pilot (IP). I was flying right seat. We completed Task 1072, "Respond to engine failure at a hover," and moved on to Task 1074, "Respond to engine failure at cruise flight." It was dark with a thick bank of clouds moving in. This was our last task for the night. A light but steady rain had begun and we discussed calling it a night. The rain caused an unusual visual display in the ANVIS-6, but the IP and I had no cause for concern. We felt confident to continue with the training.

As I completed the maneuver by terminating with power, the IP explained what I needed to work on and then said, "Let's do one more and call it a night." Off we went. We turned on final and set ourselves up to enter the maneuver in accordance with Training Circular 1-248, Task 1074. Everything felt the same as the other maneuvers we had executed earlier this evening. When the IP announced, "Simulated engine failure," and retarded the throttle, I responded by lowering the collective to maintain RPM, accomplishing the required actions.

As we continued with the autorotation, I watched the windsock, which was my reference point to begin my deceleration. I listened for the IP's usual dialogue prior to 400 feet above ground level (AGL), when he would open the throttle and verify engine power turbine speed (NP) RPM at 100 percent. I admit this had become background noise after doing the maneuver several times and I was slow to respond.

As I looked inside the aircraft, I noticed NP RPM was not at 100 percent when the IP announced, "I have flight controls." We had descended well below 400 feet AGL and the IP said, "Get ready." Well, he saved the day by executing a near-perfect Fort Rucker autorotation to the ground. I say "near perfect" because we hit hard and spread the skids. I had plenty of time to replay the whole episode over in my mind as we waited for the flight surgeon at the hospital for the old "pee-and-bleed" routine.

What Happened?

How had we managed to accomplish several successful autorotations prior to this bad one? In the investigation, I was told that I had failed in my crew coordination duties. It states in the aircrew training manual (ATM) that it is the IP's responsibility to apply throttle pressure with spring back and visually check that NP RPM is at 100 percent. However, the ATM also says provisions should be made in the crew brief for the pilot to verify the throttle is open. I assume I had failed to do this in all the previous maneuvers as well.

As stated in chapter six of the ATM, a significant number of accidents occur because one or more crew coordination errors occurred before or during the flight. Clearly, I had failed to offer assistance to the IP by verifying the throttle was open and NP RPM was at 100 percent.

I had also failed to acknowledge actions because I had fallen into a habit of paying lip service whenever an IP stated, "Throttle open." I had fallen into the new pilot trap of assuming the more experienced pilot had everything under control. The investigators pointed out that as a crew, we both failed to keep focused on the maneuver and became distracted by the deteriorating weather outside. I accept my role in the accident and clearly understand what I should have done to prevent it from happening.

In conclusion, the accident was a Class C. I fully understand crew coordination is vital to a successful flight. As a pilot in command (PC), I learned it's vital to apply all the elements of crew coordination to every flight, whether with a fellow PC or a 3,000-hour pilot. Moreover, you can rest assured I check operating RPM with throttle spring back and visually verify the NP RPM is at 100 percent every time I perform Task 1074.

THE ELEMENTS OF CREW COORDINATION

1. Communicate positively.
2. Direct assistance.
3. Announce actions.
4. Offer assistance.
5. Acknowledge actions.
6. Be explicit.
7. Provide aircraft control and obstacle advisories.
8. Coordinate action sequence and timing.

The Gift of Life

RETIRED MASTER SGT. ED ROLOFF
2nd Psychological Operations Group
Twinsburg, Ohio

On a snowy night in Hamburg, N.Y., a motorist driving a Ford F-150 struck the electrical pole in front of Dave Johnson's home, causing a power outage. Due to the foul weather and the late hour, the power company would not be able to repair service to the area for at least four to six hours. "No big deal," Dave thought. Like most Hamburg residents, he was accustomed to frequent power outages during the winter and owned a gas-powered generator.

Despite the manufacturer's warning, Dave set up and ran the generator inside his attached garage (with the garage door open). Early the next morning, when the power was restored, Dave walked out into the garage to turn off the generator. When he walked back into the house, he stumbled, fell, vomited and then passed out. Dave's wife, Lisa, came out of the bedroom to investigate the commotion and also stumbled and fell. She yelled for her oldest daughter, who called 911 when she found her parents on the floor. The entire family was transported to the local emergency room.

So what happened? Dave, Lisa and their two daughters were victims of carbon monoxide (CO) poisoning. An odorless, colorless gas that can cause sudden illness and death, CO is found in combustion fumes such as those produced by vehicles, small gasoline engines, stoves, lanterns, burning charcoal and wood, and gas ranges and heating systems. The CO from these sources can build up in enclosed or semi-enclosed spaces, poisoning the people and animals breathing it.

The most common symptoms of CO poisoning are headache, dizziness, weakness, nausea, vomiting, chest pain and confusion. High levels of CO ingestion can cause loss of consciousness and death. Since many of these symptoms are similar to those of the flu, food poisoning or other illnesses, some victims may not realize CO poisoning could be the cause of their problems.

CO poisoning is the result of CO invading the blood stream. Red blood cells absorb CO quicker than they absorb oxygen. If there is a high quantity of CO in the air, the body may replace the oxygen in the blood with CO. This blocks oxygen from getting into the body, which can damage tissues and result in death. People who are sleeping or intoxicated can die from CO poisoning before

DID YOU KNOW?

Carbon monoxide exposure accounts for an estimated 15,000 emergency room visits and 500 deaths in the United States each year.

Source: Centers for Disease Control and Prevention

ever experiencing symptoms.

If you experience any of the symptoms associated with CO poisoning, get fresh air immediately. Then go to an emergency room and tell the physician you suspect you're suffering from CO poisoning. If CO poisoning has occurred, it can often be diagnosed by a blood test done soon after exposure. The treatment for CO poisoning is high-dose oxygen, usually using a facemask attached to an oxygen reserve bag. In severe cases, a hyperbaric pressure chamber, if available, may be used to give even higher doses of oxygen.

There is nothing wrong with using a portable generator during an emergency, but it must be used wisely and in accordance with the manufacturer's specifications. When used in a confined space, generators can produce high levels of CO within minutes. Here are some safety tips for using a portable generator:

- Never use a generator inside homes, garages, crawlspaces, sheds or similar areas, even when using fans or opening doors and windows for ventilation.
- Follow the manufacturer's instructions that come with the generator.
- Locate the unit outdoors and far from doors, windows and vents that could allow CO to come indoors.
- Install battery-operated CO detectors/alarms or plug-in CO alarms with a battery back-up in your home, according to the manufacturer's instructions.

Some advice on CO detectors: Don't let buying one lull you into a false sense of security. Preventing CO from becoming a problem in your home is better than relying on an alarm. Also, do some research on the features of several different detectors and don't select solely on the basis of cost. Non-governmental organizations such as Consumers Union (publisher of Consumer Reports), the American Gas Association and Underwriters Laboratories can help you make an informed decision. It is important for you to know that the technology of CO detectors is still developing, there are several types on the market and they are not generally considered to be as reliable as the smoke detectors found in homes. Unlike a smoke detector, where you can easily confirm the cause of the alarm, CO is invisible and odorless, so it's harder to tell if an alarm is false or a real emergency.

After their CO scare, Dave and Lisa spent four days in the hospital receiving high-dose oxygen treatment inside a hyperbaric chamber. Their daughters were treated with high-dose oxygen through a facemask and discharged from the hospital after two days. Dave learned a valuable lesson on the dangers of CO poisoning, and he and his family received a very precious gift — life!

FYI

According to a study by the Centers for Disease Control and Prevention, January is the worst month for carbon monoxide poisoning.

gear UP!

FOR WARM FIRES

- Follow the directions on the package if using man-made logs. Never break the logs apart to quicken the fire.

- Never close the damper with hot ashes in the fireplace.

- Always use a sturdy screen when fireplaces are in use.

- Burn only wood. Paper or pine boughs can float out the chimney and ignite your roof or neighboring homes. Also, plastic, charcoal and Styrofoam can produce toxic gases!

- Make sure the fire is out before leaving the house or going to bed.

ARMY SAFE

FALLWINTER

NO TIME TO CHILL

ARMY STRONG

https://safety.army.mil

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BAND OF BROTHERS & SISTERS

STEPPING OUT FOR SAFETY

CHARLES W. CURTIS JR.
Joint Munitions Command
Rock Island Arsenal
Rock Island, Ill.

Look around the post where you're assigned. On any given day, you can see people walking, jogging or riding bicycles. On post, most of us use sidewalks, pedestrian crosswalks, bicycle paths and parking lots to get to our work areas, homes, recreational areas, training sites and shopping areas. In addition, some of us walk, run or bicycle for personal exercise. But did you know how great a threat pedestrians and bicycle riders face as they share the road with motorists? According to the National Highway Traffic Safety Administration, between 2000 and 2008, an average of more than 4,700 people died each year from being struck by motor vehicles.

These accidents are typically caused by negligence. Automobile drivers sometimes fail to observe traffic lights, stop or yield signs, marked pedestrian crossing lights or crosswalk paths. While bicyclists are sometimes ignored by motorists, some bicyclists make the problem worse by disregarding the traffic laws they are supposed obey. Pedestrians put themselves in danger by not waiting for the "WALK" signals to appear on pedestrian streetlight indicators before crossing busy roads or intersections. At bus stops and in busy parking lots, pedestrians sometimes raise their risk of being struck by weaving between parked and moving vehicles. Small children walking in parking lots can be too short to be seen by drivers as these youngsters make their way between vehicles or exit school buses.

Here are some tips to keep in mind about pedestrian safety.

Drivers

- Be aware of busy pedestrian crosswalk intersections and obey the traffic signals.
- Slow down in marked school zones and playground areas.
- Don't speed though parking lots because unattended small children and physically handicapped wheelchair operators may unexpectedly appear from behind vehicles.
- Look out for pedestrians at bus stop areas. Passengers may be crossing in front of or behind busses and not seen until the last moment.
- Stay alert for marching or running troop formations and obey designated road guards and crossing officials.

Bicyclists

- Obey posted speed limits and traffic regulations.
- If you share a bicycle lane with a vehicle roadway, stay in your lane and look out for vehicles as well as pedestrian traffic.
- If you share a sidewalk with pedestrians, stay in your lane and be sure to provide an audible signal when overtaking a pedestrian. Also, remember pedestrians have the right of way.
- Wear protective gear as required. Bicyclists on Army installations are required to wear helmets approved by the Consumer Product Safety Commission or certified by the American Society for Testing and Materials. Bicycles operated on Army posts during hours of darkness must have an operable headlight and taillight, and riders must wear a reflective upper outer garment.
- The wearing of headphones, earphones or other listening devices while bicycling on or adjacent to roadways on military installations is prohibited.
- Do not drink alcohol while riding a bicycle. If there is an accident and you are at fault, your riding privilege may be revoked.
- If you share the road with streetcars and automobiles, make sure you yield as required by local law. Normally, streetcars have the right of way.
- Look out for buses loading and unloading passengers and buses entering or exiting traffic lanes.

Pedestrians

- Always look for a designated crosswalk before crossing a road or highway.
- Make sure you cross only when the traffic light or pedestrian light indicates green or "WALK." Some crosswalk signal indicators have a raised hand symbol for "STOP" or the image of a person walking to indicate "GO."
- Stop at the road curb edge, corner or parked vehicle before proceeding to cross.
- Stop, look and listen. Check for traffic from both directions; first looking left and then right before crossing.
- Don't take traffic lights or pedestrian WALK signals for granted. Always check for oncoming traffic before stepping out.
- When crossing, continue to check for traffic from all directions. Look out while crossing corners where

motorists are allowed to turn right on a red light.

- Maintain situational awareness at all times. Look out for small children who may be unattended or depending on a crossing guard to safely cross the street.
- Watch where you're going and be alert for overhead falling object hazards when walking in construction areas.
- Watch for trip hazards caused by uneven pavement or foreign objects on sidewalks.
- Obey the regulations concerning headphone usage when on post. Army regulations prohibit wearing portable headphones, earphones or other listening devices while walking on or adjacent to roadways or roadway intersections.
- Runners should wear reflective vests, especially during hours of limited visibility, and stay only on authorized run routes at approved times.

The bottom line is situational awareness is vital for safety. Pedestrians and bicyclists must be aware of each other, vehicles and traffic flow. Vehicle drivers need to remain alert for pedestrian and bicycle traffic, heavy-use crossing areas and the unexpected hazard of a child or runner darting into oncoming traffic. Being alert while sharing the roads and walkways — whether we're driving, bicycling, walking or running — can help us all reach our destinations safely.

> "**BEING ALERT** while sharing the **ROADS AND WALKWAYS** — whether we're **DRIVING, BICYCLING, WALKING OR RUNNING** — can help us all reach our **DESTINATIONS SAFELY.**"

And The Award Goes To...

SGT. MONICA K. SMITH
3rd Combat Aviation Brigade, Task Force Falcon
Bagram Airfield, Afghanistan

Editor's note: Knowledge will periodically spotlight Soldiers who were recently recognized for their outstanding airmanship with the Broken Wing Award.

As Chief Warrant Officer 2 Jacob Crause and Capt. Patrick DuBois, both with Troop C, Task Force Lighthorse, 3rd Combat Aviation Brigade, Task Force Falcon, positioned their OH-58D(R) to provide cover for another aircraft, they suddenly lost hydraulic pressure. Crause began executing emergency procedures, regaining stable level flight in a wider valley. While Dubois controlled the rate of decent, Crause controlled the direction of movement.

The pilots were able to maneuver the aircraft back toward the runway and notify the tactical operations center of the situation. However, as they neared the airfield, visibility decreased from five miles to a half mile due to smoke and haze. With the decreased visibility and remaining mountainous terrain before them, Crause remained at altitude to provide the best clearance. Fortunately, the two pilots were able to land the aircraft and shut down without further incident.

Crause, of Kent, Wash., and DuBois, of Colorado Springs, Colo., were recognized for their actions with the Broken Wing Award at Forward Operating Base Fenty. The award honors aircrew members who demonstrate a high degree of professional skill while recovering from an in-flight failure or malfunction requiring an emergency landing.

Crause said piloting the aircraft after the hydraulic pressure malfunction was like driving a HMMWV without power steering.

"In our particular case, it became apparent very early on that something else was not quite right with the flight controls," Crause said. "Moving the flight controls in one direction was about three times harder than moving them in the opposite direction. This is unusual and was not the case in a previous hydraulics failure I experienced during my tour in Iraq. I realized that without the help of my left seater, Dubois, I was going to have a very tough time getting the aircraft down in one piece."

Crause said the gravity of the situation really didn't hit him until after shutdown.

"The only time fear entered the equation was after we came to a complete stop and I realized what we had just done," he said. "We made a pretty smooth landing, skidding to a stop after about 50 feet. I can neither confirm nor deny that we may or may not have executed a high five in the cockpit after we came to a safe stop."

Lt. Col. Thomas von Eschenbach, commander of Task Force Lighthorse, praised Crause and Dubois for their actions.

"They were truly deserving of their Broken Wing Awards, as they kept calm under the pressure of an emergency situation by making great decisions and demonstrating great technical skill in flying their aircraft from the battlefield safely back to the airfield," he said. "Their determination and skill personifies what I call the 'Lighthorse Spirit' — a spirit that accepts every challenge and accomplishes every task assigned, making the most difficult look easy."

The awards were presented by Col. Don Galli, commander of Task Force Falcon.

"I'm very honored to have received this award," Crause said. "However, I hope this is my last opportunity to do so."

HOW TO NOMINATE

CHIEF WARRANT OFFICER 4 GREGORY GANZ
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

The Army Aviation Broken Wing Award is highly regarded and reserved for aircrew members who successfully managed in-flight emergencies while operating aircraft under Army control. Since it was established in 1968, hundreds of aircrew members have received it based on their extraordinary airmanship. These aircrew members preserved lives and equipment, saving the U.S. Army millions of dollars.

Individuals performing authorized aircrew member flight duties on behalf of the Army while on a Department of Defense mission are eligible to receive the award. An aircrew member must, through outstanding airmanship, minimize or prevent aircraft damage or injury to personnel during an emergency situation. The aircrew member must have shown extraordinary skill while recovering an aircraft from an in-flight emergency situation. If more than one crewmember significantly contributed to the successful recovery from the emergency, each of those involved should be considered for nomination. Emergencies resulting from enemy action are not excluded from consideration.

Nominations are evaluated by a panel consisting of five master aviators, of which a majority vote equals a selection or non-selection recommendation to the director of Army safety. The panel may include senior enlisted crewmembers when appropriate. At least one panel member will be qualified in the mission type and design of the aircraft involved in the emergency.

An emergency will not be considered for an award if:

- It was self-induced.
- It actually occurred during a simulated emergency requiring no added skill to land the aircraft successfully.
- It occurred because of noncompliance with published regulations or procedures.
- It was determined that no emergency actually existed.
- In the panel's opinion, a lack of discipline or aviator judgment may have induced the emergency.
- The aircraft was in a phase of flight with no unfavorable circumstances to prevent a safe landing.

The unit commander or installation or unit safety manager should initiate nominations for the Broken Wing Award. Normally, only one person will be nominated to receive the award for a single in-flight emergency. However, if more than one crewmember materially contributed to successful recovery from the emergency, all those involved should be considered for nomination. Details on eligibility and nomination procedures of the award can be found in Department of Army Pamphlet 385-10, 6-3(f).

Nominations will be forwarded through the first O-6 in the chain of command to the U.S. Army Combat Readiness/Safety Center, ATTN: CSSC-PT (Broken Wing Award), Fort Rucker, AL 36362-5363.

To contact the Broken Wing Award manager, e-mail safe.awards@conus.army.mil, or call (334) 255-9337 or DSN 558-9337. For more information, go to https://safety.army.mil/awardsprogram.

LOST

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.

AVIATION

CH-47D

CLASS B

- An OH-58D(R) aircraft was damaged during sling-loading by a CH-47D. The OH-58D(R) was in a nose-high attitude during liftoff, with the tail boom still resting on the ground. As the crew attempted to reposition the OH-58D(R) on the ground, the tail boom sustained extensive damage.

MH-47G

CLASS C

- The aircraft experienced an overtorque/overtemp condition during aerial refueling.

UH-60A

CLASS B

- The aircraft made contact with a parked aircraft as the crew was repositioning to parking.

CLASS C

- The aircraft sustained damage when the main rotor blades contacted the tail boom section, tearing off the tail rotor driveshaft cover, damaging the intermediate tail rotor gearbox and the tail boom.

UH-60L

CLASS A

- Five Army crewmembers and four passengers were killed when their aircraft crashed en route to a designated landing zone. The aircraft was destroyed.

CLASS B

- The aircraft landed hard in dust conditions.

CLASS C

- Following takeoff, the aircraft struck power lines during nap-of-the-earth flight. The crew was aware of the obstacle and was negotiating it at the time of contact.

EO-5C

CLASS C

- A contract maintenance crew discovered damage to the aircraft during engine run-up for replacement. A washer left inside the safety screen damaged the compressor blades, inlet-housing and safety screen.

UAS RQ-7B

CLASS B

- The unmanned aircraft (UA) lost link with the controlling stations and the operator lost control, resulting in a crash landing.
- The UA experienced engine failure following launch. The recovery chute deployed, but the UA struck a power pole during descent and was destroyed.
- The UA experienced an overtemp during normal flight, entered an uncommanded descent and crashed.

CLASS C

- The UA experienced a spike in engine operating temperature during flight. During landing, the system bounced and became airborne again, causing the landing hook to miss the pendants and catch the landing net. The UA broke through the net and crashed near the runway.
- The UA experienced decay in engine RPM followed by engine, generator and alternator failure during the landing phase and crashed. The crew recovered the UA with damage.

LOSSES AVIATION — FISCAL 2011 Class A/Fatalities as of Dec. 5, 2010

ATTACK	0/0
RECON	0/0
UTILITY	1/0
CARGO	0/0
TRAINING	0/0
FIXED-WING	0/0
UAS	2/0
TOTAL	3/0

LOSSES GROUND — FISCAL 2011 Class A/Fatalities as of Dec. 5, 2010

AMV	1/0
ACV	1/1
PERSONNEL INJURY (includes weapons-handling accidents)	5/4
FIRE/EXPLOSIVE	1/1
PROPERTY DAMAGE	2/0
TOTAL	10/6

GROUND

AMV

CLASS A

- A Soldier was killed and two others were injured when their M1151 HMMWV overturned during a four-vehicle convoy. During the rollover, the driver's door opened and the driver was pinned underneath the vehicle. He died at the scene.
- A Department of the Army Civilian was killed when the government-owned pickup truck he was driving to a range site overturned on an unimproved road. He was not wearing a seat belt.

CLASS B

- An M119 howitzer was being towed by a HMMWV when it separated from its trailer and was damaged. The howitzer was reported as a total loss.

Explosive/Fire

- Several homes were destroyed when ball ammunition fired from a .50-caliber machine gun started a brush fire. The fire department attempted to extinguish the flames, but the fire spread outside of the camp to the homes.

DRIVING

POV

CLASS A

- A Soldier died when his vehicle crossed the highway centerline and collided head-on with an tractor-trailer.
- An unbelted Soldier was thrown from his vehicle and killed when his car went out of control and overturned.
- While attempting to make a U-turn, a Soldier was struck and killed by a pickup truck hauling a trailer.
- Two Soldiers died when they were rear-ended by another vehicle on the highway shoulder, lost control, traveled beneath an overpass and struck a bridge.

POM

CLASS A

- A Soldier was killed when he went off the road to avoid either an animal or an object and struck a tree. The Soldier was wearing his full personal protective equipment (PPE) and was a licensed, trained and experienced rider.
- A Soldier died from head injuries after he was thrown into a guardrail when his bike drifted onto a road shoulder, hit a rumble strip and went out of control.
- A Soldier died after he lost control of his motorcycle in a curve and was thrown 72 feet into a power pole guyline. The Soldier was not wearing any PPE.
- A Soldier died when he lost control of his speeding motorcycle and was thrown into the path of an oncoming tractor-trailer.
- A Soldier was killed when he lost control of his motorcycle, left the road and struck a mailbox. At the time of the accident, the Soldier was within 50 feet of his home.
- A Soldier was speeding in a construction zone when he struck a concrete barrier and was thrown into the path of an oncoming tractor-trailer.

LOSSES POV/POM — FISCAL 2011 Class A/Fatalities as of Dec. 5, 2010

CAR	4/4
SUV/JEEP	1/1
TRUCK	2/2
MOTORCYCLE	7/7
PEDESTRIAN	0/0
OTHER* (*Includes vans and ATVs)	0/0
TOTAL	14/14

Fiscal Year 2010: 20 — Three Year Average: 20

BUCKLE UP FOR LIFE!

USE YOUR

Protect yourself and those around you.
When in a car, ensure everyone
wears their seat belt.

ARMY STRONG.

U.S. ARMY COMBAT READINESS/SAFETY CENTER
https://safety.army.mil

ARMY SAFE IS ARMY STRONG

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CLICK IT OR TICKET

FACT: Army motor and combat vehicle accidents are the single greatest cause of on-duty accidental ground fatalities among our Soldiers.

Get the tools before the road gets slick.

Driver's Training Toolbox

https://safety.army.mil/drivertrainingtoolbox/

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ARMY SAFE IS ARMY STRONG

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LEADERSHIP: OUR GREATEST WEAPON

KNOWLEDGE

VOL 5 FEBRUARY 2011

OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

TIPS TO LIVE BY

- A SAFE RETURN
- LET'S SEE THE PPE
- PLAN FOR SUCCESS

+

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OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

LEADERS SOLDIERS CIVILIANS FAMILIES

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Mission statement: The United States Army Combat Readiness/Safety Center (USACR/Safety Center) supports our Army by collecting, 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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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.

> "A **VITAL PART** of **ENGAGED LEADERSHIP** is providing Soldiers with the knowledge to **MANAGE** their own **UNIQUE RISKS**."

MOVING ON WITH SAFETY IN MIND

FROM THE DASAF

As I look across our Army today, I continue to be amazed by the dedication of our Leaders, Soldiers, Families and Civilians to not only our missions, but also the well-being of our force. Through engaged leadership, Soldiers looking out for one another and Family involvement in safety programs, we are well on our way to another year of record lows in fatal Army accidents. Thanks for all you do to take care of our nation's most precious resources — our Soldiers, Families and Civilian workforce.

One of the bittersweet realities of military service is the certainty of goodbyes, and it's time for the USACR/Safety Center team to bid farewell to CSM Mike Eyer. Beginning this month, CSM Eyer will assume responsibilities as command sergeant major for the 2nd Infantry Division, Camp Red Cloud, Korea. This move presents a tremendous opportunity for CSM Eyer and his Family, and we wish them the best as they begin their next chapter of Army life.

During his time at the USACR/Safety Center, CSM Eyer has been a tireless advocate for the safety of our Band of Brothers and Sisters. His work here has left an enduring legacy in our Army, and I am confident the Soldiers, Family members and Civilians of the 2ID are in good and capable hands with CSM Eyer on board. Thank you, CSM Eyer, for everything you've done and continue to do to keep our Army Safe and Strong!

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

Army life is full of changes, and the time has come for me to move on to my next challenging assignment. However, I cannot leave the USACR/Safety Center without sharing with you — our Band of Brothers and Sisters — a few key thoughts from my time here. I've been able to see firsthand what our Soldiers, Family members and Civilians are doing every day, and I remain totally convinced our Army is on the right track for safety.

Traditionally, Leaders have done the hard work with regard to safety. As a result, many of our Soldiers today don't understand the composite risk management process because they haven't had to think through it. My best advice for Leaders is to continue encouraging their Soldiers to think and make smart safety decisions for themselves through continued coaching, teaching and mentoring. Our Soldiers must be educated and empowered enough to be their own best advocates for safety, both on and off duty. Leaders must also set the standard in all they do all the time, abiding by the principle of "don't set a new standard, but enforce the ones that exist."

A vital part of engaged leadership is providing Soldiers with the knowledge to manage their own unique risks. CRM should be a key element in every Soldier's individual training, and our first-line Leaders are the best starting point for this instruction. As Leaders, we must show our Soldiers how to operate within their left and right limits safely and continually hold them to those standards. By placing that responsibility on their shoulders, we create smarter and safer Soldiers who can think through the toughest of situations and apply that same knowledge to their off-duty lives. Our Soldiers are our most valuable sensors on the battlefield, and making them part of the risk management process will sharpen their skills and make them even more effective in everything they do. Ask your Soldiers for their input on risk mitigation during your next mission — you'll be surprised at how open and creative they'll be with just a little encouragement!

We must also continue to engage our wonderful Family members, keeping them informed and allowing them to be part of the CRM process during their Soldiers' off-duty time. Our Families have and will always have the greatest impact on our Soldiers and are a powerful ally in keeping our Army safe. Be sure to involve them in your safety programs and use their powerful influence for good.

My duties at the USACR/Safety Center have taken me literally all over the world, from locations across the United States to Iraq, Afghanistan, Kuwait, Germany, Belgium, Italy, Japan and elsewhere. In every location, I've been impressed by our Soldiers' dedication to duty and to each other. Even in the remotest of locations, I've always found our Soldiers doing what they're supposed to do, staying engaged and actively working to keep themselves and their peers safe and in the fight. You can always rely on the American Soldier to do the right thing, especially when their leadership demonstrates trust in their competence and gives them an example to follow. Battle buddies and peers make a difference — never leave a fallen Soldier.

I will miss the many opportunities I've had to meet and talk with our Soldiers, Family members and Civilians during my tenure here, but each and every one of you has made a tremendous impact on me and my personal commitment to Army safety. I remain proud and humbled to have had the chance to serve our Army as a member of the USACR/Safety Center team, and I thank you for what you do every day. Stay safe in all you do, and best wishes for the future!

Army Safe is Army Strong!

MICHAEL EYER
Command Sergeant Major
U.S. Army Combat Readiness/Safety Center

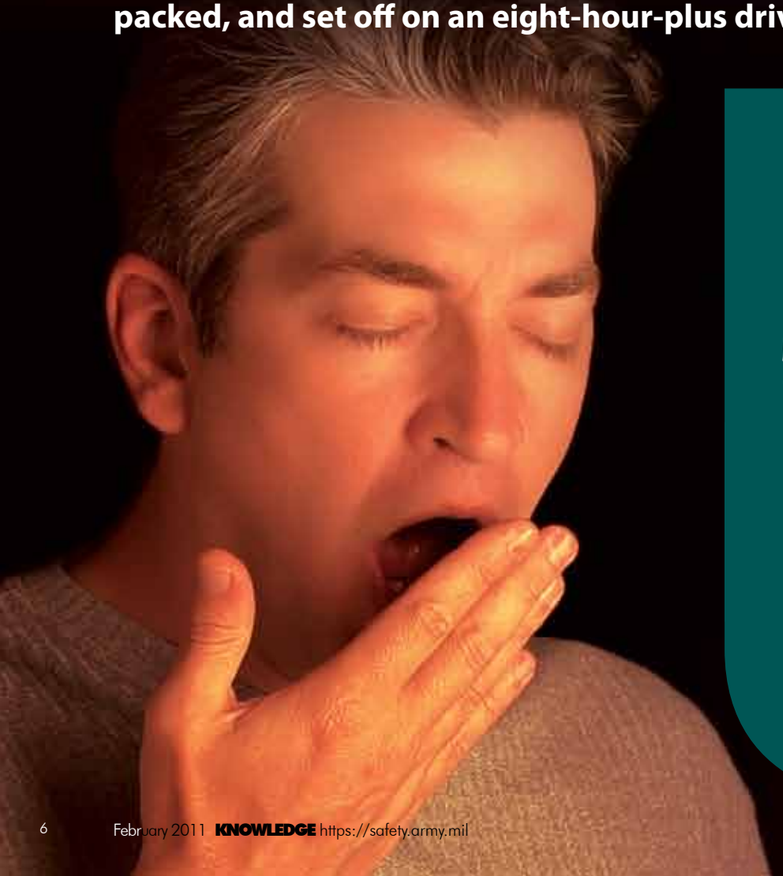
The 'Tucker' Factor

2ND LT. ALICIA HOWARD
HHC, 42nd Infantry Division Combat Aviation Brigade
New York Army National Guard
Latham, N.Y.

We've all experienced what it feels like to drive fatigued. We've made the mistake of working all day and then taking off on a long drive to be with family or friends during a holiday or vacation. I often did that when I was stationed at Fort Hood, Texas. On Thursday afternoons, we would be released about 3 p.m. after Sergeant's Time Training. I would hop into my vehicle, which I'd already packed, and set off on an eight-hour-plus drive to Joplin, Mo.

Normally, I could easily make this trip after a good night's rest; however, leaving immediately after work was a different story. While the excitement was enough to keep me awake for the first three hours, around the fourth hour I would begin to experience the warning signs of drowsiness and fatigue. I would find myself having difficulty focusing, forgetting the last few miles of driving, yawning repeatedly and jerking my vehicle back into my lane.

And weather could also make these trips take longer. On one particular trip, I was driving through Oklahoma when I encountered a blinding snowstorm that forced me to slow to less than 30 mph. I was frustrated because I realized it was going to take much longer than normal to reach Joplin. However, when I tried speeding up, I'd begin sliding on the road. I saw the consequences of that firsthand when a vehicle in front of me ran off the road into a ditch. I stopped to make sure the individual was OK. He was fine and I called a wrecker to pull him out. However, I knew at



SNOOZIN' AND LOSIN'

NATIONAL SAFETY COUNCIL
www.nsc.org

Just like drugs or alcohol, sleepiness slows reaction time, decreases awareness and impairs judgment. Like drugs or alcohol, fatigue can be fatal when driving. Just check out the following statistics.

- Death rates based on mileage were 3.2 times higher at night than during the day in 2007.
- 37 percent of drivers surveyed by the National Highway Traffic Safety Administration admitted to falling asleep at the wheel at some point in their driving career; 8 percent admitted doing so in the past six months.
- 60 percent admitted falling asleep while driving on an interstate-type highway with posted speeds of 55 mph or higher.

The drivers at highest risk are third-shift workers, people who drive a substantial number of miles each day, those with unrecognized sleep disorders and those prescribed medication with sedatives.

Recognize the Symptoms of Fatigue

- Eyes closing or going out of focus
- Persistent yawning
- Irritability, restlessness and impatience
- Wandering or disconnected thoughts
- Inability to remember driving the last few miles
- Drifting between lanes or onto the shoulder
- Abnormal speed, tailgating or failure to obey traffic signs
- Back tension, burning eyes, shallow breathing or inattentiveness

Safety Tips

- Maintain a regular sleep schedule that allows adequate rest.
- When the signs of fatigue begin to show, get off the road. Take a short nap in a well-lit area. Do not simply stop on the side of the road.
- Avoid driving between midnight and 6 a.m.

When Planning Long Trips

- Share driving responsibilities with a companion.
- Begin the trip early in the day.
- Keep the temperature cool in the car.
- Stop every 100 miles or two hours to get out of the car and walk around; exercise helps to combat fatigue.
- Stop for light meals and snacks.
- Drive with your head up, shoulders back and legs flexed at about a 45-degree angle.

> “When I **LOOK BACK** on it, it seems **SILLY** that I **TOOK** such **RISKS**. I would **NEVER** let any of my **SOLDIERS** make the **SAME TRIP** without first getting **ADEQUATE REST**.”

that point it was no use trying to drive any farther. It just wasn't worth getting into an accident.

I knew the next town was only a few minutes away. I called my family and told them that I was staying there overnight because the weather was too bad to drive. Had I tried, it would've taken me even more time to get to Joplin or I could've ended up in a bad accident. As it turned out, the next morning was beautiful and the roads were clear. I left early enough to arrive at the hotel in Joplin just after my family had gotten out of bed. We were still able to have breakfast that morning and spend an enjoyable holiday together before I had to be back at Fort Hood.

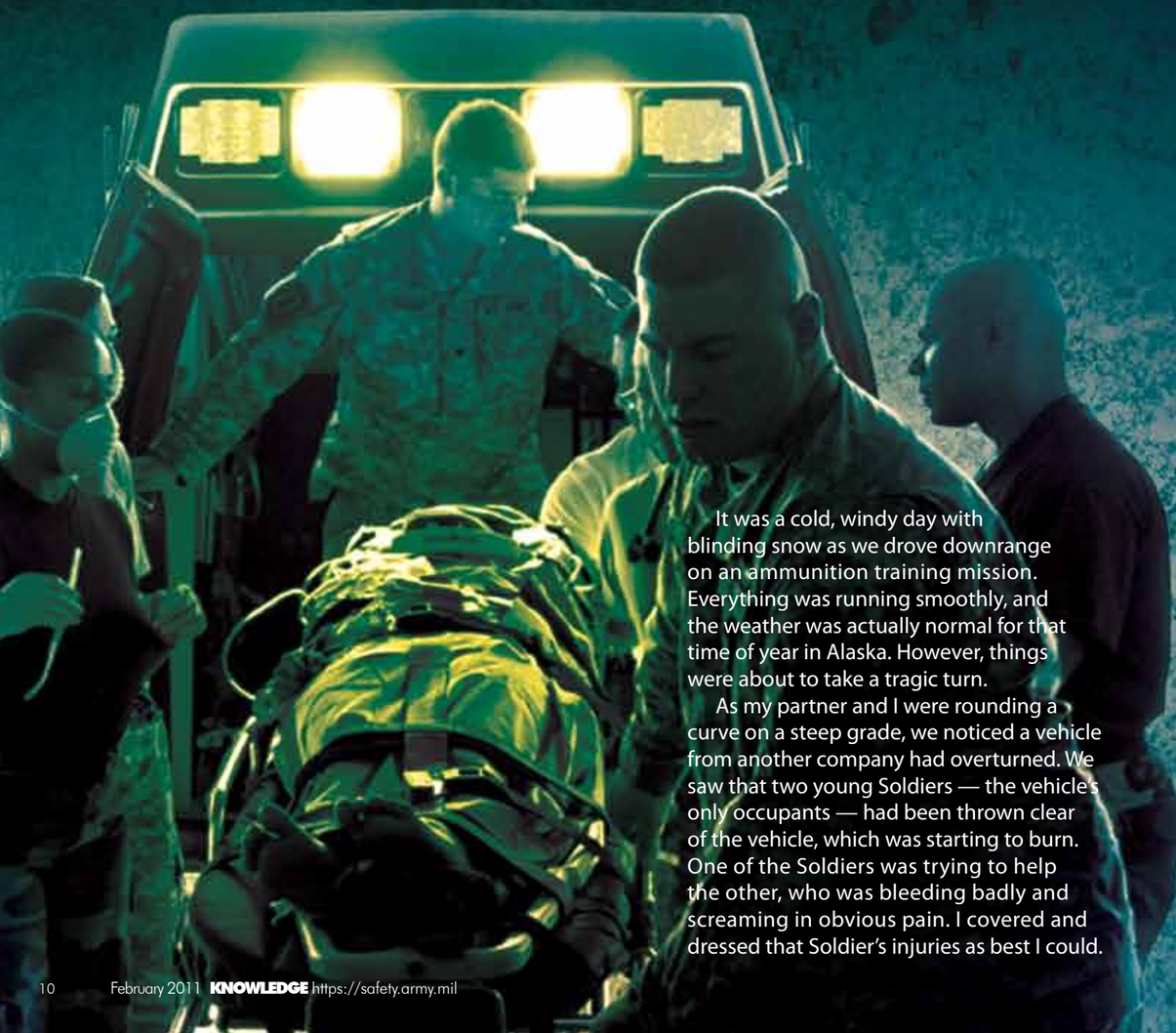
I learned my lesson on that trip and never again tried to drive it immediately after getting off from work. I now make sure I have a full night's rest before hitting the road and always check the weather forecast to make sure driving conditions will be favorable.

When I look back on it, it seems silly that I took such risks. I would never let any of my Soldiers make the same trip without first getting adequate rest. My leadership classes have taught me to apply risk management in everything I do, on or off duty. After all, accidents don't discriminate when it comes to duty status.«

WORSE THAN THEY APPEAR

RETIRED CHIEF WARRANT OFFICER 4 ROBERT WOODHAM
Redstone Arsenal, Ala.

With traumatic injuries, such as those seen in combat or vehicle accidents, it's hard to know which injured Soldier needs care first. However, sometimes the Soldier that looks OK is the one who's in most desperate need of help. Although the situation below didn't occur in combat, it happened on duty and under circumstances similar to many accidents in theater — a vehicle rolled over while the driver was speeding. Read on for the lessons this Soldier learned the hard way.



It was a cold, windy day with blinding snow as we drove downrange on an ammunition training mission. Everything was running smoothly, and the weather was actually normal for that time of year in Alaska. However, things were about to take a tragic turn.

As my partner and I were rounding a curve on a steep grade, we noticed a vehicle from another company had overturned. We saw that two young Soldiers — the vehicle's only occupants — had been thrown clear of the vehicle, which was starting to burn. One of the Soldiers was trying to help the other, who was bleeding badly and screaming in obvious pain. I covered and dressed that Soldier's injuries as best I could.

The other Soldier did not appear to be as seriously injured and was walking and talking clearly. But there were two things about him I will never forget. He had several deep cuts, but they weren't bleeding badly. Also, his eyes were big, black and vacant. However, since he was walking and talking, I didn't think he was hurt badly.

Our radio wasn't working well enough to give emergency personnel our location, so we loaded the men into our vehicle and headed for the emergency room. Both men were placed on gurneys and rushed inside. The doctor treated the screaming and bloody Soldier first. The other Soldier was told to wait.

My partner and I went back to work. Later that day we returned to the emergency room to check on the men. We were shocked to learn the Soldier who hadn't appeared badly injured died while waiting for treatment. The other Soldier was doing well in the recovery room.

I was crushed. What did I do wrong? What happened? I knew that man — we weren't great friends, but he was a fellow Soldier. One of the nurses took me aside and explained what had happened. Apparently, the Soldier died from internal bleeding, trauma and shock. If the doctors had known he wasn't bleeding from his wounds, they would've treated him differently. I told the nurse I knew he wasn't bleeding, but I didn't think it indicated anything serious. A man died because I didn't know what to tell them.

I was a young, impressionable buck sergeant then. In the 30 years after that accident, I never failed to share this story with my Soldiers in the hope they wouldn't repeat my mistake. Many of you are in combat now and will see things even worse than I did that cold winter day. Learn the signs of shock and basic first aid for combat injuries. Take care of yourself and your fellow Soldiers, and remember that sometimes things are worse — much worse — than they appear.

A Safe Return

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What if you were flying over rugged terrain and encountered a sandstorm, inclement weather or maintenance problems? How would you get your crew and aircraft to the ground safely? Thankfully, the Air Traffic Navigation Integration Coordination System (ATNAVICS) Radar AN/TPN-31 can help. The ATNAVICS is a ground control approach (GCA) radar system used to assist pilots during low-visibility conditions to execute a safe approach to an airfield.

The ATNAVICS is a highly mobile, self-contained, tactical airport surveillance radar (ASR) with precision approach radar (PAR) capabilities that provide GCA at designated airfields and landing sites. The system includes ASR and PAR, secondary surveillance radar/identification friend or foe (SSR/IFF) and secure jam-resistant voice communications. The system is the world's only fully autonomous, International Civil Aviation Organization and National Airspace-compliant radar approach control system transportable in a single C-130 or by CH-47.

Army controllers use numerous methods and systems for providing air traffic control (ATC) services. However, when a pilot's visibility is obstructed or the weather deteriorates to the point of instrument meteorological conditions (IMC), the ATNAVICS can be the difference between a safe landing and tragedy. The ATNAVICS provides precision movements on the final approach course to the runway, lane or helipad.

The system is not just an automated piece of equipment; a human component is also involved. Army air traffic controllers operate the system and communicate with pilots throughout the approach. The ATNAVICS has precise measurements on the PAR antenna, displaying the distance from 10 nautical miles (NM) to the aircraft touchdown point. It also shows the optimal altitude descent angle, allowing the controller to line the aircraft target signal precisely on glide path. When the controller keeps the aircraft on the glide path and on the runway heading course line, the pilot is then on a safe approach and clear of all obstacles to the landing area.

> "However, when a **PILOT'S VISIBILITY** is **OBSTRUCTED** or the **WEATHER DETERIORATES** to the point of instrument meteorological conditions (IMC), the **ATNAVICS** can be **THE DIFFERENCE** between a **SAFE LANDING** and **TRAGEDY**."

The system can operate in austere weather conditions and has successfully supported combat operations in Iraq and Afghanistan for more than five years. The ATNAVICS comprises an S-band air surveillance radar, an L-band secondary surveillance radar/IFF and an X-band PAR. The ATNAVICS contains multiple communication capabilities, including VHF, UHF and FM. The ASR antenna provides 360-degree azimuth surveillance coverage within 25 NM, while the SSR antenna provides coverage out to 60 NM. Additionally, the system is capable of withstanding radio frequency signal jamming/detection and electromagnetic pulse while providing continuous ATC coverage.

Both pilots and controllers believe the ATNAVICS is an effective and extremely valuable asset. Maj. Todd H. Marshburn, Task Force 164th Theater Airfield Operations Group operations officer, said, "Flying a GCA is a wonderful experience … the ATNAVICS instills confidence and provides comfort to pilots encountering IMC."

The ATNAVICS is part of the Air Traffic Services Company within the General Support Aviation Battalion and organic to the Airfield Operations Battalion. The system is used at locations with a very high density of air traffic with both rotary- and fixed-wing aircraft. The system can also deploy in support of combat operations and homeland security (natural disasters) roles.

As with anything, practice makes perfect. Aviators should never pass up a chance to contact their local GCA facility when returning to their airfield and practice flying the approach, which benefits both controllers and aviators. Don't be complacent, practice your local GCA and, when you need it, you and the controller will be ready.

What's Luck Got to Do With It?

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How long does it take to buckle a seat belt? Maybe a better question would be, "How long does it take to roll an SUV, fly through the windshield and die on impact with the road?" As it turns out, not very long as one Soldier found out last July. And it could have been worse — it could have been a "two-fer" that day. Another unbelted Soldier riding with him only survived because his foot caught on the door and kept him from being ejected when the SUV rolled three times. Want to bet he wears his seat belt now? After all, how often can you be that lucky?

However, the problem is you can't count on luck when it comes to safety. The Soldier who died in this accident was one of 24 who chose to be unbelted and didn't survive during fiscal 2009. However, there's another interesting number regarding these accidents. The Soldier who died in this accident was 25 years old. That proved to be the average age for unbelted Soldiers dying in privately owned vehicle crashes.

What did it cost the unbelted Soldier? According to the Centers for Disease Control and Prevention, the average American can expect to live almost 78 years. Stack that up against a person dying at 25 and you'll see they lost more than two-thirds their likely life span. Doesn't seem fair, does it? What could those 53 years have held? If he could, what would the Soldier pay to get that time back? Think he'd be willing to buckle his seat belt? How about you?

However, people find all kinds of excuses for ignoring the value of seat belts. Here are some classics.

"I don't need seat belts — my air bags will protect me." Trouble is, if you're unbelted, you'll likely just slide around the air bag and hit something much harder. Seat belts and air bags are designed to work together.

"I'm not going that far and I'm not going that fast." The truth is most fatal accidents happen within 25 miles of home at speeds less than 40 mph.

"They're uncomfortable." That might have been true in the early days, but today's seat belts are adjustable to restrain drivers and passengers comfortably. Indeed, they're

a lot more comfortable than the adjustable belts on stretchers and backboards.

"They'll wrinkle my clothes." That may be true. However, if seat belts are hard on clothes, just wait and see what windshields do to faces. And some of those "wrinkles" never come out.

"If my car goes into the water, I may be trapped inside and unable to get out." In reality, being restrained improves your chances of remaining conscious and escaping your vehicle.

"I'm a good driver — I'll never be in an accident." Just because you're a good driver doesn't mean everybody else is. When some distracted, impatient or aggressive driver "invites" you to their accident, you'll need your seat belt.

"When it's my time to go, it's my time to go." During 2009, the National Highway Traffic Safety Administration did a study that disproved this idea. They found using seat belts would have prevented nearly half of all driver fatalities and well over one-third of all front-seat passenger fatalities that year. Just because an impatient driver decides to go through a red light doesn't mean it's your time to "go" too.

However, as Soldiers, you can bet the Army does have your number — it's Army Regulation 385-10 — and has left a few messages on your "answering machine." For example, one says, "Occupant protective devices will be worn by all Soldiers driving or riding in a POV whether on or off the installation." That means when you go off post, the buckle stays on. And you are your "brother's keeper" on the road. The message says, "The vehicle operator is responsible for informing passengers of the occupant protective device requirement and the senior occupant is responsible for enforcement." And there's even a message for those who aren't green-suiters. The AR says, "All personnel, to include Family members, guests, and visitors, will wear occupant protective devices at any time on an Army installation."

Notice a common theme in most of these messages? Seat belts are never "optional" equipment. After all, when your life is on the line during an accident, what's luck got to do with it?

> "Just because an **IMPATIENT DRIVER DECIDES** to go **THROUGH** a **RED LIGHT** doesn't mean it's **YOUR TIME** to "go" **TOO**."

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As the shop foreman at the Maneuver and Training Equipment Site (MATES), personal protective equipment (PPE) is my highest priority. I believe we must place an enormous amount of emphasis on PPE to protect our No. 1 resource — our employees. To do that, though, safety has to be more than just a word or check-the-block mentality.

I have always believed PPE is essential in the workplace to minimize or eliminate as many accidents as possible. When I was a mechanic, I witnessed an accident that caused a co-worker to lose an eye. This individual wasn't even working when the accident happened. He was just walking past another employee who was working with some metal when a shard flew into his eye. This accident might have been prevented if he was wearing proper safety glasses with side shields.

At least once a day, I make a point to walk through my maintenance shop bays wearing my PPE so the employees know I practice what I preach. There is nothing we do at the MATES facility that is so important that we can afford to omit any safety practices. One aspect of the safety process I try to stress is we check each other and that there is no chain of command when it comes to correcting someone on a safety violation.

Signs are posted at all of our shop entrances, informing everyone PPE is mandatory before coming inside. The minimum PPE required in the MATES shop area is safety glasses with side shields, hearing protection, safety boots and an Occupational Safety and Health Administration-approved helmet. If an individual wears prescription glasses, the organization will furnish him or her with prescription safety glasses with side shields at no cost. Our internal shop standard operating procedure also protects any visitors, such as salesmen, vendors or dignitaries, who may be inside of our work areas.

The shop also provides additional PPE for employees to wear when operating equipment such as grinders and parts cleaning vats. Some of these items include aprons, gloves and full-face shields, which are all stored and maintained at the working site. Signs are posted at each piece of equipment stating the required PPE, and supervisors are tasked with ensuring these items are kept in good condition.

While we're not quite where we want to be with safety, we're improving each day by changing our cultural awareness in the workplace. In turn, I hope this will lead our employees to place an emphasis on off-duty safety as well.«

PROTECTION THAT MATTERS

In many occupations, workers need personal protective equipment (PPE) as a barrier against injuries. Without it, we would be plagued by lost-time injuries and fatalities. Here's a PPE checklist to use at work:

Eye Protection

- Maintain your eye protection by frequently inspecting it for dirt and scratches.
- Ensure that all protective eyewear is clean before use and take the time to clean the eyewear as required throughout each workday.
- If scratched, make sure that you replace your eyewear with a clean, unscratched pair.

Face Protection

- Inspect face protection for dirt and scratches on a regular basis.
- Clean or replace face protection as needed.

Head Protection

- Properly adjust hardhats to ensure the suspension system will distribute the impact evenly over the entire head.
- The hardhat should fit securely on the head to prevent it from slipping or falling off.
- Wear your hardhat directly on top of your head, with the brim facing forward.
- Regularly inspect hardhats and replace damaged shells or suspension.
- Hardhats will last longer if they are not stored in sunlight or heat.

Hearing Protection

- Wear your hearing protection in posted areas.
- Wash your hands thoroughly before inserting hearing protection and make sure earplugs are clean.

Hand Protection

- Ensure you inspect your gloves before use and replace them if they are torn, cracked, worn thin or have holes.
- Check the material safety data sheet or speak with your supervisor before handling hazardous materials.
- Wear the right type of glove for the task.

Foot Protection

- Inspect your footwear often to ensure the sole is still providing good traction and the rest of the boot or shoe meets safety standards.
- Replace the boot when the steel toe insert becomes exposed, the treads are worn or any part of the boot is cracked or worn thin.

In the workplace, PPE is your armor against "war wounds." Wear it with confidence.

Source: 8th Army (Field Army) Command Safety.

TIPS TO LIVE BY

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Mississippi Army National Guard
Jackson, Miss.

So you've survived combat and you're back home behind the wheel of your vehicle or on your motorcycle. Think you left all the really serious dangers behind in Afghanistan or Iraq? What if someone told you that you're more likely to get killed in an accident while cruising on the familiar roads back home or around your post? You'd think they're crazy, right? Well, they're not — just look at the statistics. During the last three fiscal years, on average, 118 Soldiers died in these accidents. Think of it this way — imagine losing a company every year, not from combat with the enemy, but from crashes on the highway.

We could build cars with all of the safety features found in NASCAR racers — things like roll cages and six-point seat belts — while making occupants wear helmets and head and neck restraints. While these would greatly improve the odds of surviving auto accidents, how many people would want to be trussed up in their car or truck like a race car driver? Also, the cost of engineering these safety devices into production automobiles would make them too expensive for most of us. So what can we do to lower our accident risks? Here are a few ideas.

Slow Down

Speeding is one of the leading causes of fatal Army privately owned vehicle (POV) accidents. Speeding lengthens stopping distances, makes it harder to maneuver safely and increases impact forces. And then there are the legal considerations. Slowing down is not only safer, but could also help avoid an expensive traffic ticket. However, the posted speed limit is not the only factor in determining a safe driving speed. Road and weather conditions, the amount and type of traffic and even the time of day are all factors in determining a safe driving speed. For example, if you're driving at night and can't stop within the distance illuminated by your headlights, then you're going too fast regardless the speed limit.

Don't Drink and Drive

Drinking and driving is not only dangerous, expensive and against Army regulations, it is also one of the quickest ways to end a career or ruin a life. While you probably know that a blood alcohol concentration (BAC) of .08 percent is considered legally intoxicated in all states, did you know that most states consider a driver impaired or under the influence with a BAC between .03 and .05 percent? Always have a designated driver.

Don't Drive Fatigued

One of the greatest dangers of driving while tired is a phenomenon called "microsleep." For periods ranging from a few seconds to several minutes, fatigued drivers can fail to notice or effectively respond to their environment. In some cases, drivers may fall completely asleep behind

the wheel. In other cases, a driver's eyes may be wide open as they go down the road, not noticing curves or red lights. Here are some tips to avoid driving fatigued on long trips:

- Avoid driving during normal sleep hours. Note that microsleeps are more likely to occur at natural rest times, such as the middle of the afternoon and the pre-dawn hours. Also, if you haven't been sleeping well, your accumulated sleep debt puts you at greater risk for microsleep.
- Ensure you are completely rested before departure.
- Plan at least a 15-minute rest stop every two hours.
- Limit driving to 350 miles per day or no more than eight hours on the road.

So if you're driving and feel sleepy, what should you do? Roll down the windows so the fresh air will wake you up? Turn up the radio volume to keep you alert? Turn the air conditioner to high so the cool air will wake you up? The experts say none of the above. The only way to truly relieve fatigue is to stop and sleep.

Don't Drive Distracted

We've all heard a lot in the news about states enacting laws against talking or texting on the cell phone while driving. However, there are many other forms of distracted driving that are just as deadly. Searching the GPS for a good restaurant, eating the cheeseburger you just picked up at the fast food place, trying to find your favorite CD in your console or even talking to a passenger can lead to fatal accidents. Chances are you can remember at least one close call while trying to multitask behind the wheel. It only takes one second of not paying attention for an accident to happen.

Practice Defensive Driving

If you've been out on the roads, you know how bad some drivers are. However, did you know that an estimated 1 in 20 drivers sharing the road with you is drunk? Even sober, many drivers tailgate, suddenly turn without signaling and weave in and out of traffic. These aggressive drivers make our highways extremely dangerous even when you're doing everything correctly. You can't control the actions of other drivers, but being prepared for the unexpected can lessen your odds of ending up a statistic. Remember the old saying, "Watch out for the other guy?" Well, it's still one of the best pieces of advice you'll ever receive.

Staying safe on the road is no accident (pardon the pun); it's a matter of choosing to drive responsibly while being alert to the dangers around you. For additional information on how to "arrive alive," check out the POV/POM Toolbox located on the U.S. Army Combat Readiness/Safety Center website at https://safety.army.mil/povmotorcyclesafety/.

Wear Seat Belts

According to the National Highway Traffic Safety Administration, wearing your seat belt cuts your chances of suffering a serious injury in an accident by 50 percent or more. As Soldiers, it's not optional for us; we are required by Army regulation to use seat belts at all times whether on or off post. Remember, we're Soldiers 24/7.

Our GREATEST Weapon

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In the July 2010 issue of Knowledge, Brig. Gen. Anthony G. Crutchfield wrote an article on his "Five Deadly Words" philosophy, explaining that the majority of Army accidents have one or more of these common errors. These five deadly words are untrained, unsupervised, undisciplined, overconfident and complacent.

It is undoubtedly true these failures are the ones you always see when you read an accident investigation report. However, these shortcomings don't just suddenly appear. Yes, anyone can have a lapse in judgment; however, for the most part, these deficiencies are present in your unit before the accident occurred.

How many Soldiers do you have in your unit conducting tasks they were not trained to do? How many Leaders are not present when they need to be? Are troops taking shortcuts because they think it's OK? Do they think nothing can happen to them because they see themselves as experts on what they do? Is anybody in your unit falling into the same routine and functioning on autopilot?

By being proactive Leaders, we can see the trends develop and we must put controls in place to mitigate the risks that come with these deadly deficiencies. As Crutchfield describes in the article, the five deadly conditions are constantly changing and one can become a higher risk as another goes down and then comes back around. Unit leadership must constantly reassess the situations and hazards to determine if the mission is worth the risk and apply new control measures when needed. Follow up with close supervision to ensure everyone carries out those risk decisions and that those five words are not part of the mission process.

The three deadly U's — untrained, unsupervised and undisciplined — are the ones Leaders need to take care of first. Identify the points where your unit is lacking in training. Provide the tools and resources required to have well-trained Soldiers able to accomplish the tasks assigned to them. Delegate this responsibility to the Leaders at every level. Disciplined Soldiers are a result of good leadership. Motivate and inspire Soldiers using strong, fair examples to gain their respect — not only because of rank, but also to build relationships with your Soldiers.

Overconfidence and complacency are much more complicated to detect, especially during a long deployment. These are harder to spot because they can become an epidemic even though they're a side effect of good training. The Soldier is confident he knows how to get the mission done and the supervisor is confident the Soldier can get it done without him. He's been doing it for a while now and

> **DISCIPLINED** Soldiers are a **RESULT** of good **LEADERSHIP**. Motivate and **INSPIRE** Soldiers using **STRONG**, fair examples to **GAIN** their respect — not only because of rank, but also to build **RELATIONSHIPS** with your **SOLDIERS**.

he doesn't need help from anyone, tools or a checklist. He doesn't even need to refresh his training or look at the -10 because he believes himself to be that good. This scenario is not hard to realize and, as you can see, all five deadly conditions are present.

Summary

Engaged leadership will always carry you through as long as you remain vigilant. Once a unit becomes well trained and good at what they do, it is not uncommon for the Soldiers to become complacent and overconfident in their duties. Leader engagement includes increased Leader awareness of hazards involving low-risk missions, ensuring "low-risk" missions are indeed low risk.

For all mission planning, Leaders must ensure the approval process has the proper command involvement. For the last 90 days of a rotation, when complacency is most apparent, raise the approval levels up one level. This means that during this period, only battalion commanders should approve low-risk missions. For high-risk and extremely high-risk missions, only the first general officer in the chain of command should approve.

These "five words" do not discriminate. They can happen to anybody or any unit regardless of branch. Therefore, it is imperative that we remain vigilant at all times and keep the team strong. There is no absolute answer on how to stop and defeat all accidents, but our greatest weapon comes in one word — "leadership."

STAY AWARE, STAY ALIVE

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Adrenalin washes over the Soldiers as they stack outside the door, ready to storm a room with unknown threats inside. The signal is passed and they focus on the entry. Muscles tense and the Soldiers explode through the door. The lead Soldier clears the fatal funnel and then his corner. The second Soldier pivots through the doorway, taking the opposite point of domination as he looks for threats. The third and fourth Soldiers follow, taking their positions inside the room and scanning for threats.

Soldiers perform this exercise numerous times a day at various locations around the world. However, no matter where it occurs, all must have one thing in common: muzzle awareness. Safe weapons-handling skills are essential for our CONUS and forward-deployed Soldiers. It protects the Soldiers and preserves the commander's combat power, allowing them to project more force during critical operations.

The challenge for Leaders is educating and training Soldiers about safe weapons handling — especially muzzle awareness — and then sustaining and enforcing those skills. Using drills, Leaders at the team and squad level can demonstrate and perform the techniques essential for safe muzzle awareness. By adhering to the "laser rule," Soldiers can also monitor their own and their battle buddy's muzzle discipline.

Leaders should use the crawl-walk-run method when performing weapons drills and live-fire exercises. The goal is to ensure that Soldiers and their supervisors understand and can perform the drills and tasks not only tactically, but also safely. Tactical safety equals preserving combat power and helping maintain the commander's most important weapon — the individual Soldier. The Army's doctrine of "Full Spectrum" operations means that we, as Leaders, must adopt "Full Spectrum Safety," incorporating this philosophy into all training and mission planning.

By performing composite risk management (CRM) procedures and identifying hazards facing our Soldiers when handling weapons, we can reinforce the importance of maintaining muzzle awareness. Using the METT-TC (mission, enemy, terrain and weather, troops and support available, time available, civil considerations) model, Leaders can identify key points in training and combat operations where problems could arise. As such, they can then plan for contingencies and train effectively to prevent poor practices. By using a systematic approach to identifying hazards, emplacing controls and supervising this process, Leaders can help their Soldiers avoid becoming complacent when handling weapons.

Leaders must set the example and insist that standards are maintained in training and during combat operations. Leaders at all levels, from first-line Leaders to senior enlisted and officers, must demonstrate their competency to lend credence to the muzzle awareness program. By insisting the standards are applied to all in the chain of command, Leaders demonstrate that awareness is a basic Soldier skill and no exception to this standard is acceptable. Soldiers are very cognizant of any double standard and will not buy into any policy, standard or program that does not apply to everyone in the unit and chain of command.

As Leaders, we should not accept anything but 100 percent when it comes to muzzle awareness and safe weapons handling. Reinforcing effective muzzle awareness skills will reduce injuries and deaths among Soldiers and preserve our combat power. Our Soldiers deserve no less.

PLAN FOR SUCCESS

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Vehicle crashes take the lives of more Americans during winter than any other accident cause, according to the National Disaster Education Consortium. That makes learning how to safely drive on icy and snowy roads vital, not only for making it to your destination but also for being around to celebrate next spring. And it's not just those who live in the North or Midwest who need winter driving skills. During February 2010, snow touched even southern Alabama, treating residents to a rare driving experience. However, whether you live in Alaska or Alabama, here are some "slick" tips to help keep you safe.

Winter defensive driving is more than just maintaining control on snowy, icy roads. It begins long before you get into your car, buckle your seat belt or start your engine. Before all that, you need to be planning, doing things like checking the weather forecast and listening to the radio or TV for announcements about accidents, highway closings and road advisories. If this information is not available on the radio, call your state's highway patrol or state patrol for up-to-date information. If you have access to the Internet, you can go to the National Traffic and Road Closure website at http://www.fhwa.dot.gov/trafficinfo/ and click on your state for road conditions.

When planning your route, avoid roads that can become dangerous during winter. Also, let someone know your plans so authorities will know where to begin looking if you become stranded. A tragic example of failing to do that is the Kim family. In November 2006, they took the wrong exit off Interstate 5 in Oregon and decided to try to reach their destination by a camp road that appeared to offer an alternate route. The road, however, was not maintained during the winter and the family soon became lost. As the family spent the night in their vehicle, they were trapped by a winter storm. After waiting six days to be rescued, the father tried to hike to reach help. While the rest of the Kim family was ultimately rescued, the father died of hypothermia after hiking more than 11 miles in the snow. Straying from their driving plan proved fatal for this family.

Although the Kim family is an unfortunate example, it's not just mountain roads that pose a danger. Being exposed, both above and below, to freezing temperatures, bridges and overpasses freeze first and are susceptible to black ice. Because of that, it's important

to reduce your speed when approaching bridges or overpasses and avoid braking while passing over them.

As you drive on wintry roads, always accelerate easily, turn cautiously, brake carefully and leave plenty of distance between you and the other cars. The normal three-second following rule used when driving on clear highways needs to be expanded to five or six seconds during wintry conditions.

If you have a four-wheel-drive vehicle, it's important to not become overconfident. While four-wheel-drive provides better traction than two-wheel-drive on snowy roads, it does nothing to improve your braking ability. Also, some four-wheel-drive systems can actually send you out of control in icy conditions.

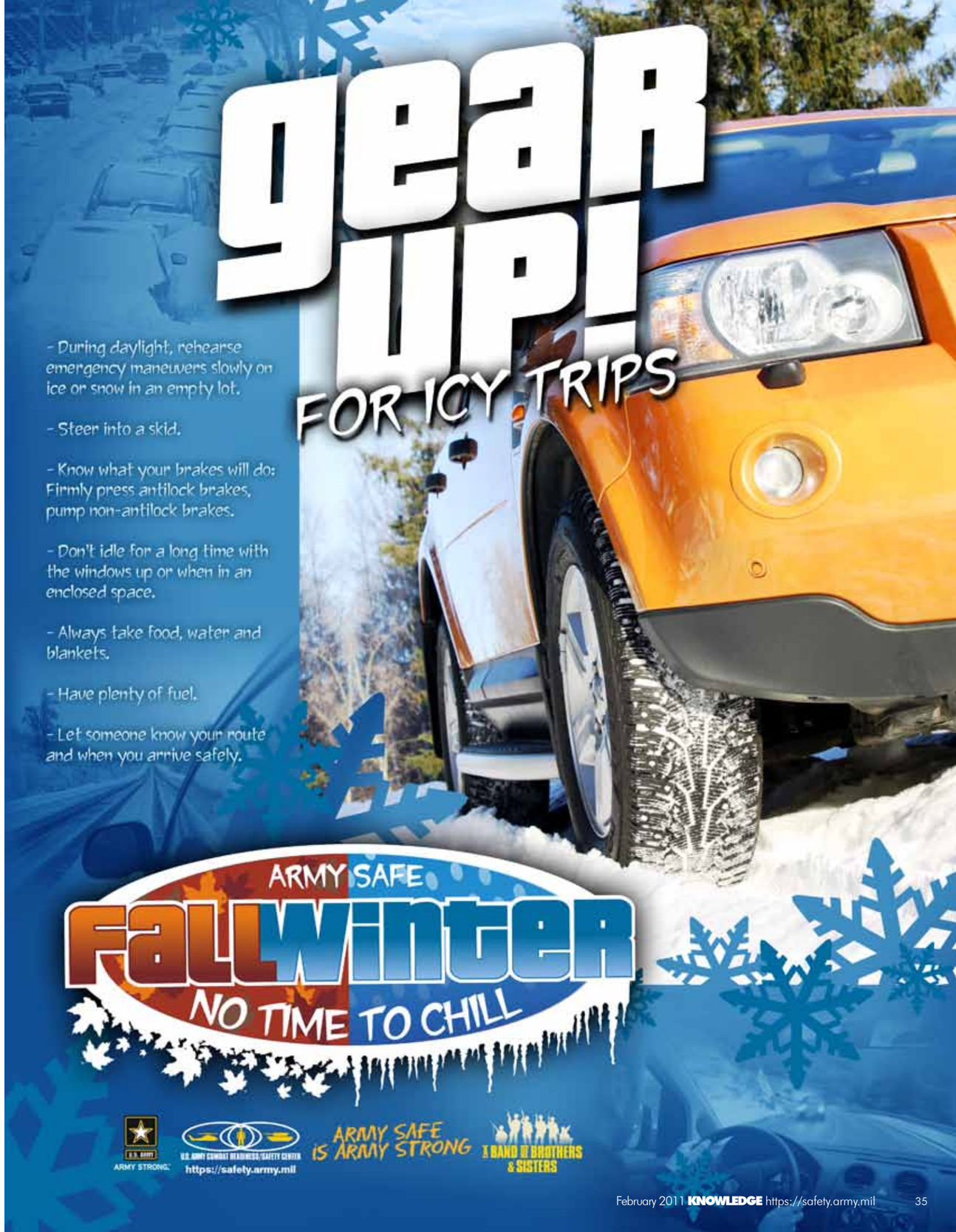
You also need to make sure your car is ready for winter's adverse weather conditions. First, ensure your tires have enough tread to grip the road adequately. Depending on the weather conditions where you live, you may want to consider mounting snow or studded tires to get the best traction. Take the time to speak with a tire professional or consult your automobile owner's manual.

Also, make sure your windshield wipers are in good condition, not cracked or worn. Check your windshield washer reservoir and make sure it's filled with a quality washer fluid designed for winter temperatures. And remember, you have to see through both sides of your windshield, so take the time to clean the inside too.

As funny as it sounds, you need your air conditioner to run effectively during winter. Air conditioners are very useful in removing condensation and frost from the inside of windows. Simply set the temperature on warm when doing this — something many cars do automatically when you choose the defrost setting.

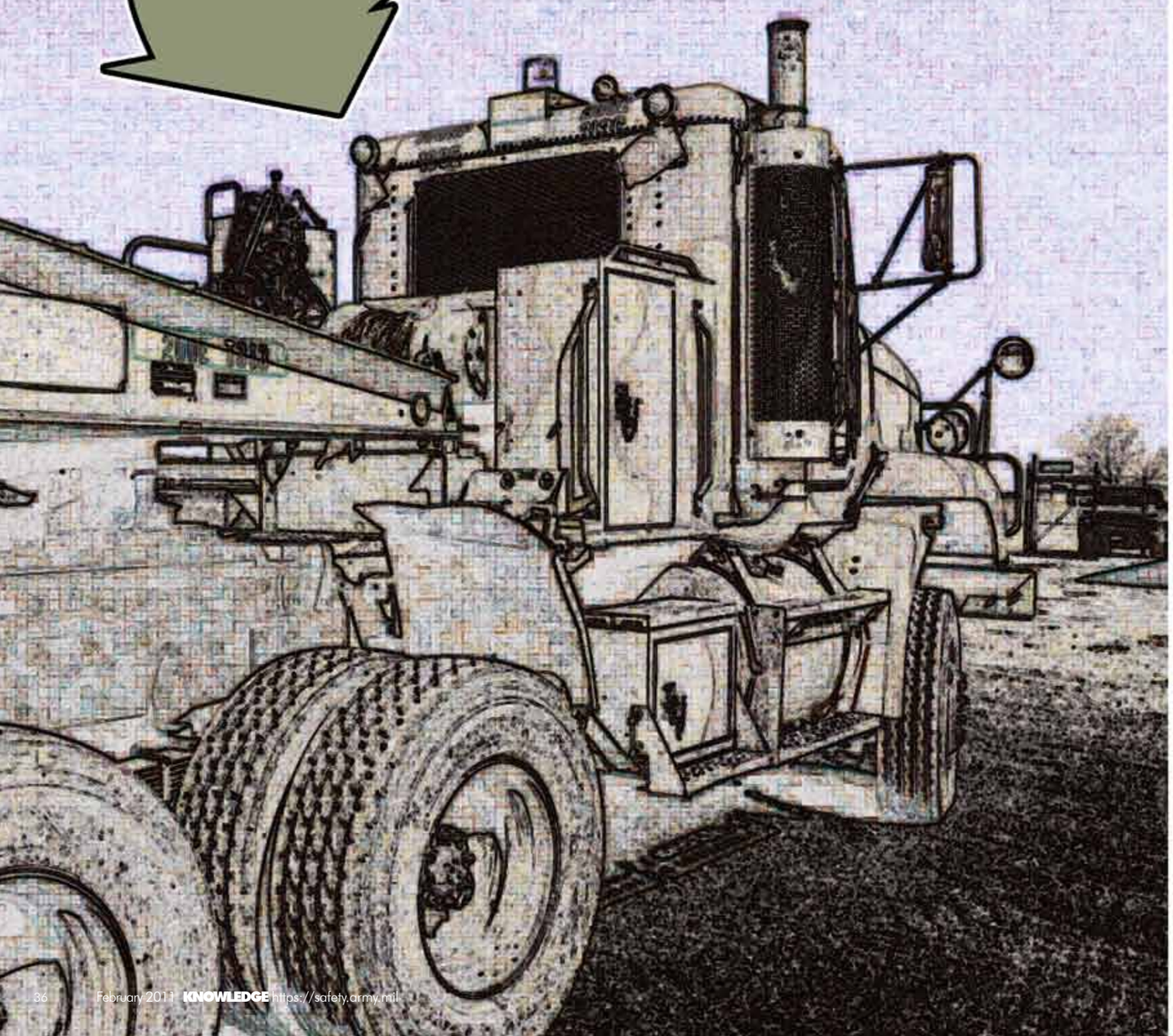
Headlights help other cars see you and allow you to better see the environment where you're driving. To get the most out of your headlights and taillights, make sure they are clear of snow. Consider replacing the bulbs before winter begins and remember to always use your low beams when snow is falling.

While winter accidents can never be completely eliminated, preparing your vehicle and driving carefully will lessen the odds you'll end up waiting for a tow truck or ambulance. After all, don't you have better things to do this winter?



Middle East Bound and DOWN

LARRY HOFFMAN
Bluegrass Army Depot Safety Office
Richmond, Ky.



It was the end of a very productive, accident-free day. We'd completed about 10 building safety inspections, and the clock was ticking closer and closer to time to punch out for a well-deserved weekend. Then the phone rang.

In the safety world, when the phone rings, it's either the colonel telling us to have a nice weekend, an employee calling to ask a question about personal protective equipment and safety, or an accident has occurred. With just minutes remaining in our work week, we prepared for the worst.

On the other end of the line was our weapons shipping manager, who was in control of every truck and train that carried weapons on and off the depot. He was calling to let the safety office know there had been an accident. I wrote down the "who, what and where" and told him we would be there in a few minutes.

The accident involved a big rig that was hauling a Strad-O-Lift trailer. These driver-controlled lift trailers are a way of life on Army depots, allowing stacked pallets of weapons and supplies to be moved each day from bunkers and warehouses. Occasionally, like any other vehicle, there are accidents that make you wonder, "What was that driver thinking?" This would be one of those accidents.

The truck was lying on its side in a ditch just outside one of the igloos (underground weapons bunkers) where workers had been loading and unloading weapons for processing to the maintenace facility. Immediately there were two things that truly scared me about this accident: one, the truck wasn't on the road; and two, the truck was fully loaded with high-explosive weapons. I started my report by taking photos of the area and truck and measuring all the distances from truck to road, truck to igloo and the depth of the ditch the truck was now lying in. I then wrote out my draft report about what happened, took down the names and statements of all witnesses and interviewed the driver.

The driver stated that as he backed up, he lost track of where the ditch was on the right side of the road. The next thing he knew, he had overturned into the ditch. As I listened to him, I thought, "There are pieces missing from this puzzle." First, he did not have the required ground guide. Second, it was evident he was in a hurry because he was off work the following day. Finally, he wasn't very cautious with the load he was carrying.

When hauling any trailer with a big rig, keep the following in mind:

- If you take a curve too fast, you can overturn.
- If your rear tires strike something (like a curb) while cornering, you can overturn — even if you're moving slowly.
- A rig can roll at speeds as low as 5 mph, especially on slopes.
- A rig can roll if you jackknife while backing up.
- Many rollovers occur when drivers try to return to the road after putting a tire off the pavement.
- Assess the work area for hazards (corners, ditches, obstacles) which may compromise the safe operation of equipment.
- When backing up, ground guides are always required, not just when visibility is compromised.
- Treat all cargo like a load of dynamite and drive accordingly.

These trucks are not all-terrain vehicles. When you take them offroad, the results could be disasterous.

> "When **BACKING UP**, ground **GUIDES** are **ALWAYS REQUIRED**, not just when **VISIBILITY IS COMPROMISED.**"

Watch Your Back

Back injuries are a leading cause of lost time from work. They can cause pain, inconvenience and a lifetime of suffering.

Lifting incorrectly is a major contributor to back injuries. These injuries are not confined to workers who do heavy lifting all day. Back injuries occur in all kinds of jobs, so it is important for everyone to understand how to lift safely.

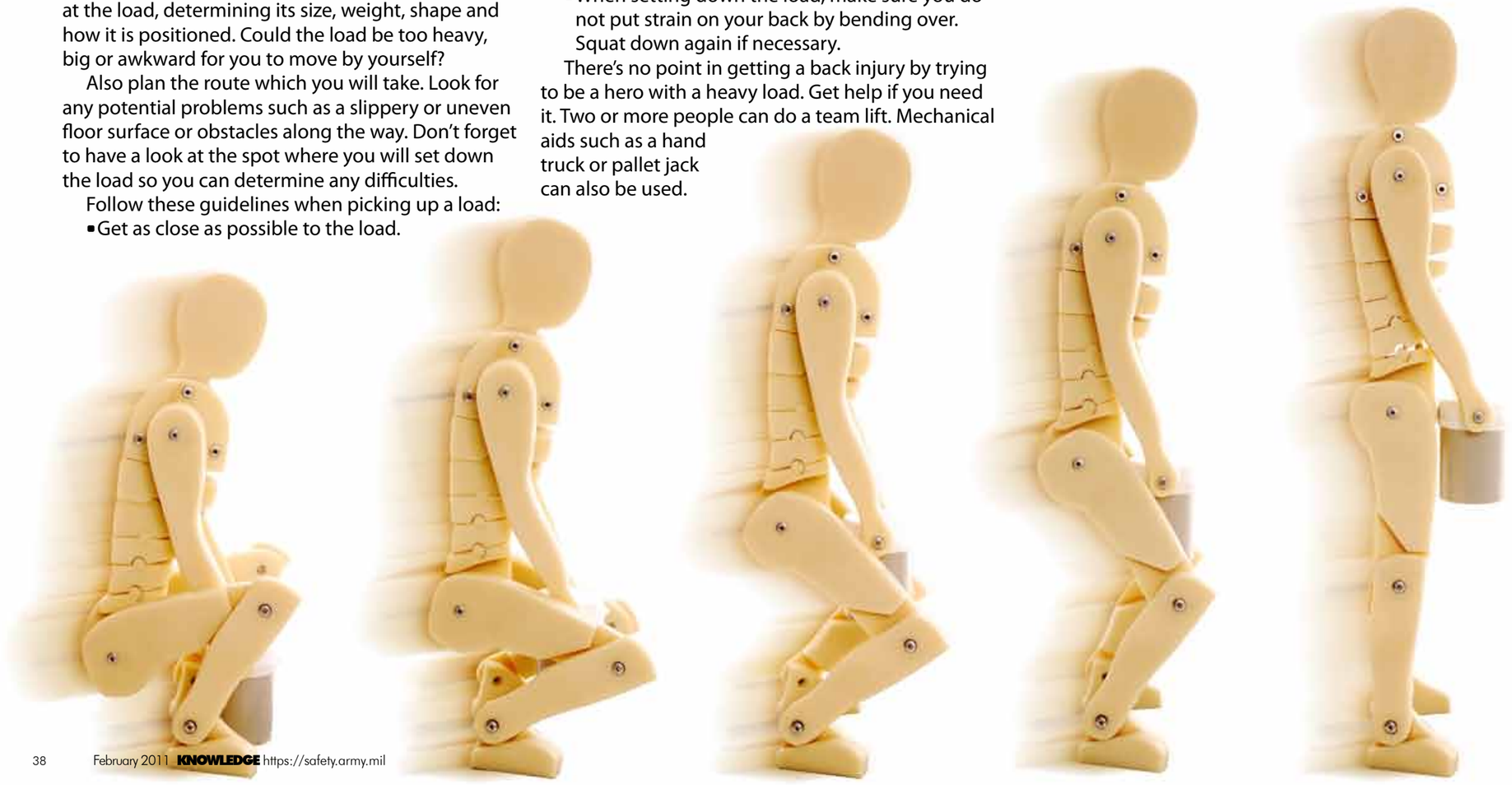
To lift safely, first plan your lift. Take a good look at the load, determining its size, weight, shape and how it is positioned. Could the load be too heavy, big or awkward for you to move by yourself?

Also plan the route which you will take. Look for any potential problems such as a slippery or uneven floor surface or obstacles along the way. Don't forget to have a look at the spot where you will set down the load so you can determine any difficulties.

Follow these guidelines when picking up a load:

- Get as close as possible to the load.
- Position your feet approximately shoulder-width apart. If necessary, straddle the load.
- Tuck in your backside and bend your knees.
- Never bend from the waist or stretch out your upper body.
- Squat down and lift the load by using the strength of your leg muscles rather than your back.
- Never twist your body when carrying a load. If it is necessary to turn, move your feet rather than your body.
- Before you start to move with the load, be sure you can see over it.
- When setting down the load, make sure you do not put strain on your back by bending over. Squat down again if necessary.

There's no point in getting a back injury by trying to be a hero with a heavy load. Get help if you need it. Two or more people can do a team lift. Mechanical aids such as a hand truck or pallet jack can also be used.



Some lifts require special techniques, such as:

- If you must lift a load higher than your shoulders, use a stepstool, stepladder or similar safe device.
- It can also be tough to pick up a load from deep inside a bin. In this case, get close to the load and press your bent knees against the bin.
- For light objects in a bin, flex one knee and swing the other leg out behind you. Use one hand on the edge of the bin for balance, and use the other hand to pick up the item.

Lifting correctly and safely is well worth the effort. It can save you a painful and crippling back injury.

Editor's note: Information provided by the 8th Army (Field Army) Safety Office.

THAT'S WHY We Have TWO Pilots

CHIEF WARRANT OFFICER 2 JACOB A. CLARKSON
Detachment 10, Operational Support Airlift Command
Indianapolis, Ind.

During a deployment to Iraq, I was flying UH-60s as part of a medevac company, operating out of Forward Operating Base (FOB) Echo in Diwaniyah. It was common for us to conduct routine patient transfer missions from FOB Echo to Baghdad or Balad. On this particular evening, we were transferring a patient as a flight of two Black Hawks to Baghdad to facilitate a higher level of care. Little did we know a number of events would unfold that almost cost us our lives.

We checked weather and maintenance to ensure a trouble-free flight. The aircraft were sound and the weather prediction was predominately clear. However, the briefer said they expected the dust to become airborne later in the evening (much later than our estimated time of arrival), thus significantly affecting visibility. With this prediction well outside of our mission parameters, we headed out the door to conduct business as usual.

The flight to Baghdad was, for the most part, uneventful. It was a nice, clear night with about a quarter-moon for illumination. We dropped off our patient at the hospital, topped off fuel in the forward area refueling point (FARP) and then headed away from the city on our way back to the FOB.

As anyone who has flown in Iraq at night knows, once you navigate away from the city and all of its ground lights, the desert suddenly becomes a vast sea of absolute darkness, with very few references for orientation, especially with little illumination. It just so happened that on this night "Murphy's Law" was in full effect. The predicted dust storm began about two hours ahead of schedule, dropping the visibility from five or six miles down to around one and one-half miles.

As a flight of two coming out of Baghdad, my aircraft was trail, and I was flying with an experienced instructor pilot in our unit. We both had flown this mission countless times and practically knew the route by memory. As we exited the FARP, we made a left-hand turn to head south to Diwaniyah. While we were turning, we decided to shift from the inside to the outside of the formation.

During the turn, a number of events unfolded. The lead aircraft's airspeed indicator malfunctioned, showing 135 knots indicated airspeed (KIAS), even as the aircraft had slowed to 110 KIAS (120 KIAS was desired). As it happened, my aircraft, still on the inside of the turn, was forced to slow even more aggressively than usual. As the lead flight continued to slow, we had to climb to avoid a collision.

We then overtook the lead and, coordinating over the radio, attempted to regain formation flight. As we corrected our climb to establish our briefed altitude, my co-pilot suddenly became disoriented. The aircraft rolled into a 15- to 20-degree left descending bank, losing altitude at a rate of about 400 feet per minute (fpm). I made a flight control change and started a climb. Upon rolling out, my co-pilot stated that I was now in an unusual attitude.

I glanced at the instruments and saw I was in a right descending turn, losing altitude at about 500 fpm and heading again toward the all-too-close desert floor. My co-pilot took the controls back and, once again, established straight-and-level flight. Once the other aircraft fell in behind us, we continued the flight back to base with continued degraded visibility. At one point, we claimed to be losing sight of our rear position light at a distance of four rotor disks. Upon arrival at Diwaniyah, we all realized how close we had come to a complete disaster on what seemed to be such a simple routine mission.

Afterward, we held a unit meeting so everyone could listen to our mission after-action report with the goal of preventing another close call like we had. We discussed many points, but the main point was that anyone — regardless of skill level, experience or position — can be a victim of spatial disorientation. Army aircraft are designed as two-pilot aircraft, not because of the position of the power levers or any other rumor we've all undoubtedly heard, but because we operate in harsh environments performing complex missions. It is the complexity of these missions and the unforgiving nature of our operating environment that requires us all to be competent co-pilots for one another.

> "It is the **COMPLEXITY** of these **MISSIONS** and the **UNFORGIVING** nature of our operating **ENVIRONMENT** that **REQUIRES** us all to be competent **CO-PILOTS** for one **ANOTHER.**"

Taken for a Ride?

BOB VAN ELSBERG
Strategic Communication Directorate
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

Some years ago, I purchased a second car for my wife to make the 30-mile back-and-forth drive to school. We checked around and found a used car that appeared to be in decent condition. We bought the car from its owner, purchased insurance and got it registered. After spending a Sunday afternoon with my wife brushing up her skills with a manual transmission, everything seemed to be going well — or so I thought.

Unfortunately, we hadn't had the car for long before it began to run roughly. I had been doing tune-ups on cars for years, so I changed the points, plugs and condenser and adjusted the timing. However, no matter what I did, I was unable to get the engine to run smoothly.

Then one day I was looking through the glove compartment and discovered a maintenance receipt. When I glanced at the mileage listed on the receipt, I just about spit. It was way higher than what was on the odometer. While the car may have looked decent, mechanically, it was very long in the tooth. I now realized why I was having so many problems with the car. I couldn't put my wife on the road in a car that could break down and strand her somewhere. Where the rubber meets the road, an unreliable car is an unsafe car.

We took the issue to a lawyer, but didn't have much luck. When buying a used car from a private individual, the rule is "caveat emptor" (buyer beware). As it turns out, I am far from the only driver who has gotten bitten by odometer fraud. According to the National Highway Traffic Safety Administration (NHTSA), some 450,000 cars are sold each year with false odometer readings.

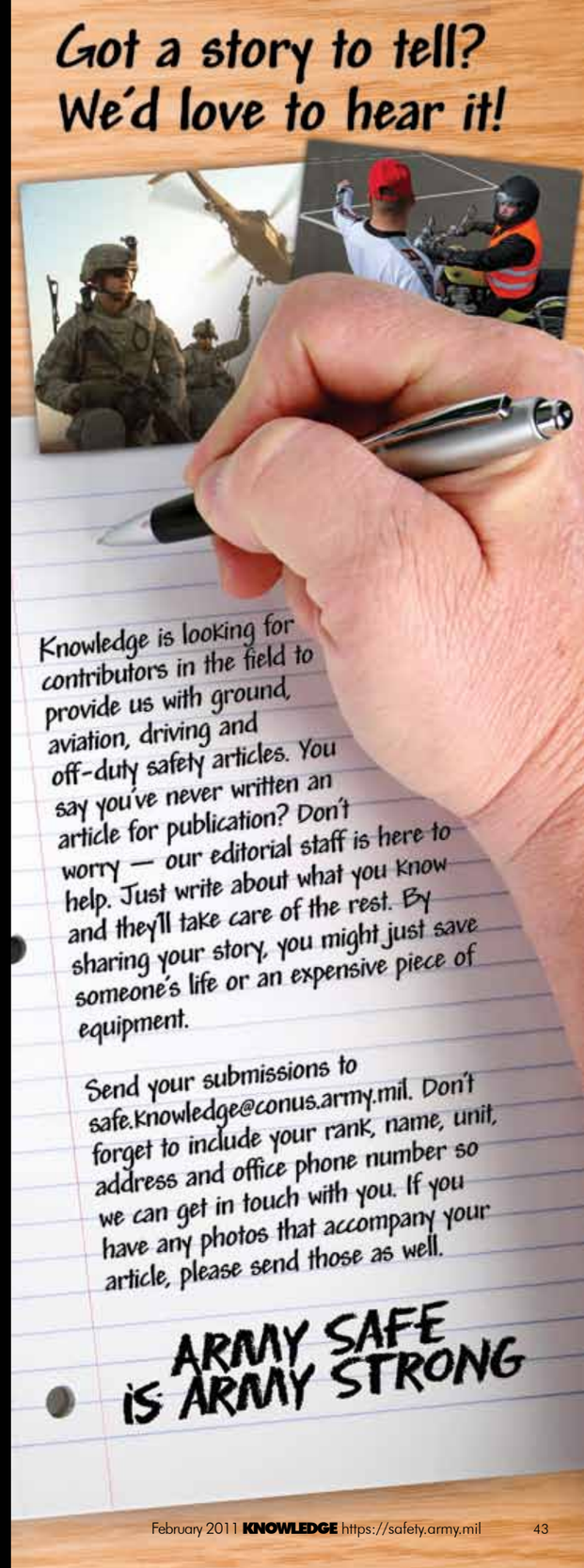
But you don't have to be the victim like I was. Here are some steps from NHTSA to help keep you from being "taken for a ride" by an unscrupulous car seller.

Detecting Odometer Fraud

- Ask to see the title and compare the mileage on it with the vehicle's odometer. Be sure to examine the title closely if the mileage notation seems obscured or is hard to read.
- Compare the mileage on the odometer with the mileage indicated on the vehicle's maintenance or inspection records. Also, search for oil change and maintenance stickers on windows or doorframes, or in the glove box or under the hood.
- Check that the numbers on the odometer gauge are aligned correctly. If they're crooked, contain gaps or jiggle when you bang on the dash with your hand, walk away from the purchase.
- Examine the tires. If the odometer on your car shows 20,000 or less, in most cases it should have the original tires.
- Look at the wear and tear on the vehicle — especially the gas, brake and clutch pedals — to be sure it seems consistent with, and appropriate for, the number of miles displayed on the odometer.
- Request a vehicle history report to check for odometer discrepancies in the vehicle's history. If the seller does not have a vehicle history report, use the car's vehicle identification number to order a vehicle history report online. For more information on odometer fraud, visit www.nhtsa.gov.

FYI

Think the digital odometers in modern cars can't be rolled back? Not so, according to CARFAX. If anything, modern digital odometers are even easier to manipulate than the old mechanical kind. To learn more about this scam, check out the following link http://www.carfax.com/car_buying/odometer.cfx



LOST

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.

AVIATION

MH-6H

CLASS C

- The main rotor blade (MRB) struck a facade structure on a military operation in urban terrain building during a rooftop approach. The aircraft spun 90 degrees and landed without further incident.

MH-47G

CLASS A

- The aircraft contacted a sand berm during a night-vision training mission, incurring damage to both fuel cells, front landing gear and undercarriage antennas.

CLASS B

- The forward MRB struck the aircraft during shutdown. An inspection revealed a missing blade droop stop. Damage was also reported to the C-box, lower cowling, driveshaft and cover, push-pull tubes and forward rotor head.

UAS

RQ-7B

CLASS C

- The unmanned aircraft (UA) experienced global positioning system failure during flight and subsequent loss of control. The operator activated the chute; however, the UA crash-landed with damage.

MQ-5

CLASS A

- The UA missed both sets of arresting gear during a night landing sequence. The air vehicle operator attempted a go-around, but the UA failed to gain altitude and crashed. The front section of the UA and payload were destroyed.

GROUND

Personnel Injury

- A Soldier lost his footing and fell to his death while in the rooftop courtyard area of a three-story apartment building.
- A Soldier was killed when the ultra-light aircraft he was operating crashed. Another Soldier was injured in the accident.
- A Soldier was killed in a parachuting accident. Three other Soldiers were also injured during the jump.
- A Soldier suffered permanent brain damage when he accidentally discharged a round from his personal weapon after removing the magazine. At the time of the accident, the Soldier was demonstrating how not to handle a loaded weapon.
- A Department of the Army Civilian was electrocuted while working on a malfunctioning flagpole base light.

LOSSES AVIATION — FISCAL 2011 Class A/Fatalities as of Jan. 5, 2011

ATTACK	0/0
RECON	1/0
UTILITY	2/4
CARGO	0/0
TRAINING	0/0
FIXED-WING	0/0
UAS	2/0
TOTAL	5/4

DRIVING

POV

CLASS A

- An unbelted Soldier was ejected and killed when his vehicle ran off the road and overturned.

POM

CLASS A

- A Soldier died after he lost control of his motorcycle while merging onto a highway and was thrown to the pavement. During the crash, the Soldier's non-Department of Transportation-approved half-shell helmet came off.
- A Soldier died when he lost control while braking abruptly and was thrown into an oncoming deputy's patrol car.
- A Soldier was killed when he was hit head-on in an intersection by a driver who failed to yield right-of-way.
- A Soldier died when he lost control of his motorcycle in a curve, crossed the centerline and struck an SUV head-on. The Soldier was an experienced rider who was wearing his personal protective equipment (PPE) and had completed Motorcycle Safety Foundation (MSF) training.
- A Soldier was found dead along a highway following a late-night crash. The Soldier had an expired license, wasn't wearing PPE and hadn't completed MSF training or registered his motorcycle on post.

LOSSES GROUND — FISCAL 2011 Class A/Fatalities as of Jan. 5, 2011

AMV	1/0
ACV	1/1
PERSONNEL INJURY (includes weapons-handling accidents)	8/7
FIRE/EXPLOSIVE	1/1
PROPERTY DAMAGE	2/0
TOTAL	13/9

LOSSES POV/POM — FISCAL 2011 Class A/Fatalities as of Jan. 5, 2011

CAR	4/4
SUV/JEEP	2/2
TRUCK	2/2
MOTORCYCLE	10/10
PEDESTRIAN	1/1
OTHER* (*Includes vans, ATVs and snowmobiles)	1/1
TOTAL	20/20

Fiscal Year 2010: 25 — Three Year Average: 29

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U.S. ARMY ARMY STRONG.

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ARMY SAFE IS ARMY STRONG

A BAND OF BROTHERS & SISTERS

THUNDERSTORMS: KEEPING AN EYE ON THE SKY

KNOWLEDGE

VOL 5 MARCH 2011

OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

TO LIVE OR DIE

SEAT BELTS – THE DIVIDING LINE

- GROUND RULES
- TO BE SEEN
- DON'T ASSUME

DO IT RIGHT

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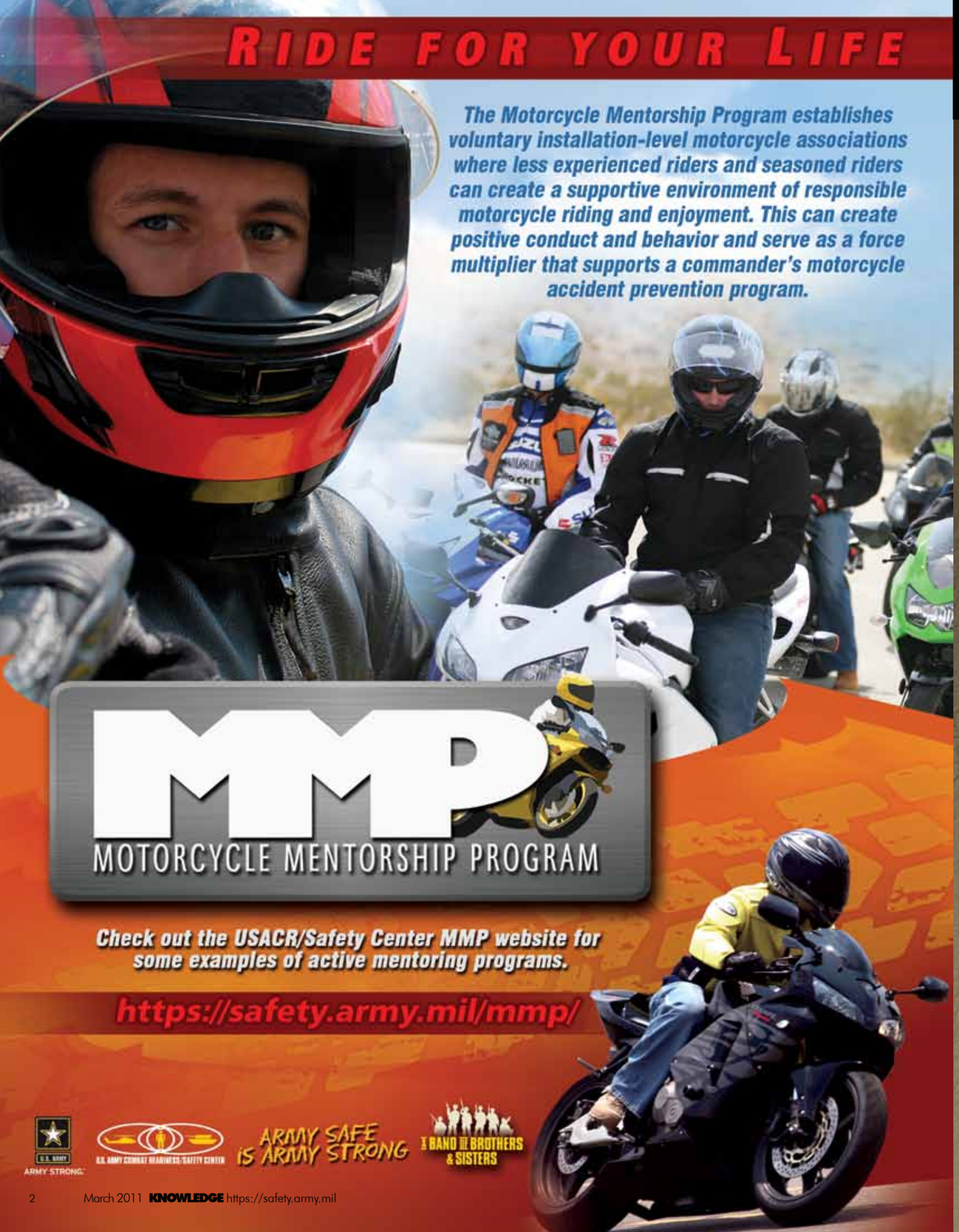
ARMY STRONG.

BAND OF BROTHERS & SISTERS



KNOWLEDGE
OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

LEADERS SOLDIERS CIVILIANS FAMILIES

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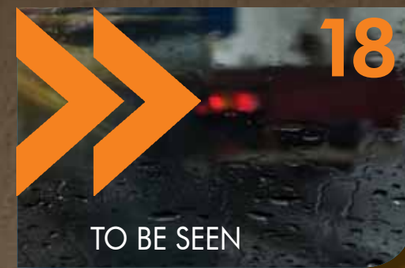

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U.S. ARMY COMBAT READINESS/SAFETY CENTER

ARMY SAFE IS ARMY STRONG

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Mission statement: The United States Army Combat Readiness/Safety Center (USACR/Safety Center) supports our Army by collecting, 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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SET THE RIGHT EXAMPLE

> And, **BECAUSE** of their close **RELATIONSHIPS, PEERS,** spouses, parents and **SIBLINGS** can **OFTEN** make an **IMPACT** even when **OTHERS** have tried **UNSUCCESSFULLY.**

This month marks the midway point in fiscal 2011, and our Army is poised to continue our ongoing downward trend in fatal accidents for yet another year. We opened the second quarter 15 percent below last year's total fatality numbers for the same timeframe, and statistics in our key privately owned vehicle category were even better, down 26 percent for the year. This great news story reflects the commitment and dedication of all our Leaders, Soldiers, Families and Civilians to the safety of our force and to each other. Thank you for all your hard work!

This trend is certainly welcome, and it appears we're headed in the right direction in countering the No. 1 accidental killer of our Soldiers. However, we can't become complacent and think our problems with POVs are at a point of solution. The improved numbers we're seeing are actually masking a devastating issue with Soldiers not using seat belts, and a majority of our POV fatalities to date have been attributed at least in part to a neglect to buckle up.

The circumstances behind most of these fatalities is remarkably similar: a loss of control, the vehicle striking another vehicle or stationary object and sometimes rolling over, with the Soldier driver and/or passengers ejected during the accident sequence. At least two of these fatal accidents occurred on post, and a third occurred during the Soldier's drive to work for his regular duty day. Five of the six fatalities were 24 years old or younger, meaning they grew up in an age of mandatory seat belt laws well before they assumed the military obligation of always buckling up. Willful disregard for standards is a Leader, Soldier and Family issue, and it will take a concerted effort by all three groups to curb this growing and disturbing trend.

For Leaders, off-duty standards enforcement has always been among the most difficult of all responsibilities. First-line supervisors can't be with their Soldiers all the time, but they can engage with them during the duty day about the risks of driving and other off-duty activities. Since the drive to and from work will be the most dangerous part of the day for many of our Soldiers, it's only logical that Leaders spend the time and effort required to ensure their subordinates are informed and empowered to make smart decisions after the duty day ends. It's also important for Leaders to get to know their Soldiers personally so they can learn what interventions work for a given individual. Safety isn't a "one-size-fits-all" pursuit, and an approach that works with one Soldier won't necessarily work for another.

As the weather begins to gradually warm up, many Soldiers will want to bring their motorcycles out of cold weather storage and prepare them for the approaching spring and summer riding season. This is a great time to take the opportunity to have the bike serviced, check the serviceability of personal protective equipment (PPE) and get motorcycle refresher training completed. Some of the basic riding skills are quickly perishable over the fall/winter months, and now is the time to get some much needed refresher training before taking those long rides later in the season.

Our Army continues to lose Soldiers due to acts of indiscipline. The acts of excessive speed, reckless riding, a lack of properly approved motorcycle training and failure to wear proper PPE continue to show up in accident findings. Leaders, the ruthless enforcement of standards for our motorcycle riders is the only way to stop these senseless losses. Leaders can and should conduct on-the-spot checks for licensing and approved motorcycle riding training for their riders, as well as inspecting their Soldiers' motorcycles periodically. Tools and checklists for the inspection of motorcycles and PPE can be found on the U.S. Army Combat Readiness/Safety Center website under the POV/Motorcycle Safety tab. Another great source of information that also promotes safe riding through experienced rider mentorship is the Motorcycle Mentorship Program (MMP). This installation-based program promotes an environment that can create positive conduct and behavior while riding and serves as a force multiplier that supports a commander's motorcycle accident prevention program.

Because every Soldier has his or her own unique needs, Soldier-to-Soldier and Family engagement is critical in this fight. Friends and Family members generally know their Soldiers better than anyone else and have more access to them during their off-duty time. And, because of their close relationships, peers, spouses, parents and siblings can often make an impact even when others have tried unsuccessfully. Never allow the Soldiers in your life to operate a vehicle unbelted, and let them know your concerns about their unsafe driving habits. You might be met with resistance at first, but, when it comes to a Soldier's life, it's an argument worth having.

Ultimately, the decision to wear a seat belt is a personal choice, but it's one that can be affected through positive interaction with others. If you're in a leadership position, set the right example by doing the right thing all the time. The same standard applies for Soldier peers and Family members. Make the smart decisions and watch how your behavior affects your friends and loved ones. The simple click of a seat belt is one of the sweetest sounds any driver or passenger will hear before an accident, and there's no better way to save lives on the road than by buckling up.

Each of you is doing a great job every day for our Army and our nation. Thank you for what you do, and let's get the last half of fiscal 2011 off to a great start today by staying engaged in Soldier safety. There's no better reward than watching your Soldiers thrive in both their on- and off-duty lives, so do your part by giving them the tools for success!

Army Safe is Army Strong!

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

An Eye on the Sky

1ST LT. ERIK JOHNSON
304th Transportation Company
U.S. Army Reserve
Chicopee, Mass.

Swift action is needed when facing a thunderstorm. After all, lightning is the second-leading cause of weather-related deaths in the United States. According to the National Weather Service (NWS), over the past 30 years, an average of 58 people are killed annually by lightning strikes, and about 300 more are injured.

Soldiers aren't immune to the dangers of lightning. Since fiscal 2002, two Soldiers have died and at least 25 others were injured due to lightning strikes. Last summer, an ROTC cadet died after she was struck by lightning while participating in field exercises at Fort Knox, Ky., for the U.S. Army Cadet Command's Leader's Training Course. To better protect ourselves, we need to know how to respond safely to lightning.

Most people have probably received some instruction about how to gauge their distance from a lightning strike. It is a common belief to count the seconds between seeing the flash and hearing the thunderclap, with one second being equal to one mile in distance. Therefore, a five-second gap between the flash and thunder would mean the lightning is five miles away. Unfortunately, using this math could get a Soldier in the field killed.

The NWS reports that the ratio is actually five seconds of time is equal to one mile of distance from you to the lightning strike. So, that poor, misinformed troop who thought he was five miles away from that sudden bolt of lightning may actually be right beside it. If you can hear thunder, it's best to go ahead and seek shelter.

Although you can't eliminate the risk of lightning completely, there are some actions you can take to reduce the probability of being struck. These include avoiding high-elevation areas, open fields, isolated trees, communication towers, flagpoles, open-top vehicles and water during thunderstorms. A building offers the best protection from a lightning strike, but a vehicle with a metal roof will also provide good shelter. Some mistakenly believe it's the tires that provide that protection. Rather, it's the vehicle's metal exterior (ragtops offer negligible protection) that diverts the charge away from occupants inside. Just make sure you don't touch anything metal that leads to the outside of the vehicle.

If a building or vehicle isn't nearby, seek shelter under the smallest tree in a group of several large trees, but never under a single tree. Stay at least six feet away from the trunk to minimize the risk of a side strike. If you're caught in an open area without trees or other shelter, it's time to assume the lightning safety position: crouch down as a baseball catcher would (only make sure your heels are touching together) and place your hands over your ears. Do not lie flat on the ground! Wait out the storm in this crouched position. Remember, before you assume the lightning strike position, remove all metallic objects from your body. This means stack arms (yes, it is understood enemy fire is a greater threat than a possible lightning strike, so act appropriate to the tactical situation), MILES and anything else metal and get 50 meters away from it.

Lightning can never be underestimated. If your unit does not yet have a lightning safety dispersal plan, request your chain of command implement one. For every area of operations it enters, a unit should know what to do when lightning strikes.

30/30 RULE

If you're training or operating in the open and see lightning or hear thunder, use the "30/30 rule" to determine when to seek shelter. When you see lightning, count the seconds between the flash and thunderclap. If it's 30 seconds or less, seek shelter immediately. Then, wait at least 30 minutes after the last thunderclap before leaving your shelter. Don't be fooled by a blue sky, either. About 75 percent of lightning injuries occur very early or very late in a storm's life, and strikes have been recorded from as far away as 56 nautical miles.

A 'Stormy' Lesson

CHIEF WARRANT OFFICER 2 JASON P. WILLIAMS
B Company, 3-227th Assault Helicopter Battalion
Fort Hood, Texas

Have you ever fought with your kids about wearing seat belts? Have you been tempted to give up out of frustration? A few years ago on a rain-slicked road, we learned this is a battle you can't afford to lose. Here's our story.

I'd been deployed about three weeks, but hadn't talked to my wife during the past few days. When I finally got in touch with her, I'll never forget the sound of her voice. I knew something was wrong when she said, "Hey, honey, let me just say we are all OK." Hearing her say that, however, didn't make the message any easier as she explained what happened.

My wife and kids were on their way from Fort Hood, Texas, to Austin for my son's soccer tournament. My wife was driving and my 10- and 2-year-old sons were in the backseat. During their drive, they encountered a bad thunderstorm. A few minutes into the storm, they hit a flooded section of road and my wife lost control of the SUV, which slid onto the grass on the right shoulder. She was able to regain control, slow down and attempt to ease back onto the road. However, the right-rear tire hit the road edge and blew out, sending the SUV sliding sideways and overturning three or four times before it came to rest upside down in the grass.

My wife didn't realize she was hurt and checked on the boys, who appeared to be OK. Our 10-year-old had wanted to ride in the front seat, but, fortunately, my wife insisted he ride in the backseat. That proved a good decision, as the passenger-side mirror had pivoted inward, smashing the window and gashing the front passenger seat. Had our son been there, he might have been decapitated.

She climbed out of her window and tried to open the back doors, but they were stuck. By now, people were already coming over to assist. My oldest had undone his seat belt and was brushing glass out of his brother's hair. He tried, unsuccessfully, to get him out of his safety seat and wouldn't leave the car without him. While all this was going on, my wife was in and out of consciousness. Her left arm was seriously injured and she was

bleeding profusely from her head. She remembered asking to see our boys and a woman telling her that they were doing fine. She'd been assuming the worst, but the fact was, the woman didn't want the kids to see her condition.

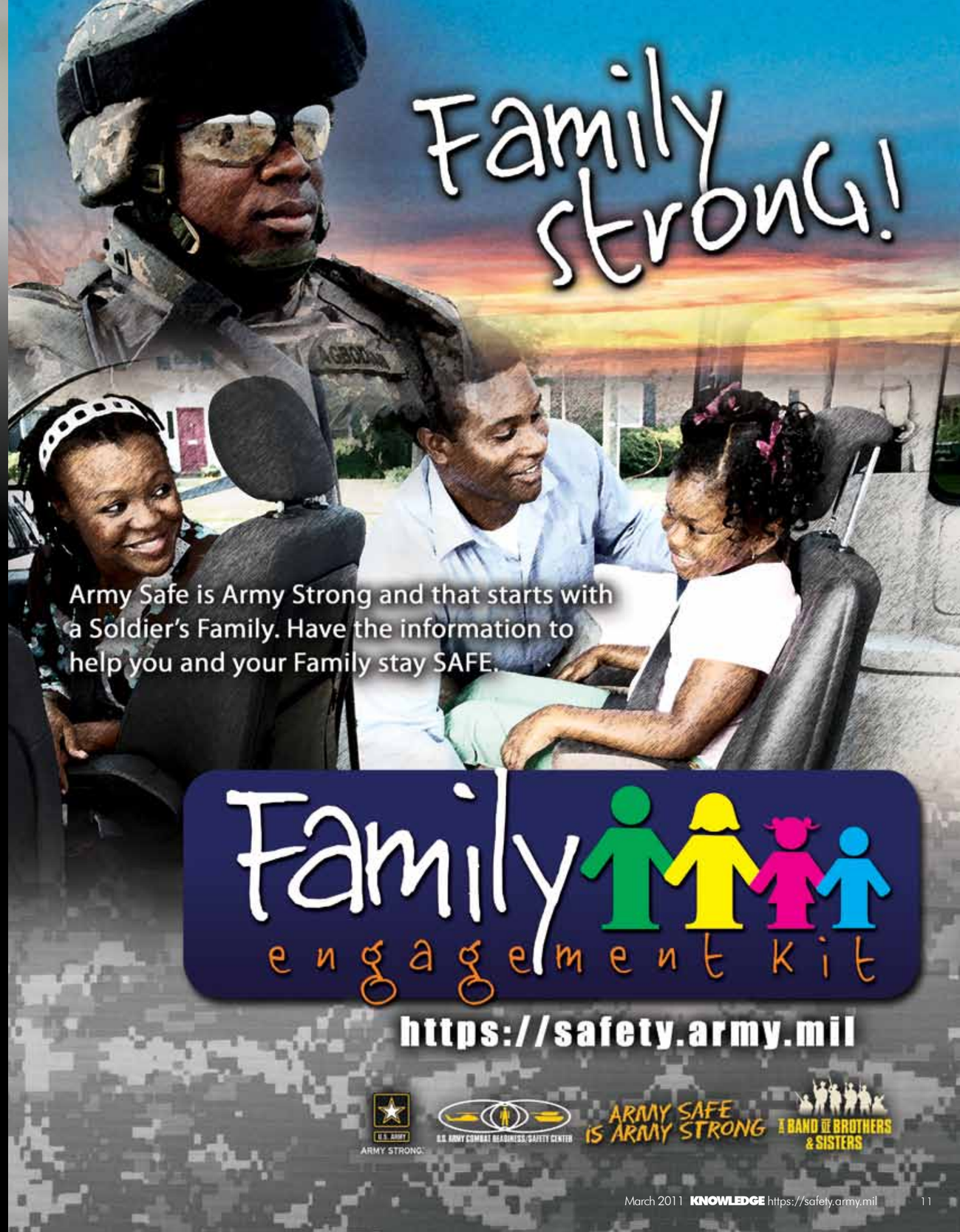
She went on to explain that the kids had some minor injuries from the stroller and backpacks flying around inside the vehicle. My oldest son needed some dental work and my youngest had a large lump on his head. Considering that everything else in the SUV was spread across the highway, I was just happy to hear they were all alive.

As I listened to the story, I couldn't help wondering if I had done something to contribute to this accident. I asked myself, "Were the wipers OK? How old were the tires? When was the last time I checked the tire pressure?" I'd looked over the car shortly before deploying, but was concerned I might have missed something. For a long time I thought about how I'd have felt had any of them been killed. Those uneasy thoughts hung around in my mind, but I eventually accepted the fact that there was nothing I could do to change the past. Instead, I decided I would focus on how to do better in the future.

My wife and son have had some difficulty dealing with the aftermath of the accident. Riding in a car during a bad storm is still a little difficult for them, but they have gotten much better. Looking back on it, we view the entire incident as a learning experience for us all. Obviously, we no longer have a seat belt issue. In fact, I've heard my son remind his friends to fasten their seat belts. I also explained to him that his concern for his brother in an emergency is a quality that many don't possess, especially other children his age. After seeing the SUV's condition, my wife was amazed they survived and felt she'd been given a new lease on life.

It was humbling to come home from combat to hear the details of my family's near-death experience. It is a perfect example of how the most obvious hazards — such as I faced in combat — are not always the ones that hurt or kill people. Since then, I've worked to make myself more aware of the potential hazards to my family. I've also tried to be better about explaining how and why I take certain safety precautions so my family will be even better prepared the next time I'm gone. When I deploy, I'm not just committed to protecting my comrades in combat; I'm just as committed to protecting my family at home.«

> "When I **DEPLOY**, I'm not just committed **TO PROTECTING** my comrades in combat; I'm just as committed to **PROTECTING MY FAMILY AT HOME.**"



Why Don't Our Soldiers Wear Those?

While deployed to Camp Buehring, Kuwait, in support of Operation New Dawn, I witnessed firsthand how a U.S. Navy flight deck cranial (FDC) can reduce injuries and possibly save lives. Since then, I have wondered why the U.S. Army has not adopted the practice of wearing an FDC while working on our UH-60 or any other Army aircraft.

CHIEF WARRANT OFFICER 4 STEPHEN R. BOYD
3-126th Aviation, Aviation Task Force
Kuwait, TF 164th TAOG

During September 2010, a routine training mission of an MH-60S from our U.S. Navy Air Ambulance Detachment (NAAD) required a precautionary landing due to a main module chip light.

Following the successful precautionary landing, the decision was made to use the General Support Aviation Battalion (GSAB) Downed Aircraft Recovery Team (DART) and the NAAD maintenance teams to recover the aircraft via flatbed. Immediately, detailed planning sessions and rehearsals were conducted to ensure a safe execution. Both the brigade and battalion safety officers were involved and composite risk management was incorporated into every phase of the process. Coordination between the NAAD and the GSAB went extremely well at all levels of planning and execution. Not surprisingly, the GSAB DART, which had successfully recovered aircraft in the past, leveraged their past successes to execute this mission in the austere desert conditions of our operational environment.

On the day of the operation, the two units worked seamlessly as one, the timeline was adhered to and safety remained a priority throughout the entire operation. I was onsite as the task force safety officer and watched as Sailors and Soldiers worked in perfect unison while climbing in, on and around the aircraft, removing blades, hoisting and chocking the aircraft onto a flatbed and then moving it back to base. The most glaring difference I noticed throughout the day was the Navy's personal protective equipment (PPE) and their mechanics strict adherence to wearing it — specifically the FDC headgear donned by every Sailor. I remember thinking, "Why don't our Soldiers wear those?"

The story should end happily at this point. But there's more.

The next morning, after a successful aircraft recovery, the helicopter was in the hangar being repaired by the NAAD mechanics. A Sailor was on top of the aircraft, disassembling components on the rotor head. As he was pulling down on a torque wrench, attempting to break the seal on a bolt, the bolt unexpectedly snapped loose. The mechanic lost his balance and fell backward from the top of the aircraft, landing on the back of his head on a cement floor. This occurred right outside my office, so I ran out expecting to see the worst.

When I got to where the Sailor was lying, he was wide awake, not bleeding and could move his fingers and toes. His FDC was still intact and strapped to his head when the ambulance took him away. What's equally amazing is he returned to duty two days after an accident that could have killed or at least seriously injured him had he not been wearing an FDC. So, for the second time in two days, I asked myself, "Why don't our Soldiers wear those?"

> "What's equally amazing is he **RETURNED TO DUTY TWO DAYS AFTER** an accident that could have **KILLED** or at **LEAST SERIOUSLY INJURED** him had he not been wearing an **FDC.**"

For several decades, the Navy has required all aircraft handlers and maintainers working in, on and around military aircraft while shipboard or ashore to wear the FDC. The current FDC provides improved capabilities in hearing protection, speech intelligibility and impact protection as well as a stable mounting platform for the use of night vision devices.

After the incident in the hangar, Army task force leadership and safety officers decided our Soldiers would wear FDCs when working on aircraft. Their use will be incorporated into our battalion standard operating procedures. Again, if this single safety device can prevent injuries or save lives, then why aren't Soldiers issued or required to wear FDCs while working on top of aircraft? Fortunately, because leadership required this Sailor to wear an FDC, he suffered only minor injuries and a few lost days of work.

Ground Rules

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Fort Allen, Puerto Rico

The ground guide is an essential component to moving heavy tactical vehicles and equipment. However, if the guide or vehicle operator doesn't follow or execute the proper procedures, the results can be deadly. As Leaders, we must ensure Soldiers train and rehearse proper ground-guiding procedures to prevent accidents and preserve our combat power.

Ground guides are a vehicle operator's "eyes" when maneuvering equipment in areas of limited visibility. Therefore, ground guiding a vehicle is one task where training and coordination between the two is critical.

Recently, the Army experienced a fatal ground-guiding accident because this routine task wasn't executed properly. As a Soldier was ground guiding a truck to connect to a trailer, the driver lost sight of him. The Soldier was pinned between the truck and trailer and crushed. He died from his injuries later that day. Leaders and Soldiers can prevent these needless losses by following a few simple steps:

- Ensure Soldiers are familiar with Army Regulation 385-10, Chapter 11, Prevention of Motor Vehicle Accidents, and Field Manual (FM) 21-305, Chapter 8, Manual for the Wheeled Vehicle Driver. Also, make sure everyone understands the basic signals to control vehicle drivers (don't forget about flashlight signals) from FM 21-60, Visual Signs.
- Make sure ground guides use hand signals. Voice signals can be

misunderstood or go unheard and should only be used in an emergency. Drivers and ground guides must coordinate hand signals before operations.

- Position front ground guides to the left front (driver's side) and rear guides to the left rear of vehicles.
- Never allow a ground guide to walk directly into the vehicle's path. Ground guides should also never walk backward or get between two vehicles.
- Ensure drivers understand they immediately must stop if they lose sight of the ground guide or don't understand a signal.
- When using two ground guides, they must maintain visual contact with each other. The front ground guide must stop the vehicle if he or she loses sight of the rear ground guide.
- Ensure the ground guide, not the vehicle commander, is in charge of the vehicle.
- Whenever the vehicle is under the control of a ground guide, the only command the vehicle commander should issue to the driver is "stop."
- Always use ground guides when backing, in congested areas, when traveling cross-country during periods of limited visibility and in bivouac and assembly areas.
- During periods of limited visibility or darkness, equip ground guides with suitable lights (two flashlights and extra batteries).
- Ground guides must keep a proper distance from the vehicle (10 yards).
- Ground guides should always clear themselves, clear the vehicle and, finally, give the command to move the vehicle.

Soldiers are entitled to outstanding leadership and we must provide it. Many accidents are the result of Leaders failing to enforce standards. To fix this situation, Leaders must enforce training and ensure composite risk management is integrated into all phases of operations to mitigate hazards while conducting vehicle operations. If Leaders at all levels maximize their efforts to ensure Soldiers understand the ground-guiding standards, there's no doubt accidents will decrease and our combat power will be preserved.

FYI

For more information about proper ground-guiding procedures, visit the U.S. Army Combat Readiness/Safety Center's Driver's Training Toolbox at https://safety.army.mil/drivertrainingtoolbox/.

To be Seen

PERRY WILDS
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Fort Rucker, Ala.

I was on my way back from a recent trip when it started to rain hard. The visibility was maybe 50 feet and there was no place to exit. I was following a tractor-trailer's taillights, hoping the person behind me wasn't steering with his knees while eating a Happy Meal. All of a sudden, the tractor-trailer's taillights disappeared.

It took a minute to realize a dark gray SUV had pulled in between us without having his lights turned on. The only time I could actually see the SUV was when he hit his brake lights. I changed lanes, something you don't want to do when you can't see squat, and got behind someone who had all their lights — including their taillights — turned on.

I'm thankful I made it through the storm so I could be here to write this article. However, this incident got me wondering why is it so hard for some people to remember to turn on their headlights. Some advances in automotive technology may have actually made the problem worse. Many vehicles now have daytime running lights, automatic lights and lights that come on when water is detected. The problem is technology has made people complacent. Assuming the car does everything automatically, they don't realize they need to manually switch on their lights to be sure they'll be seen in the rain.

With that in mind, here are some realities to consider.

While daytime running lights are great at increasing your visibility from the front of your vehicle, they typically don't do anything for your back. What many people don't realize is these lights only illuminate the headlights, not the taillights. In a rainstorm, they do nothing to help the people behind you see your vehicle.

Automatic lights come on when your car senses there is not enough ambient light. While that might work when it turns dark outside, that doesn't mean the car knows to turn on the lights when it is raining. Again, they may not come on when you need them, making it hard for drivers to see you.

The answer to this problem is simple: When the weather is "off," turn your lights on. While "smart" technology is great, it can never replace you being a smart driver.«

> "The **PROBLEM** is **TECHNOLOGY** has made people **COMPLACENT**. Assuming the **CAR** does everything **AUTOMATICALLY,** they don't **REALIZE** they **NEED** to manually **SWITCH** on their **LIGHTS** to be **SURE** they'll be **SEEN** in the **RAIN.**"

Do It RIGHT

CHIEF WARRANT OFFICER 2 SCOTT A. THOMAS
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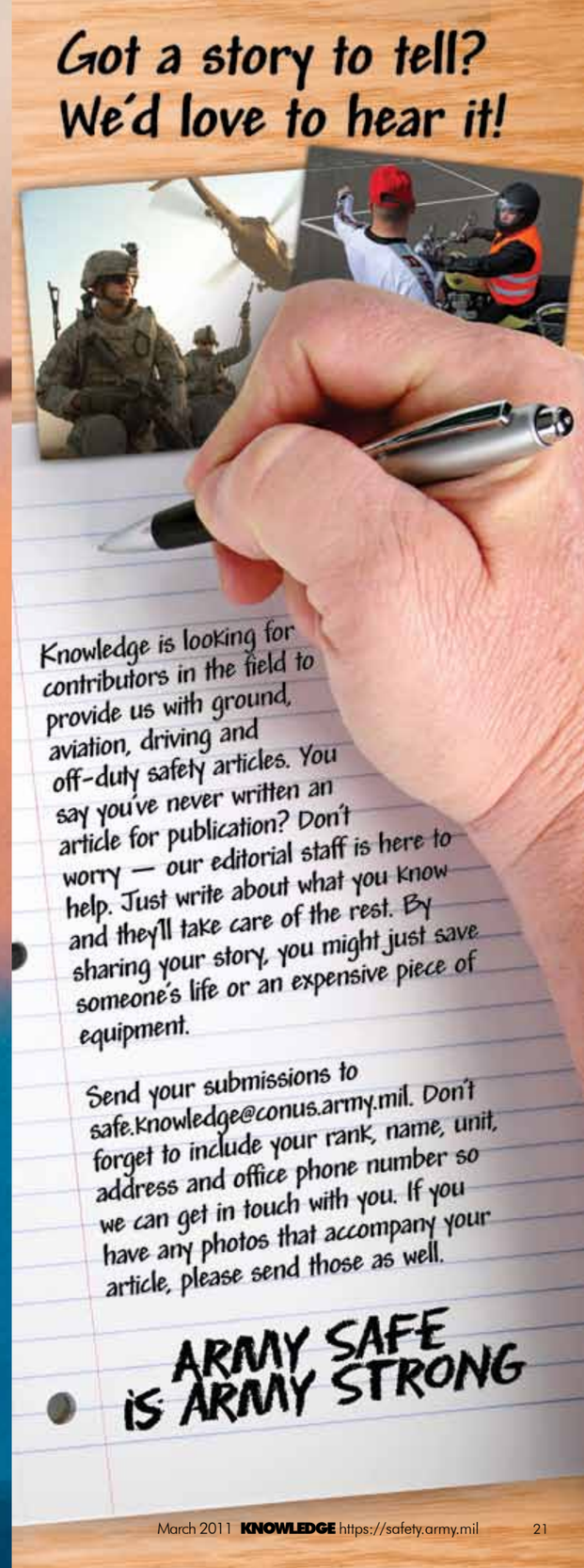
It was the eighth month of our deployment and extremely hot in the Kunar Province of Afghanistan. Our mission was a routine troop transport over a standard general support aviation battalion route that had been extended. Halfway through the mission, the crew in my sister ship had maintenance problems and was forced to return to base to switch aircraft.

Instead of shutting down and helping them move to the other aircraft, my crew and I elected to remain at idle … partially because we figured we would get in their way, and, quite honestly, because we didn't want to endure the extreme heat and humidity of Jalalabad. I know the crew in the other aircraft was thinking the same thing, and I realize now we probably put undue pressure on them to hurry their move to the spare aircraft. This, combined with the stress to "get the mission done on time," acute crew fatigue and ignoring even the simplest of checks, almost caused a fatal accident.

The spare aircraft was on the pad beside where my sister ship shut down. We watched the crew transfer all of their gear, but for some reason they did not start a preflight. As we watched a couple of vehicles pull up to the aircraft, one of the pilots climbed into the cockpit to tell us what was transpiring.

In the mad rush to continue with the mission, the door gunner accidentally fired his M240 machine gun. The pilot in command was responsible for clearing the weapon after each flight. He admitted being complacent and having trusted the door gunner to clear his weapon. The door gunner said he was in a hurry to finish the mission and was focused more on "what to do next" instead of "what to do now."

Thankfully, no one got hurt that day, nor was there any damage to the aircraft. However, it served as a wake-up call regarding the dangers of becoming complacent during the last quarter of a deployment. My aircrew learned a valuable lesson that day and we now lend a helping hand to other crews during our missions, even if that means inconveniencing ourselves. I'm certain the other aircrew learned that no matter what pressures are placed upon them, it's important to always take the time needed to do things right if they're to accomplish their mission safely.



TO LIVE OR DIE - THE DIVIDING LINE

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Strategic Communication Directorate
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

Editor's note: The following article is based upon an accident investigation conducted by the U.S. Army Combat Readiness/Safety Center. The names of the victims have been changed to protect their privacy.

How wide is the line dividing life and death? Sometimes it can be as narrow as 2 inches.

The five Soldiers were excited about their Saturday night as they piled into a rental car to drive nearly 90 miles to hear a hip-hop artist at a nightclub. Just back from downrange where alcohol was a "no-no," drinking was definitely in the mix along with the music. And why not have fun? Four of them were still in their seven-day reintegration period, working half days at the most. Since it was a Saturday, they were released at 10:30 a.m. and weren't due back until formation at 7:30 Sunday morning.

Sgt. Lee Rogers rented the car, a high-performance model, two days earlier on the day his unit got back from Iraq. And he didn't waste any time in getting back to partying. That night, he and his friend, Sgt. Adam Brooks, tied one on and showed up at the Friday morning formation a bit worse for the wear. Rogers' section leader, Sgt. First Class Jeremy Brock, counseled both sergeants to stay home and take it easy that night. The dangers of post-redeployment heavy drinking were well known, but they weren't worried about those dangers — only about getting back into the "good" life.

Sometime between 7:30 and 9 p.m. Saturday, Rogers and Brooks and Sgt. Jim Barrett joined Spcs. Larry Allen and Jeff Goodson in the rental car to head for the nightclub. Thanks to good, high-speed highways, they got there fairly quickly. They partied large and late because they didn't have to get back until their 7:30 morning formation. By the time they got ready to head back, it was somewhere between 5 and 5:30 a.m. As long as they hurried, they'd make it back in time for the formation.

Despite the fact Brooks was drunk, Rogers let him get behind the wheel. The decision made little sense, as Rogers knew Goodson was sober and in much better condition to drive. He should have been the obvious choice for the drive back that morning. Brooks and Rogers both buckled up for the trip back, but neither ensured their buddies in the backseat wore their seat belts. Maybe they thought their friends could sleep easier that way. Whatever the reason, it proved a huge mistake.

Brooks was in a hurry and pushed the car over 100 mph. As the car sped down the highway, the long night began to take its toll. Shortly after passing an interchange, Brooks nodded off and the car drifted onto the right shoulder. Unfortunately, there were no rumble strips to

warn Brooks he was about to get into serious trouble. Fatigued, intoxicated and falling asleep at the wheel, he allowed the car to drift across the line dividing life and death for his passengers.

The humming of the tires against the pavement changed as the car drove onto the grassy shoulder. Suddenly, a series of thumps broke the early morning stillness as the vehicle plowed through a stand of small trees. For 284 feet, the trees gave way, but then the car struck a 3-inch-thick support cable for an overpass. The cable didn't give way so easily and took its toll, ripping off part of the car's roof. Still, the car plunged ahead at high speed.

The vehicle tore past the cable and launched off a 4-foot-high wall, flying 35 feet through the air before slamming nose-first onto the pavement. The jolt shot Barrett and Allen — both unbelted — forward through the hole in the car's roof. The car then tumbled end over end, struck a tree and glanced off it to the right. As that happened, Goodson — unrestrained in the backseat — flew out of the vehicle and was killed.

As the car continued tumbling, the horrendous impacts tore away the motor and transaxle. In the front seat, Brooks and Rogers rode out the crash and survived, although with serious injuries. This vehicle was one that the Insurance Institute for Highway Safety had crash tested and given a Top Safety Pick award. During this accident, the car maintained the integrity of its occupant compartment and provided survivable space for all five Soldiers. Had the Soldiers in the backseat been wearing their seat belts, they'd have likely lived.

But that didn't happen. The most important dividing line that morning — the car's 1¾-inch-wide seat belts — weren't there to save Allen, Barrett and Goodson. Ironically, they'd all survived the hazards of the front line only to die needlessly on the highway.

Their deaths reflect the tragic consequences when Soldiers who protect each other in combat fail to protect each other when driving. As the person who rented the car, Rogers was responsible to ensure a sober driver was behind the wheel. As the driver, Brooks was responsible for ensuring everyone buckled up. Each of the Soldiers knew there was no "gray" area when it came to seat belt use. They'd heard it at their safety briefings every day. But despite that, no one in the car enforced what they all knew was a lifesaving standard.

The bond that leads Soldiers to protect each other on the battlefield must reach to the highways. There is no other choice. Once a Soldier crosses the dividing line between life and death, there's no coming back.«

Is it Live ...?

SGT. 1ST CLASS KARL A. PETERSEN
Company A, 1st Battalion, 109th Infantry Regiment
Pennsylvania Army National Guard
Honesdale, Pa.

In March 2006, I was the unit supply sergeant for an infantry company at Al Asad Airbase, Iraq. We were in the process of getting replacements for our two Marine platoons so they could rotate out. During this time, the incoming Marines received a lot of hands-on training — mostly weapon system familiarization of the systems for the assigned gun trucks. Most of the younger Marines were unfamiliar with these systems, so we tried to cover as much as possible. Sometimes, they would request extra training, which is what led to the following incident.

One morning, three of the new Marines asked if they could conduct hands-on training with the MK-19 grenade launcher. The platoon sergeant for the Marines allowed them to go into the convoy security teams' building unsupervised, but instructed them to not touch any other items. In this room, there was a wall with a plywood shelving unit that was separated into 10 areas. This was where each gun truck downloaded its vehicle-specific equipment — such as weapons, ammunition and pyrotechnics — after a mission.

In the middle of the room, the Marines placed an MK-19 on a wooden box and began to conduct their training. As two of the Marines continued familiarizing themselves with the weapon, the other Marine went to inspect the other items on the shelves. He picked up an AT4 launcher and carried it over to the other Marines. Believing he was holding an expended round, the Marine went through the sequence of preparing the round for firing.

Standing just three feet from the other Marines, he cradled the AT4 in front of him at waist level and pointed the front of the weapon to his left and the back toward the shelving unit. He then took out the transport safety pin and pushed the cocking lever forward, unknowingly arming the launcher. When he held down the red safety release catch and pushed the trigger button, the AT4 fired inside the building.

I was in the next building with my company executive officer and unit armorer when we heard a thud. It sounded different from incoming fire, so we ran outside to see what happened. As I ran from the supply building, I saw white smoke billowing from the convoy security building and two dazed and confused Marines walking out the door. While several people ran to help, the Marines' platoon sergeant came blazing by on his bicycle and hurried into the building. A few seconds later, he came out with the last Marine. After ensuring they were all OK, he went back inside the smoke-filled building to check for fire.

We followed him inside — fearing whatever had happened might ignite the other ammunition stored in the building. We found the AT4 launcher tube lying on the floor and figured it had been fired. Upon further inspection, we discovered the rocket had punched through a three-quarter-inch plywood wall that was 15 to 20 feet away, penetrating into the ammunition storage area that was on the other side. The round traveled between some crates of MK-19 rounds and other pyrotechnics before flying another eight to 10 feet and finally striking the exterior wall of the building. Fortunately, the rocket had not traveled far enough to arm (the manual states 33 feet as the minimum arming distance).

So how could this incident happen? Well, a few days earlier, the Marines went through an AT4 familiarization class that used a previously fired round we kept in our supply room. However, that round wasn't marked as "INERT." The Marine who fired the AT4 thought since the live round was identical to the one he saw in familiarization class, it, too, was inert and he could go through the arming steps like he did during training. Wrong!

These three Marines were lucky to be alive after this incident. However, one positive did come out of it. From this day on, all of our training devices were marked as INERT.

FYI

According to Field Manual 4-30.13, Appendix F, "Markings stenciled or stamped on munitions items include all information needed for complete identification. Components in which all explosive, incendiary, or toxic materials have been simulated by substitution of inert material are identified by impressed INERT markings. Components in which all explosive, incendiary, or toxic materials have been omitted are identified by stamped EMPTY markings."

move over for safety

TOM MILLER
Marine Corps Detachment
Fort Leonard Wood, Mo.

Serving as a state trooper in Missouri for many years, I learned that merely approaching a car during a traffic stop or working roadside while investigating an accident were two of the most dangerous duties we perform. Over the years, I've been bumped by a mirror, forced to jump on the hood of my patrol car and run from out-of-control vehicles more times than I'd like to recall.

To reduce the hazard for law enforcement officers and other emergency responders, all but seven states have enacted a "Move Over" law. Typically, the law requires motorists to change lanes and/or slow down when approaching stationary emergency vehicles with emergency lights activated. While each state statute differs significantly in the specific provisions, they all have two common goals — to provide a buffer area between emergency responders and moving traffic and to reduce the speed of passing vehicles.

Why is this law important to you? Emergency responders working roadside are putting their lives on the line every day to help preserve your life if you are in an accident. Consider that according to the National Institute for Occupational Safety and Health (NIOSH), in 2005, 390 emergency responders died when other vehicles struck them. Those deaths accounted for 7 percent of all fatal occupational injuries that year.

As well, www.respondersafety.com reports that, on average, each day two emergency responders are struck by passing vehicles. To make matters worse, according to a national poll by Mason Dixon Polling & Research and sponsored by the National Safety Commission, 71 percent of Americans have not heard of Move Over laws.

Fines for violations of the Move Over law vary from state to state. Visitors to the Move Over America website at www.moveoveramerica.com can click on their home state and check their local laws and fines. Some state fines may be as low as $40, while others have fines as high as $500 and include jail time.

Remember, the emergency responders on our highways — be they law enforcement, emergency medical or fire service, or wrecker operators — are performing a service on behalf of you. Give them a break and move over if it is safe to do so. If you cannot move over, slow down. Sure, it may add a minute to your trip, but it could save the life of another. By observing the Move Over law, we can all make the roadways safer and less stressful for everyone involved.

PAY ATTENTION TO Detail

CHIEF WARRANT OFFICER 3 JAY S. BURLESON
C Company, 2-238th General Support Aviation Battalion
Shelbyville, Ind.

As with most Soldiers in today's Army, I have a "there I was" story. As a medevac pilot serving in Iraq, I found myself flying into, around and through some very tight and, sometimes, scary situations. This is my story.

We departed from our forward operating base in Diwanyah, Iraq, on a routine patient medical transport mission to the Baghdad Combat Support Hospital (CSH). Due to the nature of our business, my crew and I were required to fly during all hours of the day and night — often being tasked for multi-mission scenarios. The first part of the mission was uneventful because it was a day visual flight rules flight. This enabled us to see much of the scenic countryside and wave to villagers as we flew by. We made the appropriate air traffic control calls regarding our flying location in the correct corridors. It had become second nature to us by now — almost like flying back in the U.S.

As we approached the hospital, I was flight lead and called the other aircraft to communicate our initial speed and altitude reduction. I reduced the collective pitch to stabilize our descent and reduce airspeed, but then had to add a little power (collective). However, when I tried, I was unable to pull in collective, which was not good. That's where our flight started to deteriorate.

I asked my co-pilot, who was navigating and talking on the radios, if he had put the friction on. We sometimes flew with more friction on the collective so aircraft vibrations wouldn't lower the collective.

He said, "No," but proceeded to loosen it anyway, just in case. This freed up the collective, allowing me to regain control of it. All was good again.

About a half mile from the hospital, I called the other aircraft to announce our second and final speed and altitude reduction before landing. Again, I lowered the collective to reduce speed and altitude. When the aircraft slowed to the speed and altitude that I desired, I again tried to add power. However, once again the collective would not move. I jiggled and pulled, and still nothing happened.

At this point in the flight, we were committed. We were less

than 100 feet above the ground, which was approaching very fast! If you've seen the CSH pad in Baghdad, you will remember it is only large enough to land four Black Hawks — and that has to be in two rows of two. Also, the concrete pad (which was looking very small and coming at me quickly) was surrounded by 9-foot-tall T-walls. Yes, T-walls.

I had no power control and my aircraft was losing altitude very quickly. I needed a larger landing area so I could do a controlled roll-on landing. I notified my crew that we had a serious problem and to lock all of their shoulder harnesses and brace for impact. I pulled up the nose of the aircraft sharply in a decelerating attitude to reduce speed rapidly and to stop our decent. I was using aircraft drag and power to stop from slamming into the concrete pad. Miraculously, we hit the ground with little downward force, but we were still moving forward, rapidly approaching the T-walls at the end of the landing zone. I was literally standing on the brakes when we came to a stop just a few feet from the T-wall.

After regaining my breath, I made sure no one had been injured during our abrupt maneuvers. Then, I tried to find out what had jammed the collective pitch. The first thing I noticed was the night vision goggles my co-pilot had stored above the collective had fallen behind it and lodged in place. That's what prevented me from raising the collective. We had an intense discussion about storing things more appropriately next time. After we checked the aircraft for damage, we proceeded with the day's operations, always paying a great deal of attention to the flight controls.

This brings me to my lessons learned from this near accident. During flight training at Fort Rucker, one of the most often repeated phrases is "attention to detail." My crew and I had covered all the obvious risks and planned for most unexpected hazards, but this one had us perplexed and it almost cost us a UH-60 and, possibly, a flight crew. We must constantly be on the alert, paying attention to details. Those details can be the margin between life and death. I'll always have that lesson with me as I continue flying to support the Army aviation mission.

The maintenance bay is no place for shortcuts. Many Soldiers have learned a tough lesson that bad things can happen when tire maintenance procedures outlined in technical manuals (TMs) are not followed. The following is an actual accident that occurred while I was a Unit Training Equipment Site (UTES) general foreman.

RIM SHOT

TILBERT BRYMER
Naval Health Clinic Annapolis
Annapolis, Md.

It was summer and we were in the middle of the prime time for training and issuing combat vehicles. We were tasked to issue combat assets to several units performing tank gunnery and infantry training for their annual training period. One of these was a 5-ton tractor which was to be used by the forward support company conducting wholesale and retail fueling operations for a brigade-sized element during training.

Our procedures required unit personnel to inspect all equipment to ensure it was ready for issue and all basic issue items were present. If we found any non-mission-capable faults, it was our mission to fix them or provide the unit another piece of equipment. The unit's inspection of the 5-ton tractor showed it had a flat tire, so the truck was pulled into a UTES maintenance bay for service.

The mechanic broke down the split rim tire and made the necessary repairs. Although he'd been trained in the proper procedures for maintaining split rim tires, he decided to not use the certified tire cage while inflating the tire. The mechanic wrapped the tire with a chain, placed it upside down and was in the process of inflating it when it suddenly exploded. Fortunately, the chain kept the ring and tire together, and no one was seriously hurt. However, several personnel were sent to the hospital for short-term hearing loss as a result of the explosion.

The accident investigation showed the Soldier did not use proper tire inflation procedures. He said he was in a hurry to get the truck completed, so he had used a chain instead of a tire cage. The Soldier also did not use the 10-foot air hose with proper air chuck. In addition, the accident investigation revealed the wage leader and shop foreman did not ensure proper safety equipment was used.

So what resources do Soldiers need to service multi-piece rims safely? In most cases, the minimum resources include:

- Eye protection
- Hearing protection
- Occupational Safety and Health Administration (OSHA)-approved tire cage (NSN 4910-01-373-0267); or larger approved tire cage (NSN 4910-00-025-0623)
- Inflation gauge with 10-foot air hose and clip-on chuck (NSN 4910-00-441-8685)
- Mechanical bead breaker (NSN 4910-01-325-2974)
- Valve stem remover
- Applicable tire tools
- Equipment technical manual
- TM 9-2610-200-14, Care, Maintenance, Repair, and Inspection of Pneumatic Tires and Inner Tubes

Under enough pressure, rims can come apart and become deadly projectiles. Leaders can help prevent injuries and fatalities by ensuring shortcuts are never taken, standards are enforced and the proper resources are made available to Soldiers.

Slip Slidin' Away

EARNIE EAKINS
Driving Task Force
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

There's an old Paul Simon song that goes,

"Slip slidin' away
Slip slidin' away
You know the nearer your destination
The more you're slip slidin' away."

Those lyrics often describe what happens to motorcyclists riding on familiar roads who don't pay attention to things that can send them skidding out of control. And riders who are ignorant, short on skills or fail to identify potential hazards can find themselves skidding into tragedy.

Ask any motorcyclist and they'll tell you riding in the rain is not fun, especially if you're not prepared for the reduced visibility and slick surfaces. Unfortunately, most riders never give much thought about how to handle losing control until it happens — and then they panic. However, if bad weather puts you on the road in slippery conditions, with proper preparation and forethought you can safely make it to your destination. The key is maintaining traction and keeping the "rubber side" down against the road at all costs. So, how do you protect yourself from slip slidin' away?

> "By **BEING OBSERVANT**, you can often **PREDICT CHANGES** in traction by the **COLOR** of the road surface. **DARKER SPOTS** caused by oil or fuel **MEAN SLIPPERY AREAS** that can lead to an accident."

Know the Hazards

First, visibility is a big problem for riders when it is raining. Since motorcycles don't have windshield wipers, treating your windscreen and face shield with a product that will improve rain runoff can make a huge difference.

Also, it is to your advantage to know which areas of the road are the most slippery. Roadway markings, slippery even in clear weather, become even more so when ice or rain coats them. This is particularly a problem at intersections, where you may encounter crosswalk markings. If you have to turn across these white lines, go slowly, avoid braking and ride in the most upright position possible. Also, if you have to stop, do so either before or after reaching those roadway markings. And, when you pull off, don't accelerate until after you have crossed the markings.

During winter, normal (not black) ice is fairly easy to predict because you can see the crystals forming on the road surface. Obviously, riding in icy conditions requires extra caution. Ice not only affects roadway markings, it also makes grates, railroad tracks and tar "snakes" (asphalt repairs/patches) much more slippery.

If you encounter a sudden downpour, it's a good idea to stop for a break and allow the oil on the roadway to wash away. Typically, it takes about a half hour of steady rain to remove the accumulation of oil drippings. When you get back onto the road, avoid riding in the center of the lane because that is the most slippery area. Instead, ride in the traffic wheel ruts to take advantage of cars pushing the water off the road in front of you.

Even when roadways are dry, traffic lines, grates, railroad tracks and tar snakes all present slipping hazards. By being observant, you can often predict changes in traction by the color of the road surface. Darker spots caused by oil or fuel mean slippery areas that can lead to an accident.

Loose material on the road can also present a slipping hazard regardless the weather, although they're normally made worse by rain. Sand, dirt and mud that have become mixed with gravel may look the same color as the pavement — especially over time as it has been sitting on the road. Because of that, it's important to take extra care in turns where sand or gravel may have washed onto the roadway. You also need to pay extra attention around construction areas where vehicles turning onto the pavement from dirt roads may have scattered dirt or sand.

Understanding the Dynamics

Proper traction control is the answer to preventing slipping and sliding. Traction, simply defined, is the very limited amount of rolling grip between your tires and the road surface and is significantly reduced during slippery conditions. Safe motorcyclists must constantly manage their traction on both wet and dry roads. To do that, there are some questions you need to answer as you ride. The most important ones are how much traction do you have available, what is consuming your bike's traction and how much traction do you have in reserve?

How much traction you have available is related to how much tire surface area you have on a motorcycle. Would you be surprised to learn the entire contact patch of both your tires is about the size of the palm of one hand? That makes understanding what consumes traction and how much you have in reserve very important to safety.

Some aspects of traction management are within the rider's control. Things such as the condition of the tires and brakes indicate how well we maintain our motorcycles. Other things, such as whether we lean excessively during turns, indicate our riding attitude. Both of these must be balanced against the things we can't control, such as the weather and road surface conditions. When you're not sure how much traction you have available, slow down.

The final question is how much traction do you have in reserve? Unfortunately, there is no way to know that for sure. What you can be sure of is that anything you see on the road that consumes additional traction is a warning sign to exercise extra care. You can do that by reducing your speed, placing your weight on your foot pegs, picking the best surface and following smoothly through your turns. It's also important to keep a steady hand on the throttle and keep the bike in as upright a position as possible until conditions improve.

The public road can be an unpredictable place. Like the song, it's possible to overlook the hazards on the familiar roads where you live and end up slip slidin' away. By maintaining plenty of reserve traction, regardless the roadway conditions or weather, you can leave the words "slip slidin' away" in the song and not in an accident report.

DON'T ASSUME

CHIEF WARRANT OFFICER 4 KEVIN J. RIESE
Air Traffic Services Command
Fort Rucker, Ala.

I looked up the word "assume" in the dictionary and found the definition to be "to take for granted." In the aviation business, there is never a time we should take something for granted. The story I am about to tell could have ended in significant damage to an airframe, or worse, as an injury or death to a fellow aviator.

The mission was to continue training a new instructor pilot (IP). The weather was perfect, and we were sharing the traffic pattern with another aircraft doing emergency touch-and-go landings as part of readiness level progression training. Things were working well. We coordinated via internal frequency so each aircraft could complete the required maneuvers and not be rushed by the other aircraft.

After one landing, I decided to exit the runway to talk over the previous maneuver and give the new IP trainee a break. We taxied back to the runway hold short line, set the brakes and talked about the previous maneuvers. As we watched the other aircraft complete a pattern, we waited to sequence back into the flow of the traffic pattern. As the other aircraft turned on base and then on final, we noticed their landing gear was not down.

I knew the IP in the other aircraft was an experienced aviator and good instructor, so I assumed he was aware of the situation. I believed he was using this event as a training point, so we both continued to watch the approach. As they were on final to the runway, I commented they were getting a little too low for comfort and should be receiving a gear-up warning in the cockpit. I didn't say anything because I didn't want to get into the other pilot's training.

As they approached the threshold, I'd had enough and wanted to ensure they were aware of the situation. I called them over the radio to check the landing gear and go around. The aircraft began the go-around and all seemed well. I was curious if they were aware of the gear not being down prior to my call, or if I, indeed, helped them avert disaster.

After completing the training flight and debrief, I questioned the other crew as to what was happening during the situation described above. As expected, the pilot in progression was behind the aircraft and unaware of the problem due to task overload. The IP assured me he was aware of the situation and wanted to use the event as a training point. The one thing he did convey to me was they had an inoperative navigation component. The ground proximity warning system never forewarned the crew of "too low, gear."

The bottom line in this story is this: What if I had not said anything and the other crew had an accident while I watched. I assumed just because the other IP was good, he had the situation under control and the aircraft systems should have alerted him of the problem. Wrong! Don't ever hesitate to say something. This could have been a disastrous accident.

How many accidents could we avoid if someone said something when others deviated from the standard? I may be stating the obvious, but the importance cannot be overstated. It's our obligation as Leaders and officers to remove the break in the chain. Speak up and never assume others are aware if you see something that is wrong or not to standard.«

"As the other **AIRCRAFT TURNED** on base and then on final, we **NOTICED** their **LANDING GEAR** was **NOT DOWN**."

ORV PARKS

Growing at Army Posts

STEVE KURTIAK
QinetiQ North America
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

In the April 2010 issue of Knowledge, we published the article "Catching Air at Irwin" about the off-road vehicle (ORV) park located near the main gate at Fort Irwin, Calif. Since then, we have received many positive responses and inquiries on how to establish a riding area on a number of installations. The safety staff at Fort Irwin has assisted several other installation safety staffs with information on how to establish such areas on their posts.

Last September, Fort Carson, Colo., opened its ORV park — about 10 miles of trails on a 199-acre site. Command Sgt. Maj. Daniel A. Daily, 4th Infantry Division and Fort Carson senior enlisted leader, and the garrison staff were instrumental in establishing this area for Soldiers to ride their off-road dirt bikes and all-terrain vehicles during their off-duty time. Fort Bliss, Texas, and Fort Leonard Wood, Mo., are also in the process of establishing riding areas, which is great news for the Soldiers who enjoy off-road riding at those installations. Including Fort Riley, Kan., and Fort Hood, there are now ORV riding areas at five U.S. Army installations.

The staff at Fort Irwin recently raised the bar another notch when they redesigned and upgraded their motocross track and trail riding area for off-road riders. The upgrade includes upkeep of the motocross track and trail riding area at the direction of the garrison safety office. I was impressed with the original layout of the motocross track and trail riding area during my visit in December 2009. However, after seeing the pictures of the upgrades, I am envious and a bit jealous of those who have the opportunity to ride at such well-groomed ORV park.

If your installation is considering establishing a riding area such as the one at Fort Irwin, contact the U.S. Army Combat Readiness/Safety Center's Driving Task Force at drivingtaskforce@conus.army.mil or (334) 255-2892/2744.

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.

AVIATION

AH-64D

CLASS C

- The lead aircraft of a combat mission inadvertently entered instrument meteorological conditions and contacted the ground during recovery. The aircrew maintained control and returned to base.

- Upon landing, the ground crew noted the No.1 nacelle door was open. After shutdown, a crack was discovered, requiring replacement of the door.

CH-47D

CLASS C

- The crew was conducting a night vision goggle sling load training mission when the HMMWV load jettisoned. The HMMWV was destroyed.

MH-6M

CLASS C

- During overwater flight training, the FADEC failed and the engine RPM rose to 115.9 percent for eight seconds. The crew recovered by using manual throttle.

MH-47G

CLASS C

- The aircraft's left rear strut collapsed upon landing on a concrete pad at a forward operating base.

OH-58D(I)

CLASS C

- While hovering from taxiway to parking, the aircraft encountered whiteout conditions and lost visual reference. The aircraft subsequently landed hard, incurring damage.

TH-67A

CLASS B

- The aircraft rolled over during a slope landing. The instructor pilot and student pilot suffered minor injuries.

UH-60L

CLASS C

- The aircraft main rotor blade contacted the intermediate gearbox cover and troop commander antenna.

FIXED-WING

C-12U

CLASS C

- A gust of wind lifted the right wing while landing, causing the left wing to strike the runway. On touchdown, the aircraft exited the runway onto the grass. The left wingtip, aileron and de-ice boot were damaged.

UAS

MAV

CLASS C

- After launch, the air vehicle operator (AVO) received warnings with the micro air vehicle and initiated a return to base. During the 250-feet-above-ground-level landing, the unmanned aircraft (UA) experienced engine failure and crashed.

RQ-7B

CLASS B

- The UA's fuel system malfunctioned. The RPMs and propulsion system decreased and the UA's parachute deployed. The UA was damaged upon landing.

CLASS C

- While landing, the UA failed to catch the arresting gear and struck the arresting net. The wings, tail and fuselage were damaged.

GROUND

Explosive/Fire

CLASS A

- A Soldier died from injuries she suffered when a propane heater exploded in her garage. The Soldier's fiancée was also injured.

Personnel Injury

CLASS A

- A Soldier died when he fell from a cliff while on vacation.

DRIVING

POV

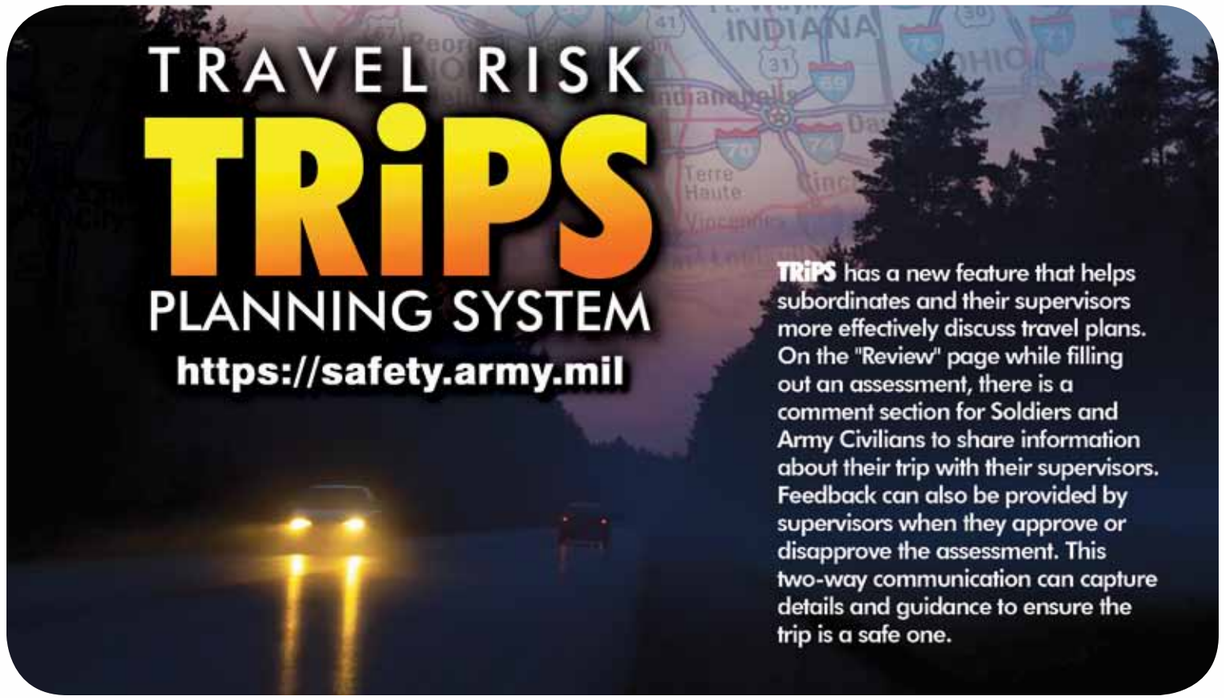
CLASS A

- A Soldier died on his way to his unit's morning drill when he crossed the centerline and collided head-on with another vehicle. The Soldier was not wearing his seat belt and was ejected from his vehicle.

POM

CLASS A

- A Soldier died when he lost control of his motorcycle and was thrown from his bike and struck and dragged by a truck in an adjacent lane. The Soldier was riding with a group, and another rider suffered minor injuries after striking the downed rider's bike.



Become the newest safety star.

It's time for the third-annual Peer to Peer Video Competition. Break out the cameras and become the Army's newest safety star!

Submit your entry **Jan. 1 to June 30, 2011**

Peer to Peer

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

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U.S. ARMY COMBAT READINESS/SAFETY CENTER

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FREEFALLIN': A CRASH COURSE IN CANOPY PILOTING

KNOWLEDGE

VOL 5 APRIL 2011

OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

AN OUNCE OF PREVENTION ...

TAMING HEAT INJURIES

- DISTRACTED DRIVING
- BOATING SAFETY
- TRUST YOUR INSTRUMENTS

+

GETTING BACK TO THE BASICS

U.S. ARMY
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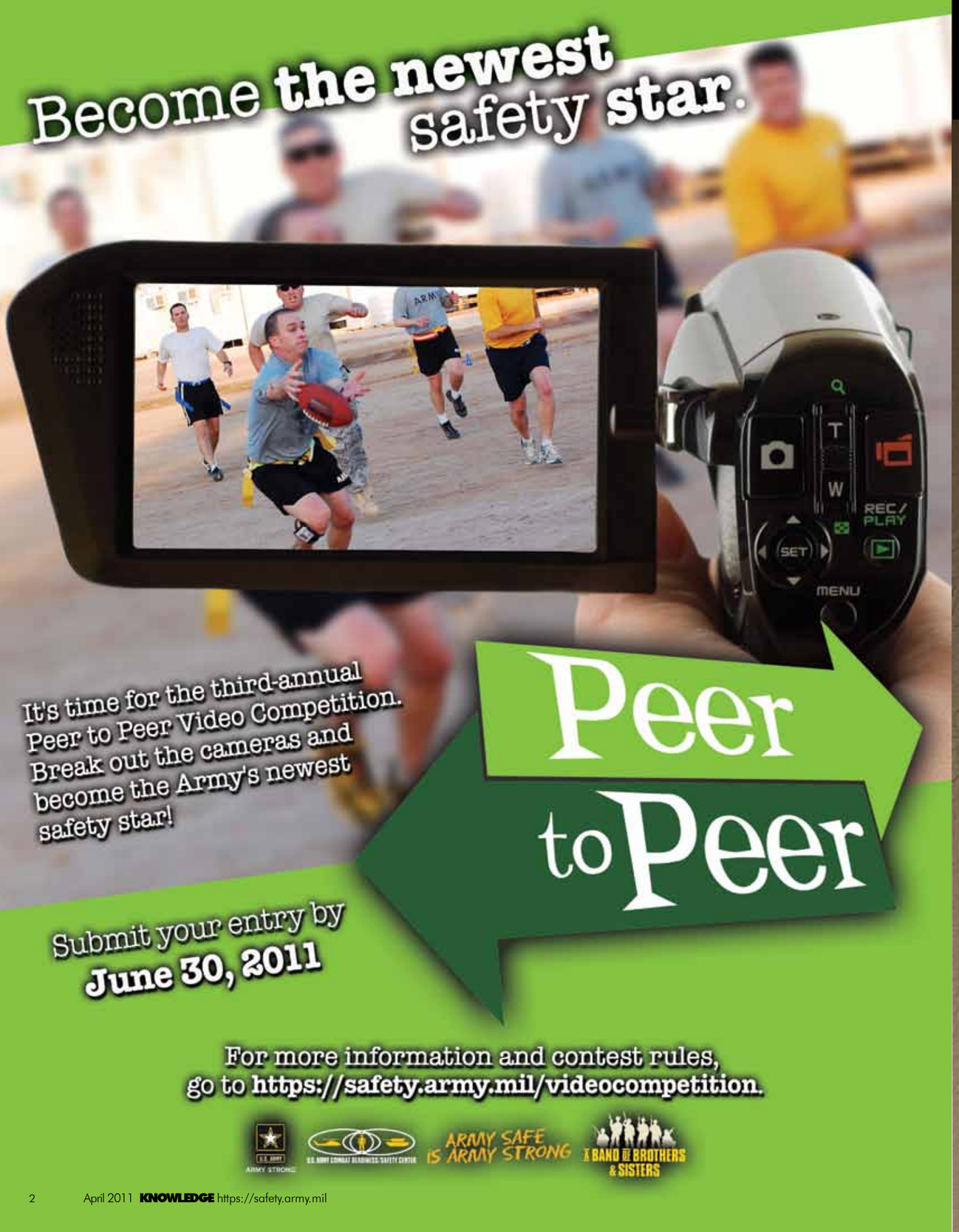

KNOWLEDGE

OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

LEADERS SOLDIERS CIVILIANS FAMILIES

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Mission statement: The United States Army Combat Readiness/Safety Center (USACR/Safety Center) supports our Army by collecting, 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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REDOUBLING OUR EFFORTS

> "As Leaders, peers, Family members and Civilian co-workers, we **MUST REDOUBLE OUR EFFORTS** this spring and summer **TO KEEP ALL** our **SOLDIERS SAFE** and in the fight."

After one of the coldest and snowiest winters on record, many of our Soldiers, Family members and Civilians are looking forward to the approach of spring and the chance to get outside for some eagerly awaited sunshine and balmy temperatures. Before we take advantage of all the spring and summer seasons have to offer, however, I'd like to congratulate each of you on a job well done this past fall and winter. Throughout fiscal 2011, our accidental fatalities have remained consistently below last year's numbers by at least 10 percent, with losses in privately owned vehicles down by as much as 25 percent at any given time. These reductions show that even in the worst of weather conditions, our Army Family is doing the right thing for safety. Thank you all for your efforts every day!

The warmer months offer abundant opportunities for fun with Family and friends, but historically, they're also the most dangerous time of year for our Band of Brothers and Sisters. Far too many Soldiers die every year in accidents associated with "spring fever," whether on the road, open water or any other number of scenarios. For example, during 2010, we lost 74 Soldiers in off-duty accidents between April and September — an average of just over 12 deaths per month — due primarily to POV, motorcycle and pedestrian incidents. After a particularly brutal winter, there's little doubt our Soldiers will be especially eager to take their motorcycles out of storage, enjoy a road trip in their POVs or let off a little steam with friends at local lakes and beaches. As Leaders, peers, Family members and Civilian co-workers, we must redouble our efforts this spring and summer to keep all our Soldiers safe and in the fight.

Just as with our past successes, engagement will be critical to this effort. Although the problem areas we see most — speed, drinking and driving, lack of seat belts in POVs or personal protective equipment on motorcycles — are deadly in many situations, the solution to them is often as easy as a simple conversation with an at-risk Soldier. For Leaders, this means showing their Soldiers they care by taking a personal interest in their off-duty safety and holding them to the standard, even after duty hours. Indiscipline doesn't have to be fatal, and it's up to Leaders to ensure their Soldiers realize the consequences of risky behavior.

Active engagement by friends and Family members is equally vital, for they have access to their Soldiers when Leaders don't. Engaging these two groups is a Leader responsibility as well, so their inclusion in the unit's safety programs should be a top priority. Data from the Army Readiness Assessment Program show our Army's safest units have adopted this "village" approach to safety by utilizing every available asset in their safety programs. Our Soldiers deserve nothing less than the full effort and focus of all their Leaders and loved ones, so extend an invitation to your unit's Family readiness groups or quality of life representatives before your next safety stand-down.

As always, the USACR/Safety Center stands ready to help you keep your Soldiers safe in the coming months. Beginning April 1, the annual Safe Spring/Summer Campaign will go live via our website, https://safety.army.mil, and be available through Sept. 30. This year's theme, "What Have You Done to Save a Life Today?" asks a crucial question of our Army Family and is designed to provoke thought and conversation on our most pressing safety issues through media products, including public service announcements, posters and feature articles covering more than 15 topics. The ready-made campaign presents a great opportunity for Leaders to engage with their Soldiers, enhance their own seasonal safety programs and reach out to Family members and the community for help in keeping the warm days of spring and summer both fun and safe.

To help reinforce the appropriate attitudes and behaviors necessary for promoting off-duty safety among our Soldiers, TRADOC, along with the USACR/Safety Center, has recently introduced a new tool for Leaders and Soldiers called **Off-Duty: On Guard**. This tool helps to raise the awareness level of Soldiers about the decisions they make, while giving them practice in intervening in the unsafe decisions of others. Currently, there are two modules: Beyond the Waterfront and Full Throttle. In each of these modules, participants make decisions for their playable characters and then see how those decisions play out. This tool can be used in small groups with a facilitator or self-instructed, self-paced. To preview this dynamic, interactive tool, visit **http://www.tradoc.army.mil/offdutyonguard/**.

The third module of our Better Opportunities for Single Soldiers Safety Factor presentation will also be released April 1, so be sure to update your current toolkit with the latest video clips and information available on our Army's most common risk takers. Finally, continue to encourage your Soldiers to participate in the third-annual Peer to Peer video competition, which runs through June 30. Prize packages totaling more than $4,000 to benefit your local BOSS programs are up for grabs, and your Soldiers will no doubt enjoy the opportunity to showcase their creativity while sending a positive safety message. Like the Safe Spring/Summer Campaign, both the Safety Factor and Peer to Peer competition are available on our website.

Thank you again for your part in making fiscal 2011 one of our safest years yet, and remember your commitment to safety is critical in the weeks and months ahead. Challenge both yourself and your Soldiers to save a life, and get Families involved in the process. There's no better time to engage on safety than today!

Army Safe is Army Strong!

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

Getting Back to the BASICS

W. RAE MCINNIS
G3 Operations Directorate
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Fort Rucker, Ala.

The basics may include using the proper equipment to inflate a split-ring rimmed tire, properly training and licensing drivers, conducting a thorough passenger briefing or making on-the-spot corrections during training exercises. Combinations of high optempo, fatigue, personnel turnover, overconfidence and complacency have caused us to forget the basics, and our Soldiers and our Army are paying the price. Injuries, destruction of equipment and, most tragically, fatalities are often the consequences of letting down our guard during basic day-to-day operations.

The leading causes of aviation and ground accidents continue to be overconfidence and complacency, often resulting in Soldiers failing to execute operations using the task, conditions and standards to which they were trained. Evidence suggests that Leaders rarely check to ensure that routine duties — the simple things — are performed to standard. Unsupervised, a Soldier's desire to accomplish the mission can lead to taking shortcuts. Shortcuts in routine duties often lead to shortcuts in more complex tasks ... and those shortcuts often lead to disaster.

We have a long list of such accidents in our database here at the U.S. Army Combat Readiness/Safety Center. These accidents share a common thread — somewhere in the accident sequence, either before or during the accident sequence.

Active leadership is the key to halting this alarming trend. When Soldiers violate a procedure or standard, Leaders must take immediate action to correct the situation. In effect, failure to correct the violation sets a new, lower standard and legitimizes the shortcut. Leaders at every level must establish procedures and set and enforce standards that focus on doing things, including the routine things, the right way every time. This is something we owe our Soldiers. Tasks, conditions and standards, SOPs and regulations have been developed over time for a reason: to ensure safe, efficient operations. Enforcing them is one of the best ways we can take care of our Soldiers. Taking or allowing shortcuts does not help our Soldiers, nor does it help us in combat. Combat requires agility of thought in planning, aggressiveness in action and persistence in execution. It also requires an understanding by all of where the left and right limits are. The "basics" or standards provide those limits.

Setting the standard is a function of command; however, the primary responsibility for ensuring execution to standard lies with first-line Leaders. The squad Leader, instructor pilot, team chief and even the "battle buddy" must understand fully what the standards are and understand that shortcuts are not the answer. Our junior NCOs and officers must be the commander's controllers. Tell them what you want and the standards to which you expect your Soldiers to perform. Give them the authority to enforce those standards and halt unsafe activities. Then hold them accountable. They must set the example and be the commander's representative in garrison, training and combat operations.

We are an Army of standards, and we know the basics contained within those standards. We execute them every day. However, the trends indicate that collectively we are letting down our guard. We are destroying equipment and putting Soldiers at risk because they are taking shortcuts and not executing the basics. Don't let the next fatal accident be on your watch because you took the basics for granted.

> "The **SQUAD LEADER, INSTRUCTOR PILOT, TEAM CHIEF AND EVEN THE 'BATTLE BUDDY'** must understand **FULLY** what the standards are and understand that **SHORTCUTS ARE NOT THE ANSWER.**"

He Ran Me Down!

BOB VAN ELSBERG
Strategic Communication Directorate
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

How long does it take for things to go horribly wrong on the highway? In less than three seconds on a September night, a distracted driver forever changed a Soldier's life.

The Harley-Davidson emitted a low rumble as Sgt. 1st Class Ron Gullion waited for a break in traffic to turn left into the entrance to the K-Mart where his wife worked. As he sat on the idling motorcycle, something caught his eye — headlights bouncing up and down as a vehicle entered the road on his right. Glancing over his right shoulder, he saw a Ford Ranger speeding straight at him.

"I thought, 'Oh crap, he's going to hit me!'" Ron said. Quickly glancing back to the left, he looked for a break in the oncoming traffic to cross the road and get out of the pickup's way. But there weren't any breaks, and trying to cut through the fast-moving oncoming traffic would be deadly.

Waving his arms and screaming, Ron tried unsuccessfully to get the driver's attention. He'd just begun to leap off when the Ranger's bumper slammed into his right leg, knocking him off the bike and several feet across the intersection. Amazingly, he landed on his feet, but with his right leg badly injured, he immediately collapsed onto the road. As he did, the pickup ran over the bike and pushed it farther into the intersection, stopping only a few feet from Ron.

Dazed, he lay in the street and saw the pickup's driver get out and start walking toward him. Unsure whether the driver was drunk or what was going on, Ron warned him away. Instead, the driver kept coming and said, "I just want to know if you're OK." Angry at being run down in the road, Ron yelled at him, "Get away! I'm not OK. You just ran over me with your truck!"

Before long, the police arrived and Ron's sense of humor returned as he began joking with them. More than anything, he was just glad to be alive. The police soon began questioning the driver. They were amazed to discover he'd apparently been lighting his pipe while trying to cross a busy intersection. Police estimated he was going at least 25 mph when he hit the Harley.

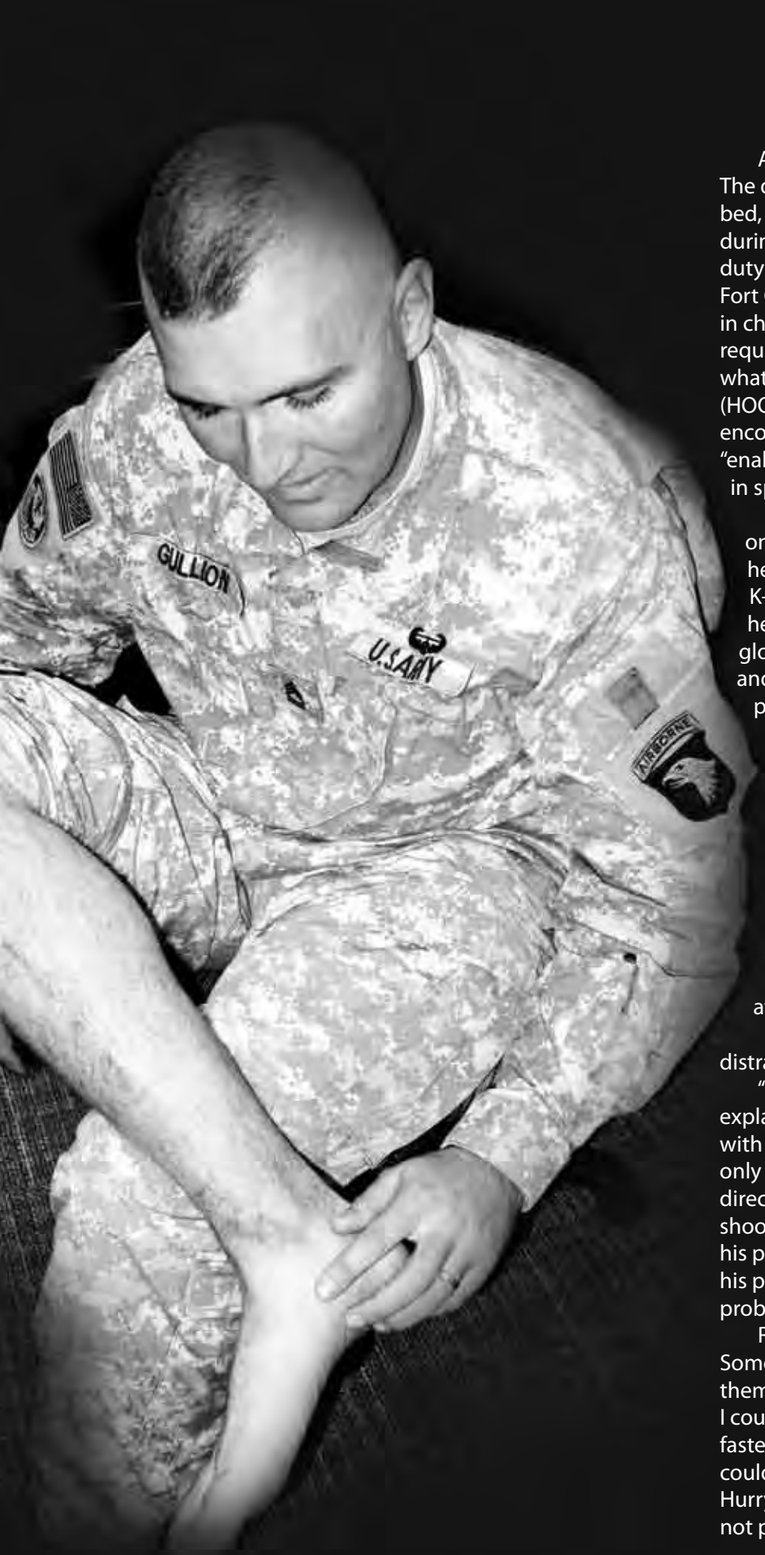
Beth Gullion, Ron's wife, learned of the accident when she was paged to take a phone call. A woman on the other end told her the news. Immediately, Beth ran out of the store, across the parking lot and toward the emergency vehicles in the street. She was shocked at what she saw.

"I looked down on the ground and I saw Ron," she said. "… When I looked over at his leg, I saw it was bent backward and up. You could tell it was broken."

Soon an ambulance arrived. As he was being prepared for transport, Ron asked an emergency medical technician about the severity of his injuries. He told him it didn't look good.

" I looked at him and said, 'You know what, if I pass out or whatever and I wake up without a leg, I'm still alive, so do whatever you have to do,'" Ron said.

Rather than going to a nearby hospital in Hopkinsville, Ky., Ron asked to be taken to Fort Campbell's Blanchfield Army Community Hospital. That night, doctors stabilized Ron and kept him there. However, his injuries required surgical care he could best receive at Vanderbilt Hospital in Nashville, Tenn. He was taken there the following morning and underwent surgery in the afternoon. The bones in his lower right leg were both broken right below the knee and directly above the ankle. The surgeon used a titanium rod and several screws to repair Ron's leg and shattered ankle. After the operation, the surgeon told him his foot would never regain full range of motion and he'd always have pain. Fortunately, Ron's injuries healed better than expected and most of the screws were removed, returning nearly full range of motion to his foot and relieving his discomfort. Ron went from limping to walking normally again.



After two days in the hospital, he went home. The doctor gave him a prescription for a hospital bed, which he used at home for three months during his recovery. He ultimately returned to duty with the Warrior Transition Battalion (WTB) Fort Campbell as the noncommissioned officer in charge of Morale, Welfare and Recreation. He requested that position so that he could create what he named the Healing Outside of a Hospital (HOOAH) program. The program's goal is to encourage WTB Soldiers to see themselves as "enabled," not disabled, by getting them involved in sports and outdoor recreation activities.

Considering what happened that night on Fort Campbell Boulevard, Ron is grateful he survived. Although he'd arrived at the K-Mart without all his normal riding gear, he'd borrowed his wife's helmet and riding gloves and was wearing long pants, boots and eye protection. He believes the piece of personal protective equipment (PPE) that helped him the most was his riding boots. A long scar going up his right foot shows the damage done during the collision. If not for the boots, he believes he would have lost the foot. And that night, even though he rode less than a mile, wearing PPE proved a prudent choice.

"Don't ever think it's just a short ride and I don't need it," he said. "It doesn't matter how far you're going or where you're at, an accident can happen any time."

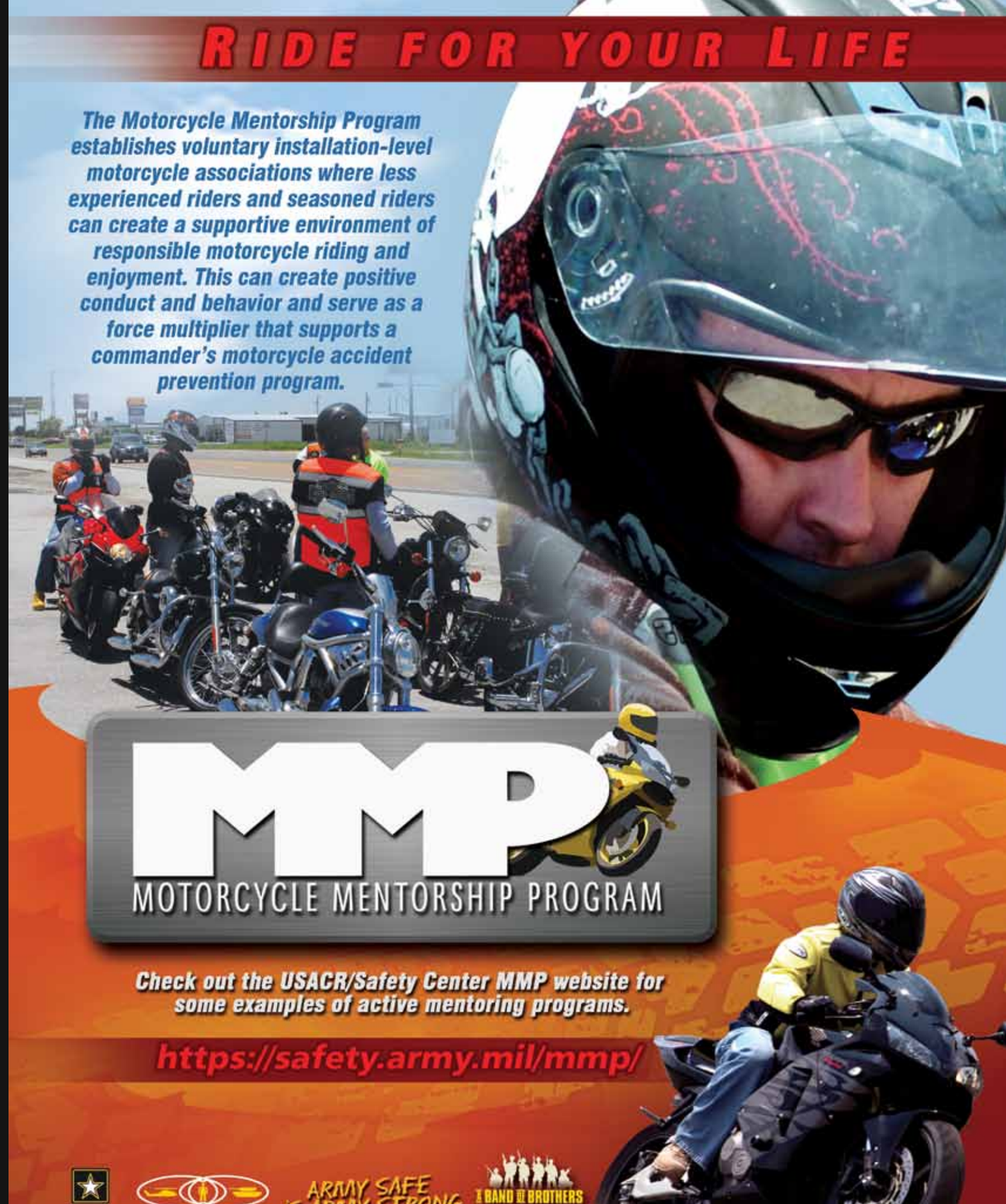
Ron also has a message for impatient, distracted drivers such as the one who hit him.

"Don't be in such a big frickin' hurry," he said, explaining that was a big part of the problem with the driver who hit him. The Ranger's driver only glanced briefly to the left — never looking directly ahead into the intersection — before shooting out into road. Distracted by trying to light his pipe, he never noticed Ron stopped ahead in his path. However, reckless driving is a common problem drivers and riders must deal with.

Ron said, "I see that every day on the highway. Someone will blow by me and I'll catch up with them at a light or in slow-moving traffic. I wish I could tell them, 'You're not getting anywhere faster than anyone else — it just feels faster. You could get there a lot safer if you slowed down.' Hurrying leads to not paying attention — and not paying attention leads to accidents."«

RIDE FOR YOUR LIFE

The Motorcycle Mentorship Program establishes voluntary installation-level motorcycle associations where less experienced riders and seasoned riders can create a supportive environment of responsible motorcycle riding and enjoyment. This can create positive conduct and behavior and serve as a force multiplier that supports a commander's motorcycle accident prevention program.



MMP
MOTORCYCLE MENTORSHIP PROGRAM

Check out the USACR/Safety Center MMP website for some examples of active mentoring programs.

https://safety.army.mil/mmp/

ARMY STRONG.
U.S. ARMY COMBAT READINESS/SAFETY CENTER
ARMY SAFE IS ARMY STRONG
BAND OF BROTHERS & SISTERS

a CRASH COURSE in Canopy Piloting

SGT. 1ST CLASS TOM BOVEE AND
SGT. 1ST CLASS GREG WINDMILLER
U.S. Army Parachute Team
Fort Bragg, N.C.

The summer's near and the time is right … for jumping out of planes!

Just returning from a deployment? Haven't been to the drop zone in a while? Visiting a new drop zone or just new to skydiving? No matter what your reason for skydiving, you want to ensure your experience is enjoyable and safe. Although this article is not meant to be a complete course or a replacement for a qualified coach or instructor, here are some tips to think about before heading to the drop zone.

According to the U.S. Parachute Association, the biggest cause of skydiving fatalities during 2010 was individuals who, while descending under perfectly good canopies, failed to follow basic safety procedures. Paying attention to the drop zone layout, winds and obstacles — in the air and on the ground — is the key to safe and successful landings. Here are some things you can do to help raise your level of awareness:

- Know your drop zone's layout, obstacles and possible "outs" (landing areas not on the drop zone).
- Check the wind direction and speed before boarding the aircraft and know your limits.
- Follow the landing pattern established by the drop zone's standing operating procedure.
- When returning to jumping after a break, ensure you jump with a canopy comparable in size and type to what you were proficient with before the break and don't be afraid or embarrassed to upsize.
- Don't downsize canopies too quickly. The faster you downsize, the faster you become a statistic.
- Avoid attempting high-performance landings when you're not ready. A good downwind, base and final is the safest and best technique to use and is a safe way to start off right.
- Never try to impress anyone on the ground. The paramedics don't care if you can do tricks. The most impressive landing is the one that allows you to immediately jump again.

> "The most **IMPRESSIVE** landing is the **ONE** that **ALLOWS** you to immediately **JUMP** again."

The best way to determine if you are being safe is to ask yourself this question: "Am I proficient at what I am getting ready to do and am I comfortable with it?" If there is any doubt, then the answer should be, "Don't do it!" As a regular part of pre-landing checks, consider making the following a part of your landing rituals and routine:

- Perform a controllability check after the canopy is open and you have cleared your airspace.
- Watch jumpers below you to see what the pattern is. The wind direction could have changed since you took off.
- Keep an eye on your altimeter. It is just as important on approach and landing as during freefall.
- Identify where you are in relation to hazards on the ground and make preparations to avoid them.
- Watch out for fellow jumpers and keep your head on a swivel. The lower jumper has the right of way.

In the end, make sure you have fun and be safe! "Blue Skies!"

Risk versus Benefit

CHIEF WARRANT OFFICER 4 RICHARD A. CHAGNON
Detachment 47, Operational Support Aircraft
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Salem, Ore.

With our visibility down to three miles, we had to wait for brigade commander approval to launch our aircraft. Time was running out. We knew if we didn't get off the ground soon to evacuate the two Soldiers, they would die.

The injured Soldiers had been hit with an improvised explosive device (IED) blast and were listed as "urgent surgical." Every crewmember onboard the UH-60 medevac aircraft was anxious to get going.

We finally received launch approval and were on our way to the point of injury (POI). It had been 18 minutes since we first received the 9-line medevac request and about 30 minutes since the IED blast occurred. With visibility deteriorating, the pilot in command (PC) in our chase aircraft and I were talking about the weather and possible solutions for our return flight to the combat surgical hospital (CSH).

It was still another 15 minutes or so to the POI. My co-pilot advised me he was going to slow down to 70 or 80 knots due to decreased visibility. I knew slowing down would take us longer to reach the POI; however, it was the best course of action. I acknowledged and reiterated our intentions to our chase bird, and they agreed. I continued to work on a plan for the return flight to the CSH based on our deteriorating weather conditions.

You could sense the stress in everyone's voice within our aircraft and on the radio from our chase bird. The weather was not looking good for continued flight, yet two Soldiers were critically injured and counting on us to get them to the hospital.

We arrived near the POI location 32 minutes after we took off from the base. The visibility had decreased to about one mile. Upon arrival to the landing zone (LZ), we contacted the ground unit to advise them we were a few minutes out. To locate the LZ, the 9-line stated it would have green chemical light sticks on a secured dirt road. We knew we were close to the LZ, but we couldn't see the chem lights. The chalk leader of the ground unit called us on the secure FM radio and said he could see us on the south side of their position. He mentioned the wind was out of the northwest and the dirt road was oriented east and west.

We completed our before-landing checks and I told the crew to make sure they were secured in their seats with seat belts and shoulder harnesses fastened. With the dust, wind, limited visibility and our landing to an unimproved surface,

we had a good chance for brownout. As we headed north and started our descent, my medic said he had the chem lights in view at 10 o'clock low. I glanced down from my position in the left pilot's seat and confirmed. My co-pilot made a slight left turn and he also acknowledged seeing the lights.

That's when it happened. We were on short final to the west, and the PC of the chase bird radioed they had lost us in the dust. Both my crew chief and medic looked up and behind the aircraft. Our medic spotted the chase aircraft about two rotor-discs behind and 50 feet above us. He yelled, "They're almost on top of us!" By the time I got to the radio to direct them away, they had flown over the top of us, missing us by no more than 30 feet.

The scenario above is fictional; however, it very well could have happened. Night flying in a combat zone is extremely dangerous and, with limited visibility, presents many challenges. Even with good initial risk mitigation and controls in place, changes in risk due to unforeseen hazards are constantly occurring.

Crews are increasingly called upon to execute hasty risk assessments. Once an aircraft launches and is executing its mission, the "supervise and evaluate" step of the risk management process has to be the PC's responsibility. The PC also has to continue with the process and reevaluate the situation as hazards change and, as necessary, change the controls based on new risks.

There is also the additional weight in the thought process of how your decisions affect others and, in this case, the injured Soldiers. Effective risk management relies upon Leaders not accepting any risk unless the potential benefit outweighs the potential loss. Risk mitigation must be objective and completed at the briefing table with the crew, briefer and final mission approval authority. However, reevaluating risks during a mission takes more than a group of people sitting in the briefing room.

Lessons learned from this scenario can help us plan better and make good decisions when the "real" incident occurs. Is transporting the wounded worth getting an aircraft shot up or having an accident because of deteriorating weather, brownout or threat? Perhaps the ground unit can medevac the wounded to the CSH? Explore all options to effectively reduce risks and apply controls, understanding those risks may change unexpectedly. Commanders, pilots and crewmembers all must ask, "Does the benefit outweigh the risk or is the risk too great for the benefit?"«

Are You a Distracted Driver?!?

BARRY D. JOHNSON
Marine Corps Air Station New River
Jacksonville, N.C.

How many times have you answered your cell phone, ate or drank, read a book, adjusted your radio or put on makeup while driving? Many drivers today consider these tasks as part of their normal driving habits, getting away with it for so long they consider it normal. Unfortunately, sometimes the result of distracted driving is mangled vehicles and dead or injured victims.

The National Highway Traffic Safety Administration reports that almost 20 percent of all crashes in 2008 involved some type of distracted driving. Those crashes killed nearly 6,000 people and injured almost 500,000. These crashes could have been avoided had drivers paid attention to driving and not doing other things.

Distractions cause crashes when drivers take their hands off the wheel, look away from the road or mentally focus on something other than driving. As a result, the lengthened reaction time may prevent drivers from responding in time to avoid a crash. In addition, distractions may cause drivers to lose situational awareness, missing things like changes in speed limits, stop signs and other warning signs and traffic signals. These errors behind the wheel may also lead to a crash.

Have you ever been guilty of distracted driving? Think about when you have been driving. Were there times when you took your eyes off the road? What happened? Many times, perhaps nothing dangerous resulted. However, were there times when you realized the vehicle ahead had stopped or slowed down and you had to jam on the brakes or swerve to avoid a crash? Have you ever found yourself running a red light that just a few seconds ago was green? This is what happens when motorists aren't focused on their driving. These minor and sometimes innocent distractions can put us and other drivers in danger.

FYI

For more information on distracted driving, visit the National Highway Traffic Safety Administration website at www.distracteddriving.gov.

There are many ways to prevent distracted driving. One is to pull off the roadway and park in a safe place to answer calls or texts. As tempting as it might be, avoid adjusting your GPS navigational device while driving. Know where all the controls for your vehicle are located so you don't have to take your eyes off the road when you need to operate them. Plan ahead and know your route; avoid trying to look at a map or read a printout of directions while you're driving. Lastly, keep children properly secured in a seat belt or child seat and pets secured in a carrier or a seat belt harness.

Preventing distractions while driving should be part of your composite risk management before starting out on any trip. Reducing distractions will greatly increase the chance you will arrive at your destination safely.

AN OUNCE OF PREVENTION...

LISA YOUNG
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Aberdeen Proving Ground, Md.

The weather is warming up, and summer heat will arrive before we know it. Now is the time to start thinking about preventing heat injuries in yourself and other Soldiers.

The incidence of heat stroke hospitalization in Soldiers has increased eight-fold during the last 20 years, according to the latest Army Heat Injury Prevention Policy Memorandum. Heat injuries can occur in garrison and operational environments, during unit and individual physical training, training exercises, recreational events and even in activities that require very little physical exertion. These injuries are a threat to medical readiness and to the fitness of individual Soldiers.

Commanders and NCOs are charged with putting in place the necessary measures to prevent heat injuries. Medical personnel also have a key role in supporting unit leadership in their efforts to protect Army personnel. In addition, individual Soldiers play a part by following the guidance they are given and paying attention to warning signs in themselves and others.

The primary reference on preventing heat injuries is Technical Bulletin Medical (TB MED) 507, Heat Stress Control and Heat Casualty Management.

TREAT THE HEAT

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Directorate of Health Promotion and Wellness
Aberdeen Proving Ground, Md.

In Australia, where I'm from, a public health campaign encourages individuals to "slip on a shirt, slop on sunscreen, slap on a hat, slide on some sunnies (sunglasses) and seek shade." While this campaign is directed mainly at preventing skin cancer, the summer sun also puts us at great risk for other health injuries.

Heat injury and illness pose a significant threat to Army personnel, whether deployed, assigned to a training center or just partaking in outdoor recreational activities. Heat-related injuries are the third-most reported medical event within the military over the last 10 years and are responsible for more than 1,300 hospitalizations in the Army alone. Minor heat illnesses such as heat cramps are often the first sign of a heat injury. If not treated properly, the result can be heat exhaustion, which can turn into a major injury such as heat stroke.

Heat Cramps

Heat cramps are muscle pains or spasms — usually in the abdomen, arms or legs — that can occur during strenuous activity. Soldiers who perspire a lot are more likely to suffer from heat cramps because sweating depletes the body of salt. Drinking large quantities of water after exercise can dilute body salts even further, which can worsen heat cramps.

If you believe you're suffering from heat cramps, stop all activity and sit quietly in a cool place. Drink clear juice or a sports beverage or add a half packet of salt from an MRE to a canteen of water. It's best to refrain from strenuous activity for a few hours after the cramps subside because further exertion could lead to heat exhaustion or heat stroke. If the cramps do not subside in one hour, seek medical attention.

Heat Exhaustion

Heat exhaustion is the most common heat injury. A Soldier suffering from heat exhaustion will often look pale with cool, moist skin, but will be sweating profusely. This can be accompanied by feelings of dizziness or faintness, headache, nausea and weakness, as well as increased thirst and a rapid heartbeat.

If a Soldier is suffering from heat exhaustion, there are several steps to take. First, move the victim to the shade and loosen their clothing in an attempt to cool the body. Drink at least a canteen of cool water. You can even pour water on the exposed skin and fan to cool. If available, put ice or sheets that have been soaked in ice water on the neck, armpits and groin. Elevate the legs. If the symptoms do not subside, get the victim medical care.

Heat Stroke

Heat stroke is a medical emergency often resulting from exercise or heavy work in hot environments combined with insufficient fluid intake. When the body's mechanisms for handling heat stress fail, the result can be heat stroke, which can be life-threatening. The main indicator for heat stroke is an elevated body temperature, generally greater than 104 F. This can lead to changes in mental status, unconsciousness and coma. Other signs to look for are rapid heartbeat, hurried and shallow breathing, headache, nausea, irritability, confusion and a cessation of sweating. Sometimes, fainting can be the first sign for older adults.

If an individual is suspected of suffering from heat stroke, immediate care can mean the difference between life and death. Call 911 or get the person medical attention as soon as possible. Loosen or remove clothing and cool the body with cool water, ice packs or ice sheets. Have the victim take sips of cool water or a sports drink if they're alert and able. Avoid alcohol and anything with caffeine.

Preventive Measures

To help avoid heat-related injuries, Leaders and Soldiers should:

- **Drink plenty of fluids.** In hot environments, it's possible for the body to lose one liter of fluids per hour. Thirst is not a good indicator of fluid loss. Don't wait until you're thirsty to drink fluids.
- **Be aware of their environment.** If you work in the heat or around heat sources, take whatever steps are possible to control the heat externally. It's also recommended that ice sheets be readily available during high-risk activities to reduce the severity of a heat injury.
- **Take frequent breaks.** As the temperature increases, take more frequent breaks to stay cool.
- **Wear proper clothing.** Loose, lightweight fabrics encourage heat release.
- **Acclimatize.** It takes at least seven to 10 days to get used to working in a hot environment.
- **Stay in shape.** A healthy heart and good muscle tone work more efficiently and generate less heat.
- **Eat light during the workday.** Hot, heavy meals add heat to the body and divert blood flow to aid with digestion. Normal dietary intake typically replaces all salt lost during the day, so there is no need to take salt supplements.
- **Be aware of special heat stress risks.** Caffeine, alcohol, diabetes or medications for high blood pressure and allergies can increase the risk of heat stress.

Conclusion

Each year, Soldiers fall victim to preventable heat injuries. Although Leaders are accountable for their Soldiers' health, Soldiers also have an obligation to mitigate their risk. Stay fit to fight this summer. Take the appropriate preventive measures and monitor yourself and your battle buddies for the signs of heat-related injuries.

This guide covers all aspects of heat injury prevention, including heat mitigation procedures, identifying high-risk individuals, heat acclimatization, fluid and electrolyte replacement, work/rest guidelines, management of heat casualties and vigilance. The 2003 Ranger and Airborne School Students Heat Acclimatization Guide also offers practical guidance to allow Soldiers to perform at their best without succumbing to heat-related injuries. A video, Heat Injury II, Prevention and Treatment, is available as well. In addition, the U.S. Army Public Health Command (Provisional) and U.S. Army Research Institute for Environmental Medicine have developed valuable heat injury prevention products, including posters, videos and pocket guides. These products can be found on the Public Health Command's website at http://phc.amedd.army.mil.

Climate variables (such as temperature and humidity), intensity of activity and individual risk factors interact to cause heat injuries. Individual risk factors include lack of heat acclimatization, cumulative exposure to heat, poor physical fitness, being overweight, concurrent illness, medications/dietary supplements, alcohol use, prior history of heat injury, skin disorders and being over 40 years old. Drinking beverages containing caffeine or alcohol within 48 hours of training also increases the risk of heat injury. Newly mobilized personnel, especially those from cool climates who are

> "Fortunately, **HEAT INJURIES** are **PREVENTABLE,** and none need be **FATAL.**"

not properly heat acclimated, are more at risk of becoming a heat casualty. Additionally, training in a compressed timeframe before deployments also increases risk.

Drinking too much water is also a risk. A number of deaths have occurred in the Army due to water intoxication, an electrolyte disturbance in which the sodium concentration in the plasma is too low. Proper water consumption guidelines should be followed to prevent overhydration. Fluid needs can vary based on individual differences (± ¼ quart/hour) and exposure to full sun or full shade (± ¼ quart/hour). Hourly fluid intake should not exceed 1½ quarts, and daily intake should not exceed 12 quarts.

It is essential that commanders, NCOs and medical personnel are educated on preventing heat injuries and implement a risk-management-based, comprehensive heat injury prevention program. Programs must include identification and assessment of hazards in terms of severity and probability, implementation of appropriate controls to reduce heat injuries and evaluation of the effectiveness of control measures. Early recognition of heat exhaustion is critical to prevent progression to a more serious heat injury and death. *(Editor's note: For treatment options for several common heat injuries, see the article "Treat the Heat" on page 22.)*

Soldiers will be exposed to extreme heat conditions as their units train for operational missions. Fortunately, heat injuries are preventable, and none need be fatal. Leaders must assess their unit's missions and training requirements against the risks of operating in warm weather environments. Early recognition and treatment of Soldiers showing symptoms of heat injuries is the key to saving lives.

FYI

For more information on preventing heat injuries, see Technical Bulletin Medical 507, Heat Stress Control and Heat Casualty Management, at http://phc.amedd.army.mil/home/ or FEMA First Aid for Heat-Induced Illnesses at http://www.fema.gov/hazard/heat/heat_aid.shtm.

TRUST YOUR INSTRUMENTS

CHIEF WARRANT OFFICER 4 JOHN D. CALLEY
B Company, 2nd Battalion, 224th Aviation Regiment
Virginia Army National Guard Army Aviation Support Facility
Sandston, Va.

In 2006, I was deployed to Iraq with the 2-224th Aviation Battalion. The 224th is an assault battalion of UH-60 helicopters from the Virginia Army National Guard. I was a platoon instructor pilot with about 2,200 flight hours. We were under the command of Marine Expeditionary Force I and had replaced a squadron of Marine CH-46 helicopters. We were based at Al Asad Air Base in the western Al Anbar Province; however, our normal area of operations was from the Syrian and Jordanian borders in the west to Baghdad in the east.

We did the majority of our flying at night and landed primarily at airports or forward operating bases, although we occasionally landed at unimproved areas. Weather was always our main concern, as accurate reporting and observations were difficult to obtain. Ceiling and visibility could and would change with little to no warning. Visibility was particularly problematic because the sand and dust would kick up and sometimes hang in the air for days.

Another hazard at night was the level of illumination — or the lack thereof. When the sky is clear and the moon is full, it's very bright. However, when there was little to no moon, the sky is disturbingly dark. Add a little sandy, dusty haze to the mixture and you have to struggle to find even small visual cues. Yet, as we approached the cities and towns, their artificial lights helped considerably.

We had been in country for about eight months, knew the area well and were comfortable flying mixed aircraft operations with the Marines. On this particular night, I was flying with our S3. He was an experienced pilot in command but didn't have a lot of recent flight time due to his staff position. Nonetheless, I still had complete confidence in his judgment and flying ability.

We were Chalk 3 in a flight of three. Lead was a Marine UH-1 equipped with forward-looking infrared radar. Chalk 2 was another one of our UH-60 Army aircraft. We were flying west on a low illumination night. The visibility was above our minimum required; however, it was close enough to cause some discussion as to whether we should delay or cancel the mission.

As we flew into deteriorating visibility, I started to feel as if I were in an increasing left turn. It started slowly and was like nothing I had experienced before. I always knew to trust my instruments or, in this case, the heads-up display connected to my night vision goggles. Normally, any leaning sensation or spatial disorientation would be short-lived. Unfortunately, the sensation continued to worsen until I felt I was in about a 30-degree left turn. I continued to trust my instruments and attempted to fly through this condition, all the while hoping it would be temporary. At this point, I should have transferred the flight controls, but I didn't want to create a situation where my pilot (PI) had to do both his job and mine. Besides, we were flying straight and level and everything was working fine.

The weather began to worsen and we finally made the decision to abort the mission. I was OK as long as we made a nice, easy turn to the left, which is how I felt we were turning anyway. When lead announced he was making a 180 to the right, I told my PI, "No way." I stated there was no way I could turn right and maintain aircraft control. I then transferred the controls to him. We executed a slow climbing right 180 — much like an instrument meteorological condition breakup — because we lost sight of the first two aircraft. I think my PI was a little freaked out because there was little warning. The visibility improved as we climbed and we could easily see the lights of Al Asad in the distance.

We recovered without incident and had a thorough debrief. Although I should have done a better job of keeping my crew informed of my decreased ability, I think my training worked, as it should. As a pilot, it's important to recognize what is happening, trust the information your systems are providing, take action when you've reached your limit and rely on your crew to perform their jobs.

MY "LUCKY" DAY

It was the spring of 1990, and I was stationed at "beautiful" Camp Pendleton, Calif. I had just recently married my high school sweetheart, was two months from pinning on the rank of corporal and was gearing up to go on my first deployment. I thought my life could not get better until I received a phone call from my older brother asking if I was interested in purchasing one of his motorcycles.

KARL SEMLER
Marine Corps Air Station Yuma
Yuma, Ariz.

Being that I was stationed in sunny California, the thought of riding a bike down the Pacific Coast Highway was a dream I now had a chance to make come true. My brother had a couple of friends interested in the bike, but he thought he would keep it in the family and give me the first shot at buying it. My wife, on the other hand, was not too excited about the idea of me riding a street bike. She knew my only previous experience was riding dirt bikes in Arizona, and that had been years ago.

Well, I jumped at the offer and was on the road to Phoenix the next weekend to pick up the bike, a fully loaded 1982 Honda Gold Wing. My pride in owning a tour bike was showing as I told my wife of all of the places we were going to explore while enjoying the freedom of riding a motorcycle.

The week after I bought the bike, my staff sergeant had me enrolled in the Motorcycle Safety Foundation's Basic RiderCourse. I was sure it would be a piece of cake. Little did I know it would become quite the challenge to get such a large and heavy bike around that short, tight course. I could have easily breezed through it on the dirt bikes I used to ride, but the Honda was much more difficult to maneuver. I instantly realized it would be a while before I could even think about taking my wife for a Sunday ride.

After I completed the course, I became a licensed motorcycle rider and was eager to get out on the road with my buddies and their bikes. They knew I was a new rider and actually took it slow for the first couple of rides. However, it soon became a challenge to keep up with them. They all had sport bikes, typically called "crotch rockets" — known for their instant speed and maneuverability. They were much different from the large, heavy touring bike I was riding. As I slowly gained more and more confidence riding, I began to push my limits.

Eventually, I had the confidence to take my wife on a ride with my friends to the town of Julian, Calif. Julian is a small town known for its apple pies and friendly atmosphere, and for months my wife had wanted to visit. I figured what better way to see it than on a bike. So we met my friends, who were eagerly waiting on their sport bikes, and began riding through some of the most beautiful countryside in southern California. Every so often my friends would open up their bikes on a long straightaway when there was no traffic and sometimes I would join them. My wife and I were both young and enjoying the adrenalin rush of the speed and freedom of being on the bike.

As we got closer to Julian, the roads became narrower and the turns tighter. As they rode through a tight 10-mph turn, I was amazed how smoothly their bikes maneuvered. However, it didn't go quite so well for me. I hit the turn going 20 mph and couldn't lean the bike far enough to avoid drifting over the double yellow line. We crossed the oncoming lane and stopped on the far shoulder, where we could "enjoy" looking down from a 100-foot cliff.

We were fortunate there was no oncoming traffic. I was also glad to be wearing a helmet, as it protected me from my wife, who was a "little" upset and slapping me on the back of my head. The ride home was uneventful, and the sale of the bike two weeks later was a blessing.

As I reflect on the situation, I can't believe I let the excitement of riding a motorcycle override my using risk management to recognize I was riding way beyond my experience level. My friends were much more experienced and riding bikes that were much smaller and lighter than mine. If I could turn the clock back, I'd have purchased a smaller bike to learn on while riding on the streets and highways and resisted the urge to push the limits.

My wife and I were lucky not to become part of the landscape that day. However, luck doesn't cut it — not when your life and the life of someone you love are on the line. Don't buy more bike than you can handle, thinking you'll "grow" into it. You may not live that long. And give yourself a break; recognize even Superman had to learn to walk before he could fly. Ride within your skills and, if you're a bit sharper than the average "tack," leave yourself a little margin for safety. After all, when you're headed for the edge of a 100-foot cliff, where would you rather stop — one foot before or one foot beyond?

A ROUGH DAY ON THE LAKE

CHIEF WARRANT OFFICER 2 IVAN MCFARLAN
59th Troop Command
South Carolina Army National Guard
West Columbia, S.C.

Fishing might not seem like a dangerous activity, but plenty can go wrong any time you drop a boat into the water.

It was my first South Carolina Army National Guard fishing tournament, and I was excited. The tournament was held at Lake Murray, a large, manmade reservoir in the heart of South Carolina that covers 78 square miles with nearly 650 miles of shoreline. I couldn't wait to wet my line in one of the premier fishing locations in the South.

My fishing partner and I thought we had planned for everything. He made sure his boat was in good condition and had personal flotation devices for each of us. We both even bought new equipment and stayed up late the night before the tournament getting everything ready. What we both forgot to do was check the local news channels for the weather forecast.

We got to the lake early that Saturday morning and put the boat into the water. We should have known we were going to have a bad day when my partner fell into the water while pushing the boat off the trailer. We launched soon after his unexpected dip and spent the next four or five hours fishing the shoreline and going in and out of quiet coves.

As we crossed over to the other side of the lake, we heard the distant rumble of thunder. The wind also started to pick up and we could see the tops of the trees swinging wildly from side to side. The waves on Lake Murray can be pretty rough when the wind is up. Still, we continued to cross.

About halfway across the lake, the dark skies opened up on us. Almost immediately, waves hit us from both sides as we pushed across the water to get to the other side. Over and over again, as each wave would hit, we were launched upward by the force of the water, only to come crashing down into our seats. Suddenly, a large wave appeared in our path. It was too late to turn to avoid. We took on a lot of water, losing much of our bouyancy. Even smaller waves were now dangerous because they, too, were filling the boat. We had no choice but to keep going.

We decided to try to make it to a small island about 200 yards away. After what seemed like an eternity, we finally reached solid ground. By now, the boat was more than halfway full of water. If we had not reached the island, we surely would have sunk under the weight of the water, our equipment and ourselves.

It took about 30 minutes for the storm to blow over. Before we could empty the boat of water, we had to unload all of the equipment. After flipping the boat over, we put everything back in and began our journey back to the launching area. We didn't even weigh in the fish we'd caught. We just raised the boat onto the trailer and went home. Both of us were just too wet and exhausted to be bothered with the rest of the event.

All of this drama could have been avoided if we had just checked the weather forecast. We learned from our mistake, and we always make sure we check now. Failure to prepare properly can lead to a rough day on the lake.«

WEATHER WATCHIN'

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
www.noaa.gov

Weather can be both friend and foe. Calm winds and seas make for enjoyable boating, water skiing and fishing. A fresh breeze and a light chop provide an invigorating sailing or windsurfing experience. But the sudden emergence of dark clouds, shifting and gusty winds, torrential downpours and lightning can turn a day's pleasure into a nightmare of distress. Here are some tips on how to keep your pleasure and safety to a maximum.

Several Days in Advance ...

Start listening for the National Weather Service extended five-day outlooks on NOAA Weather Radio, AM/FM radio and TV. The outlooks give general information to help you decide whether to continue making plans.

Before Setting Out ...

Pay close attention to the TV weather forecast and listen to detailed marine weather forecasts on NOAA Weather Radio. Take note of small boat cautionary statements, small craft advisories, or gale or storm warnings in the forecasts. The advisories and warnings alert mariners to higher winds and waves either occurring now or forecast to occur up to 24 hours from now. Advisories and warnings for conditions expected later give mariners time to take action to protect life and property.

After Setting Out ...

Don't touch that dial! Stay tuned to NOAA Weather Radio. Changes in the weather often occur out of sight and could be headed your way. Updated warnings and forecasts are aired immediately on NOAA Weather Radio, alerting you to changes that may require action on your part.

Here is some additional information to keep you safe:

- Watch for signs of approaching storms — dark, threatening clouds that may foretell a squall or thunderstorm; a steady increase in wind; or lightning flashes.
- Pay attention to the wind. An increase in wind opposite in direction to a strong tidal current may lead to steep waves capable of broaching a boat.
- Heavy static on your AM radio may be an indication of nearby thunderstorm activity.
- If a thunderstorm is approaching, head for shore if possible. Get out of your boat and away from the water. Find shelter immediately.
- If a thunderstorm catches you while afloat, remember that gusty winds and lightning pose a threat to safety.
  - Ensure your personal flotation device is fastened and prepare for rough seas.
  - Stay below deck if possible.
  - Keep away from metal objects that are not grounded to the boat's protection system.
  - Don't touch more than one grounded object at the same time (or you may become a shortcut for electrical surges passing through the protection system). «

ARE YOUR TIRES FULL OF IT?

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Fort Campbell, Ky.

When was the last time you checked the air pressure in the tires of your automobile, truck, motorcycle, boat trailer or recreational vehicle? Can you remember? Or maybe it was done the last time you had an oil change (or at least you hope it was). The fact is proper tire inflation is important to the overall safe operation of your vehicle.

Automobile Tires

Properly inflated and maintained tires improve the steering, stopping, traction and load-carrying capability of your vehicle. Therefore, you should maintain proper tire pressure, observe tire and vehicle load limits, avoid road hazards and regularly inspect your tires. Because tires normally lose air over time, it's important to check your vehicle's tire pressure at least once a month. Tires can also suddenly lose air if you drive over a pothole or other object or strike the curb when parking. With radial tires, it's usually not possible to determine if they're underinflated by looking at them. For convenience, purchase a tire pressure gauge to keep in your vehicle. Gauges can be purchased at tire dealerships, auto supply stores and other retail outlets.

When and How to Check Your Tires

The recommended tire inflation pressure suggested by vehicle manufacturers reflects the proper psi when a tire is cold. The term "cold" does not relate to the outside temperature. Rather, a cold tire is one that has not been driven on for at least three hours. When you drive, your tires get warmer, causing the air pressure within them to increase. Therefore, to get an accurate tire pressure reading, you must measure tire pressure when the tires are cold or compensate for the extra pressure if they're warm.

Checking Your Tire Pressure

Find the manufacturer's recommended tire pressure for your car. This information is usually on a placard on the doorjamb on the driver's side (and it is also contained in the owner's manual). It might call for different pressures for the back tires and the front tires.

- Check the pressure when the tires are cold as described above, or you can just check them first thing in the morning.
- Unscrew the valve cap and place it where you won't lose it.
- Press the tire gauge onto the valve stem. There might be a slight hiss as you press the gauge down and as you release it. You only need to do this for a second or two to get an accurate reading.
- Read the tire pressure on the gauge. Compare the tire pressure readings you got with the specified amount called for by the manufacturer. If your tires are not inflated to the specified amount, you need to fill them to meet the manufacturer's recommended air pressure.

Motorcycle Tires

Every year, many riders are injured or killed in crashes caused by underinflated or neglected tires. Such tires decrease stability, limit traction and increase the danger of catastrophic failure. All too many riders fail to check their tire pressures until they notice their bike isn't handling properly. However, waiting to that point can lead to a disaster. Wise riders check their tires before every ride.

Motorcycle Tire Underinflation

Underinflation causes excessive sidewall flexing, which results in heat build-up inside the tire. Heat is a tire's worst enemy, making it more vulnerable to damage from normal road impacts and accelerates tread wear. Excessive heat can also cause hidden interior separations, leading to blowouts. And, as any rider knows, a blowout can cause a loss of control and a serious accident.

Beyond that, low tire pressure reduces the speed at which a tire maintains full contact with wet roads. This is commonly referred to as hydroplaning and is a major hazard. The reason is underinflated tires have a larger "footprint" — area of tread on the road — which lessens the ground contact pressure. This lessens the tire's ability to push water away from the tread while rolling over the road. Both motorcycle and car tires provide their best wet weather traction when properly inflated.

Underinflated tires can also significantly affect a motorcycle's handling, causing a bike that might feel stable while going straight to handle unpredictably when cornering. As a rule, cornering with an underinflated rear tire will cause the bike to oversteer (turn more sharply than anticipated), whereas cornering with an underinflated front tire will cause the bike to understeer (turn less sharply than anticipated). Either situation can be extremely dangerous for riders. Whenever a rider notices their bike is beginning to handle strangely, it's a good idea to stop and check the tire pressures.

Motorcycle Tire Overinflation

Riding on overinflated tires can also be dangerous. Overinflated tires reduce riding comfort and stability and are more susceptible to cuts, punctures or damage by sudden impacts. Overinflation can also result in uneven tire wear and reduce the tires' contact area with the road, reducing the bike's traction while cornering.

It is important to manually check your tire pressure, visibly inspect your tires for wear and damage and regularly rotate your automobile's tires. Remember, when in doubt, consult a tire professional. After all, your life is riding on your tires, so keep the rubber on the road and arrive alive.«

OPERATOR DISTRACTION on the AIRFIELD

MASTER WARRANT OFFICER RAY GILLIS
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The debate over cell phone or electronic device use in vehicles is a hot topic and makes a great discussion with many opinions. As a former human factors aviation instructor, flight safety investigator and general safety officer, I wish to provide some insight on this topic. Thirty years' experience in the aviation field has taught me one thing: never endorse or recommend the use of any device that interferes with safe operation on the airfield.

The main problem is some people believe they can multi-task — that is drive and talk on the phone at the same time or, worse yet, text on an electronic device. However, when you understand how the brain functions, you'll also understand why we do not multi-task all that well. First, our minds only process one thing at a time and we jump from thought to thought. Our minds are continually processing information from our environment. It is a survival trait, in that we are looking for hazards to our well-being. I call this the awareness stage. Once we become aware of a hazard, we process the implications and then plan and act. We do this instinctively.

A good example would be a deer running in front of your moving vehicle. Once you see the deer (awareness) and take action (plan), your response is to brake hard or steer out of the way. We know what the implications are (collision) and we plan and act, usually without thinking. This full process (avoiding a deer) — awareness, implication, plan and act — happens very quickly. Now if the driver is on the phone, they may see the deer. However, because they're processing verbal information, they might not recognize the implications of failing to plan or take action in time.

I personally experienced this in Winnipeg three years ago. I was picked up by a friend at the airport and on the drive downtown, a young lady smashed into the back of our vehicle. When she got out of her car, she said she was on the phone and didn't see us. Believe it. We were there. The damaged vehicles definitely proved that happened. However, in my job teaching human factors in aviation, I fully understood what she was experiencing.

The next time you're driving a vehicle on the airfield, think about all the dangers involved. Taxiing aircraft, armament convoying, sweepers, fuel trucks, servicing vehicles and emergency response crews are just a few of the hazards.

Think about how many times we make corrections to operate our vehicles safely. We process visual cues along with sensory information (acceleration, braking, sound), and rather than calling it driving, we are actually operating in a collision avoidance regime. Failing to process information from our surroundings, even for a short time, could lead to a collision with another vehicle or aircraft. This is the main reason for posted speed restrictions on the ramp. The faster we drive, the less reaction time we have to a hazard. When a person talks on the phone, they are not fully processing the visual cues, in that they do not realize the implication of danger and fail to take appropriate actions.

Some argue that it is no different than talking to a fellow passenger. I disagree. The passengers see most of what you see and often will alert you to any dangers. A person on the phone with you sees nothing and is therefore unable to warn you. When you are listening or talking on a phone, you are processing verbal information (not driving information) and when you finally "clue in," it is often too late.

What are the driving signs of "clue out?" Ask any experienced safety officer. You drive erratically, unaware that you may be exceeding the speed limit. Other indicators include sudden stops, tailgating, swerving and crossing active runways without a clearance.

The message is simple: the operation of a motor vehicle on the airfield requires drivers pay full attention to their surroundings. Using a cell phone, BlackBerry or other electronic devices substantially increases your risk for an accident. The safety of operators, passengers, pedestrians and the preservation of resources rely on drivers staying focused and alert to hazards and taking appropriate action to prevent collisions.

Editor's note: Adapted with permission from Flight Comment.

DRIVING ON 'SNOOZE CONTROL'

CHIEF WARRANT OFFICER 4 PAUL LOCKHART
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Looking back, there have been a few occasions when I nearly made it into the "statistic" column. However, there is one that really stands out in my mind. It forever ended my perception that I was invincible.

I was a rookie reservist, a private first class in a transportation (heavy boat) unit, based in my coastal hometown of Morehead City, N.C. We were such a hodge-podge unit. Our boats (Landing Craft-Utility) were left over from the World War II era — hand-me-downs from the Navy. Nearly all our field manuals and technical manuals were copied from the U.S. Coast Guard. And to top it off, our training area was on a Marine Corps base. What a mess.

One drill, we were scheduled to qualify with our M-16s at Camp Lejeune, N.C. We were provided maps the Friday night before the drill weekend, as most of us would drive our own vehicles to the range. That would allow us to leave right after we qualified, helping shorten an inevitably long

DEAD-TIRED DRIVING

The National Safety Council (NSC) reports that more than one-third of drivers surveyed admitted to falling asleep behind the wheel. Perhaps even more startling was that 60 percent of those drivers admitted to falling asleep on highways with a posted speed limit of 55 mph or higher. These drowsy drivers not only put themselves at risk, but other motorists around them. Here are some tips from the NSC to keep you awake and alive:

Recognize the symptoms of fatigue

- Eyes closed or going out of focus
- Persistent yawning
- Irritability, restlessness and impatience
- Wandering or disconnected thoughts
- Inability to remember driving the last few miles
- Drifting between lanes or onto the shoulder
- Abnormal speed, tailgating or failure to obey traffic signs
- Back tension, burning eyes, shallow breathing or inattentiveness

Safety tips

- Maintain a regular sleep schedule that allows adequate rest.
- When you show signs of fatigue, get off the road and take a short nap in a well-lit area. Don't simply stop on the side of the road.
- Avoid driving between midnight and 6 a.m.
- When planning long trips:
  - Begin your trip early in the day.
  - Keep the temperature cool in your car.
  - Stop every 100 miles or two hours to get out of the car and walk around. Exercise helps combat fatigue.
  - Stop for light meals and snacks.
  - Drive with your head up, shoulders back and legs flexed at about a 45-degree angle.

duty day. With a little luck, I could make it from home to the range in about an hour and 15 minutes.

I pulled out about 5 a.m. that Saturday morning in my Mitsubishi "Mighty Max" pickup and got to the range without a hitch. I didn't have any breakfast, but what the heck; nothing was open before 6 a.m. anyway. I would regret that decision later.

I reported to the range as ordered. Ever fire on a Marine Corps range? These Marines didn't allow Kevlar helmets on their range. "Wow, this is different," I thought, wondering how much they valued their noggins. After firing 40 rounds, several of us were released with instructions for the next day's drill. So, I turned in my personal battle cannon and jumped back in my pickup. Everything had gone fine so far. I'd found my way to the range, showed a paper target who was the "boss" and headed home for some grub. That is, I thought I was headed home.

It was about half-past noon and I'd been awake since 4 a.m. I was bee-bopping my way home headed north on the highway thinking, "Man — why do my eyelids feel like they weigh 100 pounds?" The hum of the engine and the buzz of the tires on the road were almost hypnotic. I was drifting gently into never-never land when, suddenly, I was jolted back into reality.

"BAM — BAM — BOUNCE — BANG — Ba-BOOM — Ba-BOOM — SMACK!

My eyelids shot wide open. My first thought was, "Holy crap — whoa camel — whoa camel — whoa!"

My "normal" day suddenly turned ugly really fast! It's difficult to convey in words how violently shaken in mind and body I'd become in less than five seconds. I was halfway off the road in a pickup bouncing up and down. Had I awakened one second later, I would have launched at 60 mph down a wet, grassy slope into a stand of trees!

As I tried to maintain control, I remembered being told, "Don't jerk the wheel," in my high school drivers' education class. I was careful not to force my truck back onto the pavement too quickly for fear of catching the front tire on the edge and flipping. While I was being bounced and tossed around, I steered gently to the left to get back on the highway. Fortunately, I made it.

Oh, did I mention this happened only 15 minutes after I'd left the range? That's significant because when your adrenaline fades after doing something, it's easy to become groggy, complacent and even incoherent.

On the upside, I'd maintained my vehicle. The fluid levels were good and my tires had good tread. I didn't have a lot of money, but I took care of my ride. If I hadn't, something else — perhaps a blown tire, could have led to a tragedy. I believe my life was spared that day for various reasons. Maybe one was to share my experience with others.

So what dangerous ingredients went into the mix for my near-disaster that day? How about poor diet (no breakfast), fatigue and complacency. It doesn't take all that many things going wrong to get yourself hurt or killed. Had I taken the time to identify and assess these hazards — the first two steps of composite risk management — I could have reduced my risks. But I was complacent that day. I'd forgotten that the difference between life and death can be as short as one tick of the second hand.

Maybe this is a simple story that I took too long to tell. However, falling asleep at the wheel kills more Soldiers than you might think. Don't let yourself become one of them.«

What to Know Before You Mow

GEORGE WYATT
Installation Safety Office
Fort Campbell, Ky.

For many of us, the arrival of spring signals the desire to resume the quest to have the best-looking lawn on the block. And even for those who don't enjoy yard work, it's a necessary evil — unless you hire someone to maintain your lawn. Before bringing out those yard machines, though, we must ensure they are ready for another season of lawn maintenance.

With many of us preparing to use our lawn equipment for the first time this season, now is a good time to conduct an inspection to ensure everything is running properly. The inspection should identify problems that may prevent the machine from operating safely. It doesn't matter if the equipment is powered by gasoline or electricity, it should all be given a good safety check after its long winter dormancy. Follow these safety tips prior to and during mower operations.

Before You Start

- Inspect your machine for proper installation and operation of all safety guards, switches and levers.
- Make sure you have read or reviewed the operator's manual.
- Inspect your yard to ensure no rocks or other hazardous items are hidden in the grass.
- If the lawn is wet, postpone mowing until conditions are dry.
- Ensure your clothes are durable and fit close to the body to prevent them from being caught on any moving parts. Consider wearing steel-toed safety shoes and never wear sneakers, sandals or flip-flops.
- If using an electric mower, make sure it is always plugged into a grounded three-prong outlet. Any extension cords used with the mower must also be a grounded three-prong plug and receptacle. Ensure cords are kept clear of the mower deck.

While Mowing

- Use safety glasses and hearing protection.
- Avoid driving a riding mower in reverse as much as possible. When it is necessary to reverse the mower, look back to make sure your path is clear.
- Keep children and pets out of the yard until you are finished mowing.
- Keep the mower over grass and avoid gravel or mulch beds, sidewalks, edging material, etc.
- Stay clear of the mowing deck and discharge chute while the motor is running. Never attempt any maintenance procedure until the mower is off and the spark plug wire has been disconnected from the spark plug(s).
- Never allow additional riders on a riding lawn mower.
- Never exceed the slope limits of a mower. Check slope limits in the operator's manual. Operator weight should be a factor in determining slope limits for riding mowers if it has not already been established in the operator's manual.
- Be aware of the muffler location. Keep unprotected skin away when the muffler is hot.

Another important consideration is who may be allowed to use your mower. Serious thought should be given before allowing children under age 16 to operate a riding mower and age 12 for a push mower. Statistics indicate accident risk significantly increases when children younger than these ages operate these types of mowers.

Other Equipment

Don't forget safety when using other lawn equipment such as weed and grass trimmers, hedge trimmers, edging equipment, chain saws and debris blowers/vacuums — all of which pose various hazards and operator risks. The owner's manual is the best place to start. The manual describes the purpose and operation of the safety devices and usually has a safety checklist to use when conducting an equipment inspection.

Conclusion

Modern lawn equipment is safer than ever. The U.S. Consumer Product Safety Commission requires mower manufacturers install all the up-to-date safety equipment on the machine before it leaves the factory. Because lawn equipment can cause injuries ranging from minor cuts and bruises to loss of vision and amputations, it's important to maintain factory-installed guards, safety switches and safety levers. They should never be intentionally removed or compromised to defeat their designed purpose.

Maintaining our lawn equipment and its factory-installed safety features reduces the risk of accidental injury. To further ensure our safety, we must exercise judgment when using the equipment. Lawn equipment should always be operated as the manufacturer intended. Working with these basic principles in mind will help ensure our yard maintenance remains accident free for another season.

DID YOU KNOW?

Despite the increased safety features installed on today's lawn maintenance equipment, injuries still occur. According to the American Academy of Pediatrics, an estimated 68,000 Americans are injured each year in lawn mower accidents — with more than 9,000 of those accident victims under the age of 18.

LOST

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.

AVIATION

AH-64D

CLASS C

- The engine control lever was inadvertently placed in the lockout position during aircraft run-up, resulting in an overspeed of both engines.

HH-60M

CLASS B

- The aircraft touched down hard shortly after takeoff, resulting in damage to the tail wheel strut and forward-looking infrared radar.

OH-58D(I)

CLASS C

- The crew reported a full authority digital electronic control (FADEC) FAIL upon takeoff from the forward arming and refueling point. The engine power turbine speed (NP) overspeed was confirmed at 126 percent for 16 seconds.

OH-58D(R)

CLASS A

- An instructor pilot was killed and a student pilot injured when the aircraft crashed during Stage 1 night vision goggle gunnery training. A post-crash fire consumed the aircraft.

UH-60A

CLASS C

- The crew experienced a hard landing during brownout conditions. The tail wheel strut, tire, stabilator and airframe sustained damage.

UH-60L

CLASS C

- During a terrain flight demonstration, the aircraft stabilator contacted water.

UH-72A

CLASS A

- While conducting overwater flight, the aircraft impacted the ocean.

UAS

RQ-7B

CLASS C

- The unmanned aircraft (UA) struck the ground during launch; however, it maneuvered to altitude for landing without further incident. The payload, main landing gear and prop were damaged.

- The UA experienced an engine failure during flight. The recovery chute deployed, but the UA was not recovered.

GROUND

Personnel Injury

CLASS A

- A Soldier died when he fell four stories through a skylight he was attempting to cover with a tarp.

- A Soldier died after he lost consciousness during a pre-scuba training course.

- A Soldier died after he fired a round from a handgun into his temple. At the time of the accident, the Soldier was demonstrating that the weapon was not loaded.

CLASS B

- A Soldier's fingertip was severed when it was caught in a barracks door.

DRIVING

POV

CLASS A

- A Soldier was killed when he exited his vehicle at the scene of a minor traffic accident and was struck by an oncoming vehicle and thrown over a freeway bypass.

- A Soldier was attempting to pass another vehicle in icy conditions on a bridge when he lost control, went off the road, struck a tree and was ejected. The Soldier, who was not wearing his seat belt, died later that day.

POM

CLASS A

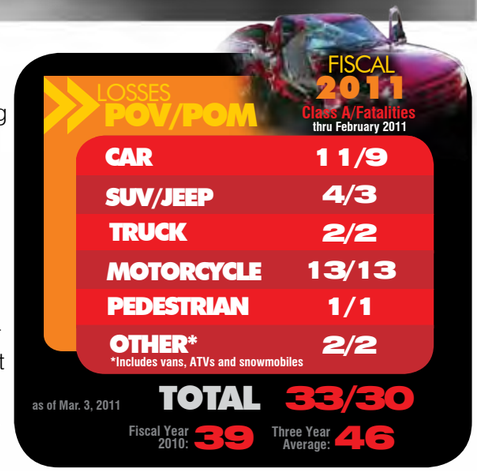
- A Soldier was killed when he was thrown from his speeding motorcycle after entering a median and striking a culvert. Although the Soldier was wearing the required personal protective equipment, he hadn't registered his motorcycle or completed Motorcycle Safety Foundation training.

- A Soldier was killed when he struck a sedan driven by another Soldier who had run a red light at an intersection.

ATV

CLASS A

- A Soldier was riding a snowmobile on a designated trail when he lost control on a rough section, collided with another snowmobile and struck an embankment. The Soldier was pronounced dead at a local medical center.



SAFE Summer

What Have You Done to Save a Life Today?

Take 5 for Safety!

Before the fun starts, stop and Take 5 to save a life this summer.

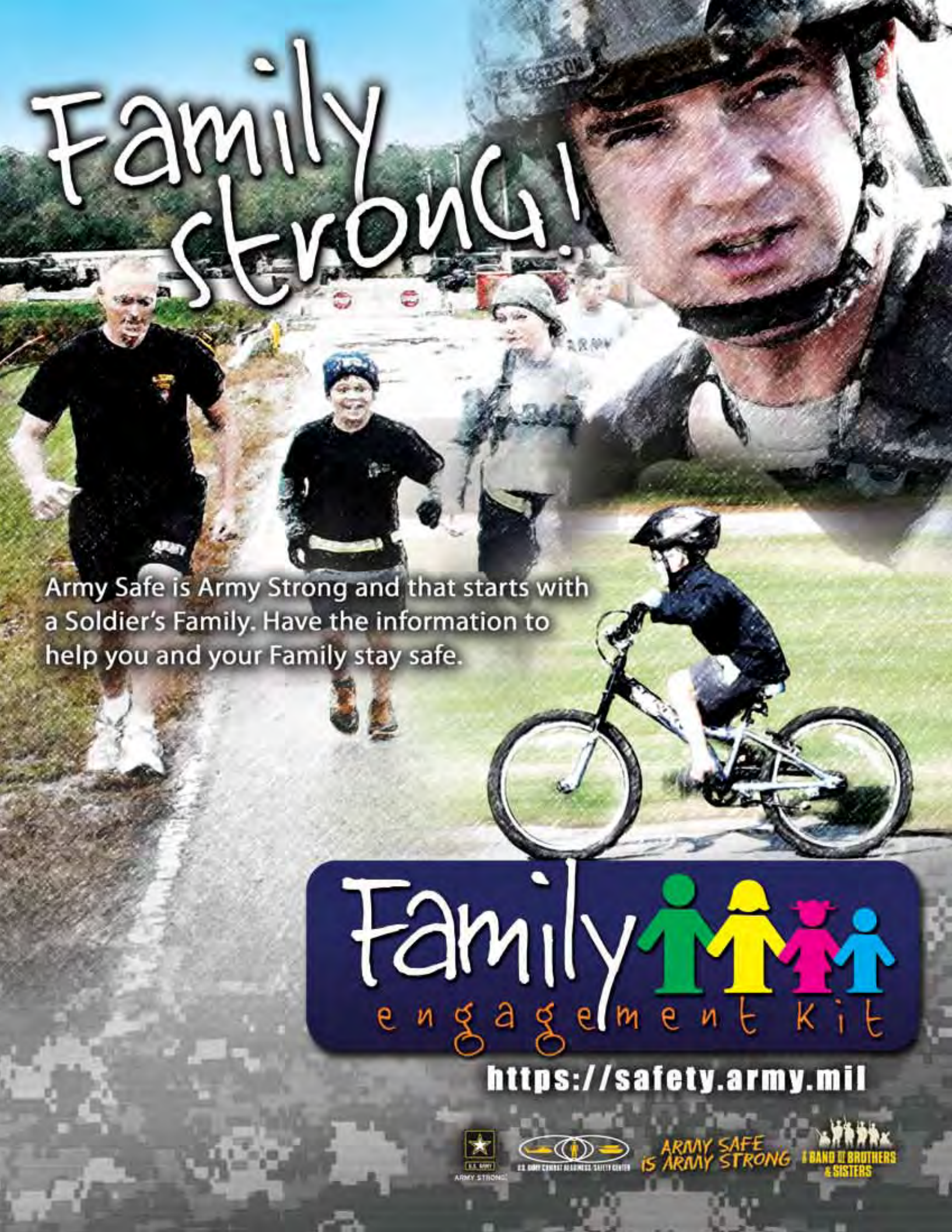
SOLDIERS
LEADERS
CIVILIANS
FAMILIES

U.S. ARMY
ARMY STRONG.

U.S. ARMY COMBAT READINESS/SAFETY CENTER
https://safety.army.mil

ARMY SAFE IS ARMY STRONG

BAND OF BROTHERS & SISTERS


Family strong!
Army Safe is Army Strong and that starts with a Soldier's Family. Have the information to help you and your Family stay safe.
Family engagement kit
https://safety.army.mil
ARMY STRONG
ARMY SAFE IS ARMY STRONG
A BAND OF BROTHERS & SISTERS

OVERTRAINING: TOO MUCH OF A GOOD THING?

KNOWLEDGE

VOL 5 MAY 2011

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GEAR UP AND RIDE

- BICYCLE SAFETY
- KNOW YOUR WINDS
- TROUBLE-FREE TRIPS

+

A SIMPLE MISSION

KNOWLEDGE
OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY
LEADERS SOLDIERS CIVILIANS FAMILIES

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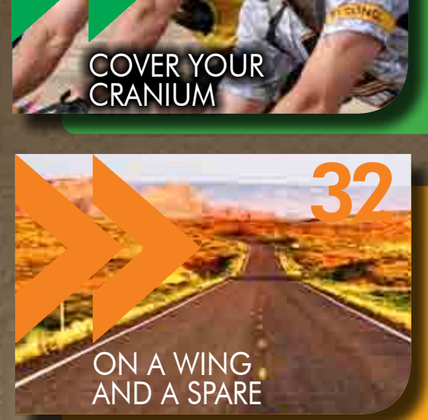

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Mission statement: The United States Army Combat Readiness/Safety Center (USACR/Safety Center) supports our Army by collecting, analyzing and communicating actionable information to assist Leaders, Soldiers, Families and Civilians in preserving/protecting our Army's combat resources.

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

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STAYING SAFE ON THE ROAD

Look anywhere in the United States, and one of the surest signs of spring and summer is the abundance of motorcycles on streets and highways. It's no different in our Army — as the temperature rises, so does the number of sport bikes, cruisers and everything in between on our installations. This time of year is a favorite for riding enthusiasts, and we want to kick it off safely by supporting the National Highway Traffic Safety Administration's observation of Motorcycle Safety Awareness Month.

As an Army, we've made great strides in identifying motorcycle riders and providing them with training that has proven time and again to save lives. Riding shouldn't be an underground activity, and the increasing number of registered motorcycles on posts shows most Soldiers recognize the value of our current safety requirements and initiatives like Motorcycle Mentorship Programs. Yet, every year we lose far too many Soldiers to accidents involving indiscipline on motorcycles, whether it's a lack of proper training, excessive speeding, neglecting to wear even the most basic personal protective equipment or drinking while riding.

Historical analysis shows us that motorcycle riders are 10 times more likely to become involved in a Class A-C accident than sedan operators. Just as alarming is the ongoing trend of Leaders at the rank of sergeant and above being fatally injured on their bikes. As of mid-March, Leaders accounted for 10 of the 13 motorcycle deaths reported Army-wide for fiscal 2011. Leaders are responsible for both setting and enforcing the standard, and the challenge for our Army continues to be reaching these battle-hardened Soldiers on the importance of their personal accountability.

We place a great deal of emphasis on engagement in Soldier safety, but Leaders need engagement from their chain of command as well. Taking care of Soldiers is a tremendous job, and Leaders at all levels need support from their peers and superiors to do it effectively. However, we must remember rank does not exempt a Leader from wearing a helmet, following the speed limit or calling a cab when he or she has had too much to drink.

Neither does rank matter in engaging with high-risk Soldiers. Someone always knows when a Soldier, whether a subordinate or superior, is taking unnecessary risks on or off duty. Junior Soldiers should play a key role in keeping their Leaders safe, and we should allow them to freely express their concerns on potentially hazardous situations. Engagement is a two-way street and requires constant interaction between Soldiers and Leaders, with everyone looking out for and learning from one another.

> "**ENGAGEMENT** is a two-way street and requires constant **INTERACTION** between **SOLDIERS** and **LEADERS**, with everyone **LOOKING OUT** for and **LEARNING** from one another."

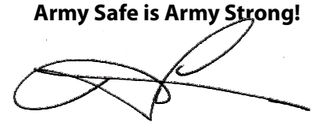
Moving forward into the height of riding season, ensure all your Soldier riders — Leader and junior alike — are engaged and understand both the joys and hazards of motorcycle ownership. Training, education and PPE all go a long way toward keeping riders safe on the road, but there's no substitute for knowing your Leaders and Soldiers are counting on you to make it back safe.

While we'll see more motorcycles on the road during summer than any other season, privately owned vehicles still outnumber bikes by the thousands. Incidents involving POVs remain the top accidental killer of Soldiers every year, and the months between April and September are the peak season for fatal POV accidents. As with motorcycles, speeding, drinking and driving and failure to wear protective equipment — in this case, seat belts — are the causes most often cited in fatality reports. Remember to engage with your Soldiers on making safety a priority in all their summer travels, whether it's for fun in the local area, a beach a few hours away or visits to Family and friends many hundreds of miles from post.

Be sure to check out the tools available on the USACR/Safety Center website, https://safety.army.mil, for information and media products on riding, driving and summer safety. The annual Safe Spring/Summer Campaign was released live in April and includes posters, videos and articles designed to educate Soldiers on hazards associated with summer activities. We also recently consolidated all driving topics in one central location on our website, https://safety.army.mil/povmotorcyclesafety, with individual tabs for POV, motorcycle and recreational vehicle information and tools. Now users can easily retrieve guidance on specific topics and stay up-to-date on the latest safety news with just a couple of clicks. Let us know how the new tab works for you.

As always, thank you for the hard work you do every day to keep our Soldiers, Family members and Civilians safe. Play hard this summer, but remember to always play it safe!

Army Safe is Army Strong!



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

The mission was simple. An OH-58C had made a precautionary landing on the range and needed a part flown out. It would take about 30 minutes to replace the part and then the aircraft could be signed off and flown back home.

A SIMPLE MISSION

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Chief Warrant Officer 3 Jason Merrill (a fictitious name) was tasked to perform the single-pilot support mission. He was told to take along a technical inspector (TI) and a crew chief to perform the work and then return to base in the repaired aircraft.

Merrill did the normal things — preflight, weather check and mission planning. The mission brief was simple; after all, it was a simple mission. He knew the range by heart — every landing zone (LZ), road and checkpoint. Navigating was a cinch; he wouldn't have to rely on a map. Of course, he'd take it along with all the other required publications. He believed in doing things by the book.

The only thing that bugged Merrill was the weather. He didn't like flying single pilot at night. Ever since he had gotten used to night vision goggles (NVG), night unaided had lost its luster. Besides, quite honestly, he hadn't flown unaided in a good while. This was the "Cav," where night flights meant goggle flights. He looked at the weather information closely. The sky was clear, the moon would be up and visibility unrestricted. As he prepared a local flight plan, he thought about the fact that this was the fall — hot in the day and cool at night. Ground fog was coming fast on the range.

"Oh, well," he thought. "I know that range like the back of my hand — every creek, every lake where the fog likes to hide." Besides, he would be returning early, before the fog began to settle over the low areas.

The flight to the downed aircraft was uneventful. After shutting down, the TI and crew chief went to work. Merrill talked with the aircraft's two aviators, kidding the pilot in command (PC) about causing him to miss getting home early and having supper with his family.

"I should have let you stay out here — good survival training," he joked.

The work took longer than expected, but, about an hour later, it was time to head for the barn. At first, the pilots of the now-repaired OH-58 suggested Merrill follow them back. However, as they discussed the idea, they realized they hadn't been briefed for formation flying and decided it wasn't a good idea.

Merrill told the other crew to take off first. He would wait a few minutes and then follow. After all, they were going in the same direction. As long as they were not in formation, it shouldn't be a problem. Everyone agreed.

On the flight home, both aircraft kept their distance but maintained internal FM radio communications. Merrill kept the lead aircraft's position lights in sight as they exited the range.

Except for the fact they had been delayed almost 90 minutes, everything was going smoothly. It was simple to follow the route back — mostly range roads — but patches of ground fog were beginning to show in low areas.

About five minutes from home, things began to go wrong. The fog got worse, and Merrill lost sight of the lead aircraft. One call assured him they were OK and had the airfield in sight.

Suddenly, the fog thickened. Merrill told the TI, who was in the left seat, to let him know if he began to lose sight of the ground. The pilot slowed the aircraft a little but decided to maintain altitude.

Should he turn around? He could still see the ground and the PC of the lead aircraft had just flown through the weather without any problems. Merrill knew they had followed the same route and were no more than a kilometer ahead.

When Merrill was almost to the exit point where he would change frequency from range control to the airfield tower, he looked to his right. The terrain was mostly open fields, which, at night, looked like a black hole.

Suddenly, engulfed in fog, the crew rapidly lost all visual contact with the ground. How deep was this fog? How high was it? Was it a simple scud layer? Single pilot at night on instruments? Should he climb? Descend? Do a 180? That didn't sound smart. Neither did the idea of flying in this soup.

The TI saw a "sucker hole" and said, "Your left, sir."

Merrill immediately turned left, descended through the hole, leveled off and looked for an open field. He knew there was a field somewhere to his left off the range road. Below there were trees and more trees, and it was getting difficult to maintain visual reference. Then, straight ahead, he saw the field he had been searching for. Before landing, Merrill made a quick call to unit ops to inform them he was landing and shutting down. They could come get him — he didn't intend to fly back tonight.

As Merrill and his crew sat by the fire they'd built in the field where they'd landed, the fog continued to roll in. He looked at his TI and crew chief and realized he could have killed these young Soldiers. Merrill realized his poor choices not only could have killed himself but, also, his buddies.

What had seemed like a simple mission had turned into a close call — brief seconds of fear and high-risk decisions.

This is a true story. I know because it happened to me about 25 years ago. I am "Merrill."

Never Underestimate Those Simple Missions

Much can be said of how safety programs and improved aviation technology have reduced risk and significantly lowered our overall accident rates. However, regardless of that progress, we aviators are still the same human beings who flew the first biplane. Though more knowledgeable, we are still capable of making the same errors we've always made.

We have been successful at standardizing our equipment, and technology has allowed us to improve equipment across the board. As human beings, however, we have to improve one at a time. That is the reason standardization is critical. It allows us to train each aviator to a particular level and standard.

What went wrong on this night was that the humans involved were not adhering strictly to standards. I had completed the risk assessment sheet with all the right numbers and it had come out "low risk" — nice if everything goes perfect, which it seldom does.

I had not flown unaided in quite a long time, and it's not the same as flying NVG. I knew that, but I wasn't going to turn down a mission because of it. I didn't consider it to be a serious factor. In addition, we fudged on the formation flight. Sure, we were legal, but we weren't very smart. My intentions were to keep the other aircraft in sight — we would "unofficially" flight follow each other. What I did not know was that the other crew was flying NVG, and that's why they had fewer problems than I did. Of course, since we were not "flying formation," there had been no need to brief, so critical information was never shared.

Last, but hardly least, was the weather. The risk level changed when the timeline changed — the weather was changing even as we were discussing our takeoff. And my decision-making process left out still another critical fact as we droned along that night: the other aircraft was a kilometer ahead, and that made a difference.

The only weather you should trust absolutely is what you are seeing out your cockpit window. That night, the weather was saying, "Land!" I hesitated almost 30 seconds too long, and that could have cost my life and the lives of my crew. The ability to learn from your own mistakes is a blessing, not a given. I was allowed to learn from my experience.

It's not our equipment or the environment that causes most of our accidents. Machines and environment are fairly predictable. We can plan on these with acceptable accuracy. Human beings are not quite as predictable; they make decisions that lead to accidents. It's not too difficult to determine what they did wrong, but determining why is more challenging.

Lessons Learned

From this event, I learned what I call my Top 10 "why" lessons.

1. Most "extremely high" risks are self-imposed. Actions we take in flight or on the ground usually are influenced by personal motivation or unplanned responses to a situation. Whether it is desire to complete the mission, ego or simply not thinking the consequences through, the result can be catastrophic.

2. The response to accepting "high" risk is influenced more by actual outcome than by possible outcome. If we gamble and succeed, we are more apt to see it as a good decision than a bad one. Too many times we insist on learning our lessons from accidents rather than close calls. Both can teach the same lesson.

3. It's better to have a damaged ego than a damaged aircraft or body. Many times, we go that extra 30 seconds simply because we cannot or will not admit we've exceeded our capability or made a mistake or bad decision. That leads us to make an even greater mistake or worse decision.

4. Every aviator will be faced at least once in his or her life with making a decision in which the outcome can mean the difference between an accident, a close call or a good no-go choice.

5. Aircrew coordination must involve effective communication and teamwork. One thing I remember most is the silence between the TI and me during our flight. I never communicated my concerns to him (or him to me) about continuing to fly that night as visibility grew worse. He was ready to land and get out several minutes before we ultimately did. The crew of the other aircraft never communicated to me that they were flying NVG. Two highly skilled pilots do not automatically equal good aircrew coordination.

6. Making a critical decision based on a self-imposed emergency is seldom done without hesitation. The same professional pilot who will instantly respond to an emergency, such as an engine failure, may hesitate to abort a mission because of fatigue, bad weather, poor forward-looking infrared radar conditions or a simple personal conflict with another crewmember. We don't react as quickly to internal warnings as external ones.

7. Risk management during every phase of mission planning reduces unpredictable "human" actions. We reduce risk by reducing unpredictable actions. Accident-causing errors usually result from individuals' unplanned actions, and unplanned actions are usually due to unidentified risk.

8. We must seek to anticipate and eliminate every risk. Every aviator must be prepared to identify risk and work the process through to completion. Don't accept unnecessary risk, no matter what phase of the mission you're in.

9. There are no simple missions. The more we identify and eliminate risk, the greater our opportunity for success.

10. Every flight should start and end with standardization. Human beings are the most complicated of the man-machine-environment mix. There is no substitute for training to standards and enforcing those standards. Ignoring standards will cause accidents.

Summary

My Top 10 "why" lessons are not all-inclusive. When it comes to safety, nothing is. Accidents do not just happen; they are caused. The goal of every individual in the unit should be to ensure that nothing he or she does will cause an accident. And, because you may not get the chance to learn from your own mistakes, take every opportunity to learn from someone else's.

TOO MUCH OF A GOOD THING?

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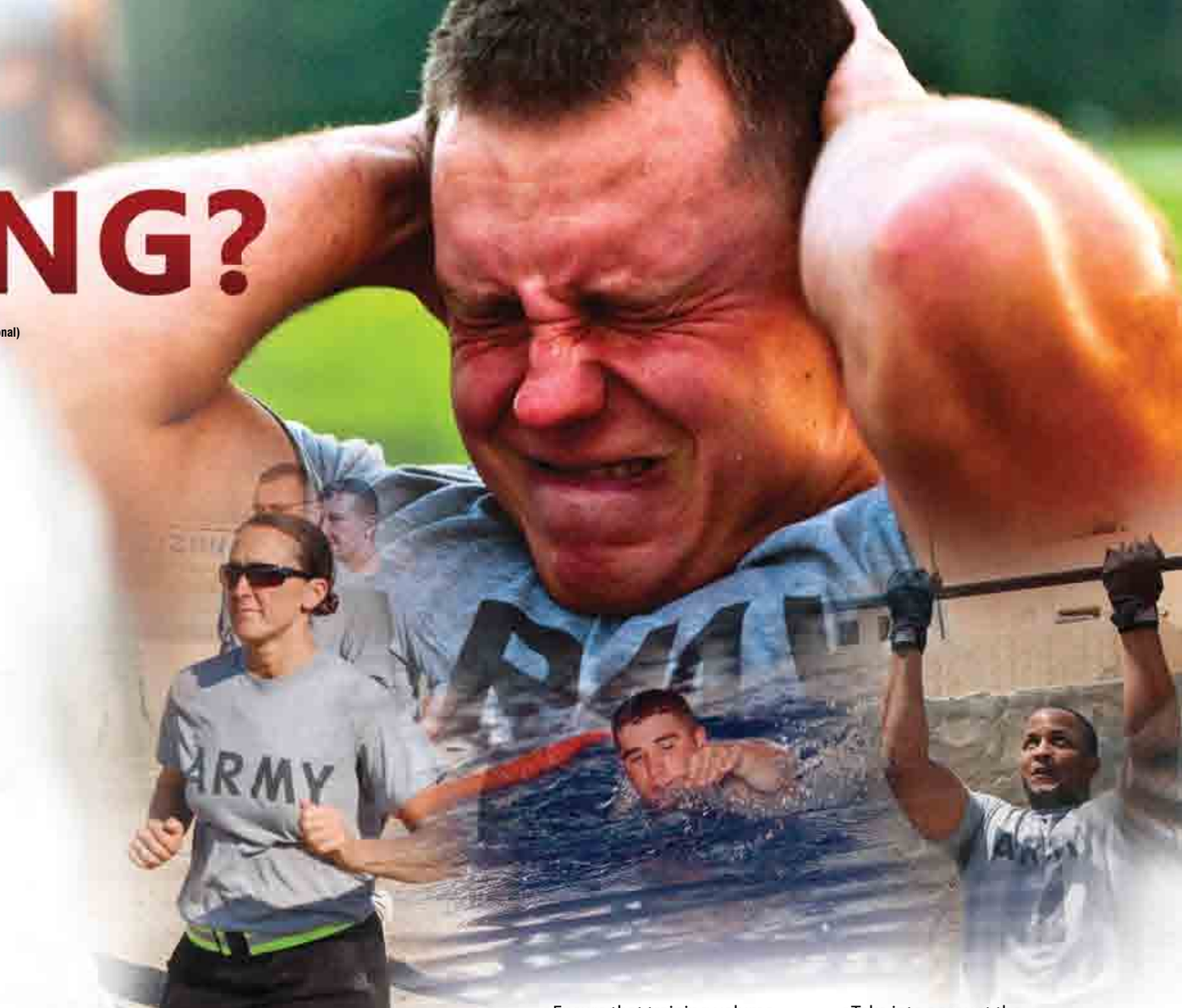

It is an accepted fact that exercise is essential for a healthy body and mind. But is it possible to get too much exercise? Actually, it is. When a person pushes their body too hard or too long without giving it a chance to recover with adequate time, rest and nutrition, the result can be overtraining.

Overtraining can occur with aerobic exercises such as running, biking or swimming and with resistance exercises such as weightlifting. This condition occurs when either exercise volume or intensity exceeds what a person should be doing for an extended period of time. Training volume can be excessive if more exercises are added, additional repetitions or sets are performed or the frequency of the exercise is increased for too long. In contrast, overtraining due to excessive intensity occurs when too heavy a resistance is used for an extended time. These principles apply to elite athletes as well as to individuals who exercise for general health and fitness.

So how does a person know when they are overtraining? Regular exercise and physical training are healthy habits that should make a person feel better, not worse. People experiencing the signs and symptoms of overtraining may be pushing themselves too hard. It is important to understand that not all of the signs and symptoms of overtraining may be present, and just because some are present does not necessarily mean a person is overtraining. The true test is whether performance is impaired or plateaued.

According to the American College of Sports Medicine, some frequent signs of overtraining include:

- Decreased performance in strength, power, muscle endurance or cardiovascular endurance
- Decreased training tolerance and increased recovery requirements
- Decreased coordination, reaction time or speed
- Altered resting heart rate, blood pressure and respiration patterns
- Increased basal metabolic rate
- Chronic fatigue
- Sleep disorders
- Decreased appetite and weight loss
- Menstrual disruption
- Headaches or gastrointestinal distress
- Muscle, joint and tendon aches and stiffness
- Longer healing times and more frequent illness

So what should a person do if they have been overtraining? There are several simple steps to alleviate and correct this condition, including:

- Add one or more recovery days to each training week.
- Include periodized exercise programs, which gradually alter the training variables over time to allow the body to progress in stages and recover adequately.
- Ensure that training volume and exercise intensity are inversely related.
- Avoid monotonous exercise by increasing training variety.
- Avoid doing too high a number of exercises, sets and/or repetitions.
- Avoid performing every set of every exercise of every session to absolute failure (for resistance training).
- Take into account the cumulative training effect of different kinds of exercise.

Exercise is a health habit that has many advantages. Be sure that your exercise program includes regular periods of recovery and that you reassess and adjust your training often. Done properly, exercise can bring life-long benefit to the body and mind.

FYI

For more information about physical activity and exercise guidelines, visit the Centers for Disease Control and Prevention website at http://www.cdc.gov/physicalactivity/everyone/guidelines/index.html and the American College of Sports Medicine at http://www.acsm.org/.

FROM OUT OF NOWHERE

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Editor's note: The names of the people in this article have been changed to protect their privacy.

The sun was just dipping below the horizon as Chief Warrant Officer 4 Bruce Freeman sat on his idling motorcycle. Winter wasn't quite over and he was glad for his Harley-Davidson leather riding jacket, gloves, hiking boots, long pants and helmet. Riding at the 45-mph speed limit gave him a "built-in" 45 F wind chill factor.

Finally, the light turned green and he eased out the clutch. His 2008 Harley-Davidson Street Glide began rolling across the intersection of Fort Campbell Boulevard and Ringgold Street as he rode in the road's far-left lane. Glancing in his right-side rearview mirror, he saw a large service truck in the middle lane slowly gathering speed as they both traveled southbound. On his left, Freeman could see the faces of the drivers stopped in the oncoming turn lane. It was as it had always been — a routine ride on a familiar section of road. Soon he would be joining his wife and nine of their friends at a local restaurant.

Behind the wheel of the service truck, Jimmy Laughlin paid attention to the rider now slightly ahead and in the lane to his left. He'd followed behind Freeman for a couple of miles and then moved to the middle southbound lane. Himself a rider, Laughlin noted a number of motorists pulled into the street, cutting off Freeman in his lane. Laughlin had moved into the middle lane to avoid hitting Freeman should something happen in the road ahead. And something was definitely about to happen.

Cheryl Banks was in a hurry to turn onto Eva Drive, which intersected Fort Campbell Boulevard from the southbound lanes. Cutting across all three northbound lanes of traffic, she shot sideways into the median. If she could just get a break in the southbound traffic, she could hurry straight across the road and onto Eva Drive. But, sitting sideways to the other vehicles in the median, her view of approaching southbound traffic was obscured. Craning her head, she peered through the windshield of the vehicle stopped to her right in the median. She could see Laughlin's truck but not Freeman, who was fast approaching in the lane nearest her. Seeing her chance to beat Laughlin across the road, she hit the gas. But she hit much more than the gas — she nailed Freeman, T-boning him and his motorcycle.

Laughlin saw it all. He saw Banks' vehicle suddenly come from out of nowhere, dart into the lane and smash into the motorcycle. He watched in shock as Freeman twisted and spun some 40 feet through the air, landing in the right-hand lane and then tumbling and slamming head-first into the curb.

Hitting his brakes, Laughlin pulled into the right-hand lane and stopped, using his truck to shield Freeman from following traffic. Stepping out of his cab, he called 911 on his cell phone and ran toward the downed rider. As he bent down to check him, Laughlin found Freeman was face down, his right arm twisted and broken behind his back. Laughlin believed he'd just watched a man die.

A woman who said she was a nurse ran from the line of stopped cars, followed by two men claiming they had paramedic experience. The woman gently held Freeman's head as the men carefully moved him onto his back. Looking at Freeman's face, Laughlin saw his eyes were open, but he was unresponsive. Gurgling sounds punctuated Freeman's erratic breaths, evidence a rib had punctured one of his lungs.

Laughlin looked at his watch. The minutes ticked by; first five, then 10

> "'Had I been wearing a **'COOL GUY'** novelty helmet that I bought at some rally, I **WOULD NOT BE HERE TODAY**.'"

and then 15 — but still no ambulance. Frustrated, he dialed 911 again, demanding the ambulance hurry. Freeman looked bad — there was no time left for delays.

Freeman's wife, Linda, looked at her watch as she waited at the restaurant and wondered where her husband was. She and their friends were unaccustomed to his being late. "Where is he?" she asked herself.

Laughlin saw the ambulance's flashing lights as it approached the crash scene. Emergency medical technicians jumped out and quickly got to Freeman, intubating him to help him breath and then stabilizing and gently loading him into the ambulance. The trip would be a short one — just far enough to reach an area where a helicopter could land. The rotor wash pounded down against Freeman and the EMTs as they loaded him onto the aircraft. Moments later it lifted off and headed toward Vanderbilt Hospital in Nashville, Tenn. Upon arriving, doctors immediately moved him into the Level 1 traumatic care unit. Freeman's wife had been called and was on her way to join him. But the roughly 50-mile drive on Interstate 24 East seemed to take forever.

"I was nervous … all I cared about was, 'Is he alive, is he alive?' I didn't care if he lost a toe or an arm; I didn't care about any of that. All I cared about was his being alive," she said.

Doctors found the impact with the car had badly injured Freeman's left leg and foot, breaking all of his toes and leaving a nasty gash in his leg. His impact with the road broke both shoulders, damaged 10 vertebrae and broke seven ribs — one puncturing a lung. He'd also badly broken his right wrist. Altogether, he had 24 broken bones. What most concerned the doctors was the damage to his brain. As they looked at the images, they found evidence of shearing in his left and right frontal lobes and left temporal lobe — indications his brain had slammed against the inside of his skull. While he'd survived, his short-term memory was severely damaged. When he awakened five days later from a medically induced coma, he couldn't name the president of the United States. Over time, therapists worked with him, helping him remember short phrases and lists of numbers to rebuild his short-term memory skills.

Freeman spent nearly a month at the hospital and a nearby rehabilitation facility and ultimately returned to his unit. More than anything, as a pilot, he yearns to get back into the cockpit. He is undergoing a year of observation to ensure he's free of any problems. His hopes of flying again and surviving to enjoy his wife and friends reflect his wisdom in wearing a "real" helmet, one approved by the Department of Transportation. He knows the value of that only too well.

"Had I been wearing a 'cool guy' novelty helmet that I bought at some rally, I would not be here today," Freeman said.

His other protective gear also helped. His leather riding jacket prevented road rash to his arms, stomach or back. His boots helped stabilize his damaged left foot until he got to the hospital and received medical treatment. Although his long pants were Levi's — not the most durable fabric when sliding down the road — they did help limit the road rash to his legs. Being protected while riding is important, he said, because riders can never completely predict what others will do on the road. He explained these items of safety gear are "meant to lessen the dangers out there just waiting to gobble you up."

As a Soldier, surviving his horrific accident has meant the world to him.

"I'd hate to think that I was robbed of the opportunity to serve my country and do what I love to do," he said.

Know your winds

NAME WITHHELD BY REQUEST

"Where are the winds from?" Every aviator, from the "newbie" (RL3 guy) to the senior wings pilot, has asked this question. Knowing your winds is a fundamental part of flying, particularly in Afghanistan, where the need for helicopter support has increased in recent years.

The mountainous terrain in Afghanistan is challenging, causing turbulence, down drafts and wind patterns that are often hard to predict. Army aviators must be confident in their ability to conduct aviation operations at high altitude, where aircraft performance and power available can be severely limited. Actually, understanding the concepts and applying them to day-to-day missions is the challenge that can often determine whether you crash or stay in the air.

To meet the high demand for aviation assets to support the ground commanders, the Army has incorporated high-altitude training at the U.S. Army Aviation National Guard High-Altitude Army Aviation Training Site and the High-Altitude Mountainous Environmental Training Strategy. Both training centers are located in Colorado.

During the relief-in-place process and progression flights in Operation Enduring Freedom, aviation task forces put a heavy emphasis on high-altitude training. Every aviator was required to conduct approaches during day and night vision goggle conditions, incorporating wind direction identifiers, wind circles, power management, maintaining an "out" and other fundamentals. Fortunately for us, our standardization pilots and instructor pilots (IP) taught us very well, choosing challenging terrain and conditions to demonstrate these principles. I found this training beneficial, as I was one of the low-time aviators in our task force. Our IPs and senior pilots-in-command continually discussed the fundamentals in daily flights and practiced them after executing the mission. Most everyone was humble enough to listen.

These concepts habitually paid off for us, allowing us to complete our missions; however, one instance particularly stands out. While conducting area security for a dismounted patrol, the ground forces identified a possible point-of-origin site from a previous engagement. The site was about 1.5 kilometers inside of a tight valley that generally led uphill. Our OH-58 crew first started with a high recon of the area to develop the situation and identify where we needed to look. Even in the excitement of finding bad guys, we also noticed indications of where the wind was blowing within the valley. Varying our flight patterns, we continued to get closer, down to about 50 feet, eventually identifying a possible insurgent at the site. We maintained contact and the ground forces eventually detained the individual. Throughout our reconnaissance, we continued to talk and crosscheck in the cockpit about our airspeed, altitude and possible "outs" while maneuvering in the tight valley. The training and practical applications we learned early on helped us complete our mission, safely maneuver the aircraft and, ultimately, support ground efforts.

In another instance later in the deployment, we weren't quite as lucky. Conducting area reconnaissance in another wide valley, we spotted several armed males along a known insurgent trafficking route. To maintain contact rapidly, I conducted a sharp, stalling turn to the left. What I didn't take into consideration was my current altitude, airspeed and wind direction. I turned, with little airspeed, into a tailwind. Suddenly, maintaining contact quickly became my second priority as I tried to arrest our rapid descent with the cyclic and forward airspeed and, eventually, with power from the collective. Luckily, I was able to get out of the settling condition with only my pride hurt, although we only missed a transmission overtorque by 1 percent. In addition, we lost contact with the armed males, who quickly hid in mountainside caves and huts. My complacency and overconfidence caused us to lose the targets and nearly damage the aircraft.

> "The bottom-line **LESSONS** I learned from these two experiences are to **KNOW YOUR WINDS** and **CONTINUE** to **PRACTICE** the fundamentals you've **LEARNED.**"

The bottom-line lessons I learned from these two experiences are to know your winds and continue to practice the fundamentals you've learned. Army aviators must understand the aerodynamics and atmospheric effects on their aircraft at high altitudes. It is your responsibility to learn, understand and apply these training concepts. The Department of the Army Leaders and senior aviators will be there to teach and quiz your knowledge, but the responsibility ultimately falls on you. The worldwide high demand for rotary support in conflicts like Afghanistan means that aviation has a higher responsibility to support the ground forces. Knowing the winds could ultimately determine mission failure or accomplishment — whether you end up crashing or flying away.

COVER YOUR CRANIUM

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"I have to wear what?" That's what I said the first time I was told I had to wear a bicycle helmet while riding off duty.

I complained to my commander, first sergeant and anyone else who would listen. I even questioned the commander about the new requirement written into regulations that required me to wear a helmet. After all, I had been riding a bike since I was 6 years old. Now in my 30s, I was invincible and nothing was going to happen to me while riding my bike.

Well, my complaining fell on deaf ears. Like a good sergeant, I complied with orders. I bought helmets for my family and myself, and I begrudgingly started wearing mine when I rode. Little did I know that just a few months later that helmet would keep me from suffering a serious head injury.

It was a nice day in Abilene, Texas. The wind was calm, the sun was shining and I didn't have to report for duty until 4 p.m. for the swing shift. I decided to do a little extra PT that day, and a good bike ride seemed to be just the ticket. I checked the air in my tires, grabbed my helmet and hit the road. I was nearing the end of my ride when it happened.

First, I heard a pop. Next thing I knew, I was on my back and my head slammed onto the asphalt. My vision quickly dimmed, but I was brought back to my senses when my bicycle crashed back down upon my chest and face. What happened? Was I OK? Did I break anything? As I lay in the road asking myself those questions, I realized I should probably move before I got run over by a car.

Wow, my head hurt!

Getting up slowly, I looked for what caused me to take a spill. As I inspected my bike, I discovered that metal fatigue in my left pedal caused it to snap off. When that happened, I rolled off my bike while traveling at a pretty decent speed. What I thought would never happen to me actually did.

Brushing myself off, I removed my helmet. That's when I realized how lucky I was to be wearing it. The back of my helmet literally slammed into the asphalt. I had three 4-inch cracks in the back of the helmet and one 3-inch crack in the side of it. I can only imagine the damage my head would have sustained had I not been wearing

FYI

May is National Bike Month. The League of American Bicyclists is promoting Bike-to-Work Week 2011 from May 16-20 and Bike-to-Work Day Friday, May 20.

RULING THE ROAD

Wearing a properly fitted helmet isn't the only precaution bicyclists should take when riding. Before hitting the road on your bike, keep in mind the following safety tips from the National Highway Traffic Safety Association.

- **See and Be Seen.** No matter the time of day, you need to be seen by others. Wearing white has not been shown to make you more visible. Rather, always wear neon, fluorescent or other bright colors when riding day or night. Also wear something that reflects light, such as reflective tape or markings, or flashing lights. Remember, just because you can see a driver doesn't mean the driver can see you.
- **Go with the Flow.** Ride on the right in the same direction as other vehicles. Go with the traffic flow — not against it.
- **Obey All Traffic Laws.** A bicycle is a vehicle and you're the driver. When you ride in the street, obey all traffic signs, signals and lane markings.
- **Yield to Traffic When Appropriate.** Almost always, riders on a smaller road must yield for traffic on a major or larger road. If there is no stop sign or traffic signal and you are coming from a smaller roadway (out of a driveway, from a sidewalk, a bike path, etc.), you must slow down and look to see if the way is clear before proceeding. This also means yielding to pedestrians who have already entered a crosswalk.
- **Be Predictable.** Ride in a straight line, not in and out of cars. Signal your moves to others.
- **Stay Alert at All Times.** Use your eyes and ears. Watch out for potholes, cracks, wet leaves, storm grates, railroad tracks or anything that could make you lose control of your bike. You need your ears to hear traffic and avoid dangerous situations, so don't wear a headset when you ride.
- **Look Before Turning.** When turning left or right, always look behind you for a break in traffic and then signal well before making the turn. Watch for left- or right-turning traffic.
- **Watch for Parked Cars.** Ride far enough out from the curb to avoid the unexpected from parked cars such as doors opening or cars pulling out.

a helmet. I immediately reported to the post hospital, where I was diagnosed with a possible mild concussion.

Looking back, I did some things right and wrong that day. What I did right was I wore my helmet and checked my tires before I rode. The main thing I did wrong was I did not take the time to perform a good inspection of my bicycle. If I had taken a closer look at the overall condition of my bike, I may have caught the fault in the pedal and prevented the pain I suffered.

So, I have to wear what? A bike helmet, that's what! And believe me; I'll never complain about it again.

DID YOU KNOW?

According to Army Regulation 385-10, when bicycling on Department of Defense installation roadways during hours of darkness or reduced visibility, bicycles will be equipped with operable head and taillights, and the bicyclist will wear a reflective upper outer garment. For more information about bicycle helmets and state laws, visit the Bicycle Helmet Safety Institute website at http://www.helmets.org/index.htm.

Gear Up and Ride

MASTER SGT. WILLIAM RAYNER
Arkansas National Guard State Safety Office
Camp Robinson, Ark.

The door swings open and you strut through in your black leather jacket, chaps and boots. Everyone in the place turns and stares while you do your best "Rebel Without a Cause" imitation. There is clearly no better reason to wear motorcycle gear. Well, maybe there is — safety.

The personal protective equipment (PPE) we wear while riding is the only thing between us and the road. Depending on the situation, wearing the proper protective gear (heavy jacket, gloves, boots, etc.) could reduce potential injuries significantly — 30 to 80 percent or more in most cases. Also, wearing PPE isn't just smart, it's mandatory for all U.S. Army Soldiers, according to Army Regulation 385-10 as well as Department of Defense Instruction 6055.04.

Motorcycle Helmets

According to the National Highway Traffic Safety Administration (NHTSA), motorcyclists without helmets are 29 percent less likely to survive a crash and 40 percent more likely to die from a head injury than those wearing a Department of Transportation-approved helmet. Motorcyclists without helmets are also three times more likely to suffer brain injuries in crashes than those using helmets. Admit it, you like your brain. So protect your head and always wear a helmet.

Eyewear

Protective eyewear (or a face shield attached to the helmet) should be worn at all times, even if the motorcycle is equipped with a windshield. Anti-fog ballistic lenses are recommended when choosing eyewear. You will also want to keep a pair of clear lenses on hand for riding after the sun goes down.

Jacket

Most high-quality motorcycle jackets are made from cordura, leather, ballistic nylon or Kevlar. A good jacket will include heavy padding on the elbows, spine and shoulders. Additionally, the

DID YOU KNOW?

Service members who successfully complete their locally required motorcycle safety riding course are eligible for a one-time, 20 percent discount off one item of personal protective equipment (PPE) at the Exchange. The Exchange sells numerous items of PPE, including helmets, protective eyewear, riding jackets and gloves, in facilities worldwide. Even better, these items are also free of sales tax. For more information, contact your local Exchange.

jacket should include reflective strips. If not, you should augment the jacket by wearing a highly visible reflective vest over it. Also, look for a jacket that offers good venting for summertime riding.

Pants

Many riders wear jeans or other types of long trousers, but like a jacket, good pants will be made of leather, nylon or Kevlar. There are also various brands of heavy denim pants made specifically for riding. For winter riding, pants not only offer protection, they can keep you warm. Insulated pants or chaps are a good choice and can be bought coated for rain resistance.

DID YOU KNOW?

May 2011 has been designated as Motorcycle Safety Awareness Month. The National Highway Traffic Safety Administration encourages drivers to become more aware of motorcycles on the road, especially during the warmer, busier summer riding months.

Gloves

Full-fingered gloves should be worn regardless of the weather, and there are different types for warm and cold weather riding. Warm weather gloves are usually not insulated and are made of leather or Kevlar. The good ones have carbon fiber knuckle protection should you fall. Winter gloves provide the same level of protection, but are insulated. Waterproofing is also a good idea.

Boots

A motorcyclist should have boots that allow the foot to fit on the motorcycle peg while still providing good ankle support. Boots should come up over the ankle, as that will offer additional protection in the event of a crash. Leather is a great choice for a boot and provides greater protection than other "stylish" footwear. Make sure the boot has a good, durable rubber sole that provides traction and slip resistance. The thicker the sole, the more the boot will absorb the bike's vibration.

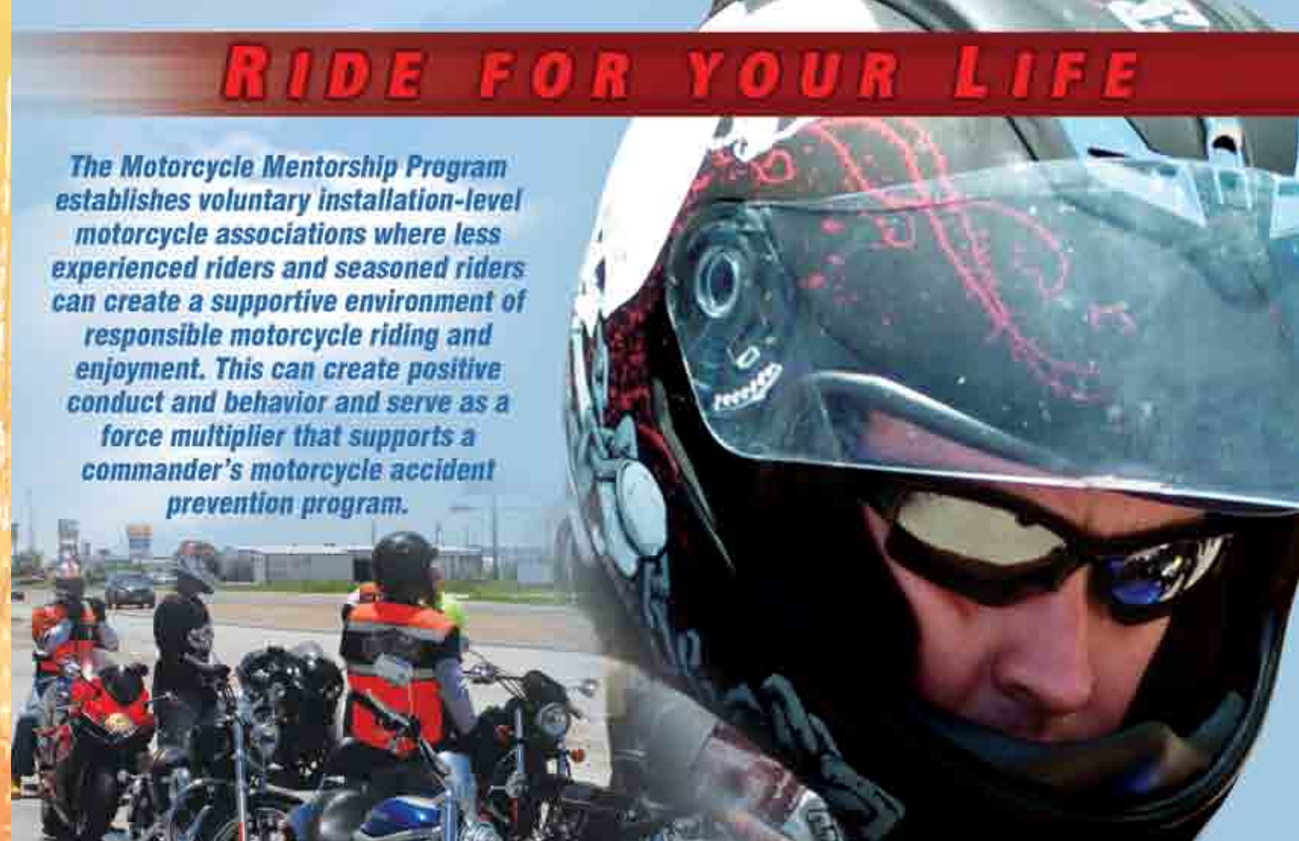
Riders are often the victims of unpredictable and irresponsible motorists (see the story "From Out of Nowhere" on page 12 of this issue). When you cannot avoid an accident, your riding gear may be all that stands between you and a funeral with honors. Why not put that funeral off until your great-grandchildren are old enough to attend?

FYI

Additional information regarding proper Motorcycle PPE can be found in Army Regulation 385-10, Chapter 11-9.

RIDE FOR YOUR LIFE

The Motorcycle Mentorship Program establishes voluntary installation-level motorcycle associations where less experienced riders and seasoned riders can create a supportive environment of responsible motorcycle riding and enjoyment. This can create positive conduct and behavior and serve as a force multiplier that supports a commander's motorcycle accident prevention program.



MMP

MOTORCYCLE MENTORSHIP PROGRAM

Check out the USACR/Safety Center MMP website for some examples of active mentoring programs.

https://safety.army.mil/mmp/

ARMY STRONG.

U.S. ARMY COMBAT READINESS/SAFETY CENTER

ARMY SAFE IS ARMY STRONG

1 BAND OF BROTHERS & SISTERS

RUSH TO FAILURE

CHIEF WARRANT OFFICER 2 JASON HUBBARD AND
CHIEF WARRANT OFFICER 3 JEREMY MILLER
2nd Squadron, 17th Cavalry Regiment
101st Airborne Division (Task Force Saber)
Fort Campbell, Ky.

How dangerous can "light and variable" winds be to the crew of an OH-58D rushing to complete a mission? Read this first-hand account of a crew who, fortunately, survived a close brush with death.

On the night of June 19, 2010, our mission was to conduct area security for a deliberate operation. The squadron commander signed off as the final approval authority. Weather for the evening was perfect. The skies were clear, visibility was unrestricted and winds were light and variable for our night vision goggle flight. We never knew this would play a significant part in our evening.

We did our usual pre-mission planning. We received the mission, gathered the necessary equipment, checked our weight and balance, conducted appropriate hover power and power performance checks, preflighted the aircraft and conducted our crew brief. Everything seemed normal. It was just another routine mission like we had done a thousand times before.

We departed the airfield as a flight of two OH-58Ds and flew to an outlying forward operating base (FOB) in support of ground forces in southern Afghanistan. After the support effort was complete, we conducted forward arming and refueling point operations at another nearby FOB.

Following refuel, we were instructed to position our aircraft at idle in the FOB landing zone (LZ). We were to stay there until called forward to provide security for the ground forces on the objective.

When we arrived at the FOB, the winds were light, just as advertised. The windsock was limp, so Chalk 1 announced he would land to the north. We were Chalk 2 and acknowledged lead's call and followed him into the LZ. Both aircraft landed and maneuvered around the small parking area without incident.

Chalk 1 departed to the south due to light winds and the tight configuration of other aircraft in the LZ. We acknowledged and again maneuvered to depart to the south. Both aircraft took off and we proceeded to the objective area to conduct our mission.

We had been on the objective area for about two hours when it was time to refuel again. Chalk 1 told the ground force commander we were departing the area for fuel and would maintain radio communication if anything came up. Both aircraft left the area and returned to the same FOB as before to refuel.

When we arrived at the FOB, we discovered two additional aircraft on the LZ. A pair of Chinooks had parked on the east side of the LZ and shut down, awaiting a mission. Chalk 1

announced they would be landing to the north as before because the winds were still light. Once again, we followed them into the LZ and refueled.

Since we were not needed right away at the objective area, after refueling, we repositioned the aircraft to the parking area. Due to the limited space available in the LZ, Chalk 1 had to park on the west side while we parked on the east side. After landing, we rolled the throttle down to idle to conserve fuel. We waited for about 10 minutes and then the ground force commander called and said he wanted us back on station. We rolled the throttle back to 100 percent and got ready to depart.

Chalk 1 announced he was departing to the south, as before, and we acknowledged. We then announced we were ready to depart. Chalk 1 picked up and turned to the south. We, in turn, picked up and turned to the south to follow lead. Due to the location of the Chinooks and the fueling points, we had to follow directly behind lead to depart. What we didn't think of was Chalk 1's rotor wash.

As we departed the FOB en route to the ground forces, we were still in trail position and slightly below Chalk 1's flight path. We started building airspeed and felt the aircraft shudder as we started to go through effective translational lift. That's when the rotor system operates more efficiently because it is operating in clean air. Just as the aircraft began to shudder, we entered Chalk 1's rotor wash, which buffeted our aircraft, and we began to descend. Chief Warrant Officer 3 Miller was the pilot in command and pulled collective to arrest our descent. Because we lacked sufficient power, we continued to descend and Miller announced we were going to land. However, because of obstacles on the south end of the landing zone, we had to extend our landing to an unimproved area.

As we transitioned from takeoff profile to landing, our rotor wash caused a dust cloud so thick we lost sight of all ground references (brownout). I pulled collective to attempt an instrument takeoff; however, we did not have enough power to climb. Unable to see the ground to land and unable to climb, all we could do was hope for the best. Caught in the brownout, we drifted to the right and struck a military-owned demountable container.

The Kiowa flipped and came to rest on its left side, catching fire. I was the co-pilot on this flight, and both Miller and I were conscious and attempted to assist each other in getting out of the aircraft. We were hanging from our seat belts, which neither of us could unlatch. I was able to lift my weight by pressing with my feet and pushing with my left arm to release my seat belt. I kicked out the windscreen and climbed halfway out, and then one of the Chinook crew chiefs pulled me clear. Miller's seat belt had to be cut for him to get out of the aircraft. While I escaped without any injuries, Miller suffered a broken nose.

> "In **HINDSIGHT**, you **NEVER** want to **RUSH** to the **POINT** that you **NEGLECT** safety."

Lessons Learned

In hindsight, you never want to rush to the point that you neglect safety. We all want to get to the ground forces as quickly as possible. However, if you crash, you won't be helping anyone and may jeopardize the entire ground mission. With the light winds, we should have given Chalk 1 a little more space to take off. We should have ensured Chalk 1's rotor downwash had dispersed. If we'd waited a few seconds longer, we would've missed the rotor wash and this accident wouldn't have occurred.

If you get into a similar situation, it's best to either commit to the takeoff or land immediately. Take the extra 10 or 15 seconds to get out of the LZ. There is no reason to fly tight in Afghanistan with the limited power margins available.

One more thing, you should always have a plan for getting out of an inverted aircraft. We often assume that the aircraft will end up upright on level ground. Put your equipment on your vest so that you can access it while your seat belt is on. While upside down, seat belts won't release like when you're sitting upright, so have your seat cutter where you can get to it and tie it down. Think about every contingency and have a plan.

Without a Clue

ART POWELL
Strategic Communication Directorate
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

Admit it, you're lost. That's right, you, the tough Soldier who never thought this would happen in a million years, are lost in the great outdoors. If this happened while on duty, you'd be with other Soldiers and have radios. But now, you're alone in the deep, dark woods, your cell phone is useless and you realize you're in a tough situation.

Warmer weather is when many folks head outdoors to enjoy family and friends, thaw out from the winter and put cabin fever in the rearview mirror. The last thing you want to do is end up in the news as the "lost hiker." One thing is for sure — your buddies won't let you forget it when it's all over. However, you can deal with them later. For now, you need to focus on what to do.

After admitting you're lost, what's the first thing you should do? You need to stay where you are — unless it's a short distance to find shelter. Park rangers say that since your last known or reported position is where they first look for you, you might be home for supper if you just stay put. If you continue moving because you're "sure" you can walk out of this situation, you'll probably make it tougher for searchers to locate you. Hiking requires planning, just like any other activity involving risk. Don't think "they'll come get me if I get lost" is a plan.

The website for the Great Smoky Mountains National Park, located along the Tennessee-North Carolina border, makes it clear you'd better do your homework before your feet hit the trail. It states, "You are responsible for your own safety! Travel in Great Smoky Mountains backcountry areas has inherent risks and hikers assume complete responsibility for their own safety. Rescue is not a certainty!"

The Great Smokies is the most visited national park in the nation, with 8-10 million guests a year. While most who decide to sample the park's 800 miles of trails do so without incident, others get lost. Over the history of the park, a few have gone missing and were never seen again.

Your safety is your responsibility and depends on your own good judgment, adequate preparation and constant attention. Backcountry hikers should be in good physical condition and able to survive on their own. Proper equipment and knowing how to use it are essential for a safe trip. Here are a few basics to help you get started:

- Let a responsible person know your route and return time.
- Always hike with another person. Keep your hiking party together and stay on officially maintained trails. Always keep children in your sight when hiking — do not allow them to get ahead of you or fall behind.
- Carry a current park trail map and know how to read it. A handheld GPS or compass can also be useful, but make sure you know how to use one properly. Practice before your hike.
- Carry two small flashlights or headlamps — even on a day hike. If you have trouble on the trail, darkness may fall before you can finish your hike.
- Take a minimum of two quarts of water per person per day. All water obtained from the backcountry should be treated either by filtering or boiling.
- Bring some jerky or trail mix to snack on if you do become lost. It will give you some energy to fight off the cold weather.
- Carry a small first aid kit designed for hikers and campers. Make sure you include medications for those with medical conditions.
- Check the current weather forecast and be prepared for quickly changing conditions.
- Wear shoes or boots that provide good ankle support.
- Avoid hypothermia, the dangerous lowering of body temperature, by keeping dry.
- Avoid cotton clothing. Dress in layers that can be easily removed or added as you heat up or cool down. Always carry a wind-resistant jacket and rain gear — even on sunny days.
- Don't attempt to cross rain-swollen streams; they will recede rapidly after precipitation stops and waiting may save your life. When crossing any stream more than ankle-deep, unbuckle the waist strap of your pack, wear shoes and use a staff to steady yourself.
- Familiarize yourself with the local wildlife and know how to avoid confrontations with it.

Sure, you may be in good physical shape. But if you live at or near sea-level, you may not realize how thin the air is at, say, 7,000 feet, advises Al Nash from Yellowstone National Park. People unaccustomed to the rarified air at higher altitudes are vulnerable to dehydration and suffering the effects of overexertion. If you become "disoriented," Nash recommends staying put and sounding, on a regular basis, that emergency whistle you brought with you. (You did bring one, didn't you?) A signal mirror can also be a life saver by allowing you to alert aircrews to your location.

The difference between being home for supper and sitting in the dark, shivering under a tall tree in the forest, could be up to how well you planned for your hiking trip. Remember, your safety in the great outdoors is your responsibility.

DID YOU KNOW?

In 1995, four students in the Army's Ranger School died of hypothermia while training at Eglin Air Force Base, Fla., after being submerged in 52 F water for 11 hours. While this is an extreme example, it demonstrates that hypothermia is deadly at temperatures far above the freezing level.

On a Wing and a Spare

MASTER SGT. PAUL B. CALIHAN
1/285 Attack Reconnaissance Battalion
Silver Bell Army Heliport
Marana, Ariz.

We'd planned our vacation perfectly. We would travel to Los Angeles for a couple of days, spending the first day at Disneyland and the second at Knott's Berry Farm. The following day we would drive to San Diego to go whale watching and visit Sea World. We were looking forward to a great vacation and planned for all of our hotels and rest stops along the way.

We decided we'd drive our small recreational vehicle (RV), which had just gotten out of the repair shop. I'd asked the mechanics to make sure it was in good shape for the trip from Arizona to California. The first day went off without a hitch and we arrived on California's busy highways right on schedule.

As we approached our exit from the interstate, I heard a loud pop. I pulled over onto the shoulder and looked at the tires — but they all looked intact. I couldn't figure out what had happened. Since our exit was only a half mile away, I drove on to our hotel. When we got there, I noticed one of the rear tires was completely flat. Unfortunately, I hadn't checked the spare or the jack before leaving on the trip. I'd assumed both were in good shape and properly secured on the RV.

The jack seemed to be OK; however, I wasn't properly dressed for changing a tire in a hotel parking lot. Instead, I decided to call for roadside assistance. I hadn't reviewed my insurance policy for at least six months because I only rarely drove the RV. I'd just assumed free roadside assistance was included, even though it wasn't clearly stated on my insurance card. When I called an insurance agent, I found out I'd overlooked adding free roadside assistance to my policy. He said they'd send a truck within the hour for $100 — an expensive oversight on my part.

When the truck arrived, the repairman removed the blown tire, which was completely shredded. When he pulled out the spare, it turned out to be flat and dry rotted. I've dealt with tires like this before and thought that it would be an easy fix to drop it off at a tire repair shop and pick it up the next day. After all, we were only driving five miles to Disneyland. I dropped off the tire at a nearby tire shop, expecting to pick it up the next day before we left for San Diego.

As the day rolled on, I didn't get the "magic" phone call telling me the tire was ready. Finally, the shop called at the end of the day to tell me they didn't have the tire in stock and it had been discontinued. That was not the news I was expecting.

We looked on the Internet and had a tough time finding tires for RVs, especially our model. Here we were 400 miles from home with a dry-rotted tire. We weighed our options. That night, I called and signed up for my insurance company's free roadside assistance coverage (another $100 to our policy). Beyond that, our options weren't too pretty — find a new tire, drive on the dry-rotted spare until our luck ran out or go home.

We made some long-distance calls to tire shops in San Diego and found one that had a tire in stock that would fit our RV. With no other choice, we decided to risk driving the 100 or so miles to San Diego on our dry-rotted tire. Luckily, it

was raining during our drive, which helped keep traffic slow.

We drove straight to the tire shop in San Diego, had the new tire mounted and then finished our vacation. However, in the process, I learned some lessons I would not take lightly.

I learned you should always review your insurance policy so you know what is included in your coverage. Also, just because you've had your vehicle serviced, don't assume that common maintenance, such as checking the air pressure in the spare tire, has been done. Before heading out, check the air pressure in all of your tires and look for signs of dry rot. "Assuming" everything is all right can leave you vulnerable to a nasty surprise. I will be better prepared for future vacations by making sure I include emergency placards, flares, a good jack, an air compressor and have roadside assistance on my insurance. This will be the last vacation where we have to squeak by on a wing and spare! «

RV TRIP TIPS

Traveling safely is important to everyone who takes to the road with a recreational vehicle (RV). Before you set out on your next trip, take a few minutes to review these tips for a safe, trouble-free journey.

Before Your Trip

Make sure your RV is well maintained and ready to go when you are.

- Install a deadbolt door lock on your RV.
- Inspect all belts and hoses for cracking, especially radiator hoses. Replace as needed.
- Check headlights, tires (air and tread) and turn signals.
- Check any hitch or towing equipment.
- Verify your insurance coverage.
- Check your fire extinguisher and smoke alarms.
- Clean your cooking vent hood to avoid grease fires.
- Leave your itinerary with relatives or friends in case of emergency.

On the Road

Be sure to observe the common — but often overlooked — principles of safety. Obey the speed limit, know your rig height and buckle your seat belt.

Tools to Keep Handy

- Flashlight
- Jumper cables
- Aerosol tire sealant and inflation product. *(Editor's note: Use only as a temporary measure to reach a service facility where the tire can be properly repaired.)*
- Emergency road flares
- Adjustable wrench
- Screwdrivers
- Pliers
- Duct tape (for temporary repairs to ruptured radiator hoses)

Severe Weather Tips

Park your RV in a sheltered area. In stormy weather, avoid trees or power lines that could fall on your vehicle. The safest place during lightning is inside your RV. If you're in the path of a tornado, you're safest choice is to go to a tornado shelter. As an alternative, you can park under a bridge overpass or in a ditch. Avoid parking in low areas that are prone to flash flooding.

Carry Your Insurance Information

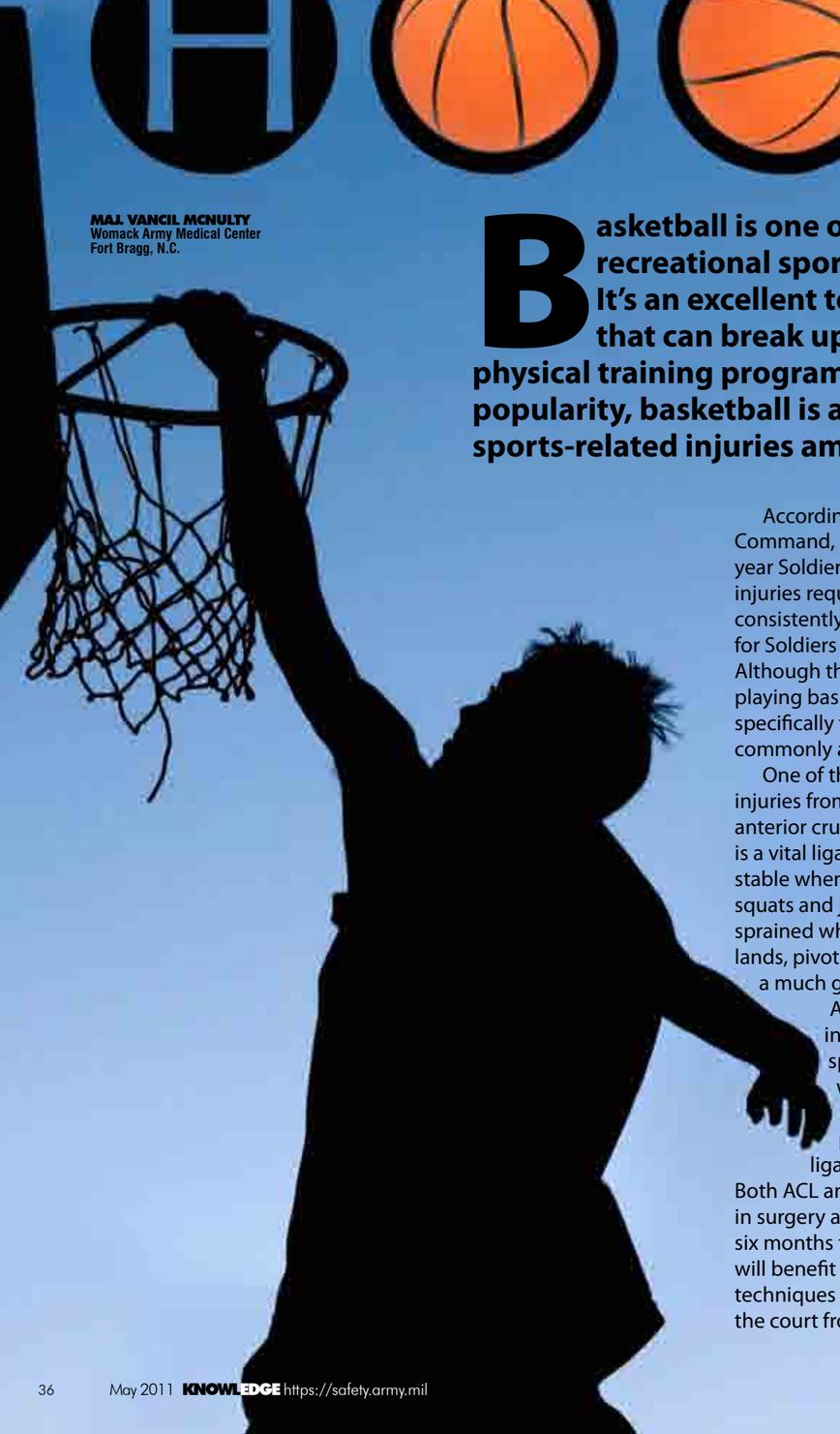
Make sure to carry all insurance contact information with you, including a toll-free claim service number if available. If you are injured in an accident, seek medical assistance first and then contact your insurance company or have someone else make the call for you. «

For more information on RV and camping safety, visit the Funroads.com website at http://www.funroads.com/rv-travel/safety/checklist/.

Editor's note: Information provided by the Foremost Insurance Group of Companies.

HOOPS Health

MAJ. VANCIL MCNULTY
Womack Army Medical Center
Fort Bragg, N.C.



Basketball is one of the most popular recreational sports in the armed forces. It's an excellent tool for fitness and fun that can break up the monotony of a physical training program. Probably due to its popularity, basketball is also a leading cause of sports-related injuries among service members.

According to the U.S. Army Public Health Command, Army survey data show that each year Soldiers suffer more than 50,000 sports injuries requiring medical care. Basketball is consistently a leading injury-producing sport for Soldiers both deployed and at home station. Although they can suffer a variety of injuries playing basketball, the lower extremities — specifically the knee and ankle — are the most commonly affected areas.

One of the more serious, yet common, injuries from basketball is a tear of the anterior cruciate ligament (ACL). The ACL is a vital ligament that helps keep the knee stable when a person bends at the knee, squats and jumps. The ACL can be torn or sprained when the player twists, jumps, lands, pivots or suddenly stops. Females have a much greater risk of tearing an ACL.

Another very common site of injury is the ankle. Ankle ligament sprains and tears usually occur when the foot is "rolled" or twisted inward after an awkward landing, pivot or cut. It's usually the outer ligaments of the ankle that get injured. Both ACL and ankle ligament tears can result in surgery and rehabilitation that can last six months to a year. Recreational athletes will benefit from practicing some simple techniques that may prevent a good time on the court from becoming a major injury.

Warm-up

The warm-up cannot be overemphasized for any sport and becomes more important if one rarely plays basketball. The warm-up involves practicing the specific movements required in basketball — but at a much slower and controlled pace. Take 10 to 15 minutes to practice techniques such as jumping, landing, cutting, pivoting and handling the ball. These activities prime the muscles and nervous system to keep movements precise and controlled, which will protect ligaments, tendons and joints. Stretching is not the same as a warm-up, but it can be a part of the warm-up.

Know Your Limits

Don't try and play above your skill level. Overconfidence in one's athletic abilities has been the downfall of many recreational basketball players. Don't get sloppy with technique or overexuberant with movements that you may not be accustomed to doing. The "I-used-to-be-able-to-dunk" syndrome is one example. Also, be aware of the skill level of your opponent, who may be much better (or worse) than you.

Wear Ankle Braces

Those with prior ankle sprains are especially vulnerable to a re-injury and should consider wearing an ankle brace while playing basketball. It is unknown how much preventive value an ankle brace provides an athlete that has never sprained their ankle. However, it may be beneficial for those who are inexperienced or underconfident in their basketball movement skills. A high-quality ankle brace can usually be attained from sick-call or a medical treatment facility physical therapy clinic at no charge. Unfortunately, knee braces do not have much preventive value for basketball-related knee injuries.

Conclusion

In addition to its physical fitness benefits, basketball can be a source of stress relief for many Soldiers. But it can also lead to injuries that result in significant lost duty time and a decrease in readiness. Before participating in a pick-up game of basketball, or any other sport, make sure you're properly prepared so your hoop dreams don't turn into a nightmare.

FYI

Basketball injuries aren't limited to the knee and ankle. To better protect yourself on the court, consider the following:

- Wear appropriate basketball shoes.
- Remove rings and jewelry.
- Ensure the playing surface is clean and in good condition.
- Check the court and sidelines for tripping hazards such as gym bags and water bottles.
- Ensure the goal posts are padded and offset.
- Use mouth guards and eye protection (ASTM F803 standard).

FLY as a CREW

CHIEF WARRANT OFFICER 4 BRIAN ROBINSON
Detachment 33, Operational Support Airlift Command
Buckley Air Force Base
Aurora, Colo.

Editor's note: Chief Warrant Officer 4 Brian Robinson and Chief Warrant Officer 3 Larry Ciancio of Colorado's Detachment 33, Operational Support Airlift Command, were conducting a functional check flight (FCF) July 14, 2010, in the unit's C-26E fixed-wing aircraft. After completion of the FCF and during the return to their home station, the aileron control cable snapped, causing an uncommanded roll to the left. A subsequent investigation revealed a misrouted aileron control cable had been sawing through a metal bulkhead for almost two years. Despite two previous maintenance inspections, the discrepancy wasn't discovered. Working together as a crew, Robinson and Ciancio were able to successfully land the aircraft. For their actions, they were recognized with the Broken Wing Award.

I planned to give Chief Warrant Officer 3 Larry Ciancio his annual instrument evaluation, but first we needed to sign off on an FCF for some previous maintenance. Our plan was to take off to the southeast, complete the FCF and return to Buckley Air Force Base. We would then pick up our instrument flight rules clearance to conduct the evaluation. The FCF required both engines be shut down one at a time and the propellers feathered to ensure proper operation.

We had great weather for the test flight and departed about 0900. Larry contacted Denver approach to coordinate a climb to 10,500 feet and obtained some maneuvering airspace to the southeast of Buckley. We arrived in the test flight area and commenced the checklist procedures. While I flew the airplane, Larry performed the engine shutdown, propeller feather and restart procedures. If there is such a thing as a routine FCF, this was it. The airplane was performing flawlessly. The engine shutdowns and restarts were uneventful, and with all the checks completed, it was time to return home.

Larry called Denver approach with our request and they subsequently cleared us to descend into the Class B airspace direct to Buckley. I began a left 30-degree bank descending turn toward Buckley with the runway in sight. As I input right aileron to level the wings, something didn't feel right. There was some resistance just before the yoke snapped out of my hands with a loud crack and fell to an inverted position. I immediately retrieved my grip, only to discover the yoke was completely loose in the roll axis. I was dumbstruck as the aircraft began to steepen its bank angle to the left.

Larry sat straight up instantly, recognizing the seriousness of our predicament. He exclaimed with wide eyes, "Oh $#!%, Brian!" I experienced real fear and heartache that I would soon get to watch as we helplessly plummeted into the ground. Larry jumped on the controls, yet quickly realized his yoke could not stop the roll to the left either. At the same time Larry was testing his yoke, I was inputting right rudder, but it didn't seem to have any effect. We were in a slow roll going through 60 degrees of bank and would be upside down within seconds.

Larry transmitted "Mayday" to Denver approach control and informed them we had lost control of the aircraft.

They responded with, "Altitude at your discretion."

Before the airplane became inverted, I quickly pulled the right engine power lever to idle and pushed the left power lever all the way forward. Thankfully, the differential power stopped the roll and slowly began to level the aircraft. As we neared level flight, I reduced the left power as necessary to keep the aircraft flying level. For reasons I couldn't understand, the airplane required differential power to fly level. I thought

FYI

The Army Aviation Broken Wing Award recognizes aircrew members who demonstrate a high degree of professional skill while recovering an aircraft from an in-flight failure or malfunction requiring an emergency landing. Knowledge will periodically spotlight Soldiers who were recently presented with this award. Details on eligibility and nomination procedures of the award can be found in Department of Army Pamphlet 385-10, 6-3(f).

of Al Haines, the United Airlines captain who successfully crash-landed his crippled DC-10 without flight controls at Sioux City, Iowa. Although many survived in Sioux City, some lost their life. I feared our situation could be a recurrence of that crash.

Denver approach control was assisting us as much as possible and clearing the airspace around us. Straight ahead was Centennial Airport's runway 28, but it was only 4,800 feet long with the approach over a small hill. I found I could steer the airplane with differential power and decided to turn toward Buckley. Buckley's runway is 11,000 feet long and 200 feet wide with crash rescue services on the airfield. Denver approach control also gave us the option of Denver International's 16,000-foot runway, but I elected to head for our familiar home station.

Larry was controlling our altitude with his control yoke. As we lined up with Buckley's runway 32, he discovered he could control the roll of the airplane with the ailerons to the left. However, his yoke was still loose from the neutral position to the right. We began to experiment carefully what control authority we did have. I told Larry to keep the airplane level as I began to input right aileron trim. It became apparent that if we gave the airplane a right turning tendency with trim, Larry could keep the airplane level by using counter pressure with left aileron input. I slowly began to equal the power of the engines while I kept my right hand on the trim wheel to counteract any left bank excursions.

We decided on crew duties. Larry would fly the airplane while I controlled the engine power, communicated with air traffic control and guarded the trim in case we needed more. I loaded the instrument landing system data for runway 32 into our flight management system. At the glide slope intercept, I lowered the gear, set the flaps to one-half and completed the before-landing checklist. The configuration change was still manageable, but without the benefit of staying in a Holiday Inn Express the night before, we elected not to make any more changes. We prepared for a half-flap landing.

The approach was uneventful. Larry made one of the smoothest landings I've ever witnessed. I aggressively put the power levers into reverse and we quickly slowed to taxi speed. I terminated the emergency with the tower and Larry began the taxi to parking. The adrenaline and tension began to give way to the fear of what had just happened. We gave each other a high five, yet didn't really know what to say to each other. We completed the shutdown with the checklist as we had done countless times before.

Lessons Learned

We were very lucky this incident occurred on a bright, clear day with some altitude to work with. Had it occurred just minutes earlier with an engine shutdown, a successful outcome would have been unlikely.

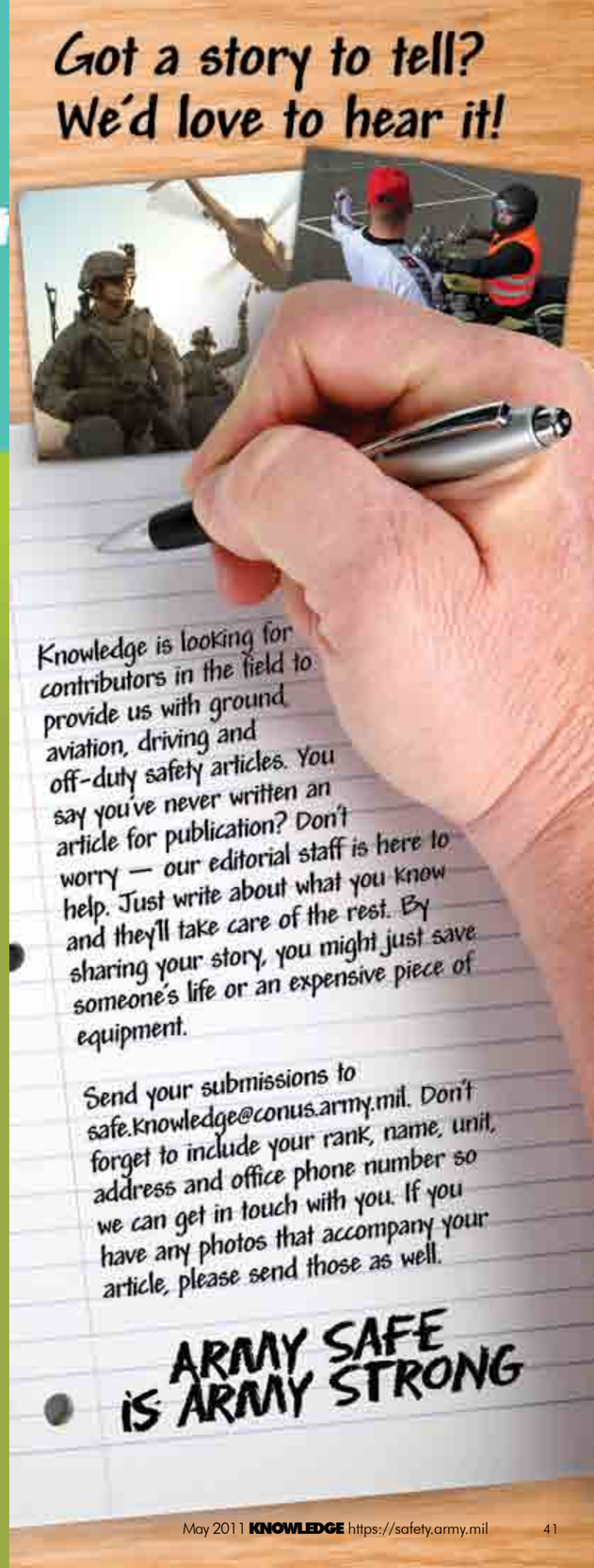
When the cable broke, I was entirely dumbstruck. I never announced to Larry I had a problem, but with my yoke upside down, he figured it out. Had he not continued to experiment with his yoke, we may have just landed with differential power applied and the landing would have been more spectacular.

My shock at what happened delayed my taking immediate action. There is no emergency procedure published for such an event. When an incident occurs that you have never trained for, you can't give up. You must use all available knowledge and previous skills to find a solution. Thankfully, we did.

We never formally transferred the controls, but we did fly as a crew and figured out how to get our wounded bird home. It took two people to land the airplane successfully.

FOOD FOR THOUGHT

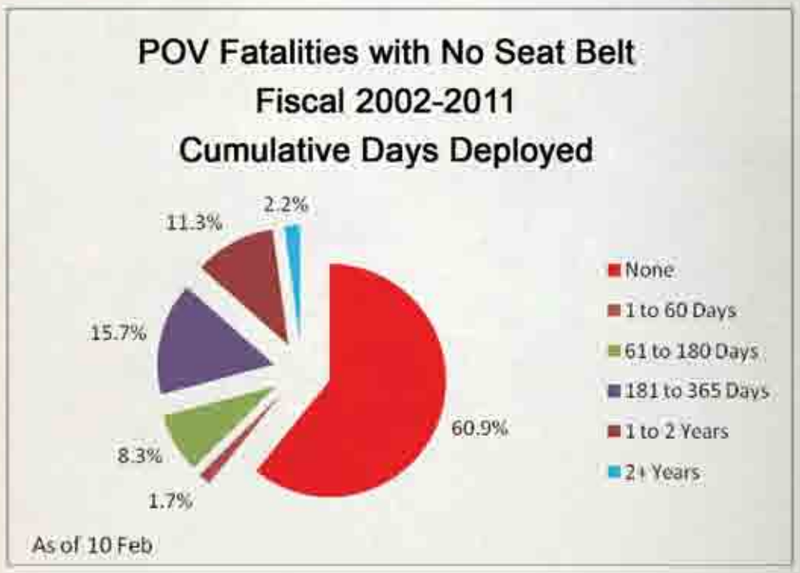
The Army Aircrew Coordination Training Enhanced (ACT-E) program provides a mechanism to effectively integrate, sustain and maintain crew coordination in the operations of aviation units. The need to evaluate aircrews consistently according to that training cannot be overstated. With greater than 25 percent of Army aviation accidents attributed to or involving crew coordination failures, aviation Leaders must continue to invest time in strategies that address improvements in crew coordination.

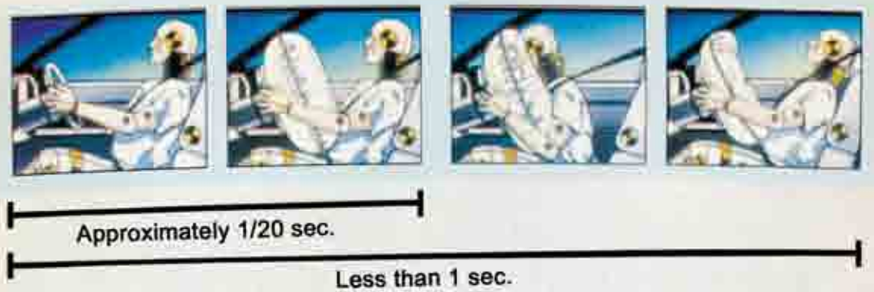


Seat Belts and Stayin' Alive

STEVE KURTIAK AND TIM PAYNE
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

As we all know, wearing a seat belt greatly increases your chances of surviving an accident — but only if you wear it. Based on the accident reports from Oct. 1, 2010, through Feb. 10, 2011, nine of 11 Soldiers involved in vehicle accidents chose not to comply with Army regulations and wear their seat belt. Of those nine Soldiers, eight — two of which were passengers — were ejected from their vehicles. In at least two of these accidents, other Soldiers who were wearing their seat belt survived.



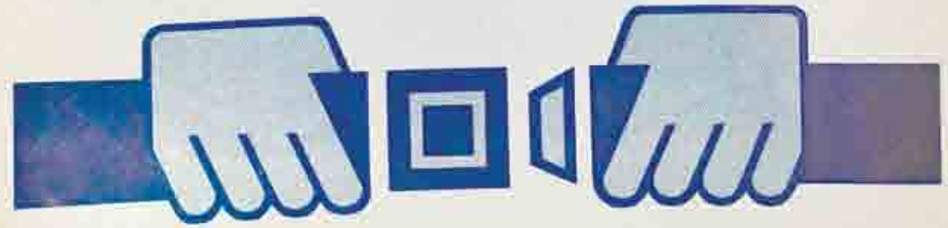


Conventional wisdom says that multiple deployments are a major cause of Soldier accidents, but the data show that is not the case. The typical Soldier killed in a vehicular accident is a 20- to 24-year-old single male specialist/corporal in their first enlistment with a high school diploma and who has not been deployed. In fact, more than 60 percent of the Soldiers killed in vehicle accidents since fiscal 2002 had never been deployed. Only 13.5 percent had more than 365 cumulative days deployed.

A seat belt is a component of the entire occupant protection system in vehicles. Federal Motor Vehicle Safety Standard 208, Occupant Crash Protection, as amended on July 17, 1984, required that automatic occupant protection, such as air bags or automatic belts, be phased into passenger cars during 1987-1990. Air bags are now standard equipment on vehicles and have been since September 1997 for passenger cars and 1998 for light trucks. The air bag sensor, a component of the air bag system, sends a signal to deploy the air bags in collisions between 8 and 14 mph. The graphic above shows how quickly the air bag deploys.

Many vehicles produced today also have side air bags, and some include air bags installed in the roof support pillars. Remember, though, that the air bag system is designed to supplement the vehicle's seat belts, not be the primary protection. Vehicle manufacturers have also designed crumple zones to absorb the energy of a collision and dissipate that energy to reduce the forces on the occupants. Manufacturer technology has progressed to the point where a vehicle will shut off the fuel, unlock the doors and turn on the emergency flashers in the event of a crash.

With all of these great safety features, why would anyone choose not to use the most effective component of the occupant protection system? Is it a "Nothing will happen to me," attitude or a "Who are they to tell me what to do," approach to driving or riding in a vehicle? Regardless the attitude or reason, nine Soldiers made a conscious decision not to wear a seat belt and paid for that decision with their lives.



LOST

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.

AVIATION

AH-64D

CLASS C

- The crew experienced a No.1 engine failure while on a crosswind pattern, and the No. 2 engine failed on downwind. The crew executed an autorotation, and the aircraft sustained damage on landing.

CH-47D

CLASS C

- The aircraft's right-aft landing gear was damaged when it struck the edge of a berm in dust conditions. The aircraft instrumentation alerted the crew and they landed without further incident.

- The aircraft's front-left landing gear was damaged during landing in brownout conditions. The aircraft landed without further incident.

- The aircraft touched down hard during a roll-on dust landing, damaging the left-forward rim assembly and dislodging the tire. The crew initiated a go-around to avoid a ground obstacle, during which the flight engineer suffered a leg injury. The aircraft landed in a notable left-low attitude at the nearest Army airfield.

- The aircraft's landing gear collapsed during a pinnacle landing. The aircraft was approved for a one-time flight to home station for repair.

UH-60A

CLASS C

- The crew was ground taxiing to parking when the main rotor system struck a single main rotor blade of a parked aircraft.

UH-72A

CLASS C

- The aircraft experienced NR (main rotor speed) overspeed (117 percent for two seconds) during an autorotation. The aircraft landed without further incident. A post-flight inspection revealed damage to the main rotor head.

UAS

RQ-7B

CLASS B

- After launching, the crew experienced a generator failure. The chute did not deploy and the unmanned aircraft (UA) crashed north of the airfield. The aircraft was deemed a total loss.

CLASS C

- The UA experienced an overtemp condition during a climb. The crew executed control flight and the chute was deployed. The UA was damaged upon landing and recovered.

GROUND

Personnel Injury

CLASS A

- A Soldier was running on an installation trail when he was shot and killed by a hunter.

CLASS B

- A Soldier suffered a likely permanent partial disability injury when his M249 discharged as he was dismounting a combat vehicle. The Soldier was struck in the leg and foot by two rounds. Another Soldier was also injured in the incident.

- A Soldier lost a portion of her finger when her gloved hand was caught in the fold of a HEMTT ladder as she was descending following routine gauge checks.

DRIVING

POV

CLASS A

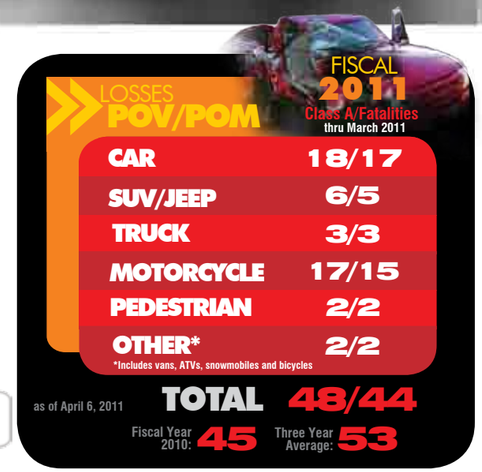
- A Soldier was killed when he was ejected from a vehicle that struck a culvert. The Soldier had been drinking and was not wearing his seat belt. The Soldier driving the vehicle, who had also been drinking, wore a seat belt and survived.

- A Soldier died when he was ejected from his vehicle that left the roadway and struck a tree. The Soldier was not wearing a seat belt.

POM

CLASS A

- A Soldier died after she lost control of her motorcycle, fell onto the road and was struck by another rider following her. The Soldier had been properly trained, licensed and was wearing her personal protective equipment.



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VOL 5 JUNE 2011

OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

'WE HIT THE MOUNTAIN!'

- 'ROUTINE' FLIGHTS
- ALL-TERRAIN VEHICLES
- WATER SAFETY

+

WEAPONS HANDLING

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KNOWLEDGE
OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

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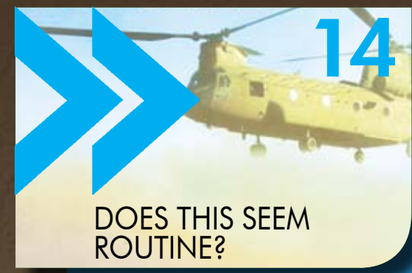

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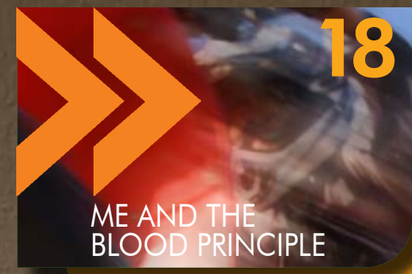

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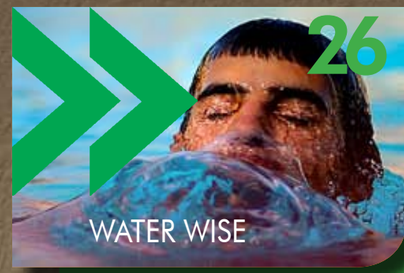

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Mission statement: The United States Army Combat Readiness/Safety Center (USACR/Safety Center) supports our Army by collecting, analyzing and communicating actionable information to assist Leaders, Soldiers, Families and Civilians in preserving/protecting our Army's combat resources.

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

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LEARNING LESSONS, STAYING SAFE

Our Army is beginning the summer on a high note of success: Overall, accidental fatalities are down 14 percent from 2010, and our Soldiers, Family members and Civilians are more dedicated than ever to the fight against preventable deaths and injuries. Every life saved is proof of your hard work and commitment to safety. Thank you all for what you do every day!

When things are going well, however, there's always a risk of complacency setting in. Accidents typically peak during the spring and summer months, and it's especially critical we maintain our vigilance and look out for one another during the weeks ahead. Since past problems tend to repeat themselves, I'd like to take a quick look at the lessons learned from summer 2010.

Motorcycles. For the period April 1 to Sept. 30, 2010, more Soldiers died on motorcycles than all other privately owned vehicles combined (31 versus 27, respectively). The numbers have been particularly worrisome in 2011, with motorcycle fatalities reaching an 85 percent increase for the year through the second quarter. Indiscipline — speeding, alcohol use, failure to wear personal protective equipment and/or a lack of proper licensing and training — was identified as a primary contributing factor in a majority of these accidents.

POVs (sedans, vans, trucks and SUVs). Accidents involving POVs comprised the next largest share of accidental fatalities during spring and summer 2010 and, like motorcycles, indiscipline was cited in the bulk of these cases. Although fatal POV accidents as a whole have been on a downward trend the past several years, they remain the No. 1 accidental killer of Soldiers, regardless of season. Nonuse of seat belts continues to be a leading factor and is a key area Leaders should address with their Soldiers.

Pedestrian. We lost seven Soldiers in pedestrian accidents last spring and summer, a marked increase from previous years. Numbers are down significantly this fiscal year, but as the days get longer and the weather nicer, more Soldiers might choose to walk home if they've had too much to drink. While this might seem a good alternative to driving after drinking, walking while intoxicated is just as risky.

Drowning. Four Soldiers drowned in off-duty accidents during the last half of fiscal 2010, a 100-percent increase from the same timeframe a year before. We've already lost two Soldiers in drowning accidents this fiscal year, and that number could increase as more Soldiers and Family members vacation at beaches and lakes in the coming months.

Other. From April to September 2010, one Soldier died in an ATV accident; one in a negligent discharge incident; one in a boat collision; and one from carbon monoxide poisoning at home. Accidents like these are uncommon, but negligent discharges in particular are on the rise this fiscal year. In fact, we've lost four Soldiers thus far to accidental discharges involving privately owned weapons.

As your Soldiers take advantage of their down time this summer, it's especially important to engage with them and their Family members on everything that can take them out of the fight. Trust built through engagement — by Leaders, peers and Family members — is absolutely necessary to ensure our Soldiers stay safe on the road and in all their off-duty activities. Fostering a command climate where Soldiers feel comfortable talking to their Leaders and each other about potential problems, without fear of retribution, will not only build this trust, but also allow Soldiers to take personal responsibility for their safety and develop greater self-discipline.

The USACR/Safety Center is working every day to make engaging with your Soldiers easier. Our annual Safe Summer campaign is currently underway, and a toolkit featuring posters, videos, informative articles and a presentation template is available through the "Campaign Corner" on our website, https://safety.army.mil. This is also the last month for submissions to our annual Peer to Peer video competition, so encourage your Soldiers to help get the safety message out while winning some cash for their local Better Opportunities for Single Soldiers programs. Finally, be sure to direct your Soldiers to the Training and Doctrine Command's "Off Duty, On Guard" interactive experience, also available on our website. This tool allows users to see the consequences of their decisions by assuming a virtual player's identity in a variety of off-duty situations. Many of the scenarios involve warm-weather activities like boating and are especially relevant this time of year.

We're on the right track to another remarkable year for safety, and I'm confident our successes will continue through the weeks ahead with the commitment of all our Leaders, Soldiers, Families and Civilians. Thank you again for what you do every day, and remember to play it safe this summer!

Army Safe is Army Strong!

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

> During the summer of 1775, a band of patriots came together to form a fighting force unlike any the world had ever seen. Born from the seeds of revolution and a passion for freedom, our Army endures 236 years later because of your courage and dedication. I thank each of you — Soldiers in uniform, Family members at home and Civilians in the workplace — for all you do to keep our Army strong. Happy Birthday to you all!

FROM BBs TO BULLETS

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When I was about 8 years old, I got a Daisy Red Ryder BB gun for Christmas. It was probably the most prized gift I ever received. Before I could shoot it, my father gave me some important instructions that apply to any firearm: "Always treat any gun as if it were loaded, even if you think it is empty, and never point it at anyone." I took him seriously and have applied his advice to every weapon I have encountered since. Unfortunately, Soldiers sometimes forget that advice. An accident that occurred during basic combat training (BCT) reminds us all too painfully that this basic principle of weapons handling must apply to every weapon — from BB guns to .50-caliber machine guns.

The accident took place during the U.S. weapons portion of BCT. The training consisted of classroom instruction, dry fire, day and night live fire of small-arms weapons, and concurrent and simulation training on the M2 .50-caliber machine gun and MK-19 40 mm grenade launcher. The BCT battery was in week six of training and conducting simulations training on the MK-19 and M2 at the Engagement Skills Trainer (EST) complex. Because only a limited number of Soldiers could train on the EST weapons at the same time, concurrent training was set up outside to maximize the instruction time.

A drill instructor (DI) conducted the concurrent training on the M2 on a covered concrete pad adjacent to the EST buildings. The weapons were oriented toward the bleachers occupied by the BCT Soldiers. Once the Soldiers received a block of instruction

"From a BB GUN to a .50-CALIBER machine gun, ALWAYS ORIENT a WEAPON IN A SAFE DIRECTION."

on the M2, they all moved off the bleachers and got in line for hands-on training using dummy ammunition. However, unknown to the DI, a live round was located on one of the links with the dummy rounds. Although some of the Soldiers discussed how real the round looked, they decided there was no way the DIs would allow a live round to be mixed in with the dummy ammo. This proved a fatal assumption.

The link with the live round was loaded into an M2 and fed through the chamber numerous times during the training. At one point, the weapon jammed. As the DI attempted to unjam it, the live round was chambered and the M2 fired, striking a Soldier in the abdomen as he was walking between the bleachers in front of the weapon. The Soldier died of his wounds.

So how did this accident happen and what could have been done to prevent it?

There were several opportunities to avoid the accident. First, the training battalion failed to stick to the unit and installation standing operating procedure (SOP) that required all ammunition to be turned in following training events. Had the live round been turned in properly, this accident could have been prevented. Also, had the training ammunition been inspected prior to and following training as per the unit SOP, the live round could have been identified before the accident.

This accident might have also been prevented if the BCT Soldiers had received thorough training on the different types of ammunition and how to identify the differences between live and dummy rounds. During the initial classes on the U.S. weapons at the live-fire range, dummy ammunition was used as part of the instruction. Several Soldiers handled the live .50-caliber round that was located in the dummy ammunition can. One Soldier even asked the DI if it was a .50-caliber round, to which the DI replied it was. However, the DI was not close enough to realize that it was a live round. The Soldiers' overconfidence in the DIs, coupled with their own lack of experience and confidence, led to a climate in which they did not question something that troubled them: Why did this round (the live round) look and feel different from the other dummy rounds? Therefore, the live round made its way back into the dummy ammunition can, where it was drawn for the training at the EST site.

Finally, why was the weapon pointed toward the bleachers? Doesn't this go against all of the training we have received throughout our careers? The DI conducting the training was led into a false sense of safety because the EST site is not an actual range, but a simulation facility. The only ammunition that was supposed to be at the site was dummy ammo. Unfortunately, the leadership at the training site that day fell into the same false sense of safety and did not correct the DI's weapon orientation.

We must never forget what has been ingrained into our heads as Soldiers and everyday citizens. From a BB gun to a .50-caliber machine gun, always orient a weapon in a safe direction. Remember, muzzle awareness saves lives.

Editor's note: This article is based upon a recent Army accident investigation. The names of the Soldiers have been changed to protect their privacy.

One hundred and eighty-four mph — that's what the bike could do right off the showroom floor. Pfc. Jesse Morales was well above 100 mph as he bored a hole through the night on a straight section of the divided six-lane highway. Never had he felt so much power at his fingertips. Time, distance and speed all blurred together as he crouched forward over the sport bike's fuel tank. He'd never gone so fast before and still been on the ground.

STRAIGHT into the NIGHT

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U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

The yellow glow of sodium streetlights bathed the road ahead, providing illumination under an otherwise dark, moonless sky. Falling quickly behind in his rearview mirror were the headlights of several cars he'd passed. He'd used the bike's speed and agility to swiftly weave through them, leaving himself an uncluttered straightaway ahead. He wondered how fast the bike's 190 "horses" could push him when there was nothing to hold him back.

Morales rolled on the throttle; the acceleration was incredible. He felt the bike surge ahead and held on tightly. The road sloped slightly downward through a gentle dip. Morales briefly felt a little heavier in the bike's seat as he came out of the dip and began climbing a gentle incline on the other side. Speed — pure adrenaline pumping, heart-thumping velocity — sent him streaking forward like a missile. But the road curved. And the machine desperately wanted to go straight.

Morales was in the far left lane. The faded white lines dividing his lane from the center one suddenly swept beneath his tires as the road gently curved to the left. A second set of white lines quickly flashed below him as he crossed from the middle lane to the far-right — his headlight reflecting off the concrete curb ahead. He saw it! Frozen — caught in an impossible situation — Morales never even touched the brakes. The blinding speed he'd craved had erased all of his options.

The bike's front wheel slammed into the curb, creating a deep, half-moon-shaped dent in the rim. Six feet or so farther onto the shoulder, the bike hit a 2-foot-tall erosion control fence. Constructed of heavy wire fencing secured by steel rebar posts embedded in the ground, it caught Morales, instantly amputating his right leg above the knee. Critically injured, he flew and tumbled more than 40 feet before coming to rest on his stomach, his face toward the road.

Several of the drivers he'd passed moments before saw the accident, called 911 and stopped to help him. But it was too late, as Morales lay motionless on the ground. Only 21 years old, he'd traded the rest of his life for just a few seconds of thrill.

How could something so senseless happen? How could an otherwise intelligent person gamble so much for so little?

The answer is worth considering. Morales had been trained — at least so far as having completed the Motorcycle Safety Foundation's (MSF) Basic RiderCourse (BRC) — more than two years before the accident. However, he'd never identified himself to his Leaders as a rider or gotten a motorcycle license. More importantly, his only prior experience riding had been on a scooter in high school. Neither his MSF training nor his limited

riding experience adequately prepared him for a motorcycle capable of speeds over 180 mph. The impulse to seek a thrill pushed him beyond his capabilities. An experienced rider could've rounded the curve, even at the speed Morales was going. But a wise rider would've realized such speeds should be reserved for race tracks where training and controlled conditions dramatically reduce risks.

And there were other issues to be factored in to this accident. Morales had worked all day, finishing with unit physical training. After work, he'd gone out with a friend and grabbed dinner at a fast food restaurant. After returning to the barracks, he later met up with Pfc. Dale Wright about 10 p.m. and asked to borrow Wright's motorcycle. Wright, who'd attended the BRC with Morales, agreed to lend him his 1000cc sport bike. Morales explained he was going to ride off post to briefly meet some friends and then return.

However, that didn't happen. At 11:30 p.m., Morales called his girlfriend and told her he was tired and going back to the barracks to get some rest. It was more than an hour later when he opened up the throttle on that straightaway as he headed back toward post. He'd been up for nearly 17 hours straight and fatigue, according to the National Highway Traffic Safety Administration (NHTSA), takes a toll on any motorist's skills. By increasing reaction times, decreasing awareness and slowing the decision-making process, fatigue subtracts from the skills motorists need to be safe on the highway. NHTSA also found that human circadian sleep patterns play a critical role in influencing driver fatigue and alertness. As in Morales' crash, NHTSA found the deadliest time for fatigue-related crashes is after midnight — a time when the body normally wants to sleep.

"For Soldiers, who must not only OBEY state and national LAWS but also ARMY REGULATIONS, OVERCONFIDENCE can LEAD TO INDISCIPLINE ..."

There is yet another human factor — the decision to ignore risks inherent in a situation regardless the warnings. The underlying motivation is perhaps best described as overconfidence, the attitude that "it" — whatever the negative consequences might be — either "won't happen to me" or "I can handle it." For Soldiers, who must not only obey state and national laws but also Army regulations, overconfidence can lead to indiscipline — a personal choice to violate the standards they know they should obey. When this happens, it often takes Soldiers out of the risk management cycle, making them vulnerable to the consequences. And while indiscipline in garrison can result in a butt-chewing from a first sergeant, on the road the results can be permanent and tragic. It was for Morales.«

"NEITHER A BORROWER NOR LENDER BE"

Those words, taken from Shakespeare's play Hamlet, form the basis of some pretty sound advice for Soldiers when it comes to loaning motorcycles to friends. As in Morales' story, the loan of a motorcycle to a friend, while perhaps done with good intentions, doesn't always end up with good results. During recent years, several Soldiers have died riding motorcycles borrowed from other Soldiers. Certainly, none of the Soldiers who lent their bikes to their friends intended that they should die on them, but sometimes obvious risks were ignored. It's worth a moment to look at a synopsis of some of these accidents to see what lessons can be learned.

- A Soldier was invited to a party at a co-worker's home where he drank heavily. The Soldier had expressed an interest in borrowing a friend's motorcycle, despite being told not to ride by several other partiers. Despite that, the Soldier borrowed the motorcycle, started it and sped up and down the street until he lost control at 80 mph and crashed. The Soldier, who wasn't wearing a helmet, suffered massive head trauma and died on the way to the hospital.
- A Soldier was riding a borrowed motorcycle when he lost control, went into a ditch, struck a barbed-wire fence and suffered fatal injuries.
- A Soldier was riding a borrowed motorcycle without having a motorcycle license or having attended the required MSF training. Overconfident, he lacked the experience and training to ride at high speeds and crashed, suffering fatal head and body injuries.
- Two Soldiers were riding together when the one on a borrowed motorcycle lost control, went off the highway and down a steep embankment and was killed.
- A Soldier was riding a borrowed motorcycle when he collided with another Soldier's motorcycle and was thrown into a steel barrier and killed.

While none of the Soldiers who lent their bikes to their friends intended they suffer these kinds of consequences, neither can they change them. Some bad decisions last forever.«

Does THIS Seem ROUTINE?

CHIEF WARRANT OFFICER 5 BOBBIE T. SCHWEIKART
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The intent of this article is to ignite some thought and consideration on successful mission accomplishment without loss of life or equipment.

The extreme environmental flight conditions in Afghanistan present aircrews with challenging conditions in which to execute a diverse set of missions. Most Soldiers in today's Army have already experienced the Afghanistan area of responsibility (AOR) and are aware of the hazards associated with flight operations. Yet, after several months and 100 to 200 hours of flight time in the AOR, these same Soldiers may look at flight operations as just another day at the office. The attention to detail applied to earlier flight operations have blurred into a "Groundhog Day"-type routine.

The question, "Does this seem routine?" may be your last words. There are several ways to avoid falling into the "routine" ambush.

Pre-deployment Training: While pre-deployment training has evolved greatly over the last seven years, it still tends to lag behind the accident trends. Current accident trends have pinpointed power management, landing in brownout conditions and controlled flight into terrain as the leading mistakes. Simulators can be used to emphasize power management techniques, practice one- and two-wheel landings in mountainous environments and combat maneuvering flight and limited visibility landings (brownout). Initial experiences in the high and hot Afghanistan AOR revealed an issue with power management. However, the High-Altitude Mountain Environmental Training Strategy (HAMETS) is addressing this problem through training at Fort Carson, Colo.

Crew coordination, standard terminology, landing zone (LZ) evaluation of dust and wind conditions and proper scanning techniques are reinforced in all phases of pre-deployment training and cannot be stressed enough. Pre-deployment environmental training must be followed with tailored environmental training programs executed upon arrival in the AOR and reinforced throughout the deployment.

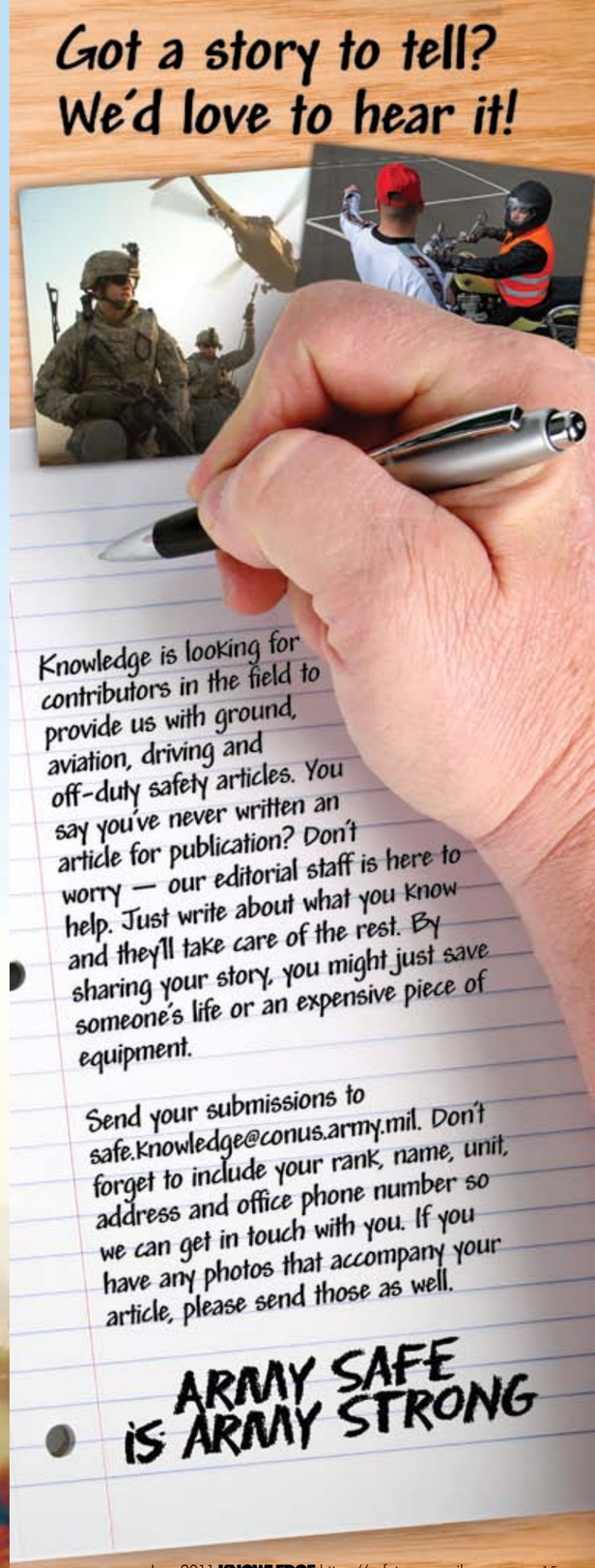
Crew Mix: Commanders, standardization pilots (SPs) and aviation safety officers (ASOs) involved in training must have an intimate knowledge of the strengths and weaknesses of individual crewmembers. Augmenting that knowledge with tools such as a quick reference spreadsheet detailing crewmembers' flight experience in all flight modes, allows Leaders, SPs and ASOs to assign appropriate crews to each mission set. When an assigned flight crew contains two pilots in command (PC) who are both qualified crewmembers, the mission briefer must clearly identify the air mission commander (AMC) and PC, eliminating any question of who is in charge of the aircraft. Consider designating someone other than a PC as the AMC. This will allow them to focus on the mission while the PC focuses on flying the aircraft and working with the flight crew. Non-rated crewmember and door gunner selection requires the same scrutiny as rated crewmembers.

Mission planning: Centralized accident investigations have shown the Army has improved in its mission planning processes, which have undeniably prevented accidents and loss of life. The 160th Special Operations Aviation Regiment is a prime example that covers contingencies from the aviation, maneuver and enemy perspective. Their mission planning is a detailed process, regardless of mission complexity, and a model for all to follow.

Having a close partnership with supported ground elements is paramount. For example, aircrews requiring ground elements to provide individual Soldier weights to the pound as they develop load plans is critical to accurate performance planning. In-flight mission and environmental changes require aircrews to work tabular data in flight and on the objective. The evaluation of wind effects must be continually trained and enforced. Accurate in-flight evaluation of winds and their effects may be the difference between a successful mission and a Class A mishap. Missions conducted carrying heavy loads under high/hot environmental conditions are accomplished successfully only when detailed pre-mission planning, en route planning and appropriate pilot techniques are applied to complement each other.

Command Involvement: Command involvement at all levels is necessary to "check the checker." Mission briefers must ask hard questions rather than signing off their portion of the briefing because the crew assigned the mission has a good reputation. Statistics have shown that you cannot base the probability of a crew experiencing an accident solely on their number of flight hours. Everyone is susceptible. You've heard it said, "Bring your A-game to all mission sets." The fact is we are not always capable of bringing our A-game. We must be humble and recognize when outside factors are affecting our or another's ability to perform. These factors may be as simple as not getting enough sleep, onset of a cold or uncertainty of one's ability to conduct that specific mission or assuming the other aviator can fly the aircraft and complete the mission without help.

In summary, every mission has its unique set of hazards that, on occasion, the controls put in place will not mitigate below a high or extremely high level of risk. In the end, commanders must make the "go/no-go" decision based on solid cost/benefit analysis and aggressive risk management. There is nothing routine about any Army aviation mission. Ask questions to clarify any detail, regardless of how minor it may seem. The answer could save your life and the lives of others. ≪



BURNED on the Fourth of July

CHRIS HAIRR
U.S. Army Training and Doctrine Command Safety Office
Fort Monroe, Va.

The Fourth of July is a festive time of year. Many of us get the day off and have cookouts or parties, and some cities and towns hold festivals. Of course, no Fourth of July celebration would be complete without a fireworks display. From skyrockets to Roman candles, fireworks have entertained and captivated young and old for years.

Unfortunately, a lot of people don't take seriously the major hazards related to fireworks. Some even enjoy lighting firecrackers or cherry bombs and holding them in their hand as long as possible before throwing them — sometimes at each other! Even sparklers, which many consider a "safe" firework, can be dangerous. Sparklers can burn up to 1,800 F, and the stick remains hot long after the flame goes out. Still, some parents will readily hand their child a sparkler without a second thought. Some people just don't seem to understand what can happen with these unsafe practices.

Many of those who have used fireworks have a "close-call" story to tell. My father had multiple fireworks incidents when he was younger. However, one particular story stands out.

When he was 15, my father and five of his friends from the neighborhood decided to take some Roman candles to a nearby field. It was a particularly dry summer that year, and the field had tall grass — up to his knees at some points. To remain hidden from police, they chose a spot that was out of sight from the road. They lit their Roman candles and started shooting them almost horizontally. Then, as some foolish people do, they started shooting them toward one another.

For about an hour and a half that night, they ran around that field having fun. Then, a scary series of events took place.

A flaming orb from a Roman candle was shot into one boy's T-shirt sleeve. Almost simultaneously, another boy was struck in the eye by one of the colored fireballs. The two injured teenagers and one other stopped shooting their Roman candles so they could check how badly they were injured. The other three boys, including my father, continued playing. About 10 minutes later, my father inadvertently shot a few orbs into an area of thicker, drier grass. Those orbs caused the lower portion of the grass to ignite, and, almost instantaneously, the entire corner of the field was on fire.

When they saw the blaze, they immediately ran away. The majority of the field eventually ended up burning. Fortunately, no property, other than the empty field, was damaged, and none of them were caught by police. My father and his friends were lucky to escape this "near miss." With the fire spreading as quickly as it did, it could've very easily surrounded them, trapping them in the field.

Still, there were consequences to their careless behavior. The young man who had the orb shot up his sleeve had to go to the emergency room with third-degree burns across the underside of his upper arm, along his armpit and down a few inches on the side of his torso. The doctors had to give him skin grafts, and he spent a week in the burn unit to make sure the affected area was kept clean. For as long as he and my father kept in contact, he had bad scars all along the grafted areas.

The young man who was struck in the eye also had to go to the emergency room. He suffered permanent damage to his eye and eyelid and had to have surgery that night. Sadly, his eye sustained too much damage to ever recover, so it had to be removed. It was replaced with a glass eye that he has to live with for the rest of his life. He had to spend two weeks in the hospital recovering from the surgery and the burns to his eyelid.

That night, two people's lives were forever changed. But despite the horrible injuries his friends suffered, my father continued using fireworks unsafely. Eventually, though, he saw the error of his ways.

If you plan to shoot fireworks, please keep my father's story in mind. When used properly, fireworks can add excitement to any celebration. However, in the hands of the careless, the festivities could end badly.

IS IT LEGAL?

Before lighting your first fuse, make sure fireworks are legal to possess and use in your city and state. The National Council on Fireworks Safety (NCFS) website has a directory of state laws regarding fireworks, including what items are permitted and prohibited for use. It's also a good idea to 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 the NCFS's website at http://fireworksafety.com.

HANDLE WITH CARE

To help you safely celebrate the Fourth of July, the National Council on Fireworks Safety offers the following tips:

- Use fireworks outdoors only.
- Obey local laws. If fireworks are not legal where you live, do not use them.
- Always have a garden hose or bucket of water handy.
- Only use fireworks as intended. Don't try to alter or combine them.
- Never relight a "dud" firework. Wait 20 minutes and then soak it in a bucket of water.
- Use common sense. Spectators should keep a safe distance from the shooter, and the shooter should wear safety glasses.
- Alcohol and fireworks do not mix. Have a "designated shooter."
- Only persons over the age of 12 should be allowed to handle sparklers of any type.
- Never use homemade fireworks or illegal explosives; they can kill you! Report illegal explosives to the fire or police department in your community.

Me and the Blood Principle

The "blood principle" states that people are unwilling to invest in the necessary safety precautions until blood is spilled or someone dies. On a day not long ago, I cut corners on safety, broke my own personal operating procedures and inflicted the blood principle on myself.

CHIEF WARRANT OFFICER 4 RICH GOLLNER
Western Army National Guard Aviation Training Site
Silver Bell Army Heliport
Marana, Ariz.

My wife and I were on our way to our usual all-terrain vehicle (ATV) riding spot — one that I knew well — when we saw some riders at an area near where we lived. After stopping and chatting with them for a bit, I found out the local authorities were OK with people riding there. Hearing that, we decided to give it a whirl. After all, it saved us a 35-minute drive.

After offloading the ATV, my wife put on her personal protective equipment (PPE) and I handed the "reins" to her. The ATV was new and she needed to get a feel for how it handled. She seemed to be having a wonderful time. I was going TDY the next day and it was good to have some time to enjoy together.

She returned and said the area where she'd been riding would be a great place for me to play. Hearing that, I decided to put on my gear and mount up. She was right. When I got there, I saw some nice built-up turns, a few whoops and a couple of makeshift jumps — nothing too serious and definitely within my skills. Although the ATV was still in its break-in period, I decided to "get on it" a bit to feel how it handled in the turns and whoops. On my second pass, I held back a little, entered the jump too slowly and landed on my front wheels. Fortunately, I knew from experience to shift my weight back to keep the ATV's rear end down. I chuckled at my own "rookie" mistake.

I didn't repeat that mistake on my third jump. I gave the ATV plenty of gas and hit the jump just right. Eager to go around and do it again, I took what appeared to be a shortcut back to the ramp area. I hurried along the shortcut, not realizing that it veered sharply to the right. I couldn't make the turn and

WHAT DO YOU THINK?

Do you ride an ATV? What would you have done different that day? What suggestions would you make to prevent future ATV accidents? Remember, not everyone walks away (see The Good, the Bad and the Ugly, Knowledge, October 2010). Why not take a few moments to share your thoughts with us at safe.knowledge@conus.army.mil?

Also, do you have a good "It Happened to Me" story to tell? Why not share what you've learned with others through this magazine? And if you'd prefer, we don't have to put your name on it. Just think about it. You might keep someone else from learning the hard way.
Got ATV? Got Internet? Check out the following website, http://www.atvsafety.org/.

ended up going straight over another berm with a 4-foot drop on the far side. Oops! There was nothing I could do but bail — something at which I had a bit of experience.

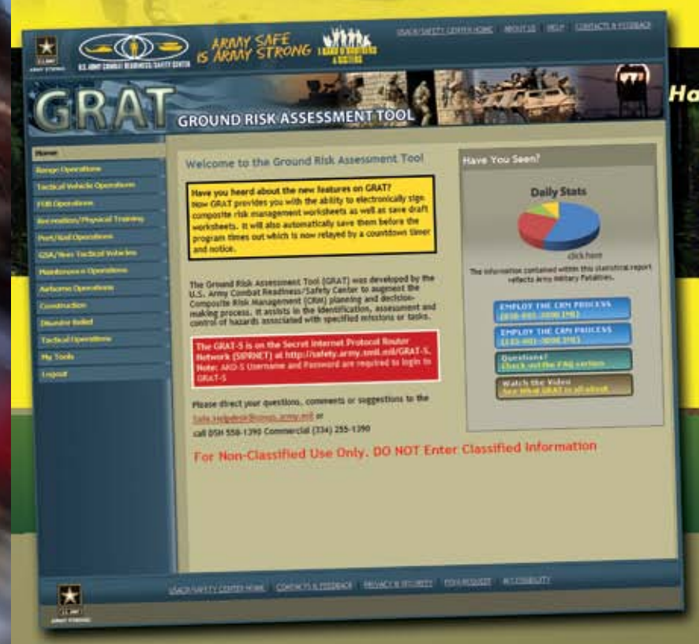
I tried my best to soften my ground impact, but after the dust settled, my left hand was tingling and pain wracked both knees. I checked myself to see if anything was broken, but everything moved OK. That said, my pants were ripped open in the knees, and I could see bloody wounds where I once had skin. Hobbling painfully, I collected the ATV and headed back to my truck. As I did, I had time to consider my lessons learned.

First, I blew it by not taking the time to get familiar with the area. The dirt was much softer than I was accustomed to and there were hidden turns I wasn't aware of. I'd ridden in unfamiliar places in the past and used my skills to bail me out of trouble. I usually got away with it — but not this day.

Second, I was unfamiliar with my new ATV and relied on past experience to overcome any handling differences. All ATVs don't handle the same, even if they do have certain characteristics in common. However, I let that make me complacent rather than take the time to really learn my new machine. On top of that, I knew I was pushing the ATV too hard during its break-in period trying to do those jumps. I should have waited until a later date.

Third, I'd ridden for years without shin guards or knee protection and had always gotten away with it. I'd rarely crashed and, when I did, had only minor injuries. I was overconfident and complacent because I'd successfully dodged the bullets in the past — that is, until one finally connected. That's when the blood principle kicked in.

It could have been worse. Aside from some badly scraped knees and sprained wrists, at least I was able to walk away from this accident. I'd made a deposit on the blood principle that day, and you can write "overconfident" on that check. I learned enough that day that I don't want to make any future deposits. This is one account I never want marked "Paid in Full."«



'We HIT the MOUNTAIN!'

CHIEF WARRANT OFFICER 3 NICOLE HAYES
A Company, 4th Attack Reconnaissance Battalion, 4th Aviation Brigade
Fort Hood, Texas

On Nov. 3, 2010, I almost killed my co-pilot gunner (CPG) and myself. I was the air mission commander for a standard AH-64D team supporting ground operations in Afghanistan. Here's my story.

We arrived for our afternoon briefing and received a direct support mission for an infantry battalion. However, the briefed weather was below brigade minimums for mission support.

After receiving heavy ground fire and suffering multiple casualties, the infantry battalion called in for troops-in-contact support. I updated weather for the urgent mission and received a new weather brief of 800 feet and six miles. I was re-briefed and approved to take off with weather above 700 feet and two miles. I was lead in a flight of two AH-64Ds. The previous day I'd flown to the area where we were headed, so I decided to take the same route instead of the published low weather route.

My CPG was a new first lieutenant just out of flight school. I gave him a standard crew brief as we went through run-up procedures. Once we were ready for takeoff, we called the tactical operations center (TOC) and departed the airfield to the west. As we left the fence line, we stayed at 100 to 200 feet above ground level and 110 knots true air speed (KTAS).

We were about 10 miles from the airfield when I saw the canyon we had passed through the previous day en route to the south side of the mountain range. We made the turn to start through the mountain pass and I called my wingman to let him know I'd be slowing to 80 KTAS. We were in the canyon for about a minute when the weather rapidly worsened. As I was making a radio call to my wingman to ask what he thought, visibility suddenly deteriorated and we inadvertently "punched" into the clouds.

I was at the bottom of a 5,000-foot ravine with zero visibility and again called my sister ship to tell him to turn around. I started climbing and told my CPG to back me up on the instruments. I was closer to the left side of the canyon than the right, so I let him know I'd be turning slightly right to avoid contacting the mountainside. About 23 seconds later, the CPG got my attention by yelling, "Pull up!" I looked up to see that we were about to run into very steep terrain. The low-altitude warning simultaneously sounded. I jerked the cyclic to the left trying to keep the rotor blades from striking the ground. At the same time I pulled full aft cyclic all the way to my seat belt.

It was still not enough. We hit the mountain. I can only describe this sensation as the most terrifying moment of my life! We struck terrain and bounced back into the cloud, smashing the underside of the aircraft into the side of the rock face. Somehow, we managed to keep the rotor from striking the ground. My CPG calmly announced our airspeed had dropped to 12 knots. He sounded as if we were having a normal conversation over a cup of coffee. His cool demeanor helped me to stay calm as well.

We managed to get the aircraft under control and, once again, started to climb through the clouds. Using my moving map for situational awareness, I turned the aircraft to parallel the mountain range as we headed back toward base.

While still climbing through the clouds, we received another

low-altitude warning. We had crossed the east wall of the canyon at just 54 feet. Again, my airspeed bled off as I pulled back the cyclic, desperately trying to stay away from what I couldn't see. My CPG continued to keep us on track by announcing airspeed. A few tense minutes later, we punched through the cloud layer. We were now flying under visual flight rules (VFR). I called my wingman to let him know we had hit the mountain, but we were still flying and were VFR over the top.

My wingman made all the radio calls to tower and the TOC so we could focus on "limping" our aircraft back to base. Anything above 90 knots caused the aircraft to vibrate. We were unaware of the extent of the aircraft damage. However, as we looked out our window, we could see we had knocked the seeker heads off all three of the Hellfire missiles we were carrying. We crossed back over the mountain range and entered the downwind leg of the approach pattern using the moving map. My CPG put up the emergency GPS approach and I flew to it but didn't execute the published procedure. I descended back through the clouds and landed without further incident.

Lessons Learned

I made many mistakes throughout this mission. I pushed my team and myself into weather that was legal, but not smart. This caused me to find myself in a bad way. Faced with the same conditions, I would still take off; however, I'd make sure to use the published low weather route. I was simply taking the same route I had the day before. I had never been on the published low weather route, and I felt more comfortable flying the same course I had just 24 hours earlier.

In addition, I'd make sure my entire team was comfortable with the weather and familiar with the GPS approaches. I'd also make sure not to put myself into another situation without an escape route. I hope by sharing my experience, I can help fellow aviators learn from my mistakes and avoid making the same ones.«

> "We **STRUCK** terrain and **BOUNCED** back **INTO** the **CLOUD**, smashing the **UNDERSIDE** of the **AIRCRAFT** into the side of the **ROCK** face."

WATER-WISE

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As summer approaches, many Soldiers and their Families will seek out recreational activities in or around water. While having fun may be the top priority, following some basic water safety rules could mean the difference between a good time and tragedy.

Did you know that, on average, it takes only 20 seconds for a child and 60 seconds for an adult to drown? Drowning is often a silent event, especially for children because those 5 years old and under don't understand the danger of falling into water and usually don't splash, cry or call out for help. According to the Centers for Disease Control and Prevention, in 2007, there were nearly 3,500 drownings in the United States, averaging about 10 deaths per day.

More than one in five drowning victims are 14 and younger, and for every child who dies from drowning, another four receive emergency care for non-fatal submersion injuries. Unfortunately, for those that only "nearly drown," the result is also often tragic. Near-drowning may result in memory problems, learning disabilities or severe brain damage.

Before taking your Family out for a relaxing dip this summer, keep the following tips in mind:

- Designate a responsible adult "water watcher" to supervise all children swimming or playing in or around water. This adult should not be distracted by anything else — that means no chatting with other people, reading books, talking or texting on a cell phone or grilling.
- Avoid drinking alcohol before and during swimming, boating or water skiing. Be especially careful to abstain from alcohol while supervising children.
- For home pools, install a four-sided, isolation pool fence that completely separates the house from the pool area. The fence should be non-climbable and at least 4 feet tall. Use self-closing, self-latching gates that open outward and have latches above the reach of children. Place items that can be used for climbing, such as tables and chairs, away from fences.
- Remove all floats and other toys from the pool immediately after use. These toys can tempt children to enter the pool area or lean over the pool and accidentally fall in.
- Know the local weather conditions and forecast before swimming or boating. Bad weather can make swimming and boating very dangerous.
- Always use U.S. Coast Guard-approved personal flotation devices (PFDs), regardless of the distance to be traveled, the size of the boat or the swimming ability of the boaters. Do not use air-filled or foam toys (like "water wings") in place of a PFD.
- Always swim with a buddy, even if you are an excellent swimmer.
- Anytime your plans involve water-related activities, plan ahead for emergencies. Teach everyone in your group how to use safety equipment and how to call 911. It's also a good idea to learn CPR. Your CPR skills could make a difference in someone's life until paramedics arrive.

Summertime means fun in and around the water. Whether you're at the ocean, lake or neighborhood pool, be water wise and prevent drowning and other injuries.

FYI

For more information about water safety, visit these Centers for Disease Control and Prevention website at www.cdc.gov/SafeChild/Drowning/default.htm or Safe Kids U.S.A. at www.usa.safekids.org and search for "drowning."

WATERLOGGED

Soldiers aren't immune to recreational swimming and boating accidents. Earlier this year, a Soldier drowned when he fell from a boat into chilly water while fishing at a pond. The Soldier, who was not wearing a life jacket, was unable to climb back into the boat and sank below the surface.

In fiscal 2010, eight Soldiers died while participating in off-duty water-related activities, including:

- A Soldier who had been snorkeling in shallow water with Family members was found unresponsive. She was pronounced dead at a local medical center.
- A Soldier drowned in a hotel swimming pool while on a brigade-sponsored retreat.
- A Soldier drowned in a lake when he attempted to swim from a boat to retrieve a can floating on the water.
- A Soldier died when the boat he was operating struck a concrete bridge piling.
- A Soldier drowned when his kayak capsized on a river.

The BAG-DRAG Boogie

PETER CRANTON
Brooke Army Medical Center
Fort Sam Houston, Texas

June 7, 2006, was supposed to be a special day. It was my girlfriend's birthday and I wanted to surprise her by riding my motorcycle to Atlanta from Valdosta, Ga. To get an early start, I cranked up my bike at 2 a.m. and headed up Interstate 75 North. Little did I know it was going to be a (very) short trip.

I was riding my first motorcycle, a Suzuki GSXR 1000, that I'd bought about a year earlier. The previous year, my girlfriend bought me motorcycle riding lessons from a Harley-Davidson dealership as a birthday gift. She knew how much I wanted to ride.

The four-day Rider's Edge course helped me a lot. One of the lessons we were taught was how to properly secure items while riding. Cruiser-type motorcycles, such as Harley-Davidsons, often have saddlebags or even trunks to carry gear. However, on my Suzuki sport bike, I was pretty much limited to whatever I could strap to the gas tank or rear fender.

As I got ready to hit the road that morning, I used a spider bungee cord to strap my travel bag to the rear fender. I checked and double-checked the bag to make sure it was secure before heading out. As I pulled onto the highway, everything seemed normal. Periodically, I reached back and checked the bag to make sure it was still there. I'd only gone about 20 miles when things suddenly changed.

I was riding in the right-hand lane at 75 mph when the engine light came on and I lost all power. I didn't have a clue what was happening, but I felt like I was riding on ice as my bike skidded at least 100 feet into the fast lane and stopped. Fortunately, my motorcycle training had taught me to not panic, so I didn't lose control.

My mind was racing. Here I was at "0-dark-thirty" on the highway with traffic rapidly overtaking me. I got off my motorcycle and started pushing it into the emergency lane. However, as I pushed, I noticed the bike was difficult to move. When I got into the emergency lane, I checked the bike see what had happened. At first, I didn't notice anything. Then it struck me — "Where did my bag go?" Then I saw where it had gone. The bag I thought I'd properly secured had fallen and become jammed between the motorcycle's fender and rear wheel. That's what locked up the rear wheel and sent me skidding across the road.

As I stood there, my heart was pounding in my chest. I realized how bad the situation could have been had I not been trained to properly handle motorcycle emergencies. Beyond the initial training I received from Harley-Davidson, I'd also taken the Military Sportbike RiderCourse. In an emergency, good training pays off.

I learned that day it is essential to properly secure any bags or luggage when riding a motorcycle. I should have known the spider bungee cord I was using wasn't up to the job. Since the accident, I have looked into buying a tank bag. Had I been using one that morning, I'd have been enjoying the day with my girlfriend instead of doing the "bag-drag boogie" on the interstate.

KNOWING WHEN TO SAY 'WHEN'

CHIEF WARRANT OFFICER 2 JOSEPH M. STUPPIELLO
Detachment 1, B Company
3-126th General Support Aviation Battalion
Rochester, N.Y.

It's 120 F outside and close to 130 F in the cockpit! You're hovering at 50 feet with about 10 feet of obstacle clearance off the side of a ridgeline. You're conducting business as usual, as you follow footprints in the sand to determine which set of tracks you need to pursue. It's HOT! You're not sweating anymore. Did you pay that electric bill online last night? Where's the hose to your CamelBak? The winds are 40 knots, gusting to 55. Nothing out of the ordinary, just another day in the desert. On your last phone call, did you tell your wife and children that you love them? Man, it's HOT! There's the CamelBak hose, but it's no use because there's no water in it. All you can think about is how nice it would be to fly something corporate with a freaking air conditioner! The warning tone suddenly sounds and you have a low rotor condition. How did this happen?

Oftentimes, as aviators, we find ourselves in different mindsets and have different attitudes and opinions about things, depending on how long we're assigned a particular mission. At first, we're excited. Things are new, we've trained for this operation a long time and we're eager to accomplish the mission. We execute and strive to be the best. Our focus is solely on the mission, including completing the mission promptly and as safely as possible. We have purpose and are glad to support our fellow ground troops. We feel good about the mission because we're making a difference.

As time passes, however, rest cycles come into play. After a while, the old adage, "work hard, play hard" comes to mind. Although time off from work is important, our mission takes such high precedence we don't normally get much time off from work. This often leads to fatigue, which can be even more problematic for aviators. Mental fatigue leads to poor decision-making and impaired problem-solving skills. Physical fatigue affects (slows) our response times when we should always be "ahead of the aircraft." Even though we're still focused on our mission, we also realize it's the "mission" that is keeping us from taking time off from work. And while we think we're focused totally on the mission; subconsciously, we're focused on what we're going to do or where we're going to be next weekend.

After painstaking months lapse, we can finally begin to see light at the end of the tunnel. Our deployment is ending and we're soon heading home. Our focus is still on the mission, but our thoughts are on going home to our Families. We've been flying "routine" missions repeatedly and become comfortable with our abilities and our aircraft. We are much more confident than when we began the mission several months ago. Just to keep things interesting, we might push our limits or push the envelope of our aircraft. Because of this, we are much more likely to take higher-risk missions due to a false sense of security we have conjured in our minds. The thought, "It won't happen to me!" emerges; after all, we've been there for several months and experienced every action known … or so we thought.

Aviators are confident and don't let anything stand in their way of accomplishing the mission. A commander might start to believe that he doesn't need pilots in command who choose not to complete a mission simply because they are not "comfortable." The climate within the unit is similar to when we began the mission; however, safety now takes a backseat to mission completion. Toward the end of our deployment, we all just want to be heroes and go home. Unfortunately, some have very little or no regard for safety.

The scenario at the beginning of this article was based on a true story. Fortunately, the pilot made the appropriate corrections to recover the OH-58A/C. What happened was the throttle cable became loose and, as a result, the throttle inadvertently rolled down as the pilot made power adjustments with the collective. The pilot was able to recover the aircraft due to his being familiar with the airframe. He knew this was a problem in this airframe and recognized it en route for the mission. The pilot had an observer on board that day with no flight experience.

Why did the crew decide to continue the mission? Why didn't they abort and get another aircraft? In order to fix a hazardous situation, we must first identify the problem. Once the situation was identified, the pilot took precautionary measures to control the situation. The important things to consider included the following: How many times have we found ourselves in a similar situation? How often do we find ourselves flying around and not even focusing on the mission at hand? How many pilots do we know who have experienced this same type pattern of mission rut? What are some of the things we can do as aviators to fix or mitigate these issues? Do you have the intestinal fortitude to stand up to your superior to tell him or her that you need some time away from the mission? Do you know when to say "when?"

Horse Sense

CAPT. ADAM HENNING
301st Regional Support Group
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Butler, Pa.

It was late summer and I, along with the rest of the guys in my platoon, was preparing for my first deployment. We had met a few months earlier during our pre-mobilization training and were already beginning to function as a cohesive team. With about a month left before mobilization, going-away parties were in full swing. It was a nervous time for many of us, but we were determined to make the most of our final days at home.

We took road trips, hiked mountains and even found an old abandoned railroad trestle to climb across that spanned a gap about 80 feet above a river. On this particular day, the activity was horseback riding. A buddy of mine was hosting his going-away party and asked if any of us would like to try a little riding. Having never ridden a horse, and secure in the knowledge of my own invincibility, I decided to give it a go. At first, I did pretty well. As I gained confidence in my newly discovered riding skills, I decided I wanted to go faster. The horse was all too happy to oblige my request for more speed and, like me, ignored the concerns of my buddy, who was saying something about being careful.

It was about this time that I realized two things. The first was horses don't have much in the way of natural "holds." Without a saddle, I found myself beginning to slowly slide to one side of the horse. This brought me to my second realization. While a well-trained horse will slow down with a gentle tug on the reins, this particular horse had a mind of his own. Just about then, my train of thought was interrupted by a disorienting weightless feeling, followed by an unceremonious landing a few inches from the horse's hooves. Fortunately for me, no real damage was done, aside from some minor scrapes and bruises.

My first experience with horseback riding (or horseback falling, as we later dubbed it), made for some funny stories. But the tendency of Soldiers to engage in risk-taking behavior immediately before and after a deployment is no laughing matter. I was lucky; my reminder that I'm not invincible came in the form of a minor, although painful, fall. Many aren't so lucky.

Far too many Soldiers are seriously injured, or even killed, when they engage in risk-taking behavior immediately before or after a deployment. Almost everyone I've spoken to knows someone who had been hurt or had a near miss in the months during their deployment preparation or their recovery period following redeployment. Whether it's the result of feeling invincible or wanting to experience one more thrill before heading oversees, these risky behaviors are a real threat to the safety and mission-effectiveness of our troops.

As safety professionals and Leaders, it's our responsibility to stay engaged with our Soldiers during the entire deployment process. This includes preparation and recovery. By being alert for signs of high-risk behavior, we not only show our Soldiers we care, we just might save a life.

OFF DUTY, ON GUARD

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Fort Monroe, Va.

"How can the Army prevent off-duty accidents?" Commanders, supervisors and other Leaders in positions of authority have been asking that very question without much success over the past several years. The Army has made some pretty good progress in reducing on-duty accidents and fatalities, but as those incidents decrease, we're losing a far greater percentage of our Soldiers to accidents suffered during non-duty time.

As a way of expanding the conversation on off-duty accidents and offering reasonable solutions to some of the challenges faced by our Soldiers, the U.S. Army Training and Doctrine Command has produced a video game in the form of an interactive video virtual experience entitled "Off Duty, On Guard." This innovative tool allows viewers to play the parts of various characters, make decisions and see the consequences of their choices. The vignettes are entertaining and based on actual accident experiences. The storylines and characters are believable and easy to identify with and, while not being "preachy," convey a message of what right looks like when prudent, reasonable choices are made.

The video is split into two stories, "Full Throttle" and "On the Waterfront." "Full Throttle" features three main characters (Mags, Vans and Twitchy) with three different storylines, all dealing with vehicle safety issues. Mags' story deals primarily with privately owned vehicle safety; Vans' segment covers all-terrain vehicles and off-road safety; and Twitchy's video covers motorcycle safety.

"On the Waterfront" is a story about six Soldiers spending a Saturday on the lake. Obviously, the tale is about boating and water safety. There are also three main characters (Frickman, Diaz and Grimes) that play major roles in this vignette. Unlike "Full Throttle," there is only one storyline and choosing the different characters allows the viewer to see how each character's actions (or inactions) affect outcomes.

This video is extremely user-friendly and can be presented in a variety of ways (individual, small groups, classroom). It's available now for your spring and summer off-duty safety campaigns at http://www.tradoc.army.mil/offdutyonguard/.

Remember, this tool is not a magic solution to solve all our off-duty safety challenges. It is only the beginning of many potentially productive conversations; how productive they are depends on how effectively you and other Leaders use the tool.

LOCKOUT

May Not be the Solution

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Since 2005, a tactic, technique and procedure (TTP) has been slowly gaining acceptance in the UH-60 community that may not be the correct response in all decreasing rotor situations. The mission requirements in Afghanistan have forced H-60 aircrews to perform missions at the limits of aircraft engine performance. Most Army aviators have not experienced these environmental conditions, which require an understanding of engine gas generator speed (NG) and fuel flow limiting.

Although the operator's manual includes information on turbine gas temperature (TGT) limiting, there is little information on fuel flow and NG limiting. Because TGT is the only method of engine limiting mentioned, pilots may believe that bypassing the TGT limiting function of the Electronic Control Unit/Digital Electronic Control Unit (ECU/DECU) will always offer additional power. It is critical for aviators to understand the conditions that cause the engine limiting before placing an engine in lockout.

The General Electric (GE) T700-series engine limits maximum torque available in one of three ways: TGT, NG or fuel flow. Typically, H-60 pilots have been trained to rely on TGT as the best indicator of aircraft power. Until recently, most H-60 pilots flew missions in environments in which TGT was generally the engine-limiting factor. When limited by TGT, bypassing the ECU/DECU limiting function would allow the pilot to increase torque by 2 to 4 percent beyond the dual-engine limiter. When operating in cold environments (below 0 F), the T700-series engine may reach an NG or fuel flow limit before a TGT limit. Below minus 20 C, the engine will always be NG limited and TGT will not reach the dual-engine limiter value.

Here is the danger; pilots who rely only on TGT and fail to consider NG or fuel flow limitations when determining the additional power beyond the maximum torque available may be in for a nasty surprise. That additional power may not be there, a situation that could delay a successful recovery or escape plan. The current charts in the operator's manual, tabular data and the integrated performance aircraft configuration (IPAC) software do not specify whether the maximum torque available figure is TGT, NG or fuel flow limited. However, all give an accurate maximum torque available value regardless of the limiting factor.

Power Limited Approaches and the Value of Escape Routes

Rotary-wing aircraft supporting Operation Enduring Freedom are often required to take off and land at high gross weights in power-limited situations. Anytime a pilot determines he is in a power-limited situation, it becomes even more imperative to have an executable escape plan for the entire takeoff or landing sequence. A limited power situation is not a go/no-go event since conditions such as wind, turbulence, pilot control input and power required for the deceleration for landing aren't precisely predictable and aren't factored into torque values. Variables may change during the takeoff or landing, causing pilots to exceed the planned and calculated power limit. It is critical while conducting landings during TGT, NG or fuel flow limited power situations that an escape must be executed whenever a rotor droop occurs or anytime power is in question.

Limited power margins should be an indicator to the pilot in command as to whether to attempt the maneuver. As the margin between power available and power required becomes smaller, the quality and necessity of an executable escape plan should be the determining factor in deciding to conduct an approach. Issues such as power to overcome wind, turbulence, downdrafts and deceleration must be factored into the maneuver. Climb/descent power available must be determined before beginning the maneuver and the ability to execute an escape at any point is critical. Where power requirements may be marginal and cannot be accurately calculated, it may be necessary to verify power available by applying power at the same conditions as the landing zone (LZ) before the approach.

When conducting limited power approaches, Task 1011 of the aircrew training manual (ATM) states: "Determining aircraft performance using tabular data, requires that aircrews update performance data when there is an intent to take off or land when operating within 3,000 pounds MAX ALLOWABLE GWT OGE, and when there is an increase of 1,000 feet pressure altitude, and/or 5 C from the planned PPC." Currently, the only method of calculating the data to meet this standard is the tabular data located in the operator's checklist or by using the charts in the operator's manual. During the next revision of the ATM, Task 1011 will be updated to include the use of IPAC software to derive values.

Landing Zone Sequence a Proven Procedure

The Directorate of Evaluation and Standardization, in coordination with U.S. Army Forces Command and 21st Cavalry Brigade, has been involved in training units before deployment to Afghanistan in these limited power situations. The High Altitude Mountain Environmental Training (HAMET) package includes mountain flying considerations, power management, multi-aircraft and night vision goggle operations. It also includes an LZ sequence that is used for all approaches, simulating marginal power and includes terrain analysis. Originally adopted from the High-Altitude Aviation Training Site program of instruction taught at Eagle, Colo., it is an invaluable and proven technique for determining margin available versus power required, a vital consideration when conducting limited power operations. Although trained in mountainous conditions, the techniques can apply to takeoffs and landings in

any limited power environment. The next revision of the H-60 ATM will include the following procedure:

Landing Zone Sequence

1. Environmental
- Note temperature at LZ.
- Note pressure altitude of LZ on altimeter setting of 29.92.

2. Suitability
- Size, slope, surface, long-axis, obstacles.

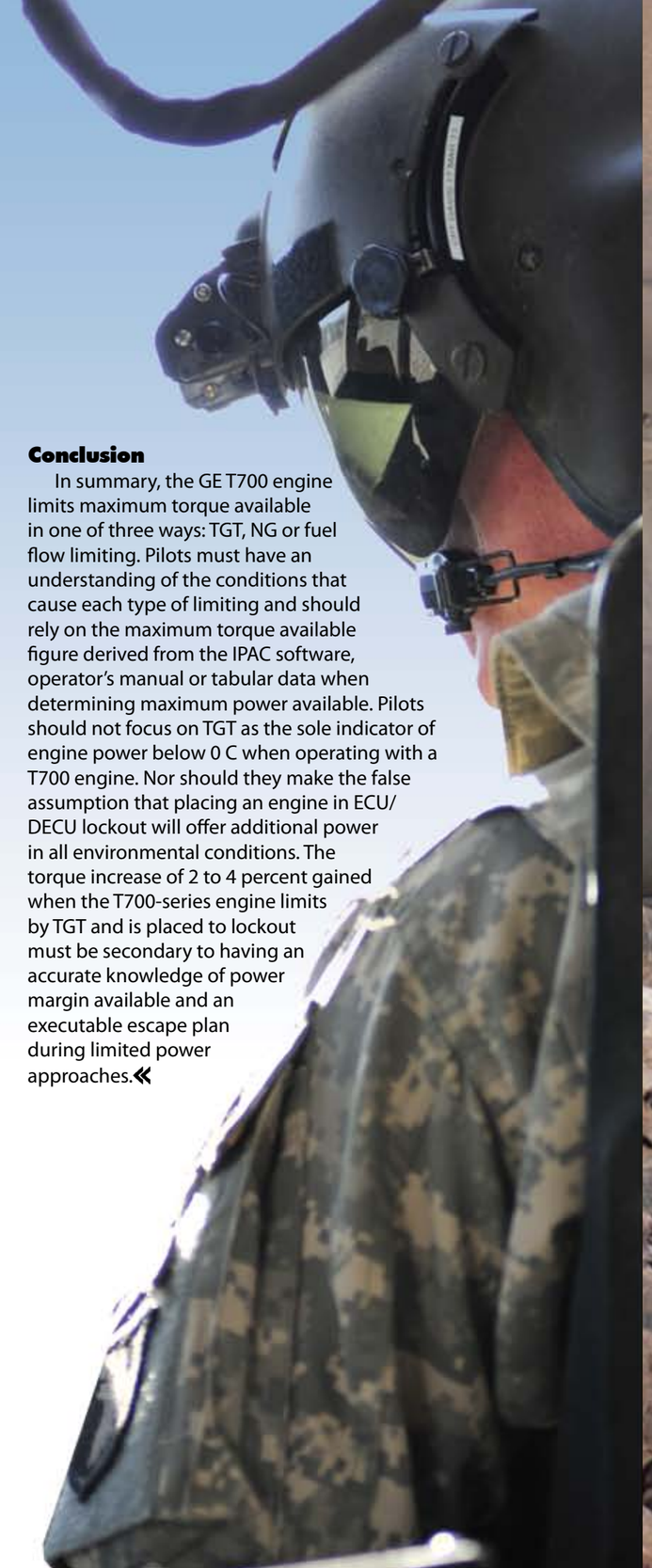
3. Power Requirements
- Tab data/IPAC Max OGE wt _____
- A/C wt (zero fuel wt + fuel) _____
- Difference (+/-) _____
- Percent torque (TQ) (+/-) _____
- Max TQ (Verbalize) _____
- Hover TQ (Verbalize) _____

4. Wind
- Assessment of the direction and velocity of the wind by cockpit indicators, visual indicators, GPS, last known forecast wind or flight maneuvers.
- Analysis of terrain, trees, buildings and their effects upon wind creating updrafts, downdrafts, headwinds, tailwinds, crosswinds and demarcation lines from a large scale down to the touchdown point.

5. Route In/Out/Escape
- Wind should dictate route in, out and escape.
- In calm wind, use the route that affords the best escape.

6. Low Reconnaissance
- Verify wind by using cockpit indicators.
- Ground track versus heading.
- Airspeed versus true airspeed (convert IAS to TAS to make this step accurate).
- A/S versus TQ versus VSI (vertical speed indicator).
- Verify escape.
- Verify touchdown point and suitability.

7. Approach/Takeoff
- Predicted TQ for approach, hover and takeoff. This is an adjustment of the hover TQ, considering level surface and zero wind.
- Expended TQ is the highest amount of TQ used during any part of the maneuvering, approach and takeoff.
- Actual TQ is the amount of TQ to hover.
- If there is a difference between TQ values, discuss why.



Conclusion

In summary, the GE T700 engine limits maximum torque available in one of three ways: TGT, NG or fuel flow limiting. Pilots must have an understanding of the conditions that cause each type of limiting and should rely on the maximum torque available figure derived from the IPAC software, operator's manual or tabular data when determining maximum power available. Pilots should not focus on TGT as the sole indicator of engine power below 0 C when operating with a T700 engine. Nor should they make the false assumption that placing an engine in ECU/DECU lockout will offer additional power in all environmental conditions. The torque increase of 2 to 4 percent gained when the T700-series engine limits by TGT and is placed to lockout must be secondary to having an accurate knowledge of power margin available and an executable escape plan during limited power approaches.«

'ICE' YOUR PHONE

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Imagine finding yourself "speechless" — unable to communicate with emergency responders when you need to most. Maybe you've had an accident and are unconscious. Maybe you've fainted. Maybe you're having a heart attack, stroke or severe allergic reaction and can't talk. The emergency responder needs to know who to contact on your behalf, but you're not able to tell them. That's where your cell phone might be able to "speak" for you.

"How," you ask? Well, it's really pretty easy. Most of us create a directory of contacts on our phones so our family and friends are just a click away. When victims are unable to communicate, emergency responders often check their cell phone directory, hoping to find the number for a family member or other important point of contact. This is where "ICE" comes in.

ICE, as an acronym, stands for "In Case of Emergency." You can create a contact under the title ICE, followed by the person's name and telephone number. If need be, you can create multiple ICE contacts, such as ICE1, ICE2 and ICE3, to add additional phone numbers, perhaps including your family doctor and work associates who need to be contacted during an emergency. Because names in contact lists appear in alphabetical order, some people use an "A" before the word ICE. This allows these numbers to be the first ones seen by emergency responders when they open the directory.

Who would you want to have on your ICE contact list? Your nearest family member would probably top the list, followed by your primary care physician and a work contact.

And while your doctor knows your medical history and is aware of any medications, existing conditions or allergies you have, you need to provide that to others on your ICE list. Remember to provide both daytime and nighttime telephone numbers as appropriate so those on your ICE list can be contacted 24 hours a day.

The ICE idea originated after the terror bombings in London in 2005. One of the paramedics who responded to the scene suggested the idea, which later became a nationwide safety campaign in Great Britain. Its popularity was such that the idea has spread to other countries, including the United States, where many emergency responders have adopted the practice. By creating your own ICE cell phone contact list, you can help emergency responders help you during an emergency.

Editor's note: Information on the ICE program in this article was provided by the American Society of Safety Engineers, available online at http://www.asse.org/.

FLY PREPARED, NOT SCARED

CHIEF WARRANT OFFICER 4 MICHAEL A. HAMBRECHT
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Editor's note: Chief Warrant Officer 4 Michael Hambrecht was on his way to the airfield for one more autorotation when his engine stopped. Working together as a crew, Hambrecht and his student pilot were able to land the aircraft safely. For his actions, Hambrecht was recognized with the Broken Wing Award.

"If something isn't wrong with a helicopter, it's about to be!" My primary flight instructor said that to me nearly 19 years ago while attending flight school. I couldn't help but wonder what I had gotten myself into. I later learned my instructor didn't come up with the saying that made me believe he was an extreme pessimist. I soon realized he was actually a realist. There are many clichés in aviation based, to some degree, on actual events. Some have been embellished over the years. That particular saying has stayed in my head every flight I've ever been on and has kept me safe so far. It hasn't made me fly scared — just prepared.

The weather was great, the aircraft was ready to fly and our mission planning and preflight duties were complete. All that remained was our administering a simple night vision goggle (NVG) proficiency flight evaluation (PFE). We executed the PFE to standard and without incident. My co-pilot/student (company commander) for the flight was motivated and wanted to conduct another autorotation on the return trip to the "house." I didn't mind the request because he had an excellent control touch and hadn't scared me the entire flight.

We were on our way to conduct the autorotation. Fortunately, we were 1,500 feet above ground level (AGL) instead of descending to the normal NVG pattern altitude of 600 feet AGL. That's when our OH-58C aircraft decided it was finished — right then and there — nine nautical miles north of the airfield.

My pilot (PI) was on the controls, flying straight and level at 90 knots indicated airspeed when the LOW ROTOR light illuminated. I wasn't initially concerned about this since we had already conducted numerous simulated engine failures. I just assumed my PI had inadvertently reduced the throttle or GOV INCR/DECR switch. I verified the throttle was full open, double-checking/second guessing the PI and myself.

The throttle was full open, which made the hairs on my neck stand up, but I couldn't verify the GOV RPM trim switch since I was in the left seat and didn't have one on my side. What I expected to see was the PI's hand resting on the switch, causing the rotor RPM to decrease. His hand was not on the switch, and it was at this point I realized we were in a serious situation.

Then, the audio warning sounded.

The engine hadn't failed. It did, however, go to idle, which isn't technically an engine failure, but it certainly wasn't an "engine success." Remember the "something is about to be wrong" cliché? Just before the incident, I had honestly just said to myself, "If it quits here, there's nowhere to go except behind us." That, combined with the extra altitude at the time of the incident, and luck, is the reason we made it without crashing.

We didn't have a forced landing area in front of the aircraft. I took the flight controls and made a Mayday call while turning 180 degrees left (because I was on the left side) to the last forced landing area I could recall. I had never made a Mayday call before, and I wasn't happy about making it then.

My PI remained extremely calm and was a model of crew coordination. He tried for the remainder of the flight to increase the GOV RPM and assisted with obstacle avoidance. I remember him mentioning there might be wires in the intended landing area, to which I asked him if he'd like me to go around. I sometimes joke to stay calm, along with implementing my "cool-guy pilot voice." Whatever keeps you calm, right? It actually seemed like we had a lot of time after turning to the intended touchdown point. The aircraft's circle of action (where the aircraft will go without manipulating the controls) was short by about 150 feet and I was already at optimal glide profile. I accepted the fact we were going to land in the trees. However, while decelerating, I was surprised to clear the trees into the open area. Because of the size and suitability of the touchdown area, I conducted a zero ground-run touchdown.

The lesson learned is this: Stay proficient in your aircraft. Plan for the worst, hope for the best and never stop flying the aircraft until shutdown.

LOST

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.

AVIATION

CH-47D

CLASS C

- While conducting night vision goggle (NVG) pinnacle/ridgeline approaches, the aircraft developed unusual vibrations. Training was terminated and the aircraft returned to the airfield. A postflight inspection revealed damage to three rotor blades on the aft pylon.

UH-60A

CLASS B

- The aircraft touched down in a nose-high attitude, damaging the main rotor blades and severing the tail rotor driveshaft.

UH-60L

CLASS B

- During ground taxi under NVG, one UH-60L made contact with another UH-60L, resulting in damage to the main rotor blades and tailboom/vertical fin.

UH-60M

CLASS C

- While conducting NVG dust landing training during relief-in-place operations, the main rotor system struck and severed the tail rotor driveshaft, resulting in damage to all four main rotor blades.

UAS

MQ-5B

CLASS A

- The unmanned aircraft (UA) encountered a 12- to 13-knot crosswind during touchdown, striking an arresting cable drum with the landing gear.

RQ-5B

CLASS A

- The UA impacted terrain during flight.

GROUND

Personnel Injury

CLASS A

- A Soldier drowned when he fell from a boat into chilly water while fishing at a pond. The Soldier, who was not wearing a personal flotation device, was unable to climb back into the boat and sank below the surface.

- A Soldier riding his bicycle was killed when he was struck from behind by an SUV. Four other riders were also struck and taken to a local medical center for treatment.

- A Soldier died after shooting himself in the head. At the time of the incident, the Soldier was reportedly drinking at home with two friends.

CLASS B

- As a Soldier performed maintenance on a Mine Resistant Ambush Protected All-Terrain Vehicle, a portion of his finger was amputated when it became caught in the gear motor.

DRIVING

POV

CLASS A

- A Soldier suffered a major head injury when he jumped out of a moving vehicle after an argument with his spouse. The vehicle's speed was estimated at between 30 and 35 mph at the time of the incident.

- An unbelted Soldier was ejected through his vehicle's rear window after he lost control, crossed the centerline and struck another vehicle head-on. The Soldier was transported to a local medical center, where he died.

- A Soldier suffered potential permanent disability injuries when he was struck head-on by a vehicle that entered his lane. The Soldier was hospitalized for ankle, leg, pelvic and skull fractures.

- A Soldier died when he was driving on the wrong side of the road and collided head-on with another vehicle.

- A Soldier died when his speeding SUV came up on a curb, struck a large rock in a driveway, hit a tree and then overturned and landed on its roof. Although the Soldier was wearing his seat belt, his survivable space was compromised in the crash.

- A Soldier died when he lost control on wet pavement, went through a median and collided head-on with a tractor-trailer.

CLASS B

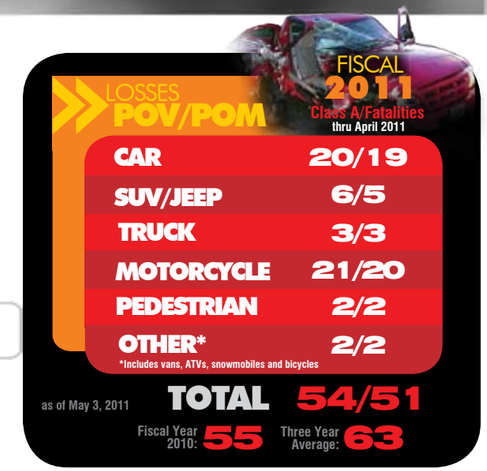
- Two Soldiers were injured when they were cresting the top of a hill and collided with a vehicle approaching in their lane.

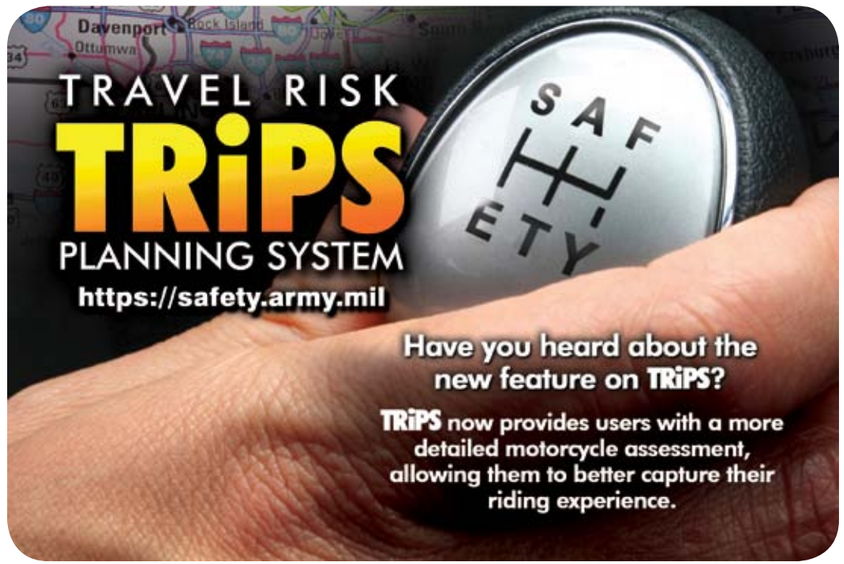
POM

CLASS A

- A Soldier died when he was speeding, went off the road and struck a pipe-supported fence. The Soldier wasn't wearing his helmet, did not advise his command he had a motorcycle and had not completed Army-approved Motorcycle Safety Foundation (MSF) training.

- A Soldier was killed when he lost control of another Soldier's sport bike at high speed and struck a traffic sign. The Soldier was wearing personal protective equipment with the exception of protective footwear. The Soldier had completed the required MSF training the previous month, but had not gotten his motorcycle license.





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Peer to Peer

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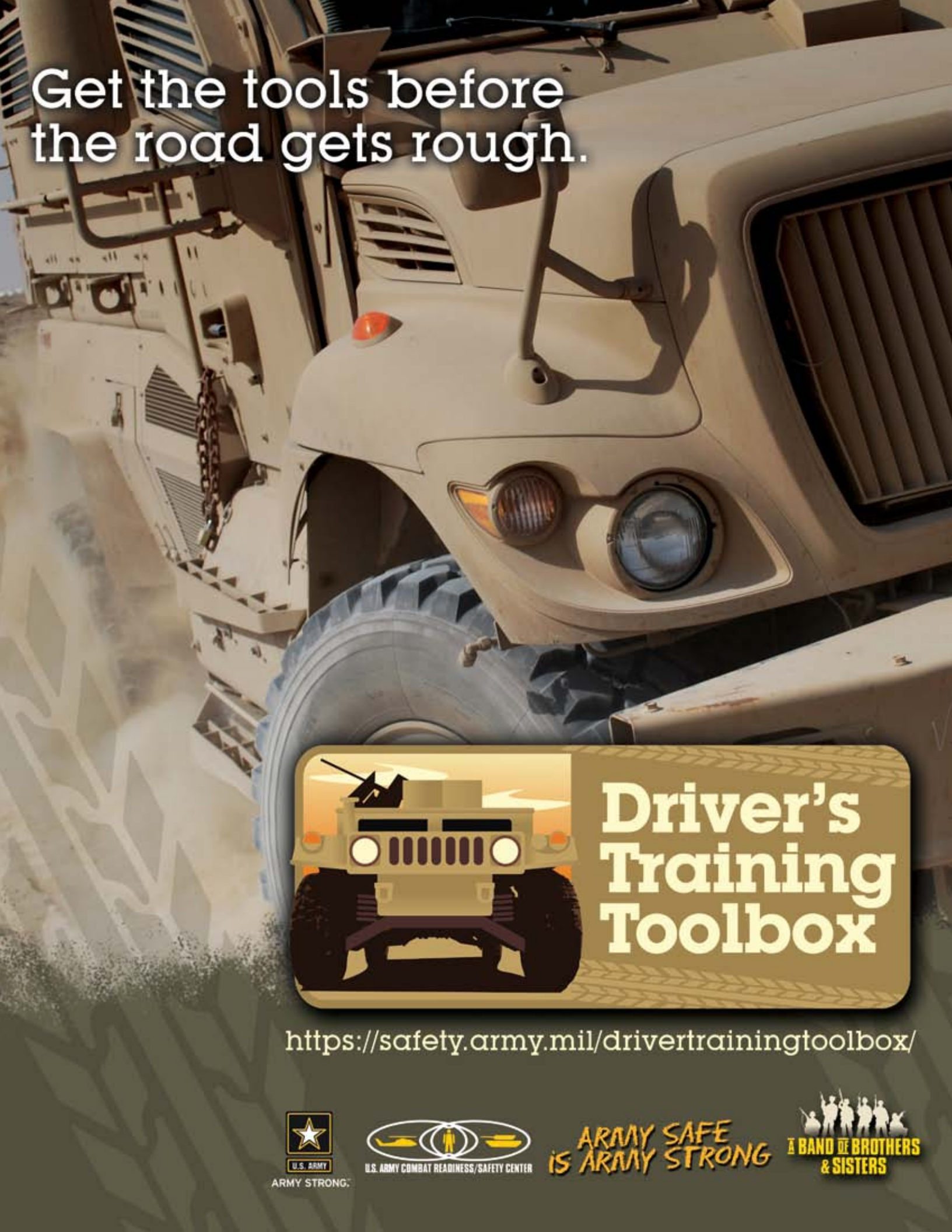
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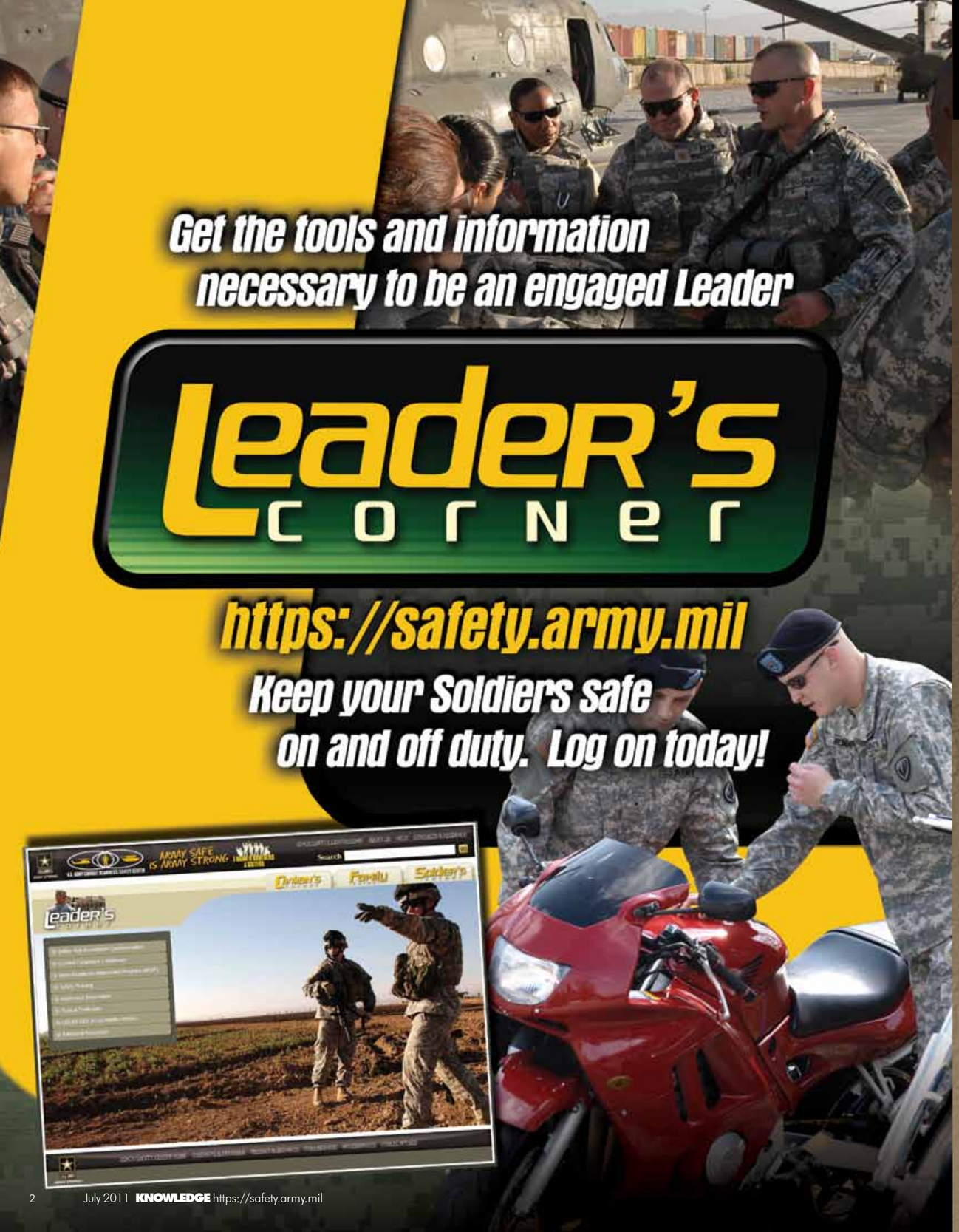

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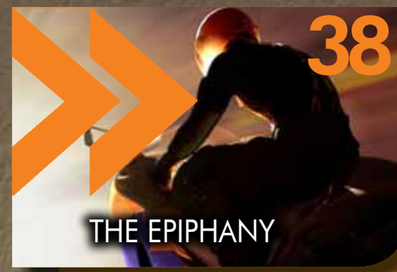

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> **"LEADERS** should also **TAP** into the **FAMILIES** within their **UNITS** for **SUPPORT**. Their access and **INFLUENCE** make spouses and other close loved ones a **GREAT** line of **DEFENSE** in keeping Soldiers **SAFE."**

ALWAYS ON GUARD

As your director of Army safety, it gives me great pleasure to welcome the newest member of our command team, Command Sgt. Maj. Rick Stidley. He comes to us from the great Marne Division, where he served in numerous leadership positions and most recently as the command sergeant major for the 3rd Combat Aviation Brigade, Hunter Army Airfield, Ga. With a 32-year Army career and past deployments to Grenada, Panama, Iraq and Afghanistan under his belt, Command Sgt. Maj. Stidley brings with him a sincere and profound understanding of the safety issues facing our Soldiers today. Look for his welcome column in the August issue of Knowledge.

This month, the United States of America turns 235 years old. It's amazing to think how, during that short time, our nation has emerged from a fledgling democracy to the global leader it is today. The work you do every day ensures the sacrifices of past patriots will live on for generations to come. I am proud to be part of this great Army and have the opportunity to work alongside each of you. Thank you all for your service!

In Army safety, we spend a lot of time talking about off-duty accidents. This makes sense, because every year a vast majority of our accidental fatalities occur away from work. For example, as of June 1 this year, the off-duty share of all losses was a staggering 85 percent! That number illustrates two points: first, on-duty safety remains a great news story for the Leaders and Soldiers with their boots on the ground in locations at home station and in our overseas theaters; and second, off-duty accidents continue to be the most critical safety issue facing our Army today.

On duty, our biggest gains have been in reducing fatal Army motor vehicle accidents to unprecedented lows. In fact, as of June 6, AMV fatalities were down 80 percent from the previous year. That's an extraordinary accomplishment, especially considering the hundreds of thousands of miles driven every year in all models of AMVs, both in garrison and in theater. This statistic proves we've come a long way from the early days of our combat missions in Iraq and Afghanistan, when on-duty AMV losses soared to historic highs. Although safety upgrades and greater familiarity with equipment have had a lot to do with our recent successes, much of the credit is owed to superb leadership and hands-on engagement from Soldiers at all levels. Whether it's to remind another Soldier to buckle their restraint system or call out a driver who's exceeding the safe speed limit, those who do the right thing for safety show their commitment to the warrior ethos of never leaving a fallen comrade behind.

Given this amazing success on duty, it would be easy to assume we'd see a corresponding reduction in privately owned vehicle fatalities. Reality, however, is far different from this assumption. Although POV fatalities have been on a downward trend the past few years and currently remain below 2010 numbers, the grim fact is nearly 70 percent of the Soldiers lost during this fiscal year have been killed after hours on civilian roadways. How can a Soldier safely drive a multi-ton vehicle during the day but lose control of a small sedan or even smaller motorcycle at night or on the weekend? There are any number of contributing factors to fatal POV accidents, but the "big three" are almost always constant — speed, failure to wear seat belts or personal protective equipment and driving under the influence of alcohol.

The question we should all be asking is why our on-duty mindset isn't transferring to the off-duty realm. Our Soldiers know what to do and our Leaders do a fantastic job in enforcing standards on the job. But both Leaders and Soldiers must remember there is no time limit on responsibility, and their obligations to one another extend even after duty hours. Reminding a friend to buckle up or slow down is just as effective in a sedan as in a HMMWV. The key is engaging and never letting your Soldiers become complacent. Leaders should also tap into the Families within their units for support. Their access and influence make spouses and other close loved ones a great line of defense in keeping Soldiers safe.

Our mission here at the USACR/Safety Center is to help our Total Army Family —Leaders, Soldiers, Family members and Civilians — stay safe in all they do. POV safety is obviously a primary concern and we have many driving tools available on our website, https://safety.army.mil, but that's not all we have to offer. Be sure to check out our other products and let us know what else you need to make your safety program a success. You can start with our Safe Spring/Summer Campaign, which contains ready-made posters, videos and feature articles covering a wide range of topics related to warm weather activities.

Thank you all again for what you do every day. As you celebrate our nation's birthday, I ask that you take a moment to think about what more you can do to keep our Soldiers safe. Protecting our Band of Brothers and Sisters is the greatest birthday gift America could receive!

Army Safe is Army Strong!

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

BREAKING THE CHAIN

CHIEF WARRANT OFFICER 5 JAMES L. CHANLEY
63rd Theater Aviation Brigade
Kentucky Army National Guard
Frankfort, Ky.

The UH-60 crew had just returned from a 12-month deployment. They were re-integrating into the routine flight training of the commander's task list. After a long, accident-free deployment in a challenging environment, flying in their own backyard didn't seem all that risky.

This all-too-common mindset is prevalent in Army aviation. As Army aviators, we are conditioned to believe we are "Above the Best." This is a necessary belief for us to complete the most difficult tasks. Unfortunately, when asked to complete the less difficult tasks, we often do not give them the same attention to detail in all aspects of planning and preparation. The problem this night wasn't that the task was easy, but the perception that it was easy because so many aviators had accomplished it before, including those crewmembers flying this Black Hawk.

The tasks flown this beautiful night under night vision goggles were Task 1155, Negotiate Wire Obstacles, and Task 2024, Perform Terrain Flight Navigation. The crew was transitioning from nap-of-the-earth flight with the intention of doing an over-wire crossing at a known and approved wire obstacle. Regrettably, on this night, the training flight ended abruptly when the UH-60 contacted two static lines associated with high-tension power lines.

First, I want to make something clear. This is not about pointing fingers or blaming individuals. We must all learn from this mistake — or should I say from these mistakes because there were several opportunities to prevent this accident if a link had only been broken.

In our training, we have all heard

> **"ACCIDENTS HAPPEN** because no one **BREAKS** the **LINK** to a **SEQUENCE** of events **LEADING UP** to them."

of the infamous accident chain and the connecting links that lead to an aircraft accident. If at any point leading up to the accident a link is broken by a sound decision, the accident is prevented.

This training flight was originally a two-ship mission. However, the first aircraft, which had an instructor pilot and air mission commander onboard, was mission briefed but had to cancel due to a maintenance issue found on preflight. The second aircrew decided to continue their training flight, although they had never been briefed directly from the briefing officer. Since this training flight entailed terrain flight with a wire obstacle, a face-to-face briefing discussing the hazards and techniques of negotiating a wire obstacle might have been enough to break this link.

The crew was familiar with this route; however, this particular wire obstacle was actually an underwire crossing. Yet on this night, the crew felt they would mitigate the risk by crossing over the wires. On the surface, this sounds like a good decision; however, GPS waypoints used in conjunction for an underwire crossing are plotted between the stanchions, not directly over them. This would have been the place to cross when flying over a wire obstacle. In addition, as the crew continued on the route and the GPS was counting down their distance, they attempted the wire crossing without seeing the wires. This also might have been enough to break the link.

Aviation accidents come in all shapes and sizes. However, accident reports have concluded that nearly 90 percent of aviation accidents have human factors as the primary cause. To quote Pogo, "We have met the enemy and he is us!" When I say "us," I am not merely assigning that position to the individuals in the front seat of the aircraft. This can apply to commanders, briefers, crew chiefs or the line guy who sees something that doesn't look right, but never speaks up. Usually when an accident occurs, it doesn't just happen unless it is a mechanical failure. Accidents happen because no one breaks the link to a sequence of events leading up to them.

Fortunately, for this crew, the Wire Strike Protection System and a lot of luck were in their corner on that night and they walked away without a scratch. We might not be so lucky next time if "you" are not willing to break the chain.

it ain't just FOR LOOKS

JERRY HOLLENBACK
Dugway Proving Grounds
Dugway, Utah

It was a warm July afternoon and I was getting ready to go across town for a get-together with a group of other riders. I had a helmet, but it was not required in the state where I lived. The year was 1978, and I had just gotten out of the military after doing one tour. Hairstyles in the 70s were, for the most part, long, and I felt the need to grow mine since I had to keep it so short in the military. At the last minute, I decided to wear my full-face helmet since I knew it would keep the bugs out of my long locks. Man, I'm glad I did.

After about 15 minutes of riding, I hit a state road where the speed limit increased to 55 mph. I saw a white pickup coming from the opposite direction and noticed a couple of guys in the pickup's bed. There was no other traffic, and I remember squinting because I was riding into the sun.

All of a sudden, I felt like someone had hit my head with a baseball bat. The impact almost knocked me from the bike. The helmet's face shield was covered with a red fluid, obscuring my vision and confusing me even further. Fortunately, I was able to direct my motorcycle to the shoulder and stop. Shaking, I removed the helmet expecting to see bird parts. I was certain that the red fluid was bird blood, and all I kept thinking was that a big bird had impacted me at 55 mph. Imagine my disbelief when I removed my helmet and discovered it covered with pomegranate juice and seeds.

> **MAKE SURE** your **BIKE** is **MECHANICALLY** ready for the ride and that **YOU** are **MENTALLY** and **PHYSICALLY** prepared.

It was at that instant I realized the guys in the back of the pickup must have heaved a pomegranate at me. Without thinking, I mounted my motorcycle and sped after them. By now, they were already a couple of miles in front of me, but I knew I could catch them. After chasing the pickup for about 5 minutes, I had closed the gap to about a half mile. It was at this point that I realized a couple of important points. First, I was alive and unhurt, but I was speeding down the road with a blurred visor, chasing a pickup in a fit of rage. Second, even if I had managed to get the pickup to pull over, then what? Reality set in and I gave up the chase. I pulled into a nearby gas station and was able to get some water to clean my face shield. As I took a couple of deep breaths, I gave thanks for the fact that I was unhurt and pondered the events.

I had been going at least 55 mph and the pickup was probably going at least as fast as it came at me. A pomegranate — a fruit as hard as a baseball — was chucked at my face with the velocity of a fast pitch. What if I had not worn my helmet? With my helmet, I was barely able to maintain control.

A sobering feeling swept over me. Next, I thought about the altercation I almost got in. Had I caught up with the truck, what if he'd decided to use his vehicle against mine? A truck against a motorcycle is an unfair fight. Finally, what if we both stopped in a safe location? Then what? There were at least three of them against me.

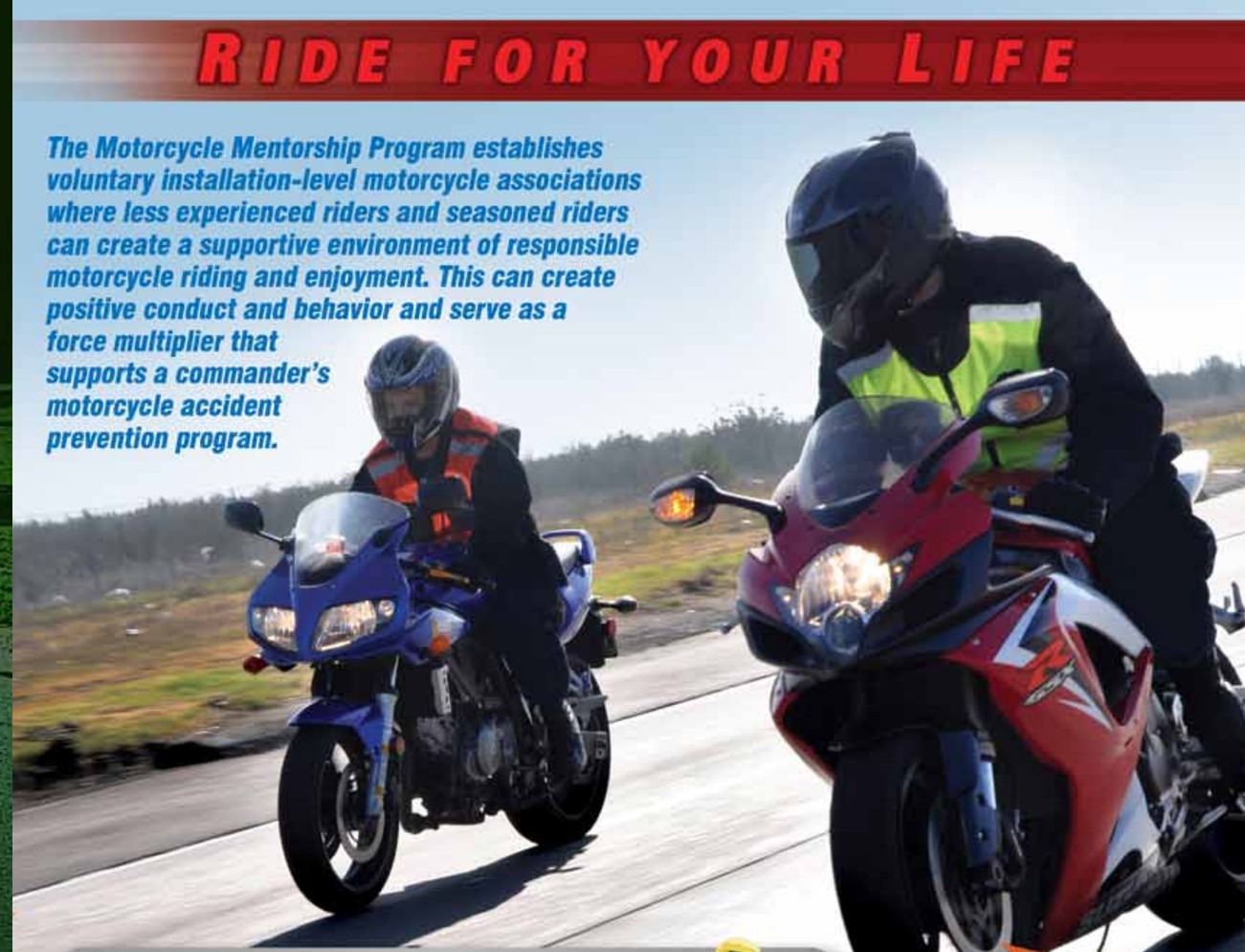
This experience taught me many great life lessons. First, my helmet almost assuredly saved my life. Second, I can't allow my emotions to get the better of me.

Whether riding on my bike or in my car, I can't let other drivers provoke me to react with rage. Finally, I vowed to pay more attention to my surroundings. Whether it's a short drive across town or a cross-country trip, you can't allow yourself to become complacent. Make sure your bike is mechanically ready for the ride and that you are mentally and physically prepared.

I'm in my 50's now, and my hair is much shorter. I still ride motorcycles, and I always wear my helmet — except now I wear it for protection instead of vanity. Every time I see riders not wearing helmets, I wonder what it will take to get them to wear one. I hope they'll change their ways before someone, whether by accident or intentionally, makes them a fatality statistic.

RIDE FOR YOUR LIFE

The Motorcycle Mentorship Program establishes voluntary installation-level motorcycle associations where less experienced riders and seasoned riders can create a supportive environment of responsible motorcycle riding and enjoyment. This can create positive conduct and behavior and serve as a force multiplier that supports a commander's motorcycle accident prevention program.



MMP
MOTORCYCLE MENTORSHIP PROGRAM

Check out the USACR/Safety Center MMP website for some examples of active mentoring programs.

https://safety.army.mil/mmp/

ARMY STRONG
U.S. ARMY COMBAT READINESS/SAFETY CENTER
ARMY SAFE IS ARMY STRONG
A BAND OF BROTHERS & SISTERS

SEEING IS BELIEVING

STAFF SGT. EDUARDO A. ALEGRIA
U.S. Army Aeromedical Research Laboratory
Fort Rucker, Ala.

When I deployed to Iraq as a cannon crewmember with the 101st Airborne (air assault), each Soldier in my unit was supplied with two pairs of goggles. One pair provided protection during air assault missions, while the other offered ballistic protection. Even though the unit Leaders instructed us to use our goggles, the matter was not strictly enforced. Therefore, some Soldiers placed their goggles on their helmet. As a result, many Soldiers suffered eye injuries, and some even lost their eyesight.

During my second deployment, this time to Afghanistan as a combat medic with an artillery unit, my unit leadership, like that of my air assault unit leadership in Iraq, instructed us to use military combat eye protection (MCEP). However, this time the MCEP-use standards were enforced. All Soldiers were ordered to use their protective glasses, even during night. This meant we had to change the lenses in our glasses twice a day — gray lenses for daytime and clear lenses for nighttime.

Getting into the habit of wearing MCEPs 24 hours a day and changing the lenses was very difficult. Honestly, it was a pain. But as my deployment progressed and I witnessed firsthand what shrapnel did to the eyes of Soldiers who were not wearing MCEPs, wearing eye protection became extremely important to me. In no time, it became second nature. I knew the most important thing I could do to protect my eyesight and that of my fellow Soldiers was to wear approved MCEPs.

DID YOU KNOW?

According to statistics from the U.S. Army Public Health Command (Provisional), the average Soldier who suffers an eye injury is an E3 to E5, 20- to 24-year-old male, who is struck by an object while performing combat soldiering, participating in sports or doing maintenance, repair or servicing. He is not wearing eye protection and will lose an average of 6.1 workdays at an average cost of $9,724 because of the injury. To learn more about authorized eyewear, go to https://peosoldier.army.mil/pmseq/eyewear.asp.

I am currently assigned to the Sensory Research Division of the U.S. Army Aeromedical Research Laboratory (USAARL). I have the privilege to work alongside vision scientists and eye care providers who study combat eye injuries and how to better protect Soldiers' vision. Now, more than ever, I understand how important eye protection is; how the eyewear is designed to protect a Soldier's vision from dust, wind, sunlight and shrapnel/ballistic fragments; and how much work goes into providing Soldiers with the safest eyewear available.

For many years, USAARL has evaluated the ophthalmic characteristics of eye protection and provided recommendations to industry and project managers to ensure the eye protection worn by Soldiers meets military requirements. This means when a Soldier puts on a pair of MCEPs included on the Authorized Protective Eyewear List (APEL), he or she is wearing eye protection that has been tested by vision experts and approved by users.

Other ways USAARL is working to protect Soldiers' vision includes identifying ways to reduce the incidence and severity of combat eye injuries and methods to increase Soldiers' use of eye protection in combat. In addition, USAARL is investigating the relationship of eye injuries caused by the initial pressure of a blast (as opposed to secondary effects of the blast, e.g., shrapnel) and the use of protective eyewear. USAARL is also developing methodologies and standards to better assess the effectiveness of protective eyewear.

The Army keeps moving forward to better fit Soldiers for battle. As Soldiers, we can feel confident knowing that when we wear MCEPs, we are reducing the likelihood of sustaining an eye injury.

PROTECT THOSE PEEPERS

WAYNE COMBS
U.S. Army Public Health Command (Provisional)
Aberdeen Proving Ground, Md.

Many eye injuries are avoidable if Soldiers use common sense to protect their vision and Leaders ensure their Soldiers wear appropriate eye protection. Keep the following tips in mind to protect your vision at work and home.

At Work

- Follow eye safety signs and procedures.
- Know what to do if a hazardous material splashes into the eye. Know where the nearest eyewash station is and how to use it.
- Always wear approved eye protection for mechanical, chemical, biological or radiant energy (from such sources as welding, lasers or sunlight) hazards. According to the American National Standards Institute (ANSI), the industry code "Z87" must be marked on the side of protective eyewear. For training and operational duties, a ballistic standard is required. Military Combat Eye Protection (MCEP), approved by Program Executive Office (PEO) Soldier and labeled APEL (Approved Protective Eyewear List), significantly exceeds ANSI Z87 standards and meets this requirement.
- Make sure eye protection is clean and in good shape.
- Do not wear contact lenses in areas where there is smoke, dust or fumes, or when training or deployed.
- Report eye hazards to supervisors.
- If an eye injury occurs, immediately call emergency medical services.

At Home

- When outside, wear sunglasses that absorb the sun's harmful ultraviolet (UV) rays. Both clear and tinted MCEP lenses provide UV protection. A broad-brimmed hat also helps protect the eyes.
- When working on cars or around the house, be aware of eye hazards. Mechanical hazards such as rust or flying objects, chemical hazards such as battery acid and radiant hazards are common in the home shop.
- Wear approved eye protection. Safety glasses and goggles should have ANSI Z87 markings on the side. Remember, MCEP exceeds safety glasses standards and can also be worn when working at home.
- Always wear appropriate approved eye protection when playing sports. For eye-hazardous sports such as racquetball, wear American Society for Testing and Materials-approved eyewear that contains protective lenses.

In addition to the tips above, it's a good idea to have an eye exam every two or three years, or sooner as directed. Early detection and correction of eye problems is important. Above all, use common sense and protect your vision.

INTO THE THIN AIR

CHIEF WARRANT OFFICER 3 MARK S. LAUER
Company C, 1/150th Aviation, Task Force Vortex
Camp Bondsteel, Kosovo

Our mission was to play "elevator" for pararescue personnel training and qualifying with the square parachute. Our task was to pick up as many jumpers as we could in our Air Force UH-1N, take them up to 13,000 feet and have them jump out. It was a cool November day in the California high desert, and we weren't worried about power limits due to temperature. The mission was pretty simple to execute — that is, until it took a bad turn for us.

We started out the day with a pre-mission brief that included all the jumpers and my aircrew. The jumpers then rode a bus to the jump site while we prepared the aircraft for the mission. The preflight, start up and flight to the practice area all went without incident, and we arrived for our first "stick" of jumpers. It took us some time to climb to altitude, as we were loaded with gas and had a full cabin. Each follow-on jump went just as the one before, and we soon needed to return to base to refuel. Once we'd refueled the aircraft and gotten a meal, we returned to the jump site for another set of lifts.

As we started our second hour, boredom set in. While we were leveling off for the jump, my co-pilot rogered my call of 13,000 feet and then I heard a very weird laugh. That caught my attention and I looked over at him to see what was so funny. What I saw wasn't funny in the least. My co-pilot looked back at me with bluish lips and a big grin that made me wonder about hypoxia. I then pulled off my own gloves to look at my nail beds, which were also a blue shade. I said that we were finished once the jumpers were away and my co-pilot looked at me, laughed and asked, "Why?"

As the jumpers departed, I took control of the aircraft, started a descent and called the ground party to notify them we were returning to the airfield for fuel and a crew change. I then contacted the operations center and arranged for another crew to go out and finish the final two hours of lifts that day. Once we were on the ground, I pulled my crew together for a debrief and told them that once we were finished, we were all going to the flight surgeon's office to get checked out. I explained to the flight surgeon what had transpired and he looked over everyone. Once we received a clean bill of health, we returned to the unit, where I talked with the commander and safety officer about crew limits on high-altitude flying. I recommended each crew be limited to only two lifts of 2.5 hours' duration per day and that those flights be separated by another crew flying a 2.5-hour flight.

What had seemed a simple flight requiring little skill on the aircrew's part took an interesting, and potentially deadly, turn. As in this case, the effects of hypoxia can be cumulative. Because of that, keep an eye on your crew and use situational awareness to watch for hidden hazards in each mission and flight. The composite risk management worksheet showed an overall low risk for this mission — that is, until we found good reason to elevate the risk. Initially, we believed the risk of hypoxia was removed as long as we limited ourselves to a maximum of 30 minutes above 10,000 feet. However, the cumulative effects of repeatedly operating at above that altitude on a cold day unexpectedly increased our risk. Fortunately, we learned that lesson without having to sacrifice an aircraft and crew to pay for it.

FYI

For related reading on the effects of hypoxia and ways to help keep crews safe during high-altitude operations, check out the story "Better Air for Aircrews" online at https://safety.army.mil/knowledge_online/february2010/.

DEATH IN THE HIGH COUNTRY

CHIEF WARRANT OFFICER 2 PETER BIESSENER
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Fort Knox, Ky.

A few years ago when I was a member of a search-and-rescue team in Colorado's Rocky Mountains, another team asked our help in locating a lost hunter. We responded and I went as part of a three-man all-terrain vehicle (ATV) team. I recall that it was a beautiful, clear, cold, crisp morning as we drove south to the Sangre de Cristo Range.

The search base was busy when we pulled in, as teams from at least four other counties were preparing their gear. Our team lead reported to the command center as we unloaded our ATVs, powered up our global positioning systems, located ourselves and surveyed the area on a topographical map. As searchers, we wanted to begin with an upbeat, optimistic attitude even though many of us had been involved in searches that didn't end well.

The subject of this search was an elk hunter from Texas, a male in his late 50s who couldn't hike long distances or up steep terrain. He was there with eight members of his extended family. He hunted the area the previous year and had set out alone the day before on his ATV. He had warm clothes, some snacks, a rifle and a handgun, but hadn't told anyone where he was going. Additionally, we were to use caution if we located him because he suffered from paranoia and didn't have his medication with him. He was lost, cold, hungry, paranoid and armed — all details that set off alarms for my team.

We loaded our gear, made radio checks and headed toward our search area.

Our initial search took us about three hours as we moved fast, covering 40 miles of trails. We returned to base for fuel and to report clearing those trails. We'd spotted a

BEFORE YOU RIDE

Here are the ATV Safety Institute's Golden Rules:

1. Always wear a Department of Transportation-compliant helmet, goggles, long sleeves, long pants, over-the-ankle boots and gloves.

2. Never ride on paved roads except to cross when done safely and permitted by law; another vehicle could hit you. ATVs are designed to be operated off highway.

3. Never ride under the influence of alcohol or drugs.

4. Never carry a passenger on a single-rider ATV, and no more than one passenger on an ATV specifically designed for two people.

5. Ride an ATV that's right for your age.

6. Supervise riders younger than 16; ATVs are not toys.

7. Ride only on designated trails and at a safe speed.

8. Take a hands-on ATV RiderCourse and the free online E-Course. Visit ATVSafety.org or call 1-800-887-2887.

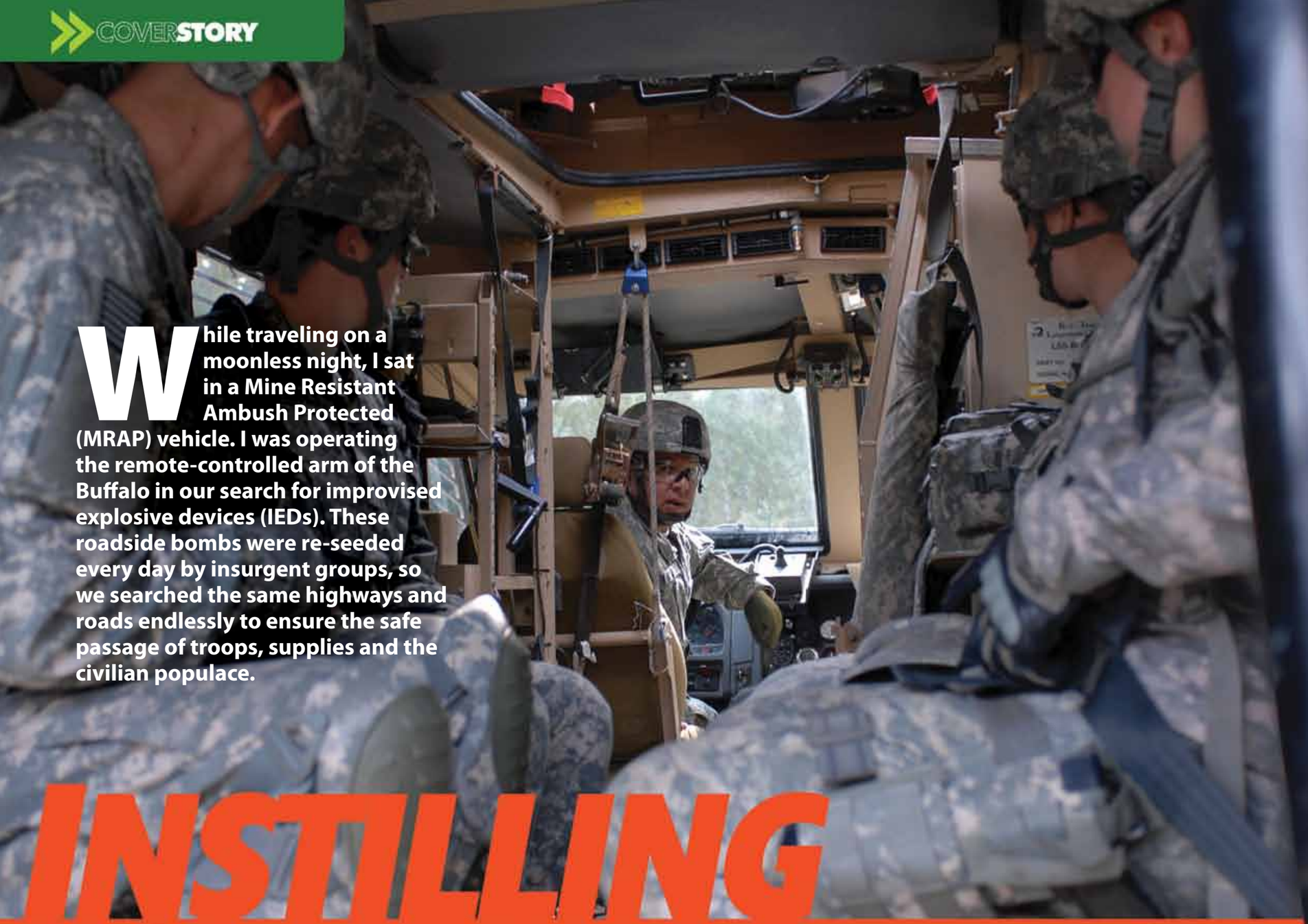
trail heading up a high ridge outside our search area and suggested it to the command center as our next area. The trail headed toward a very remote high-altitude basin and, knowing what we did about our missing hunter, we felt it warranted searching.

My team headed up the high-ridge trail. Our plan was to work our way up to a meadow at 11,000 feet. After an hour and a half of searching side trails going up the ridge, we found the hunter. He was about 50 feet downhill from the trail with his ATV on top of him. When we got to him, he was dead. The way his hands grasped the ATV, it looked like he was trying to lift it off himself. He'd kicked vegetation and dirt away as he struggled until he could no longer breathe, crushed by the ATV on his chest.

We wondered what had happened. While we waited for the coroner and a recovery team, we looked for answers. The trail was pretty steep and cut into the side of the ridge with a 2- to 3-foot ledge on the uphill side. We saw where he'd been riding downhill and his right front tire had hit an exposed tree root on the uphill cut of the trail. This caused his ATV to go off the trail. He'd been riding alone without wearing any safety gear.

We also saw other clues of what happened at the crash site. There was a gun scabbard mounted on the ATV's right side, attached near the footrest and at the rear rack. The scabbard probably hooked him and caused him to roll with the ATV. We also noticed the ATV's tires were inflated extremely hard — more so than seemed right for the circumstances. We got the ATV back onto the trail and found it was still drivable. However, the person who drove it down the mountain said it was hard to control until we lowered the tire air pressure. Did the overly firm tires cause him to go off the trail after hitting the tree root? Was he coming down in the dark and didn't see the tree root? We concluded that if there'd been another ATV rider with him, he'd probably have survived.

Sadly, instead of his hunting trip ending with game, it ended with grief. That's not how it should have been. All-terrain vehicles are fun and designed to be useful machines for hunters and others who like going into the wild. But useful as they are, riding an ATV without identifying the risks and planning to be safe can be a very unforgiving experience.



While traveling on a moonless night, I sat in a Mine Resistant Ambush Protected (MRAP) vehicle. I was operating the remote-controlled arm of the Buffalo in our search for improvised explosive devices (IEDs). These roadside bombs were re-seeded every day by insurgent groups, so we searched the same highways and roads endlessly to ensure the safe passage of troops, supplies and the civilian populace.

INSTILLING SAFETY AWARENESS

RETIRED CHIEF WARRANT OFFICER 4 MICHAEL HAMPTON
36th Engineer Brigade
Joint Base Balad, Iraq

As we traveled down a main supply route, our lead vehicle struck one of these deadly devices. "Blast, blast, blast!" is what we heard over the headset, followed by, "Rollover, rollover, rollover!" Sitting in the patrol's second vehicle, I saw it all — the blast and the vehicle rolling — but I was helpless to prevent the horrific chain of events. As per our battle drill, the remaining vehicles continued to their security positions and conducted secondary sweeps.

Upon reaching the disabled vehicle, we jumped from our MRAP and sprung into action, hitting the ground with weapons drawn. We were unable to open the rear hatch to extract the team because the combat lock was engaged. Looking through the hatch window, I saw every member of the team was unconscious. It was evident several had been thrown around inside the vehicle. My immediate thought was, "You've gotta be kidding me. No seat belts?"

Unfortunately, this scenario plays out every day. We're losing more Soldiers to acts of negligence than combat operations. Why? A theater engineer brigade is a unique organization with many diverse missions (route clearance, construction, bridging operations, etc.) that pose numerous challenges. In the age of modularity, a brigade, battalion and even a company can deploy into a hostile environment without its indigenous units. The elements that now have the possibility to fall under our commands, besides the regular Army units, include National Guard and Reserve components from the Army and Air Force as well as multinational coalition forces. The most important of these challenges is to instill the same level of safety awareness in all of these units.

With a formation comprised of thousands of Soldiers, Sailors and Airmen, how do you instill a common practice that may be foreign to some of these service members? There are several key factors to help you be successful in this endeavor: command influence/leadership engagement, dissemination of a viable safety program and battlefield circulation.

Leadership

Leadership engagement is the backbone of a successful safety program. Show me Leaders who are engaged in their safety program, and I'll show you a successful safety program. While conducting accident investigations as a safety representative, if I found the program was broken (no policies or procedures, no subordinate Leader engagement, no training, no safety awareness), I typically found the command was apathetic.

"Green-tab" emphasis is a vital part of a successful program. Units that have a program without policies and procedures in place can still be effective if the leadership is engaged, but the converse is not true. Written procedures alone do not make a successful program; the application of those procedures by Leaders does. Having a

> "As **LEADERS**, it's our **RESPONSIBILITY** to **INSTILL SAFETY** awareness in the **SOLDIERS** in our command."

safety professional in the ranks will help get the program online and compliant with military standards, but there is no substitute for leadership involvement.

Dissemination of the Program

Another critical key factor is disseminating the program to subordinate units. This does not imply that simply pushing data to them electronically is sufficient. We must travel to their locations, sit down with Leaders and have face-to-face conversations. As a safety professional, your approach is critical at this point. Like any first encounter, there is a "feeling-out" process as you and the Leaders get to know each other. You are also there to ensure subordinate commanders understand the full spectrum of their safety responsibilities.

Another important note here is an accident investigation should not be the first time Leaders get acquainted with their safety manager. You should personally make every effort to engage units before they enter the theater or your formation. (For example, I travel to Kuwait to meet with the command teams of each battalion and company coming into theater under this command. I encourage battalion additional duty safety representatives to link up with individual companies coming into the theater that will fall under their command.) I, as the brigade representative, visit each company that falls under a battalion command during their relief-in-place process for an introduction and in-brief with their command group.

During this meeting, I aim to establish an engaging climate.

Commanders are Leaders and mission focused; they rely on assets to accomplish their missions, whatever their assigned task may be. You have to become one of those assets for them and not the stereotypical inhibitor. Offer training for their safety representatives and formations, policy production, answer data requests and assist them in developing programs to improve their organization's effectiveness and overall operation.

Another critical piece of this encounter is to ensure them you will never forward information to your commander without first briefing them. For example, "Sir, I will brief you and your team on anything I am going to take back to the commander that your team may have to explain." If you cannot out-brief them immediately, then hold the data — unless it is life threatening — until you have a chance to contact them. I have found that commanders at all levels are more responsive if you allow them to correct deficiencies on their own without the notification of their bosses. If the correction cannot be made at that level, it needs to be elevated anyway. If it can be handled at their level, there is really no need to report it to their higher commander — unless it is life threatening and appropriate actions have not been taken to mitigate the hazard. As a safety representative, it's your job is to keep issues off the commander's desk, not put them on.

Battlefield Circulation

A third key factor is battlefield circulation. This is executed by all Leaders and safety representatives. I attempt to visit each formation every month. My visit, along with commanders, senior NCOs and subordinate safety representatives throughout the formation, instills genuine concern of well being and involvement in each Soldier's life. Conducting route clearance or personal security missions is not in my mandate, but it is absolutely necessary to get to know what the Soldiers go through and the issues they face on a daily basis. Route clearance, construction projects (vertical or horizontal), bridging and dive operations are all part of this multifaceted organization, and you must learn the intricacies of each mission.

As the theater engineer brigade, we have elements throughout the Iraq Joint Operations area. This geographical dispersion demands extensive travel — normally five days out of every week for the entire year. This is important and pays huge dividends, as it allows commanders and organizational members to gain trust in you. Be responsive; an asset is no good to a commander if they cannot get their hands on it. If a commander needs your assistance, go to him or her. This demonstrates a strong sense of purpose and personal commitment.

Conclusion

It's our responsibility to instill safety awareness in the Soldiers in our command. These three key integration components are essential in establishing a safety program that meets or exceeds standards and demonstrates a genuine concern for the units we support.

WEATHERING THE STORM

CHERYL RODEWIG
The Bayonet
Fort Benning, Ga.

Fort Benning, Ga., officials believe the lack of injuries during recent severe weather was a direct result of the effective use of composite risk management (CRM). Winds speeds reached 100 mph when a small tornado touched down during the Best Ranger Competition, but there were no injuries or close calls among the many Ranger teams, Soldiers and personnel scattered across the Harmony Church cantonment area. That's no coincidence, said Kestner Edens, mission safety manager for the installation safety office.

"If it wasn't for the leadership and their thought process, it could have been worse," Edens said. "Composite risk management is the Army's decision-making process for identifying hazards and controlling risk across the Army's full spectrum of missions, operation, functions and activities. You identify the hazard. You develop the controls. You make your risk decision. Then you're going to implement your control measure(s)."

Since the 4th Ranger Training Battalion (RTB) regularly conducts high-risk training and events, unit personnel are familiar with the precepts of CRM, Edens said.

"They have standard operating procedures in place to help conduct a safe stand down," said Edens, who oversees training and provides commanders feedback on the best way to mitigate any hazards. "If lightning is striking within a certain proximity, they go into a lightning lockdown. They wait for the storm to pass before they move on to continue their operations."

Weeks ahead of the competition, unit leaders planned specific procedures to follow for all anticipated risks, including the potential of inclement weather, said Lt. Col. Jeremy Miller, commander of the 4th RTB. The safety procedures were then rehearsed at company, battalion and brigade levels.

"Weather conditions were closely monitored every 12 hours beginning five days prior to the execution of the competition," Miller said. "Weather monitoring continued hourly throughout the first day of the competition."

As forecasts predicted the weather and wind speeds would worsen, Miller postponed the start of the orienteering event. After reports of damage from hail and wind, competitors moved to a secure lightning holding area, where they waited until the storm moved north and it was safe to begin the event.

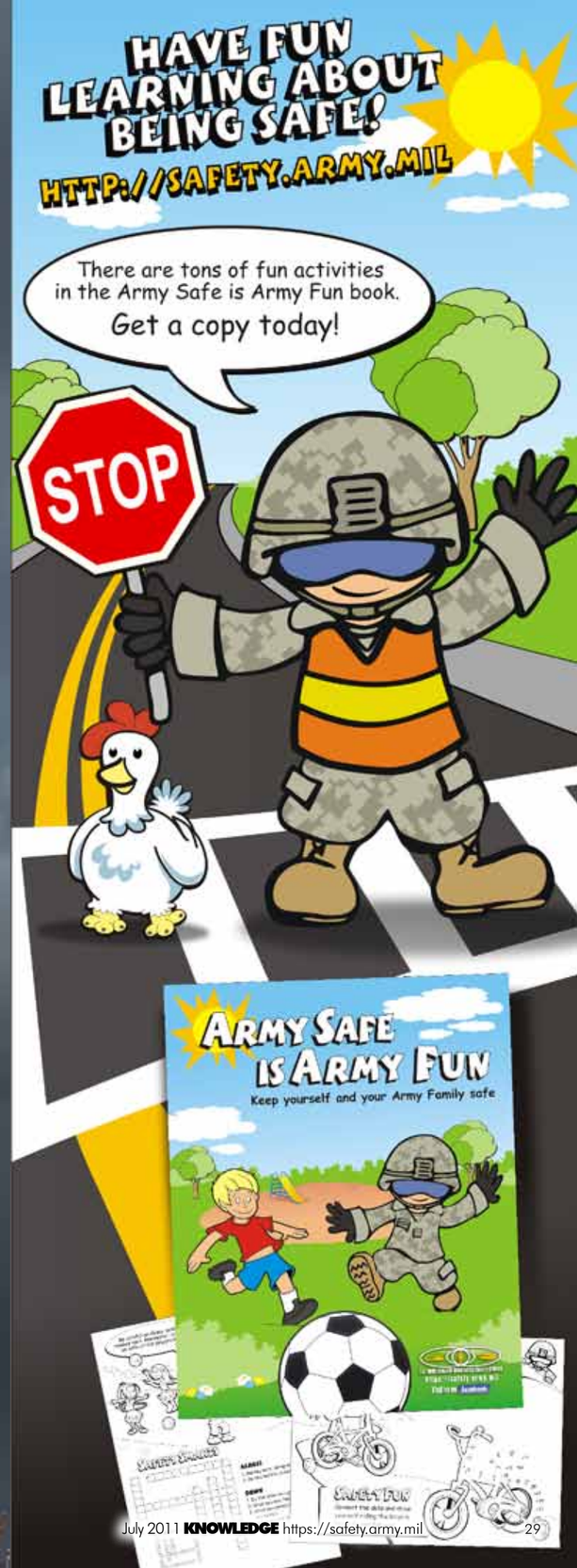
Once the event started, safety was kept at the forefront, Miller said. All 68 competitors were tracked using the Deployable System for Training and Readiness (DSTAR). They each carried an emergency response kit with a military GPS, a set of batteries, a chem light, a whistle, an MRK radio with preset emergency station and one red star cluster. They were also briefed on how to react in emergency weather situations.

Company and battalion chains of command kept in steady contact with Lawson Army Airfield and were apprised of the severe weather cell, which eventually developed into a tornado, headed for the area, Miller said.

"Based on these weather conditions and visible atmospherics in the training area, the decision was made to end the course at Checkpoint 3 and begin consolidating competitors using their DSTAR," he said.

Checkpoints went into lightning lockdown procedures while competitors were collected and transported back to Camp Rogers, where they were placed in the student barracks to wait out the lightning and tornado.

"Several actions led to the successful and safe execution of this event under these extreme conditions," Miller said. "Most important was the planning and analysis at all levels to prepare for and mitigate risks. The forward positioning of leaders on the ground, leader experience, a functional communication architecture and multiple layers of contingency plans created the conditions for accurate and rapid information flow throughout these extraordinary circumstances. In the end, the safety of the competitors and support personnel was the primary influence for all decisions."



BETWEEN A JACK AND A HARD SPOT

NAME WITHHELD BY REQUEST

There I was … trapped like a monkey with its hand stuck in the cookie jar!

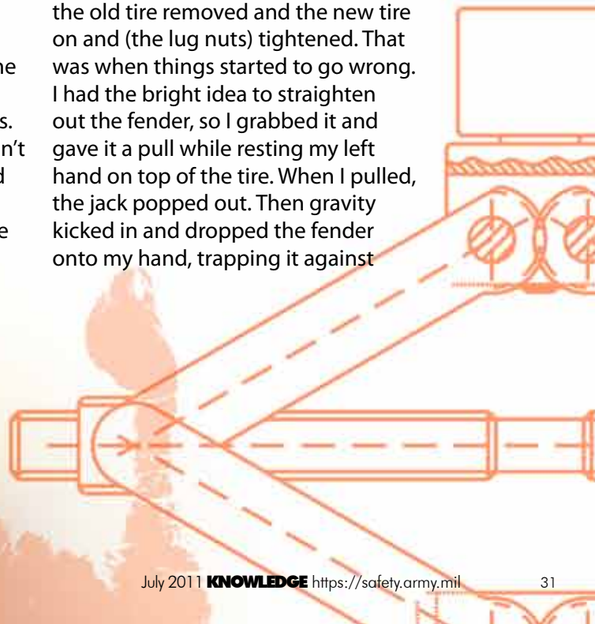
I purchased a Boss Hoss motorcycle several years ago. In case you don't know, this motorcycle has a small-block Chevrolet V-8 engine. The bike had 400 horsepower and, when gassed up, weighed 1,200 pounds. After owning the bike for just under a year (still under warranty), I noticed a slight tick coming from the left rocker cover. I called the dealer, and he told me to bring in the bike. It was going to be a two-hour drive and I had to leave the bike with him. But that wasn't going to be a problem because I had a truck and a utility trailer that would handle the job.

I loaded the bike onto the trailer and drove to the dealer without incident. I then left the bike and trailer with him and returned home. A week later, he called and told me he couldn't find anything wrong with the bike and to come pick it up. I drove back to the dealer, loaded the bike onto the trailer and started for home.

It was a hot day, so I rolled up the windows and turned on the air conditioner. I had a good country station playing nice and loud over the radio. Life was good until I noticed the guy behind me flashing his lights. With my big turbo diesel truck, I hadn't noticed the left tire on my trailer had blown out and I was dragging the trailer on the rim. I was on a two-lane county road with very little room to pull off, so I ended up half on and half off the road. I carried two spares since I'd had previous blowouts with this trailer before — probably because my motorcycle was only a couple hundred pounds under the trailer's maximum load capacity. Both blowouts were due to the rubber valve stems letting go on the 90-psi tires.

This time, the blowout had done some damage, since I had driven for a while before noticing it. Apparently, when the tire blew, it curled the trailer fender back and under a little. I grabbed the jack and the spare tire and got to work, constantly looking over my shoulder for traffic since I was still halfway in the road. I was out in the country, so there wasn't much traffic — just the occasional driver that would slow down, gawk and keep going. In the middle of the tire changing, a fire truck rolled by. Initially, I thought they were going to help me, but they didn't stop.

Anyway, I got the trailer jacked up, the old tire removed and the new tire on and (the lug nuts) tightened. That was when things started to go wrong. I had the bright idea to straighten out the fender, so I grabbed it and gave it a pull while resting my left hand on top of the tire. When I pulled, the jack popped out. Then gravity kicked in and dropped the fender onto my hand, trapping it against



the top of the tire and squashing the crap out of it. Did I mention my bike weighed 1,200 pounds?

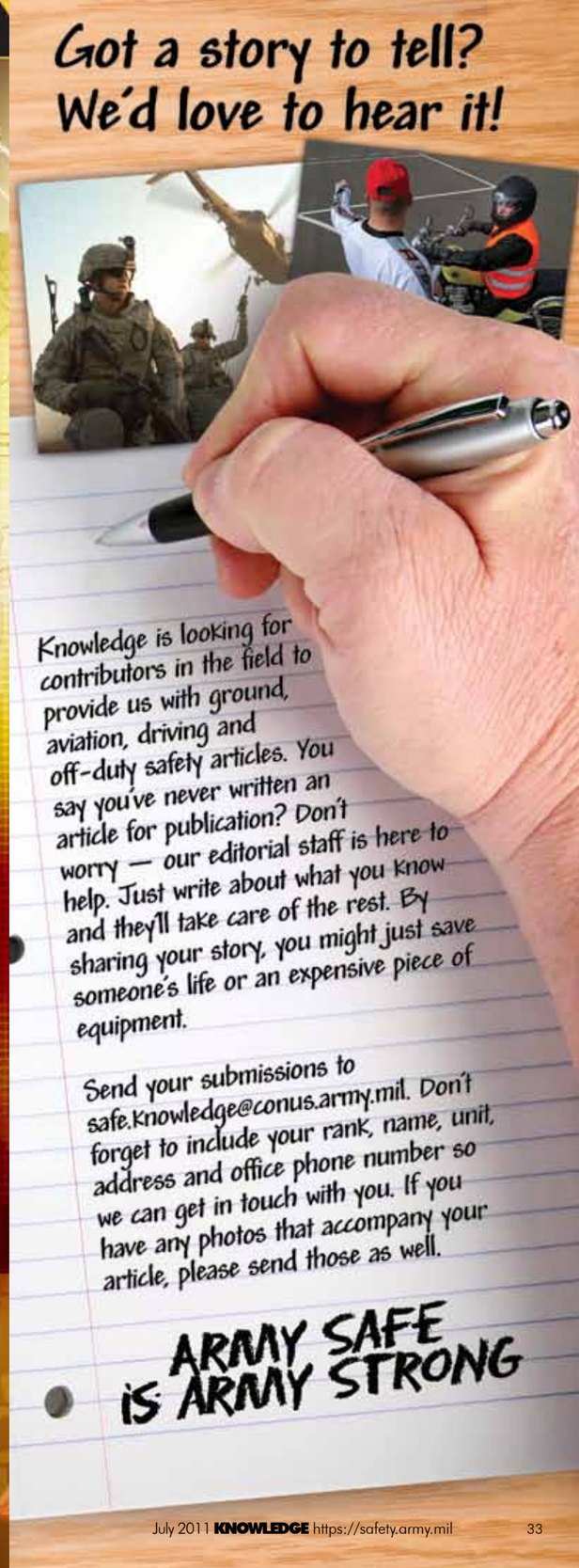
I tried to pull my hand out, but it wouldn't budge. I was trapped like a monkey with its hand stuck in a cookie jar. So there I was, halfway in the road with my hand caught and starting to bleed and nobody around. The main thought going through my head at that point was how stupid this whole situation was. I've always said if you're going to be stupid, you've got to be tough and I'd been fairly tough my whole life. That's when it hit me — I could grab the jack with my free hand, put it back into position and jack the trailer off my trapped hand. It worked like a champ. I had the trailer off my hand in maybe 30 seconds and applied a rag to my injury.

I finished getting the tire and fender situated and drove home without further problems. My hand was sore for a couple weeks, but wasn't permanently damaged. I was definitely lucky; things could have been a lot worse. Halfway out in the road like I was, I could've been hit by a passing vehicle. Or, I could've been like the driver who passed by me and crashed while going around the bend. He ran off the road, went down a 10-foot embankment and rolled upside down. That's where the fire truck was headed. I'm not sure what that driver suffered, but I'm sure his injuries were a lot worse than mine.

The lesson I learned from this situation is just because a trailer tire is rated for a given weight doesn't mean it's rated for high speeds. My tires were fine for short trips around town, but on the highway they overheated and eventually failed.«

TRAILER TIRE TIPS

Do you understand your trailer tires' weight and speed ratings? If not, visit www.discounttire.com/dtcs/infoTrailerTireFacts.dos



The COTTER PIN

CHIEF WARRANT OFFICER 3 EDWARD N. FITZGERALD II
615th ASB, 1st ACB, 1st Cavalry Division
Fort Hood, Texas

I crewed rotary-wing aircraft for the first 12 years of my career before becoming a rated aviator. I'd like to share an experience I had while serving in a CH-47D company as a flight engineer.

The aircraft I was assigned had been phased in February 1995. In April 1995, the 6th Cavalry Brigade had an unfortunate accident with a CH-47D that had recently come out of phase and was in track-and-balance status. A faulty lower drive arm bolt on the forward rotor assembly had sheared in flight, causing the blades to de-phase. As a result, Safety of Flight Message CH-47-95-02, Inspection and Torque Check of Lower Drive Link to Swashplate Retaining Hardware, was issued. This message required a visual inspection of the drive arm assemblies on both the forward and aft swash plates. The inspection was to verify a minimum 0.005-inch clearance existed between the threaded end of the bolt and the inside of the lug/swash plate ring, and a minimum 0.001-inch clearance between the bolt head and the lug face of the swash plate.

My company complied with the requirements and we started the inspections immediately. We had six airframes that failed, mine being one. The plan was to come in the next day (Saturday) with a maintenance team and further inspect and correct the deficiencies. Once we had the forward head locked out, we discovered why my aircraft had failed the forward drive arm check. It was because someone failed to install the lower slip bushing.

When starting the corrective procedure of disassembling the drive arm, I removed the cotter pin from the castellated nut on the middle bolt and was surprised to see the bolt had not been torqued. The hardware, per the technical manual, required a minimum of a 400 inch-pounds of torque. It was not present. In addition to this fault, a sleeve bushing had been installed instead of the required hat bushing. The lack of the proper bushing caused the hardware to loosen over the 40 hours since its assembly in phase. The middle drive arm bolt was put together with an improper bushing installed and washer stack up (e.g., a thick washer with several thin washers). This gave the appearance of a proper gap and the technical inspectors (TI) signed off during the scheduled maintenance months earlier. We made all corrections on the airframes and returned them to service.

To this day, I have that cotter pin on a key chain to remind me that no matter how many mechanics, crewmembers, TIs and pilots look at an airframe, there can still be concealed faults or deficiencies with it. No one person or maintenance system is perfect. If something doesn't look right or if you're unsure about a maintenance issue, it's better to ask questions and get a second set of eyes on it before it's too late.

> "If something **DOESN'T LOOK RIGHT** or if **YOU'RE UNSURE ABOUT A MAINTENANCE ISSUE**, it's better to **ASK QUESTIONS** and get a **SECOND SET OF EYES** on it before **IT'S TOO LATE.**"

Diver Down

NAME WITHHELD BY REQUEST

I consider myself a fairly experienced diver. I've had more than 30 dives, along with an advanced scuba certification and a couple of specialty certifications. I also learned to dive in water that had limited visibility, which was usually anywhere from five to 10 feet on good days. My diving experiences had been fairly uneventful in terms of emergencies or accidents, but that was about to change.

After returning from a deployment to Iraq, I was looking forward to getting back into scuba diving. On this particular weekend, a friend from my company and I planned a dive at a local scuba park at a lake. We arrived at the park, got a map of the dive area and decided to try and find a sunken sailboat that was located just off of one of the dive platforms.

As we prepped our gear, we talked out the dive. We decided my friend would lead since he had been to the park before and I was unfamiliar with the site. We also discussed different hand signals and what to do in case of an emergency. We then performed our buddy checks and got into the water.

From the dive platform, we followed the marker down to the sunken sailboat. Visibility was about five feet, but I didn't think much of it because I'd dived in worse conditions. After we checked out the sailboat, we headed back to the platform to continue to the next marker. I was still following my buddy when I started to experience a spinning sensation.

I began talking myself into staying calm, but when the feeling didn't subside, I had to concentrate on not panicking. I made the decision to grab onto my buddy and tell him to ascend. Normally, I would have stayed underwater to get things under control. However, I was 70 feet below the surface and well aware that if I did lose control, things could go bad very quickly. Fortunately, my buddy wasn't suffering from the same effects and was able to lead me back to the surface.

I wasn't sure what caused this spinning sensation that wouldn't subside, but I didn't have the telltale "drunk" feeling associated with nitrogen narcosis. In the past, I'd been on dives as deep as 95 feet without any issue. After discussing it with some other divers, I realized I'd become disoriented because I lost visual reference with the bottom of the lake. Instead of keeping the bottom in sight, I was watching my buddy.

I attribute two things for the successful outcome of this incident. First, I followed the "buddy rule." My dive partner was able to get me to the surface while I concentrated on staying calm. Second, and most important, was my training. I was able to recognize something was wrong and the potential danger of it. Our training on hand signals also allowed us to speak the same language underwater.

For some, training is nothing more than a check-the-block activity. However, when you put in the time and effort to do it right, it can save your life.

THE EPIPHANY

BOB VAN ELSBERG
Strategic Communication Directorate
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

Was it worth taking the chance of never seeing my fiancee again just to prove I was faster than someone else?

I was home on leave in San Diego from my duty assignment in Hawaii. I'd met a girl while I was home the previous Christmas and had fallen in love with her and proposed. She'd accepted and we were engaged to be married.

It was summer now and I'd taken two weeks' leave to fly home and spend some time with her and my parents. At the time, my means of transportation was a street bike. It was the biggest and fastest bike I'd owned.

My fiancé lived in a city about 12 miles from my parents' home. I'd taken her out that night and was headed home when I got to an intersection with University Avenue — the main street running through La Mesa, Calif., where my folks lived. At the time, my clutch cable needed to be lubricated and I was having trouble smoothly pulling away from a stop. As I waited at the light, three guys pulled up in a car in the lane to my right. When the light turned green, I had to "goose" the throttle and slip the clutch a bit to get going. The guys in the car heard my engine rev up and yelled, challenging me to a street race. I thought, "Why not — it's almost midnight and traffic is nil." I knew I could put these guys in my rearview mirror.

I grabbed a handful of throttle and started working my way through the gears. I was in fourth passing through 85 mph and ready to shift into fifth and go for the money. Then I looked ahead and time seemed to freeze. On the left, I saw a bar, which was still open. I glanced at the cars in the parking lot. Was anyone getting ready to pull out? There wasn't a concrete divider between the eastbound and westbound lanes. There wasn't anything to keep someone from pulling across the road in front of me. In fact, would they even bother to look? And who'd expect me to be doing 80-plus mph on a 35-mph street?

Then I looked ahead to the next intersection. At the moment, the light was green — would it still be that way when I got there? What if somebody turned in front of me at the last second? By then I'd be doing more than 100 mph. Even if I saw them, I'd be going too fast to stop. My grandfather rode Harleys back in the 1930s. He once T-boned a car and was thrown halfway through the driver-side window. He'd suffered back pain ever since. And he wasn't going half as fast as I was.

Then I thought about the girl I was going to marry. On my hotness scale, she was a 10. I never thought I'd get lucky enough to have a girl like her. Was it worth taking the chance of never seeing her again just to prove I was faster than someone else? If I crashed, what would that do to her and our dreams of having a family together?

Then I thought about my parents. I loved them both and they loved me. I was only 21 — what

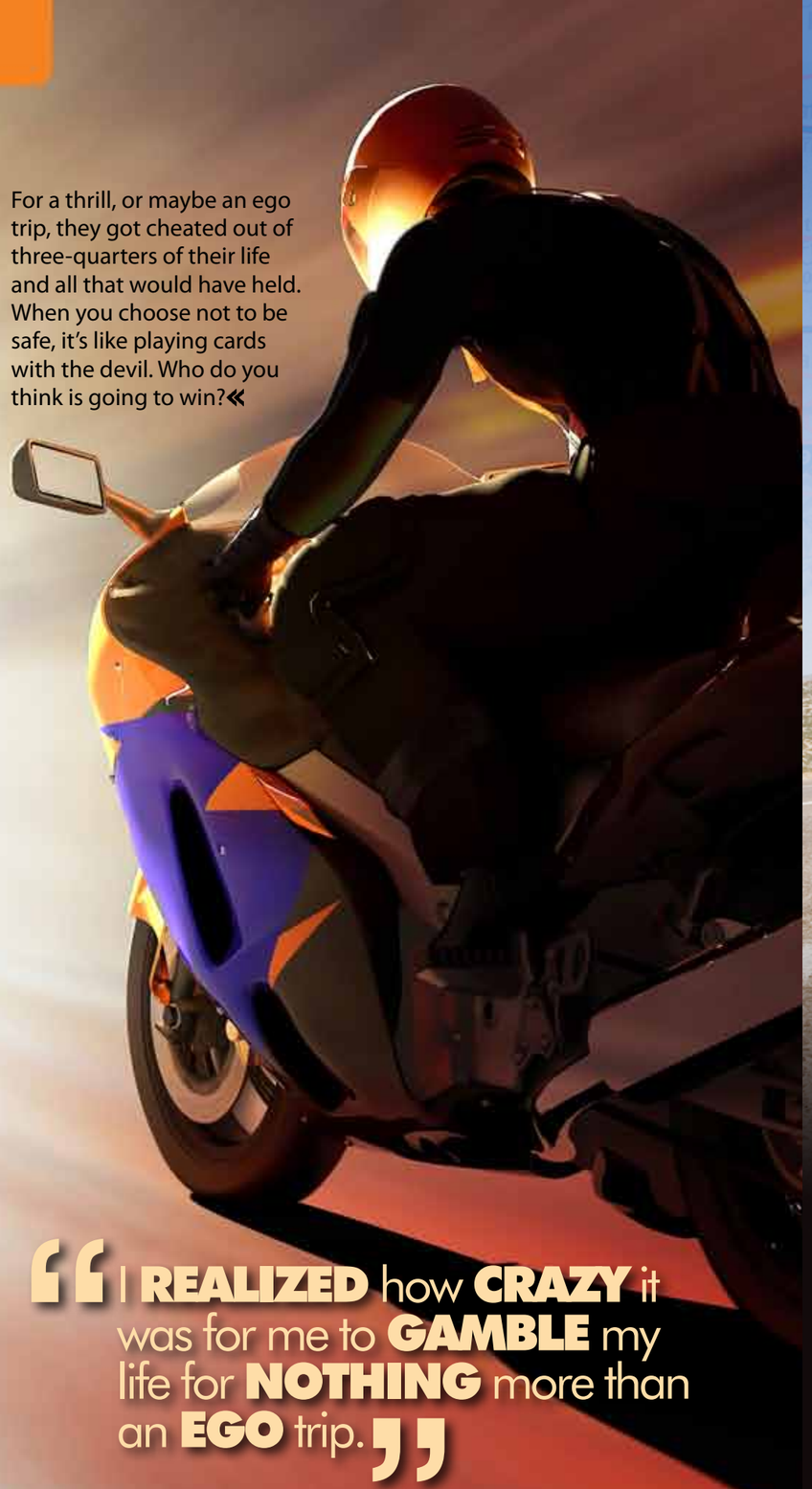
would it do to them if I did something stupid and died within a mile of home.

In that moment, I had my epiphany. I realized winning a street race really didn't matter much. Sure, it might boost my ego for the moment, but how long was that good for? Besides, who would know except me and the guys in the car? And if I won, they weren't going to tell anybody. Was that worth dying for?

I realized how crazy it was for me to gamble my life for nothing more than an ego trip. I rolled off the throttle and the car passed me. The guy in the backseat flipped me the bird and called me things I won't repeat. By then, I could've cared less. So they insulted me — big deal, what's that next to being dead? And what do I care what they think anyway?

Never since that night have I been tempted to street race. Before composite risk management (CRM) was invented, I'd used the process and it proved sound. I'd identified the hazards, assessed them and recognized the only good control measure was to back off. And let me tell you from experience, the "supervise and evaluate part" has worked out well. I like being around to celebrate more birthdays.

When young Soldiers die in accidents, I think about all the years, relationships and good times they'll never get. For a thrill, or maybe an ego trip, they got cheated out of three-quarters of their life and all that would have held. When you choose not to be safe, it's like playing cards with the devil. Who do you think is going to win?«



"I **REALIZED** how **CRAZY** it was for me to **GAMBLE** my life for **NOTHING** more than an **EGO** trip."

Just Out For a Spin

MORGAN MCLEOD
Flight Safety International
Dothan, Ala.

Your engine quits and your aerobatic airplane becomes a heavy glider. You do an eyeball scan of the local real estate, and the available options don't include an airfield. Gravity isn't going to wait, so you're going to have to make some quick risk management decisions.

It was a particularly hot day during August 2010, and I was nearing completion of my second sortie with a young lieutenant. We were flying in a Zlin 242L, a popular fixed-wing trainer made in Czechoslovakia, taking advantage of the aircraft's aerobatic capabilities to practice upset recovery and spin training.

Our flight had gone well until we decided to do one final spin and recovery before quitting for the day. The student entered the spin as instructed and the recovery was going very smoothly until he tried to apply power while pulling out. I watched as he applied power, but didn't hear the sometimes-deafening roar of the engine. I asked him to try again, but nothing happened. I then asked for the controls and immediately trimmed the aircraft for its best glide speed.

My first thought was, "Is this real?" The situation was unfolding just as I'd been told it would during a real in-flight emergency. I'd practiced handling engine failures in flight many times during my initial training and it was ingrained in me to quickly find a place to land.

Earlier in the flight, I'd noticed and pointed out to the student a paved drag strip that, at first glance, seemed to be a good spot for a forced landing. I asked the student to see if he could locate the drag strip. After a second or two, he said he couldn't. While he was searching for the drag strip, I reached for the engine failure in-flight checklist. Having run the checklist once from memory, I asked the student to read aloud the steps while I executed his commands. After an unsuccessful second attempt to start the engine, I called dispatch to let them know I had an engine failure and asked them for any ideas.

After explaining that I had run the checklist twice, they said, "Find a place to put it down." On my second radio, which was tuned to Cairns Army Airfield approach control, I declared an emergency for an engine failure. Remembering there were other Zlin's out that day with similar N-numbers, I wanted to be perfectly clear which aircraft was in distress. My radio call started with, "Cairns approach, Zlin 149FS," and ended with, "Zlin 149FS."

Meanwhile, my student was doing the three things I'd briefed him to do in case of a forced landing — shut off the fuel selector valve, turn off the master switch and crack open the canopy. I cannot stress enough the professionalism with which this student conducted himself.

Having chosen a field, I committed to landing and would not change my mind. That proved to be a hard impulse to fight, especially when I saw a nice empty road which, I found out later, was crossed by several power lines. However, I was convinced that this nicely groomed peanut field would be soft and we could land into the prevailing north winds. As the main wheels touched the tops of the peanut plants, I noticed a ditch just ahead of us. Announcing, "Hold on," I pulled hard on the stick as we floated over the ditch and landed softly on the other side. Neither the aircraft nor we suffered any damage.

I am absolutely certain that my training, from pre-solo through multi-engine, is what allowed us to walk away safely from this emergency landing. Also, the poise and composure which the lieutenant and I were able to maintain allowed for safe and productive crew resource management.

I was honored recently with the Broken Wing Award, which was presented by Brig. Gen. William T. Wolf, director of Army safety and commanding general of the U.S. Army Combat Readiness/ Safety Center. Receiving that award was one of the proudest moments of my life.

Editor's note: The author has worked with Flight Safety of Dothan, Ala., for more than two years, helping U.S. Army helicopter pilots transition to flying fixed-wing aircraft. Students begin their training with the Cessna 182, then transition to the simulator training on the Beech King Air 200 (Army C-12), followed by training on the aircraft they'll be assigned to flying.

> "I **AM** absolutely **CERTAIN** that my **TRAINING**, from **PRE-SOLO** through multi-engine, is what allowed us to **WALK** away **SAFELY** from this **EMERGENCY** landing. Also, the poise and **COMPOSURE** which the lieutenant and I were able to **MAINTAIN** allowed for **SAFE** and **PRODUCTIVE** crew resource **MANAGEMENT**."

LOST

Editor's note: Information published in the accident briefs section is based onw 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.

AVIATION

AH-64D

CLASS C

- The crew was conducting high-altitude environmental training when the aircraft experienced a No. 2 engine driveshaft failure. The crew was able to land without further incident.

CH-47D

CLASS B

- The aircraft struck power lines during climb-out from a resupply mission for a local exercise. The crew retained control of the aircraft and executed a precautionary landing.

OH-58D(R)

CLASS B

- The aircraft's engine failed following indications of fuel boost pump failure, low fuel pressure warning and RPM fluctuations. The aircraft entered autorotation and landed hard with damage. There were no injuries. The engine failure was caused by a malfunctioning fuel check valve.

TH-67A

CLASS C

- The aircraft sustained damage associated with spike knock during a demonstrated autorotation for a contractor instructor pilot evaluation.

UH-1H

CLASS C

- The aircraft experienced engine compressor failure during a service flight. The aircraft descended and landed under pilot control, but experienced slight fuselage damage while clearing trees.

UAS

MQ-1C

CLASS A

- The unmanned aircraft (UA) crashed preceding a high-altitude test flight. The UA was destroyed.

CLASS C

- The UA initiated an uncommanded trajectory during takeoff. The UA proceeded off the runway, coming to rest on gravel.

RQ-7B

CLASS B

- The UA experienced a spike in operating temperature and engine-out during return descent. The UA crashed.

CLASS C

- During landing, the UA initiated an uncommanded acceleration and struck the safety net, resulting in damage.
- The operator team lost link with the UA during flight and was unable to track its location from that point. The UA was never recovered.

GROUND

ACV

CLASS A

- A Soldier died after he was pinned underneath a Mine Resistant Ambush Protected All-Terrain Vehicle that overturned during a sharp down-slope turn. The Soldier was using a gunner restraint system.

CLASS B

- An armored reconnaissance vehicle was damaged when a fire started in the rear wheel well.

AMV

CLASS A

- A civilian died from burns he suffered when the tractor-trailer he was driving caught fire during a supply convoy.

Personnel Injury

CLASS A

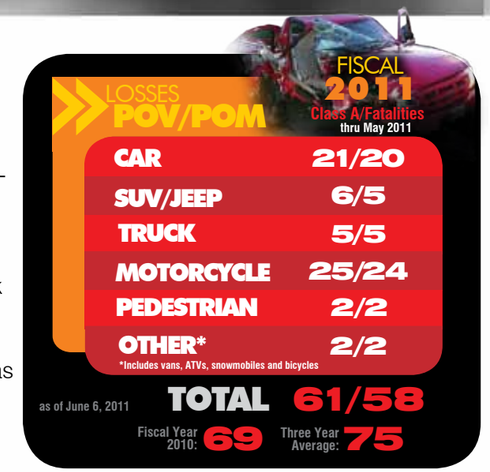
- A Soldier drowned during a diving exhibition after becoming separated from her dive buddy. The Soldier was a certified master diver.
- A Soldier died after he was struck in the neck with a round from another Soldier's M9.
- A Soldier drowned during a whitewater rafting trip when her raft struck a rock and overturned.

DRIVING

POV

CLASS A

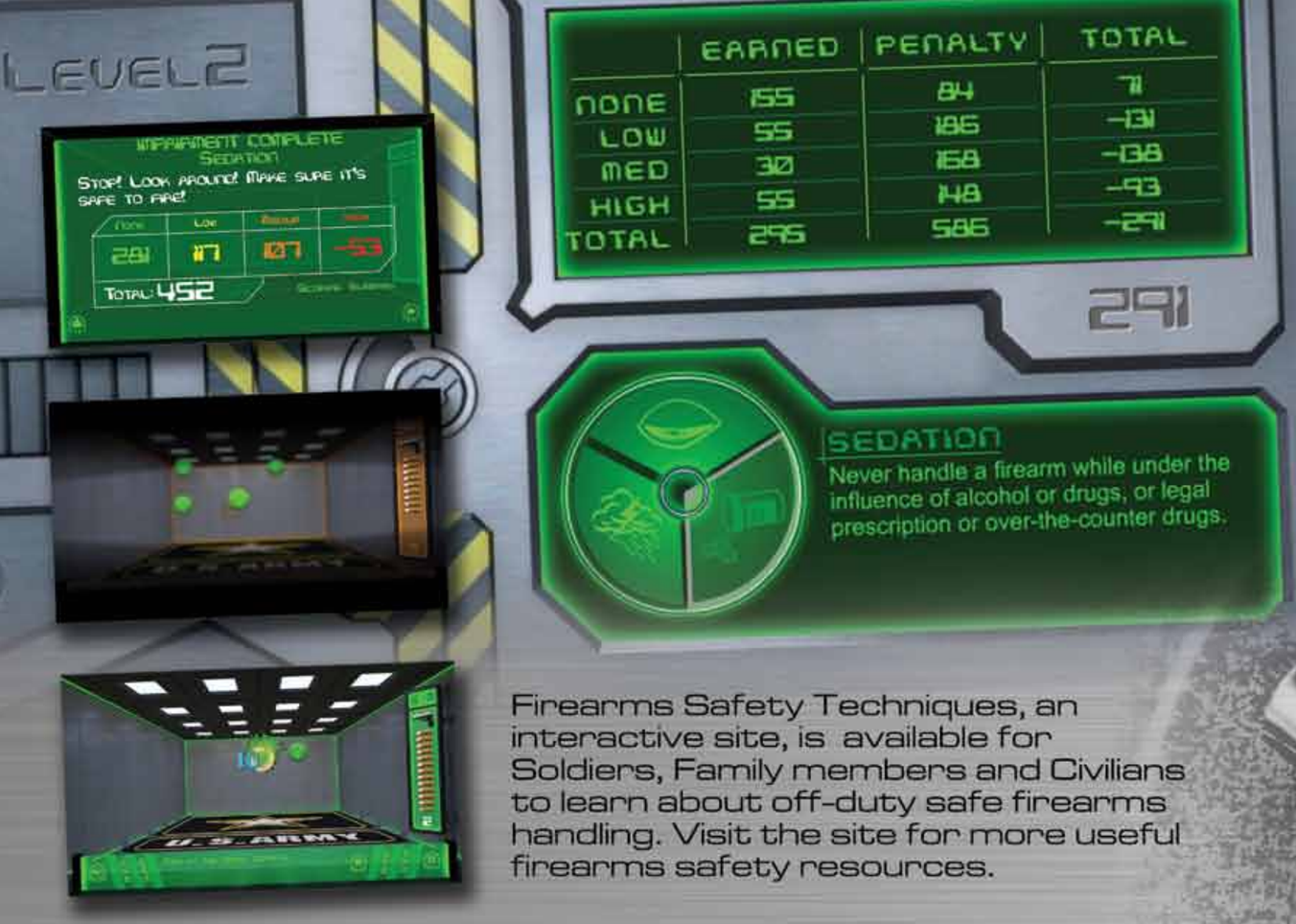
- A Soldier was killed when he left the road in an S-curve and struck a concrete bridge support. Seat belt use was not reported, but the vehicle's airbags deployed.
- A Soldier died when he was speeding in a sports car and went off the road and struck a utility pole. The Soldier and his passenger were both wearing their seat belts.
- An unbelted Soldier-passenger died when he was partially ejected from a speeding pickup that went off the road, struck a concrete barrier and overturned. The Soldier-driver and another Soldier-passenger were also unbelted and thrown around inside the vehicle, suffering non-life-threatening injuries. The Soldier-driver was intoxicated.
- Two Soldiers died when their vehicle went off the road, struck a tree and burst into flames.
- A Soldier was killed when he was driving after dark and struck a boulder that rolled into his lane on an interstate highway.
- A Soldier driving too fast for the road conditions hit a patch of ice, slid into the oncoming lanes and collided head-on with an approaching vehicle. The Soldier was hospitalized and died after being removed from life-support.
- A Soldier died in a multivehicle crash when his car was struck from behind and pushed underneath the rear of a pickup ahead of him.
- A Soldier was killed in a single-vehicle crash on the interstate.
- A Soldier was killed when he ran a stop sign, was hit by another vehicle and lost control, crossed the median and struck a pickup in the oncoming lanes. Although the Soldier-driver and his two Soldier-passengers were wearing seat belts, he suffered severe head injuries and later died after being removed from life support.



POM

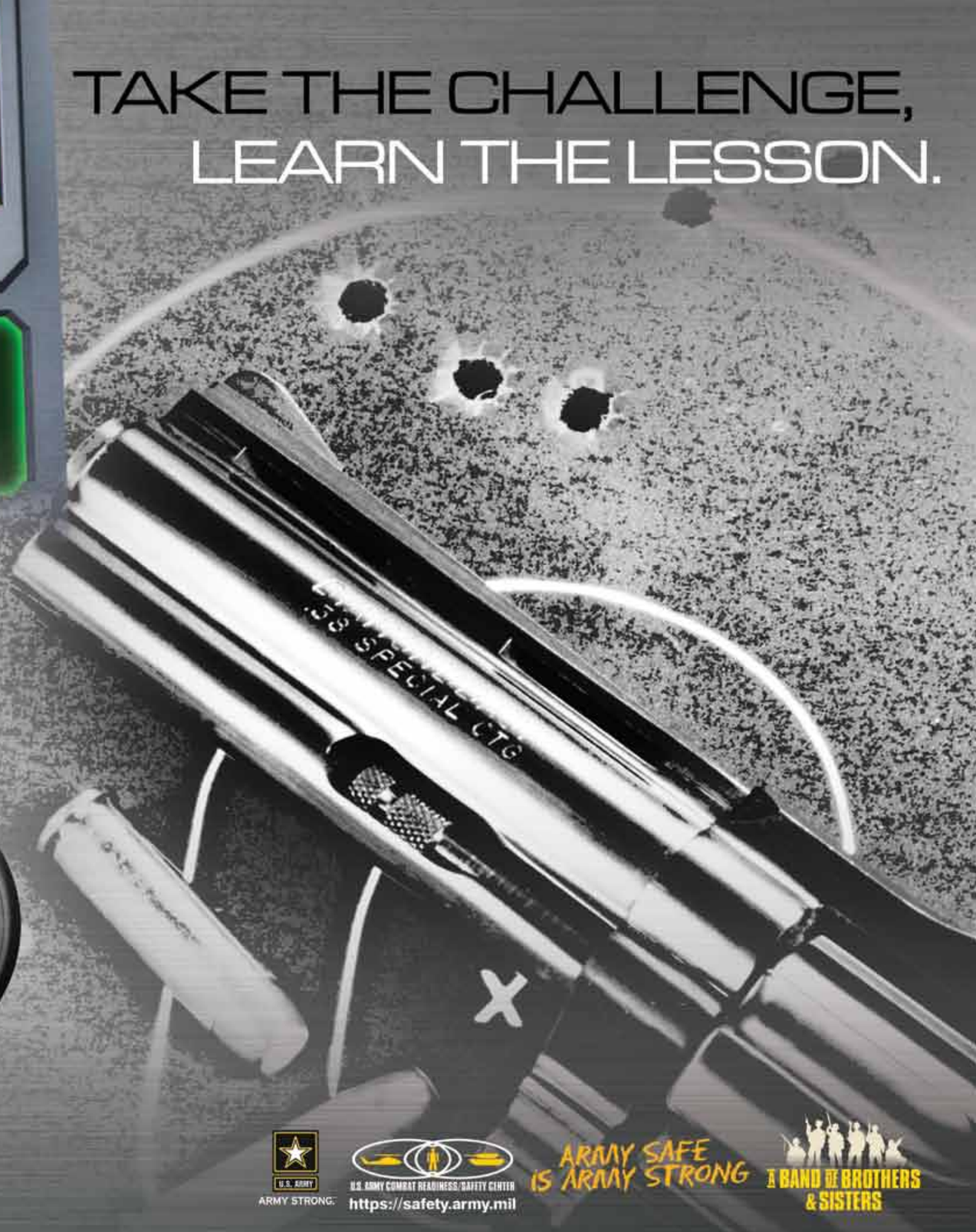
CLASS A

- A Soldier suffered a permanent total disability injury when his motorcycle collided with a vehicle that pulled out in front of him at an intersection. Although the Soldier was wearing full personal protective equipment (PPE), he sustained a serious head injury.
- A Soldier was riding a recently purchased motorcycle when he lost control at a three-way intersection, crashed and was killed. The Soldier was wearing a helmet, but may not have been properly licensed to ride.
- A Soldier suffered a permanent total disability injury when he lost control of his motorcycle and crashed. Authorities report he was riding at a high rate of speed.
- A Soldier was killed when he sped through a lighted intersection and rear-ended a pickup truck. The Soldier was licensed and had safety training but was not wearing any of the required PPE.



Firearms Safety Techniques, an interactive site, is available for Soldiers, Family members and Civilians to learn about off-duty safe firearms handling. Visit the site for more useful firearms safety resources.

TAKE THE CHALLENGE, LEARN THE LESSON.



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BUCKLE UP: BUSTED AND BRUISED ... BUT BREATHING

KNOWLEDGE

VOL 5 AUGUST 2011

OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

RIDING ON EMPTY

- WEAPONS HANDLING
- TRAIN AS YOU FIGHT
- DRINKING AND DRIVING

+

CREW COORDINATION

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KNOWLEDGE
OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY
LEADERS SOLDIERS CIVILIANS FAMILIES

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U.S. ARMY COMBAT READINESS/SAFETY CENTER

ARMY SAFE IS ARMY STRONG

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Mission statement: The United States Army Combat Readiness/Safety Center (USACR/Safety Center) supports our Army by collecting, 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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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.

CURBING INDISCIPLINE

> **"CURBING INDISCIPLINE** has been a primary **FOCUS** for **LEADERS** for many years now, yet the **MAJORITY** of our **OFF-DUTY** accidental **FATALITIES** continue to be attributed to some form of **RECKLESS BEHAVIOR**."

If scorching temperatures and crowded highways are any indication, the dog days of summer are here. Last-minute vacations, back-to-school shopping and counting the days until the first game of football season are hallmarks of this time of year, and many of our Soldiers and Family members are busy preparing for the hectic and fun weeks ahead. There is one additional indicator of late summer, however, of which we should all be aware: a largely predictable increase in fatal off-duty accidents.

Historically, August and September are especially brutal in terms of privately owned vehicle accidents. Using fiscal 2010 as an example, motorcycle fatalities nearly doubled during these months versus June and July. Deaths in sedans and other POVs also rose between August and September from numbers recorded earlier in the summer, although the increase was not as significant as that for motorcycles. And while POV fatalities as a whole are down in fiscal 2011, fatal motorcycle accidents were up 37 percent at the end of the third quarter — with what are traditionally our worst days still ahead.

Curbing indiscipline has been a primary focus for Leaders for many years now, yet the majority of our off-duty accidental fatalities continue to be attributed to some form of reckless behavior. Going back to fiscal 2010, indiscipline was a primary contributing factor in 32 of the 40 fatal motorcycle accidents recorded during the year. Investigations into many of fiscal 2011's accidents are still ongoing, but indiscipline is obvious in preliminary reports: One Soldier died after he lost control of a borrowed motorcycle at 90 mph, while another was killed instantly after slamming into a car at more than 100 mph on his motorcycle. We know motorcycle and other off-duty accidents typically peak during the summer, but we cannot afford to sit back and hope things get better when the weather cools off. The time to act is now, and the best action Leaders can take is to continue engaging with their Soldiers on the hazards of indiscipline.

There is no doubt our Leaders are doing a great job every day in executing their missions and ensuring the well-being of their Soldiers on and off duty. Some Soldiers may require more engagement than others, however, and Leaders should not be afraid to call them out on acts of indiscipline. Our most successful Leaders maintain an open and close relationship with their Soldiers but also know when to take corrective action. Your Soldiers may be tired of hearing you talk about indiscipline, but that should never stop you from engaging with them anyway. What you do and say makes a difference.

At the USACR/Safety Center, one of our central priorities is to give you the safety tools you need as a Leader in today's Army. Soldiers are more dynamic and connected than ever before, and we are working every day to make engaging with them easier and more effective. We just launched the fourth and final installment of the Better Opportunities for Single Soldiers Safety Factor kit, which includes several interactive and hilarious presentations ready for you to brief before long holidays or during safety stand downs. We also have several initiatives set for release at the beginning of fiscal 2012, including our annual Safe Fall/Winter campaign and a seat belt campaign kit designed to reach younger Soldiers. In addition, we are continually looking for suggestions to improve the Army's Motorcycle Mentorship Program, which remains the single-greatest way for Leaders to engage with their Soldier riders on motorcycle safety. Outside the duty day, there is no better opportunity for our Leaders to truly lead by example than the MMP. Information on these and all our other tools and programs is available on our website, https://safety.army.mil.

Each of you is doing a great job every day for our Soldiers, Family members and Civilians, and I thank you all for your hard work. Remember to be extra vigilant as we say goodbye to summer and prepare for the fall and a new fiscal year, and please let us know how we can help you and your Soldiers. Keep making a difference, and play it safe in all you do!

Army Safe is Army Strong!

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

I DIDN'T KNOW SCREEN DOORS COULD FLY

CAPT. MICHAEL F. HUTSON
A Company, 1-145th Aviation Regiment
1st Aviation Brigade
Fort Rucker, Ala.

The morning of Feb. 19, 2007, started like any other. We received our missions for the day, preflighted our aircraft, briefed and departed to complete the various air mission requests and checked in with the ground units we normally supported. So far, the morning had been uneventful. I was a freshly minted pilot-in-command (PC) with about four weeks' experience. My co-pilot gunner, Chief Warrant Officer 2 Erik Hoskinson, was a mature, experienced pilot who would soon become a PC himself. We had been flying together quite regularly since I finished my PC ride. This day we flew wing for our lead aircraft, piloted by Chief Warrant Officer 3 Brian Haas, and the air mission commander (AMC), 1st Lt. Brian Haas. (Yes, both were named Brian Haas).

We had just departed the forward arming refueling point (FARP) at Taji in our AH-64D and returned to support a convoy belonging to the 1st Brigade Combat Team, 1st Cavalry Division, when we got a call from the convoy's ground commander. His element, Iron Horse, was requesting us to come up their net. CW3 Haas pushed to the Iron Horse net, and we were immediately dispatched to Joint Security Station (JSS) North (the JSS in Tarmiyah), which was manned by D Troop, 2nd Battalion, 8th Cavalry Regiment, call sign "Demon."

We then headed northeast and were only seven minutes away. We updated the attack tactical operations center (TOC) of the situation, and then proceeded to bump to the JSS North net as well. Tarmiyah is situated about 20 miles northeast of Taji, and I could see a column of black smoke rising from that direction. I remember wondering aloud to Hoskinson what was burning so heavily. After the handover to Demon, I realized what that smoke was.

CW3 Haas was in radio contact with Demon while I was flight following as Hoskinson updated our TOC of the developing situation. After transmitting our situation report to the TOC, we off-tuned to Demon's frequency and then realized the seriousness of their situation. The JSS had taken a direct hit from a vehicle-borne improvised explosive device (VBIED) through their front gate. They were taking sustained small-arms and rocket-propelled grenade (RPG) fire from all directions and had suffered casualties. Due to the intensity of the firefight, the Soldiers were unable to get to their casualties and believed the enemy was inside the compound. The fear in the kid's voice on the other end of the radio drove home the urgency of the situation.

As we arrived on station in the vicinity of the JSS, the damage we saw was chilling. The VBIED had ignited the JP8 fuel storage tank on the facility and left it burning out of control. Also, most of the wall around the area had collapsed.

Our first goal was to locate the source of the enemy fire so we could set up close combat attack runs. The ground unit reported they were taking RPG fire from adjacent buildings to the north and

> "They were **TAKING SUSTAINED** small-arms and rocket-propelled grenade **FIRE** from **ALL DIRECTIONS** and had suffered **CASUALTIES**."

east. We looked but could not find anything. Then the ground unit reported the enemy had adjusted fire from the JSS to us.

Lead was hit multiple times on the first run, but was able to stay in the fight. Unbeknownst to them, they had taken an anti-aircraft round in the tail rotor gearbox. As we attempted to vary our orbits around the station, lead spotted a motorcycle fleeing the area where the JSS was reported to have taken fire. We tracked the motorcycle into a palm grove to the east of the JSS, approaching from the south to get a better look.

As I maneuvered back into formation with lead 175 feet above ground level, I felt a firm jolt underneath the aircraft and saw Hoskinson's overhead canopy pane crack, obstructing my forward field of view. Hoskinson shouted over the intercom that we were descending rapidly into a palm grove and quickly made a Mayday call. Crazy Horse 3 (lead) turned 180 degrees to cover us when they received our call we were taking fire. It turns out they just turned around into the same maelstrom of bullets we had just flown through.

I recovered the aircraft and got it as straight and level as I could with my limited field of view. I took over lead, and lead became our wing to keep an eye on our aircraft. We wrapped around the north side of the city and, once we cleared the western edge, proceeded directly to Taji. During this time, the cockpit voice was going crazy announcing the various emergencies caused by the battle damage we had just taken. Cockpit indicators told me I had taken damage to the utility hydraulic system, rendering our 30 mm gun inoperative. We had also suffered flight control damage, illustrated by the "BUCS FAIL" message on the up-front display.

Our wingman, now flying trail, was able to see and relay to us that our wing stores were on fire. I looked out the left side of the aircraft and saw the rockets beginning to cook off. I punched off the stores and began looking for a place to set down the aircraft. However, after conferring with our wingman, we decided the tactical situation did not permit this. After assisting me in getting the initial emergencies under control, Hoskinson, by peering through the small windowpane in front of him, began to guide me back toward Taji. Trail took care of the radio calls so I could concentrate on flying. He also relayed the events to our TOC and requested a follow-on air weapons team (AWT), and ended up conducting a battle handover with them.

After establishing a heading back to Taji, I suspected Hoskinson had been hurt and asked him about his condition. His reply was, "I'm fine. Just fly the aircraft." I knew when we got hit that he'd been hurt, but I didn't know to what extent. Hoskinson ignored his injuries and kept me concentrated on getting the aircraft home to Taji. Hoskinson performed incredibly well during this emergency. As we surveyed our damage, he reported that a round had penetrated his floor and damaged the cyclic, which had fallen over to the stop. I later discovered that same round had hit the bottom of his seat and sent fragments into his calves. Since we couldn't transfer the controls, I had to depend on him for obstacle avoidance, as I was practically flying blind. I knew there was a set of high-tension wires between Tarmiyah and Taji, but I could not see them. Thankfully, Hoskinson spotted the wires, which gave me ample time to negotiate them.

CW3 Haas and 1st Lt. Haas did everything they could to assist us getting home. They took over all radio calls for us and helped us assess our aircraft damage, allowing us to control the aircraft and monitor our own systems. On our way back to Taji, we passed the replacement AWT. Crazy Horse 3 relayed our situation and the tactical situation on the ground in Tarmiyah to them, including a warning that we had taken fire by some heavy-caliber weapons in the eastern palm groves. That team would take battle damage as well, but they would also score a few engagements against the enemy.

As we approached Taji Airfield, rather than land direct as we had been cleared, we flew right by it (I couldn't see out my front windscreen). Crazy Horse 3 called and reminded me to land to the south, but it was too late. He pointed out the airfield at our 3 o'clock position, and we turned and landed to the north. As we were landing, Hoskinson informed me that he had been shot in his legs. To get him closer to the crash and rescue trucks, I made the approach requested for us. With Hoskinson guiding me, I was able to establish a slow approach and land the aircraft right next to a nearby fire truck. The firefighter's eyes were as big as saucers, as I'm sure he was wondering if I was going to land on top of him. Frankly, I was wondering the same thing.

After I was sure we had touched down safely, I told Hoskinson to open his canopy. I pulled off the power levers and crawled into the extended forward avionics bay to assist him unbuckle. The Taji fire department did a phenomenal job extracting Hoskinson from the front seat and getting him to the aid station. Hoskinson was presented his Purple Heart by the 1st Air Cavalry Brigade commander at the aid station, and was then evacuated to Baghdad to have his wounds cared for. He would return later that night and be back flying a week later.

After my nerves settled a bit, I went over to survey the damage to our mount. We counted at least 22 bullet holes of varying calibers all over the airframe. From the rotor blades to the canopy to the intermediate gearbox, there wasn't much that didn't get scratched. The contractors later found the round that hit Hoskinson's seat. It was a 12.7 mm round from a "Dishka" machine gun. I was amazed by the damage that aircraft took and still brought us home. There is no other aircraft in the world I would rather take into battle.

In CW3 Haas and 1st Lt. Haas, I had the best wingmen anyone could ask for, and I thank God for them. There was no way I could have remained as calm and collected as I did without their support. Upon postflight inspection, they had taken damage as well, to include a hole in the tail rotor gearbox. I'm thankful it held together for them.

Before that day, I didn't know screen doors could fly … but I'm very glad they can.

Editor's note: For their actions to safely land their aircraft, Hutson and Hoskinson were presented with the Broken Wing Award.

RICOCHET

BRIAN ROBIE
U.S. Army Natick Soldier Research, Development and Engineering Center
Natick, Mass.

All too often we hear about off-duty incidents involving military personnel performing unsafe acts. How can these Soldiers spend months in theater or training without an accident, only to get injured or killed within days of returning home? Some believe it is due to a loss of situational awareness that results from the relief a Soldier feels when beginning a period of leave. The following is a true story of a Soldier who had completed his tour of duty only days before he was involved in an off-duty firearms incident. The Soldier's name has been changed to protect his privacy.

Trent Powell had spent four years serving the Army and just returned from his first deployment when he was given extended leave. He spent the first three days with close family and, most importantly, his new daughter, who was born during his deployment. On his fourth day home, Trent's friend, Joe, asked him to join him for target practice. Joe was relatively new to the sports of hunting and shooting and hoped Trent would share some of his experience and skills with him. Trent gladly agreed and the two met on Joe's land, where he had a large hay field.

Joe and Trent set up targets at various distances and competed to see who could make the best shot. After a couple of hours, Joe had grown tired of being beaten by Trent. When Joe noticed a squirrel about 80 yards downrange, he decided to make a bet. "Whoever hits the squirrel gets free beer," he challenged Trent. Joe took the first shot — a miss. Trent then took his shot, stopping the squirrel in its tracks. Not convinced Trent had struck the squirrel, Joe suggested they go confirm the hit. Trent agreed and the two walked downrange to view the squirrel.

Upon reaching the animal, they noticed it had been wounded by Trent's shot but was still alive. Without warning, Joe pointed his rifle at the squirrel and pulled the trigger. Trent's next memory is lying on the ground facing the sky with Joe's shirt being held to his forehead. Unbeknownst to the two men, a rock was just under the surface of the ground beneath the squirrel. When the bullet from Joe's rifle struck the rock, a piece of shrapnel ricocheted into Trent's forehead.

Trent was lucky. The doctors decided the bullet fragment wasn't a danger to Trent, and the piece remains embedded in his forehead today. But not all Soldiers are as fortunate. In recent years, there has been a dramatic increase in off-duty incidents — many which result in fatalities. While privately owned vehicle and motorcycle accidents still account for the greatest number of casualties, off-duty firearms fatalities also continue to be a problem for our Army.

Trent may have followed many of the proper procedures he had learned, but he let his situational awareness slip once he returned home. Trent never should have allowed Joe to leave his rifle loaded when they went downrange to inspect the squirrel. He could have also insisted the weapons be left in the truck before heading downrange. It is important to remember that even though you may not be on duty or in theater, danger is always present. It only takes one mistake to cause a catastrophe.

DID YOU KNOW?

In an effort to reduce off-duty accidental firearms incidents, the U.S. Army Combat Readiness/Safety Center has developed an interactive online tool called Firearms Safety Techniques. The site is available for Soldiers, Families and Civilians at https://safety.army.mil. Give it a shot today!

THINK WEAPONS SAFETY

Soldiers must remember to **THINK** any time they're handling a privately owned weapon:

Treat every weapon as if it's loaded.

Handle every weapon with care.

Identify the target before you fire.

Never point the muzzle at anything you don't intend to shoot.

Keep the weapon on safe and your finger off the trigger until you intend to fire.

For more information on safe weapons handling, visit the U.S. Army Combat Readiness/Safety Center's Range and Weapons Safety Toolbox website at https://safety.army.mil.

Busted and bruised... but breathing

MICHELLE A. POMAR
White Sands Missile Range, N.M.

Oh, God, I don't want to die!

The temperatures were hitting the triple-digit mark that August afternoon as I eased into the fast lane on Interstate 10 East in El Paso, Texas. I'd just gotten off work and was on my way home to study for my chemistry final the next day. It was about 2:30 p.m., and, surprisingly, there wasn't that much traffic on the freeway. I say "surprisingly" because I-10 in the El Paso area is considered one of the most congested sections of interstate in Texas. I thought I was home free — but I was about to find out otherwise.

I was shocked when a large van veered into my lane from the right, hitting my right-front fender, knocking me out of control and spinning toward the median. It was the most terrifying moment of my life, and I closed my eyes while my car spun out of control. All I could think of was my family and friends as I felt the car sustain several impacts. When everything seemed to stop for a second, I yelled, "Oh, God, I don't want to die!" — and then felt another hit.

When I opened my eyes, I saw dust or smoke everywhere. I remember running out of my car and looking back at it. I was shocked I was able to walk away from it, or what was left of it. The front and back ends were completely crushed and I couldn't see the tires.

Several people stopped and a woman came up to me and gave me a wipe to clean my face, which felt numb. She said I had hit her truck.

I was taken to the hospital and released that night. When we got home, my dad received a phone call from the woman driving the truck. She had seen everything and described what happened. She explained that after the van hit my car, it turned and smashed into the median and then spun around and hit her truck head-on. After that impact, my car spun and was hit again by her truck and sent head-on into the median, where it finally stopped. And when she said she was driving a truck, she didn't mean some pickup. She was behind the wheel of a tractor-trailer hauling a load.

Every time I think back to that day, one thing really sticks in my mind — the dark purple bruises the seat belt made across my chest. I am actually thankful for those bruises because they proved to me how hard my seat belt worked to save my life. I have always been conscious of the importance of seat belts, but I never knew how valuable they could be until that day. Without them, I wouldn't be here telling this story.

WHY BUCKLING UP MATTERS

According to the National Highway Traffic Safety Administration, from 2004 to 2008, seat belts saved more than 75,000 lives — enough people to fill a large sports arena. During a crash, being buckled up helps keep drivers safe and secure inside their vehicles, whereas being thrown out of a vehicle is almost always deadly. Seat belts are the best defense against impaired, aggressive and distracted drivers.

The River Wild

CHIEF WARRANT OFFICER 2 NICOLE DAISLEY
A Company, 2nd Battalion, 82nd Aviation Regiment
Fort Bragg, N.C.

My husband and I love the outdoors. Whenever we get a chance, we enjoy camping, boating, fishing and anything else that will give us a break from "Army life." One week in the spring of 1998, it had rained a lot, and the rivers and streams were swollen. We'd wanted to go on a canoe trip for a while, and the heavy rains created what we thought would be great rapids on our local river. We got some friends together for the trip, rented three canoes with all the proper safety gear and made our way to the river.

Once we got to the river, we were excited to see how high the water had risen. My husband and I were very experienced with a canoe, so we didn't anticipate any danger. Unfortunately, we didn't take our friends' skill levels into consideration.

All six of us set off in our canoes, expecting an awesome ride. We knew the first few miles of our trip would be simple because my husband and I had canoed this river a few times. The fast-but-smooth river was fun for all, but it probably gave us a false sense of security.

About five miles into our trip, the water got choppy. Even my husband and I were starting to feel this trip was about to get more challenging. We should have pulled over to the bank and walked to safety, but being young Soldiers, we always pushed everything to the edge. As a group, we decided to forge ahead because we only had a mile or two to go until we reached the bridge where we would get out of the water. When we approached a series of rapids, we knew we were in serious trouble.

TIPS FOR YOUR TRIP

WISCONSIN DEPARTMENT OF NATURAL RESOURCES

Canoeing can be a lot of fun, but if you don't know the dangers, you could get into trouble on the water. The Wisconsin Department of Natural Resources offers the following tips for keeping dry and steering clear of danger.

To Get into a Canoe:
- *Have Someone Hold the Canoe Steady* — You don't want to tip the canoe before you even get out on the water!
- *Crouch Low* — Keep your knees bent.
- *Grab the Sides of the Canoe for Balance*
- *Always Walk Along the Center* — Keeping your feet on the centerline will help keep the canoe from rocking.

Stay Low — Do not stand up or walk in your canoe when you are away from shore.

Always Wear a Life Jacket — You never know when you might fall out or tip over unexpectedly.

Avoid Sudden or Jerky Movements — Rocking from side to side could cause the canoe to tip over.

Be Aware of the Currents — You don't want to end up floating farther downstream than planned. If the current starts to pull you along faster or you see a lot of rocks in the water ahead, paddle away from them or toward the shore.

Always Sit on the Seats or in the Center of the Canoe — Sitting on the side of a canoe will cause it to tip over.

Stay Away from Low-Hanging Trees and Branches Near the Shore.

Do Not Canoe in Bad Weather.

Avoid Letting Big Waves Hit the Side of the Canoe — Always try to keep the canoe at a right angle to the waves; otherwise, a wave might push the canoe over.

If the Canoe Overturns:
- *Don't Panic*
- *Stay with the Canoe*
- *Paddle or Push the Canoe to Shore* — Once in shallow water, flip the canoe to dump the water and then climb back in. A canoe will float even if it's full of water until you can get to shore to empty it.
- *Always Bring Extra Clothing in a Waterproof Container* — You want to be prepared in case the canoe tips or the weather changes.

Be Sure to Bring the Proper Equipment, Including:
- *Sun Protection* — Hats, sunscreen, long sleeves and pants.
- *First Aid Kit*
- *Plenty of Food and Water*
- *Life Jackets*
- *Map of the Area* — Be sure you know where you are so you do not get lost!

Tie All Equipment to the Canoe — Put equipment into a waterproof bag to keep it dry and tie it to one of the center beams in the canoe so it won't be lost if the canoe overturns.

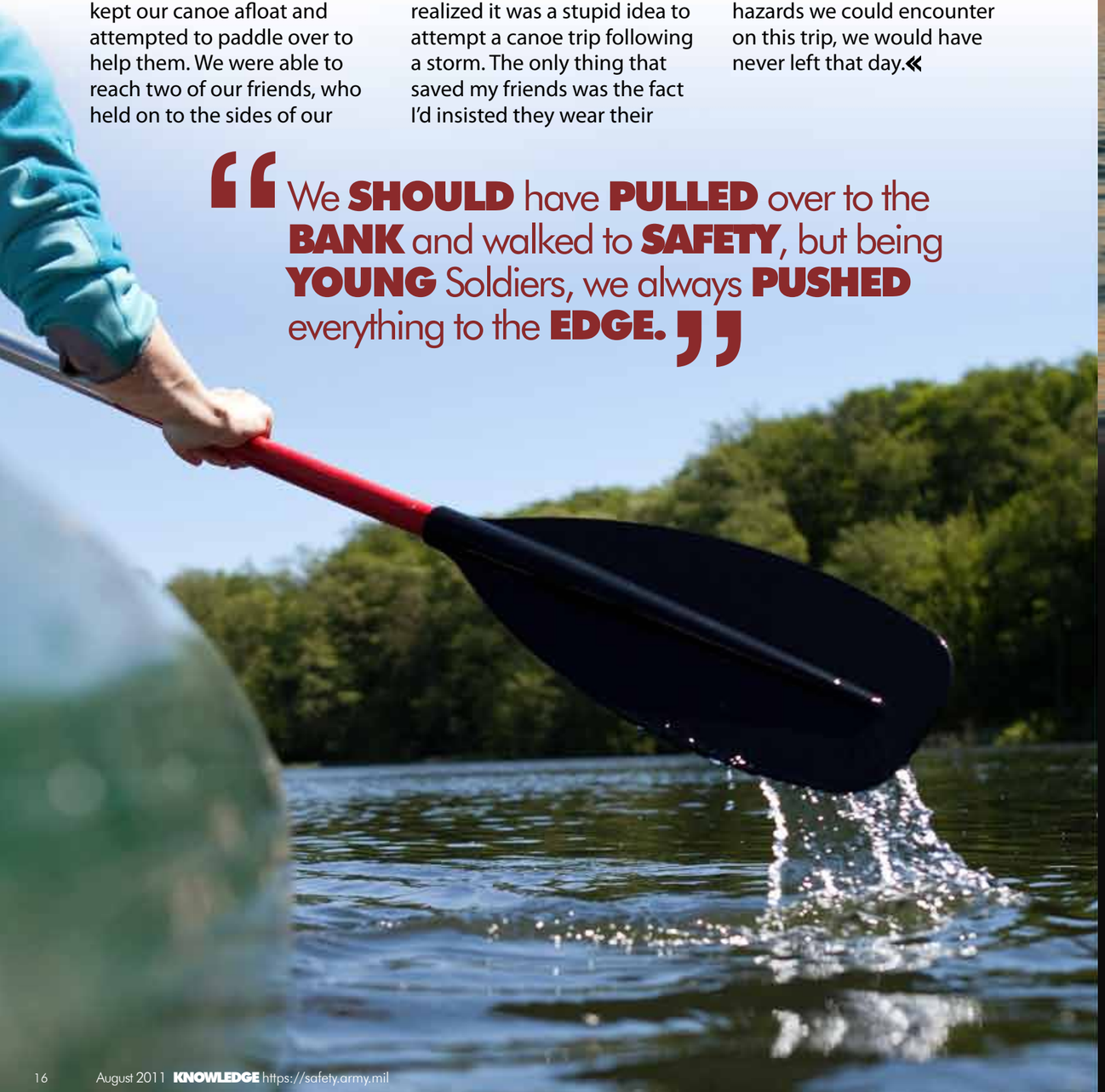
Do Not Litter — Carry out everything you bring to the river.

Once you learn these important tips, grab your paddle and life jacket and you'll be set to go. Remember to always canoe safely and have fun on the water!

My husband and I watched as our inexperienced friends' canoes tipped over, got lodged in a group of underwater trees and snapped in half. We could see our friends floating helplessly down the river. We kept our canoe afloat and attempted to paddle over to help them. We were able to reach two of our friends, who held on to the sides of our canoe as we paddled to the bank. Luckily, some people on the riverbank witnessed the incident and called 911. A safety boat was then dispatched to rescue our other two friends.

After the incident, we all realized it was a stupid idea to attempt a canoe trip following a storm. The only thing that saved my friends was the fact I'd insisted they wear their life preservers. At the time of this incident, I'd only been in the Army for a few years and didn't know anything about composite risk management. I believe that if I would have taken the time to weigh the hazards we could encounter on this trip, we would have never left that day.

> "We **SHOULD** have **PULLED** over to the **BANK** and walked to **SAFETY**, but being **YOUNG** Soldiers, we always **PUSHED** everything to the **EDGE.**"



CHOCK-FULL OF TROUBLE

CHIEF WARRANT OFFICER 3 NATE MARSHALL
Detachment 4
District of Columbia Army National Guard
Fort Belvoir, Va.

There I was, standing just inside the glass doors of the Myrtle Beach (S.C.) International Airport Fixed Base Operations (FBO) and watching the monsoon-like winds building quickly from out of nowhere. The rain was coming down so hard it was getting difficult to see my twin-engine turboprop-powered C-26E transport parked on the line just 50 yards away. I watched in horror as my airplane started to move, as if it had come alive on its own! But let me back up to how I got to this point …

My co-pilot and I had departed Guantanamo Bay Naval Air Station several hours earlier with a load of 11 passengers, including a one-star general. Our final destination for that day was Rhode Island. We had planned a stop at West Palm Beach (Fla.) International to clear customs and refuel, followed by another refuel stop at Myrtle Beach International. The weather was easily doable, with scattered thunderstorms, moderate turbulence and light icing forecast along the route. We would be at 20,000 feet the majority of the time. Overall, it looked like a normal day for us.

The flight through the Caribbean was uneventful, and we landed at West Palm Beach just as a few thunderstorm cells were starting to build in the area. It took 20 minutes to clear customs — just long enough for one of the cells to turn violent and start dumping copious amounts of rain and lightning onto the airfield. A fuel delay turned a planned one hour ground time into two hours.

We departed West Palm uneventfully. As we were vectored for the approach at Myrtle Beach International, we saw several thunderstorm cells painted on our weather radar and NEXRAD weather uplink display. The cells were in all directions from the airport, but still far enough apart that we were easily vectored around them. Once we had the airport in sight, we accepted a clearance for a visual approach. The landing was uneventful, as was taxi and parking, which was directed by a lineman from the FBO.

After we shut down the engines, the lineman gave us the signal that he'd put the wheel chocks in place. We released the parking brake, which is standard procedure on our airplane for two main reasons. First, the linemen may need to tow the airplane to a different parking spot to facilitate ramp operations. Second, the brakes on the C-26 have been notorious for overheating if used extensively during the landing rollout or subsequent taxi. If left engaged after parking, the heat will not dissipate as quickly and can actually build to a point that damage occurs.

We helped our passengers deplane and directed them into the FBO. My co-pilot and I did our postflight checks, including ensuring chocks were installed on at least one of the three sets of landing gear wheels. I observed that chocks were installed on the nose wheel. I placed our fuel order with the lineman and we walked into the FBO, as we had done so many times on other missions.

A few minutes later, the lady behind the desk waved me over and said lightning had been observed in close proximity to the airport, so the fuelers were on a weather delay.

I explained this to the general and the rest of the passengers. A few minutes later, there I was, where this story began, watching the rain and wind. I was horrified when our aircraft spun 140 degrees to the left, where it came to a stop. Originally, it had been parked on the line with a ground power unit (GPU) just off the right wing tip and a Beechcraft King Air parked near the left wing tip. I was sure my airplane had hit the King Air or GPU. There was too much speed and movement involved for it to have missed hitting something.

I called to the co-pilot and we both ran outside into the storm. There was a tug with a couple of sets of chocks parked just outside the FBO door. We each grabbed a set of chocks and ran toward the airplane, ignoring the torrential downpour and lightning. I'm sure the same thought was running through both our minds — "Save the airplane!" I remember thinking I had never been in rain this hard. I could feel water in my socks before I was 20 feet from the FBO door. As I installed the wheel chocks on one main landing gear, my co-pilot installed chocks on the other. I crouched under the fuselage for a moment and conducted a 360-degree scan, examining each section of the airplane. To my relief, I could see it had not collided with anything. I could hardly believe it!

The chocks that were installed before the storm were still in the same place, but the forward-most chock had been pushed out of the way. It didn't take long to figure out what happened. The wind had pushed on the left side of the vertical stabilizer, causing the aircraft's tail to rotate to the right and the nose to the left. The nose wheel free castered, which allowed the airplane to rotate counterclockwise free of the chocks until it weathervaned completely into the wind. As I looked around the ramp at other airplanes, I saw several light airplanes had been bent and mangled in their tie-down ropes. Some had literally twisted in their parking spaces as they pulled against the ropes. One Cessna 152 even had a bent fuselage. All had been pulled in the same direction.

It was then I realized my error. The chocks installed by the FBO lineman were the small wooden chocks often used on light general aviation aircraft like a Cessna 172 or other light airplane. Yet these same chocks were used so many other times on our airplane in the past. After all, we park on completely level surfaces and it would take a huge amount of force to roll over any wheel chock, right? Wrong!

I made a huge mistake because I was complacent. I did not take the time to think about what could possibly go wrong. We do have larger, heavier (30 pounds) wheel chocks onboard that we could have used. On this day, however, the weather was nice, so we weren't expecting any surprise monsoon-like winds. Plus, we were only stopping long enough to refuel … what could possibly go wrong?

From this experience, I learned to ensure two sets of chocks suitable for our C-26 are installed whenever we park. As part of my postflight checks, I now check the size and weight of any chocks installed by FBO linemen before I walk away from the airplane. The FBOs do have the heavier chocks, but sometimes you have to ask for them. If they only have one set, I retrieve ours from the cargo compartment and install them as well. I learned a huge lesson and will never make that mistake again.

My Son's Fateful Choice

NAME WITHHELD BY REQUEST

Sometimes you spend the rest of your life paying for a hard lesson learned. My son, Bryan, was only 14 when he was permanently injured in an all-terrain vehicle (ATV) accident. At that time, I had no idea riding an ATV could be so dangerous. After all, if it was dangerous, they wouldn't let kids ride them, right?

Bryan frequently went to his friend's house, where he would join several other boys riding their ATVs during the afternoon. He enjoyed that and often talked about how much fun he had. One evening after giving Bryan permission to spend the night at his friend's house, we received the phone call every parent dreads. We were told Bryan had been in an accident and was being rushed to the hospital.

When we arrived, hospital personnel were wheeling him into one of the emergency rooms. Shortly thereafter, doctors told us he would require emergency surgery for a head injury, along with internal injuries. It felt like the clock had stopped as we waited during the surgery. Finally, we were called in to talk with the surgeon. Although the news was relatively good — Bryan would survive — we were told he'd lost the vision in his left eye. To me, that was devastating news.

Bryan remained in the hospital for more than a week before we could bring him home. His recovery took months and it was hard for him and us to accept the fact he'd never see again out of his left eye. For years afterward, Bryan exhibited behavioral and substance abuse problems. Although I'll never know for sure, I've always suspected his head injury precipitated his bad behavior.

We found out after the accident that Bryan and his friends had been riding their ATVs along a dirt road. As he rode, Bryan's ATV hit some loose gravel on the side of the road and careened into a culvert and flipped. When he landed, he apparently struck his head on a pile of rocks. It's a wonder he even survived.

I can't turn back the clock and undo the damage my son suffered that day. All I can do is share what I learned so someone you care for won't have to pay the price Bryan did.

First, it's important to understand ATVs aren't toys. They can be very powerful and fast, and no one should ride them without first having the proper training. Had I ensured Bryan was trained to ride, this accident might never have occurred. Second, helmets aren't just for motorcyclists; they're for ATV riders too. Had Bryan been wearing one, his injuries would have been much less serious and he'd still be able to see out of his left eye. Unfortunately, that's something he'll never get back.

GET SMART — NOT HURT

Did you know there is a nationwide organization dedicated to making you the safest and most skillful ATV rider you can be? The All-Terrain Vehicle Safety Institute can take new riders and train them to handle their ATVs without having to pay the price of bumps, bruises or broken bones in the process. To check into this training, just go online to http://www.atvsafety.org/. There you'll be able to take an online course, enroll in hands-on training with instructors and watch some entertaining and informative videos.

HERO POWER

TRACEY RUSSELL
Ground Task Force
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Fort Rucker, Ala.

The ability to save a human life is an amazing power. When we consider this power, we commonly think along the lines of professional training or individuals faced with extreme situations.

We revere physicians, firefighters and police officers who wield their power to save human lives using the specialized training related to their chosen occupations. The "average Joe" who tackles an armed robber and the soccer mom who lifts a vehicle off her child are celebrated for their heroics in news headlines across the country. All these individuals are deserving of our respect and admiration for their contributions to society and humanity. However, these actions are outnumbered by a vast number of unsung heroes that save lives multiple times each and every day.

Who are these unsung heroes? They are the "ordinary" people all around you — the motorcycle rider who wears a helmet; the turret gunner who uses a restraint system; the driver of a vehicle who chooses not to text and drive; the Soldier who properly clears a weapon; the boater who wears a lifejacket; the designated driver; the mechanic who uses the right tool for job; the parent who ensures the child safety seat is properly installed; the leader who enforces standards; the person who intervenes when they see an unsafe act; and many, many more.

The power to save a human life lies within all of us. It does not require extraordinary skills or years of specialized training. It can truly be as simple as putting on a seat belt or using a crosswalk and making sure your Family members, friends and fellow Soldiers do the same.

What have *you* done to save a life today?

What have YOU done to save a life today?

RIDING ON EMPTY

GUNNERY SGT. KEVIN L. JONES
1st Battalion, 11th Marines
Camp Pendleton, Calif.

As a kid, I was into sports and played basketball in the park during summers in the Bronx. Back then, my coaches always warned me to stay hydrated. That's advice I should've heeded later when I was riding a motorcycle.

I was just finishing my three-year tour as a Marine drill instructor (DI) at Camp Pendleton, Calif., and rode my Yamaha R1 as often as I could. I planned to celebrate finishing my DI tour by meeting a friend and riding in the mountains east of San Diego. We scheduled the ride for the first Saturday that August. The temperature was 101 F, typical for a mid-summer day. I was wearing all the proper personal protective equipment (PPE), including my motorcycle jacket.

We started riding about 10 a.m. and, before long, I was feeling light-headed. Although I hadn't drunk any water since the previous day, I just thought this feeling was due to the hot weather. When we stopped to get gas, I bought a soda. Later I'd wish that I'd bought water.

As soon as we resumed riding, I began feeling light-headed again. We were in the mountains going through a series of curves at a pretty good clip when we came upon a two-lane road. My friend took off down the road, but I decided to slow down and found myself behind an older couple driving uphill at maybe 25 mph. As I was following them, the effects of my dehydration set in, causing me to pass out and hit the guardrail. As I did, I apparently woke up and put out my right arm to catch myself. When the bike fell, it shattered the ulna bone in my right arm and the radial bones in my hand. I didn't realize my arm was broken until I tried moving it. I wouldn't have wished that pain on my worst enemy.

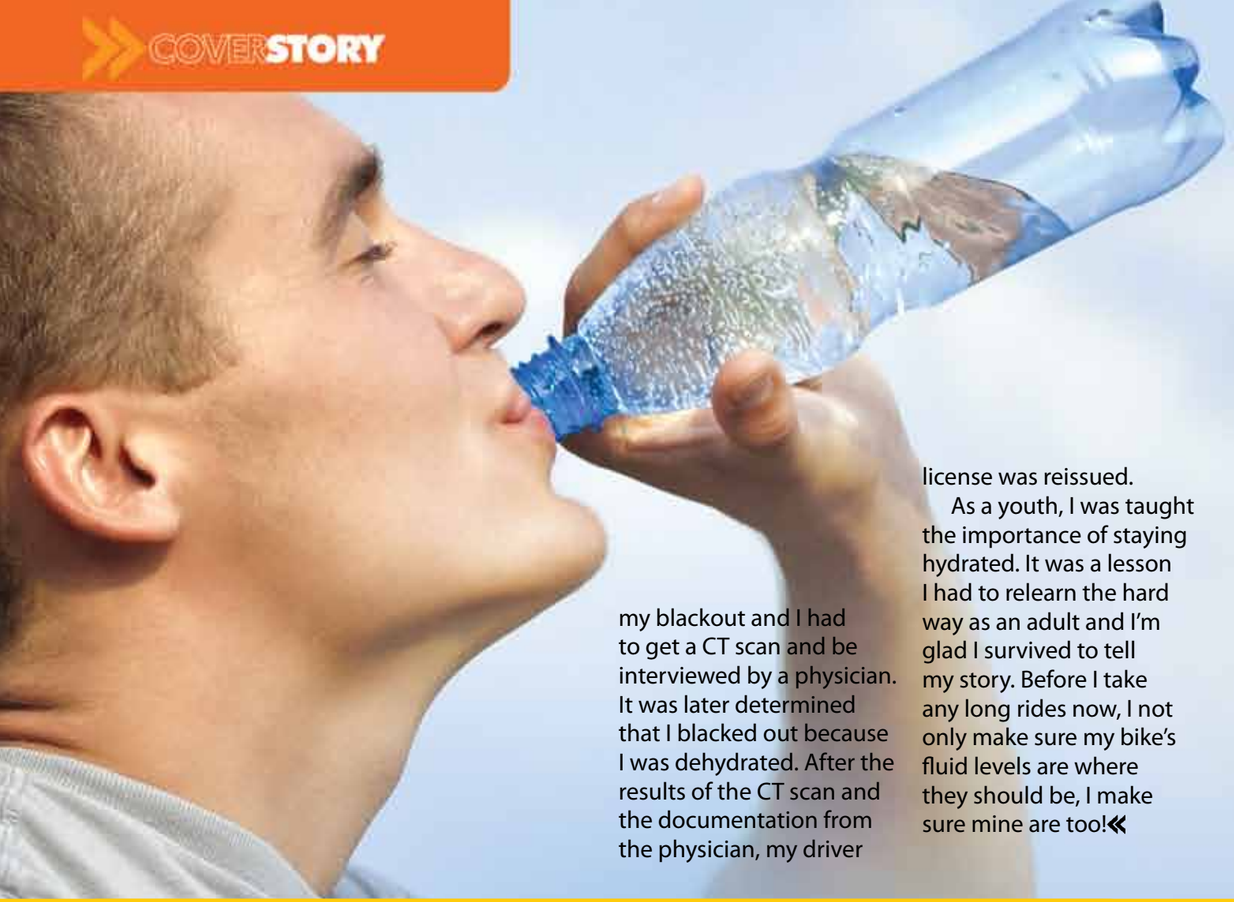
A few drivers stopped to help and eventually called the California Highway Patrol. When I finally stood up, I realized how close I'd come to being killed. I'd only survived because I was going slowly when I hit the guardrail. Had I been going any faster, I'd have gone over the guardrail and down a 175-foot cliff onto some jagged rocks.

I was taken to the hospital, where doctors placed two rods and 14 screws in my arm. It took 50 staples to close the wound. Due to the bones not healing properly, I had to go back for another surgery five months later. Four months after that, I had a third operation where doctors did a bone graft by taking bone marrow from my hip and putting it in my arm. The pain was excruciating.

In the state of California, if you pass out or blackout while driving or riding, your driving privileges are automatically revoked. The Department of Motor Vehicles revoked my driver's license because of

FYI

Check out the article, "When You're Hot, You're HOT!" by David Hough at www.soundrider.com/archive/safety-skills/when_youre_hot.htm for good information on riding during the summer.



my blackout and I had to get a CT scan and be interviewed by a physician. It was later determined that I blacked out because I was dehydrated. After the results of the CT scan and the documentation from the physician, my driver license was reissued.

As a youth, I was taught the importance of staying hydrated. It was a lesson I had to relearn the hard way as an adult and I'm glad I survived to tell my story. Before I take any long rides now, I not only make sure my bike's fluid levels are where they should be, I make sure mine are too!

KEEP YOUR COOL

With all the possible accident causes when riding, it is easy to overlook the danger of becoming dehydrated. Yet, if it's important to stay properly hydrated when you train and fight, why would it be any less important while cruising down the road? Here are some tips to help you ride safely.

- Drink plenty of water before and during your ride. Avoid coffee, tea, soda or sports drinks with caffeine or sugar, as they promote dehydration. However, sports drinks that don't have caffeine or sugar can be helpful in maintaining your electrolyte balance.
- Consider wearing a hydration system that will allow you to sip water as you ride.
- Exposing your skin to the sun's heat and wind will accelerate dehydration. Instead, wear riding clothing designed to both cover you and keep you cool.
- Wear your helmet to reduce the effects of the hot wind and help retain body moisture.
- Schedule rest stops so you can get out of the heat and into air-conditioning.
- Ride during the cooler parts of the day, such as the early morning or late afternoon.

Remarkable Airmanship

CHIEF WARRANT OFFICER 5 MARK W. GRAPIN
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The flight on Oct. 6, 2009, started like every other flight in Chief Warrant Officer 5 Paul Kuhr's career. An instructor pilot in the UC-35A Cessna Citation with the Alaska Regional Flight Center (RFC) stationed at Elmendorf Air Force Base, Kuhr completed the actions necessary for the routine flight scheduled. As with any flight where passengers are aboard, Kuhr double-checked the current and forecasted weather, performance planning and preflight inspections, planning his route for the smoothest altitudes available. Everything on this flight promised to be unremarkable, except for the novelty his passenger felt as he flew aboard one of the few Army jets to get to his meeting.

The length of this flight was certainly not going to challenge any endurance records. Enough fuel was pumped into the tanks to get them there and back, with plenty in reserve. As he was returning to Elmendorf, Kuhr and his crew noted the left main landing actuator had seized, preventing the left landing gear from lowering.

While it's obvious not having the aircraft's landing gear extended during a landing is a bad thing, it's something else to imagine a peg-legged jet doing pirouettes or cartwheels down the runway. Perhaps reflecting on what Capt. Al Haynes experienced many years before in the cockpit of a DC-10 airliner, Kuhr pooled his resources to develop a plan to increase the odds of survival for his passenger and crew.

The first resource available was time. The engines were running smoothly, the airspace had been cleared and crash rescue could be safely pre-

positioned. Radio calls could be relayed through telephone conversations to experts on how best to respond to this emergency. There was no published procedure in the operator's manual, nor had any kind of training developed — let alone practiced — for this emergency.

After burning off as much fuel as possible and making several low passes over the Elmendorf runway to rehearse the landing, at 10 feet over the runway threshold Kuhr cut the throttles and armed the firewall shutoff valves. He then ever-so-gently eased the Cessna to the asphalt.

For 1,400 feet, the jet slid down the runway centerline, sending a shower of sparks from the left wing as it scraped along the ground. "You don't normally push the rudder to full-stop, but we made sure we got every millimeter of opposite rudder our Cessna would give us in those final moments," Kuhr said.

Kuhr attributed successfully landing the aircraft to the training he'd received and the solid support he'd been given by his crew and others on the ground. Earlier this year, Kuhr (pictured center above) was presented with the Broken Wing Award. Afterward, he placed the award on his office desk and quickly prepared for another flight that afternoon. Because of Kuhr's dedicated airmanship when faced with his emergency, he and his crew survived to fly another day.

BRIDGE OVER TROUBLED WATER

CHRISTINA SHORT
200th Military Police Command
Fort Meade, Md.

It was the Saturday of the first battle assembly weekend in the new fiscal year, and a staff sergeant and a few of his Soldiers were conducting recon on a training location for the following day. The plan was to drive a HMMWV to a location in the hills that would be the perfect spot for their training. This plan would have worked out great had it not been raining the previous two days.

It was a clear day with the temperature hovering about 68 F. Everything was going well on the recon until the Soldiers got to a bridge. This structure wasn't exactly what comes to mind when picturing a bridge; it was more of a low water crossing. If not for the previous two days' rain, crossing this bridge would have been a piece of cake. Now, however, it was flooded.

"No problem," the sergeant thought. "We're in a HMMWV. A little water won't hurt us."

Before crossing the stream, the sergeant talked to some locals who lived nearby about the width of the bridge. They assured him the HMMWV could make it. He also watched a pickup truck cross the bridge successfully. Two Soldiers then walked across the bridge so the sergeant could roughly measure the width. Neither Soldier fell in the river, so the sergeant figured the bridge was wide enough for the HMMWV.

The Soldiers entered the HMMWV and started across the flooded low water crossing. Just before reaching the middle, the HMMWV's left-front tire slid off the crossing's left edge. At this point, the sergeant realized attempting to cross was a bad idea, but before anyone could move, the left-rear tire also slid off the edge. The sergeant instructed the Soldiers to slowly exit the HMMWV.

After everyone was safely out the vehicle, all they could do was watch as it rolled off the bridge and into the stream.

Since it was Saturday, the nearest Army Reserve maintenance shop was closed, so the proper wrecker wasn't available to retrieve the HMMWV from the stream. This forced the Soldiers to call a local towing company. The first tow truck arrived on the scene but couldn't move the HMMWV, so another truck was called. Fortunately, the second truck was able to pull the HMMWV from the stream. However, the HMMWV wasn't properly hooked up to the tow truck and sustained nearly $20,000 in damage.

Remember, floodwaters can hide damaged roadways and low water crossings. The sergeant and his Soldiers learned an important lesson that day: If you can't see it, don't cross it. They also learned to conduct training recons during the week — when the maintenance shop is open — and have a retrieval plan for vehicle breakdowns and accidents.

FYI

Think your tactical vehicle is heavy enough to protect you from fast-moving water? Think again. If a 97,000-ton aircraft carrier can float, so can your 3-ton HMMWV. The reason is buoyancy. According to the National Weather Service (NWS), most cars can be swept away in 18-24 inches of moving water. Trucks and SUVs — even with their higher clearance — do not fare much better. Whether driving or walking, any time you encounter a flooded road, the NWS encourages you to "Turn Around, Don't Drown."

Cracked Up On My Kid's Bike

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How often do fathers play with their children's toys and get hurt in the process?

For years, I have provided my children small dirt bikes and gone riding with them. I never let them ride without wearing their personal protective equipment (PPE) and always set the example by wearing my own. That is, until I made an exception one day.

It was late on a Sunday afternoon during a Labor Day weekend and I was working with friends to roof a barn. The kids had gotten bored and went looking for something more exciting to do. They found their dirt bikes and dragged them out. Having been sitting for a while, the bikes were difficult to start, so I came down from the roof to help get them running. Once they were running, they rode them up and down our 900-foot-long dirt driveway a couple of times. My son complained his bike wasn't running correctly, so I decided to give it a quick check ride. I ignored my own rules about wearing PPE and failed to put on a helmet, gloves or other protective gear. After all, I was only going up and down the driveway. What could happen, right?

About two-thirds of the way down the driveway, the engine started to over-rev. I could not get the bike to downshift, so I tried to slow it down by using the rear brake. Well, that didn't work and I was fast approaching the end of the driveway, which opened onto a busy state road. Instead of going for the shut-off valve, I grabbed the front brake handle, locked up the front tire and spun to the left. I then launched over the handle bars, landed on my left shoulder, flipped and slid face-down for at least 25 feet. Altogether, I broke my collar bone, burned my left leg, got a nasty case of road rash on my right arm and face (got four stitches there) and tore up my knees and elbows. Some example I was.

Had I been wearing my helmet and elbow and knee pads, the only injury I would have probably had would have been the broken collar bone. Instead, I provided my children with a Kodak moment by showing them what not to do. Maybe at least seeing the consequences made an impression on them. Hitting the road certainly made an impression on me!

I'm glad it was me on the bike and not one of the children when the engine malfunctioned. However, at least they were wearing their safety equipment — which reinforced a lesson for me. There is no situation so safe or "harmless" that you don't need to wear your PPE.

Falls are one of the biggest workplace safety hazards we encounter. They always have an element of surprise, which is what makes them a standard comedy routine. But falls aren't fun when they are real.

Watch Your Step

Falls are one of the leading causes of workplace injury and death. And these aren't necessarily falls from heights such as ladders or construction scaffolds. Most are falls from the same level, often caused by slipping or tripping. The main causes of slips, trips and falls in the workplace include:

Poor housekeeping: Items on floors, spilled liquids and equipment cluttering the aisles — all of these hazards can lead to someone slipping and falling if we simply ignore them. You may think someone else will take care of the problem, but that may not happen in time to prevent an accident.

Dangerous surface conditions: Broken or cracked surfaces, protruding nails, different elevations which are unmarked, torn carpets, loose or curled mats and slippery finishes are all hazards.

Insufficient lighting: Dim or incorrect lighting, glare in areas where it is dangerous or lights which flicker or "strobe" and cause perception difficulties.

Inattention to tasks: Carelessness brought on by inexperience, horseplay, fatigue or personal problems.

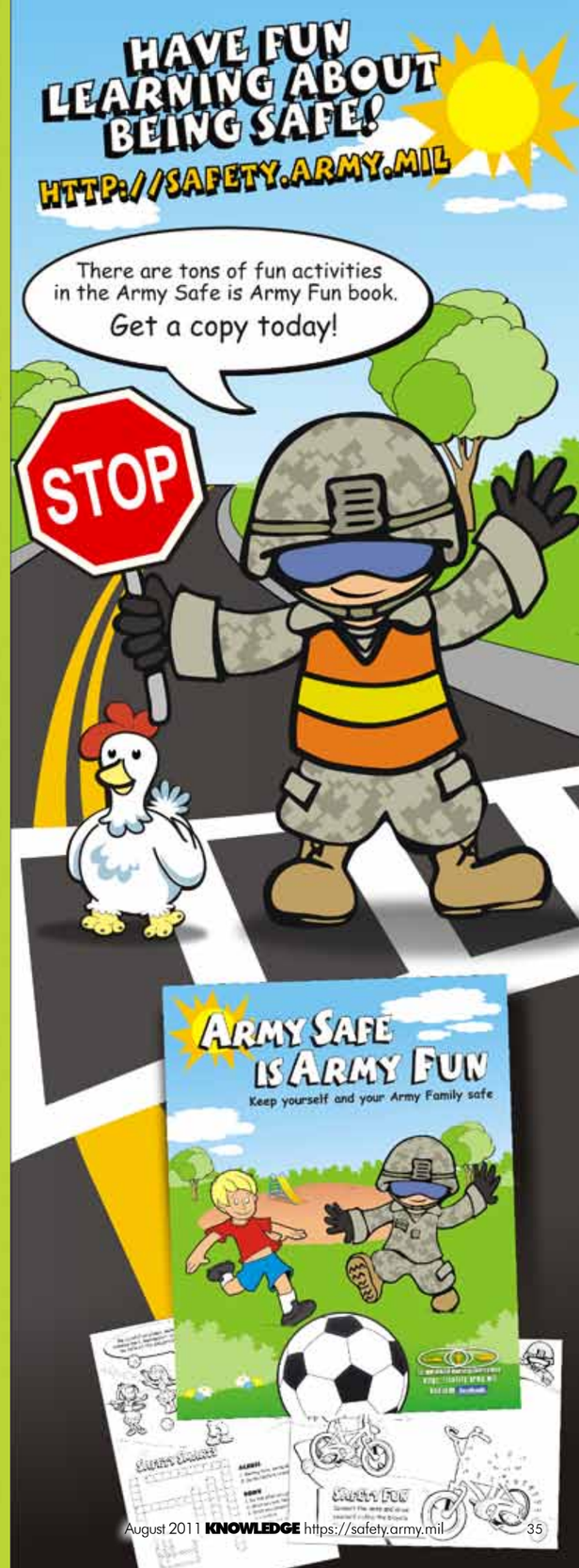
Improper footwear: Shoes which are not properly fastened, are too big or small or have slippery bottoms or oversized heels.

Here are some tips to help prevent falls:

- Keep obstructions out of walkways. Stored materials, equipment, cables, cords, hoses and trash are all common causes of tripping accidents.
- Keep doors and drawers of cabinets and workbenches closed.
- Keep all floors as clean as possible. Clean up any spills promptly. If this is not possible, make sure there is a barricade and sign. Place cleaning equipment in areas where everyone can find it.
- Floor coverings such as carpets, mats and tiles should be secured to prevent tripping hazards. Report any problems you find.
- Stay under the speed limit when you are walking. Don't run in your work area.
- Make sure your footwear won't trip you. It should fit well and have low heels. Keep your shoelaces tied. The tread should be adequate for traveling safely on slippery surfaces. Keep your shoes in good repair.
- Properly barricade any hazardous areas such as construction zones.
- If you are carrying an item, be sure you can see over it or around it. This is especially important on stairways.

If you slip or trip — even if you are not injured — take a moment to figure out the cause. Correct or report any hazards such as wet floors or obstacles in traffic areas. Falls aren't funny. They cause serious injuries and death. By keeping these fall prevention tips in mind, we will all be much safer. Watch your step to prevent falls.

Editor's note: Information provided by U.S. Army Installation Management Command.



REALISM
– TRAIN AS YOU FIGHT

LT. CMDR. WILLIAM "BILLY D" DELMAR
Directed Missile Countermeasures Device/Navy-Marine Corps Intranet
HSL-49 SAFETY
Naval Air Station North Island
San Diego, Calif.

Editor's note: This article details the interaction of a squadron's pre-mishap plan and the actions of the local base or post emergency services. This is a good example of a coordinated interagency aircraft mishap drill between an HSL-49, a U.S. Navy H-60 squadron and Naval Base Coronado (NBC) Emergency Services. The author wanted to share the lessons learned with aviators across the Department of Defense.

The call came in at 9:48 a.m. I stood outside our duty office and watched the squadron duty officer (SDO) listen intently to the voice on the other end of the phone. After a few moments, he jotted down some quick notes and hung up. I could see him trying to sort through the millions of thoughts, questions and impulses competing for their own say. Finally, he blurted out, "Red Stinger just crash landed at Turner Field." I remained calm. It was easy for me … his news was exactly in line with the mishap drill scenario for that day. The drill was unannounced and it was time to evaluate the effectiveness of our pre-mishap plan.

As the SDO was reaching for the mishap binder, he received another call from the wing command duty officer (CDO). He reported that a local resident identified a smoking HSL-49 helicopter descending low over San Diego Bay close to Turner Field. The phone rang again. This time, the duty petty officer picked up the extension. "Sir, it's the Coronado Fire Department. They are saying there was a helicopter crash with fuel spilled everywhere. They want us to confirm that we don't have ordnance on the bird." According to the flight schedule, however, the aircraft had launched for a defensive maneuvering training flight with flares onboard. The drill scenario was building.

The base CDO called in. He needed more information regarding the crew and mission. He asked for confirmation. Just then, another call came in — more confusion. The SDO passed the phone to a fellow pilot. He raced in to brief the basic facts to the commanding officer (CO). The CO asked some pointed questions and then picked up the phone to call the commodore.

In this drill, as in a real mishap case, the duty office phone may be constantly ringing with information all over the veracity scale. The SDO, feeling task saturated, paused in his checklist and reset. Opening page 1 of the HSL-49 pre-mishap plan, he read the first words in front of him, "Don't panic." Taking a breath, he looked up from the binder, grabbed the first available person and doled out sections of the pre-mishap plan. The once chaotic duty office started to take shape as an orderly command center, the frantic SDO now managing information flow and directing traffic.

At Turner Field, there was a different sense of chaos. Red Stinger 104, our flyer and static display for the drill, rested comfortably on the helicopter pad. The crew sat idly at their stations, awaiting rescue. The SDO at HSL-49 was not the only person to receive the report of a downed helicopter. As North Island Tower received the report of a simulated downed helicopter, the emergency command net for NBC was alive with chatter. Within minutes, the federal fire department, NBC security forces and the Coronado city fire department raced to the scene, unsure of the extent of the damage. On North Island, the base executive officer (XO) established his emergency operations center (EOC) and assumed command of the effort.

This mishap drill was not limited to one SDO and one squadron pre-mishap plan. Two weeks earlier, I sat in a conference room as a member of a training team consisting of representatives from eight emergency responder agencies and NBC officials. The goals of the mishap drill were to exercise the base emergency response plan

and evaluate the effectiveness of the first responder organizations. NBC officials also did not pre-brief their organizations.

We conducted helicopter familiarization training 101 with local federal firefighters three days before the drill. We reviewed basic aircraft configuration, armament and egress procedures. This training proved invaluable. Many of the new firefighters were not familiar with the location or hazard distances of the many cartridge-aided devices (CADs) on the SH-60B Seahawk. I learned that most firefighters did not receive training to rescue an aircrew unless they were part of an airfield crash crew. We also discussed pressurized sonobuoy launchers, flares and forward-firing ordnance. I also learned that the first step in any injury case is to slice open the item of clothing that covers the injury. Since our drill scenario simulated a broken leg and the survivor was my XO, I requested that the crash crew simulate shredding his flight clothing.

Meanwhile, at the squadron, I ran to maintenance control to see how the effort was going. I stepped to the counter and the aviation administration specialist handed me the logs, records and aircraft discrepancy book (ADB) for RS 104. The maintenance chief handed me the Naval Aviation Logistics Command/Management Information System data tape after locking down the system. So far, their response was exactly by the book. I returned topside with the aircraft histories and secured them in the safe. In an adjacent work center, the maintenance officer (MO) assembled the emergency reclamation team (ERT) for training. Each member left with instructions to prepare for overnight aircraft security and care. Two ERT members grabbed the mishap kit and extra supplies necessary for initial security.

Topside, I convened the aircraft mishap board (AMB) primary and secondary members. Since the XO was a member of the mishap crew, I, as the aviation safety officer (ASO), became the senior member. As a detachment officer-in-charge (OIC), you will likely be the senior member in the event of a mishap. This statement holds true for the young helicopter second pilot as well. It is vital that all members of the squadron or detachment are intimately familiar with the pre-mishap plan. No two accidents are the same and you may be required to serve a pivotal role during the first 24 hours of a mishap.

I began the AMB training with the question, "Now what?" It was clear this training would be free play — less lecture and more practicum relying on board members to enact their role. Murphy's law states mishaps are likely to occur at the most inconvenient time when no one is around. Due to deployed commitments, we had only 12 pilots at home guard. Everyone participated in training that day.

At the aircraft, first responders rescued the flight crew and secured the simulated crash scene. The drill scenario entered its third phase and the fire chief announced there was significant fuel spilled in the area and the potential for pyrotechnic flares to ignite. Because of that, people needed to evacuate the area. The NBC emergency team staked out the base gym facilities and initiated their disaster relief plan. Coronado residents and local military families needed care. Post-disaster relief and stability operations often fall to an afterthought, but it was at the forefront now and an important pillar in the base mishap plan.

Our mishap drill tested the response of the NBC and Coronado Emergency Services and the effectiveness of our squadron pre-mishap plan. Following the drill, the training team assembled to debrief. We shared lessons learned and addressed shortfalls. We were able to eliminate redundancy and streamline the interagency communication process. Conducting an unannounced drill provided us deeper insight into our planned mishap responses and showed us better ways to improve the process. The SDO learned an important lesson that day. As aviators and aircraft commanders, we take charge.

As part of my turnover as safety officer, I remembered to update the recall roster with my name and phone number in the event of a mishap. I neglected, however, to review the roster for our ERT in the monthly maintenance plan. While the roster was current with non-deployed personnel, our maintenance team discovered that a majority of the personnel were dayshift workers on our primary and secondary teams. We looked hard at the balance of qualifications within our shops and considered a more equal weighting based on shift schedule. As it was, if a mishap occurred at night, there was a good possibility we'd be sending out a fatigued and less-focused team to secure the scene.

The NBC EOC was an excellent command and control facility with an extensive communication suite. Previously, I was not fully aware of its capabilities or benefits to the command and control environment. We learned a mishap requires the coordination of multiple local and military agencies. The EOC is an ideal location with trained personnel to fulfill the command role.

The squadron's safety culture is pivotal to the success of your mishap drills. From the beginning, we insisted that the drill be integrated into our normal daily operations. It was equally important all other operations were stopped during the mishap drill. We knew we would lose scheduled events and disrupt the entire command, but a focused squadron effort is required for the success of a mishap drill.

The mishap drill satisfied a number of training requirements, but wickets are not the driving force behind these events. You can simplify mishap drills, send a message to the SDO and gauge his ability to activate the mishap plan. You can make a drill transparent to the daily operations of your command, but we did not that day. Everyone at HSL-49 leapt into action. The flightline shut down. The familiar chattering of computer keyboards ceased. This effect was heightened because it was an unannounced drill. We always train as we expect to fight. Mishap training should be no different. Realism, especially for the new SDO or young airman in the shop, is the most important factor in a successful mishap drill.

> "The squadron's **SAFETY CULTURE** is **PIVOTAL** to the **SUCCESS** of your mishap **DRILLS**."

YOUNG, DRUNK AND DUMB

BOB VAN ELSBERG
Strategic Communication Directorate
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

There I was … doing a "scorching" 20, maybe 25, mph on the streets in San Bernardino, Calif., late at night, wandering in my lane like some old granny.

I was getting ready to enlist and Jerry, a friend of my late father (they'd served in the military together), felt it was time I had my first "real" party. You know — the kind where a boy becomes a man by drinking the "good stuff." It was different for me since I'd never had a drink before, being raised by my mother in a very strict church. But hey, I was about to enlist and this, Jerry assured me, was part of the rite of passage in becoming a "real" man.

Jerry filled my glass and handed it to me, assuring me I was about to experience a quality introduction to inebriation. He also promised I wouldn't suffer a head-pounding hangover like you'd get from some cheap convenience store wine. "Hmm," I thought after my first taste, "Not too bad." I finished my first glass and was starting to feel mellow. I should have stopped there but, "Oh no!" Jerry said, as he refilled my glass. He assured me it would only get better and that my father would want his son to have a proper sendoff.

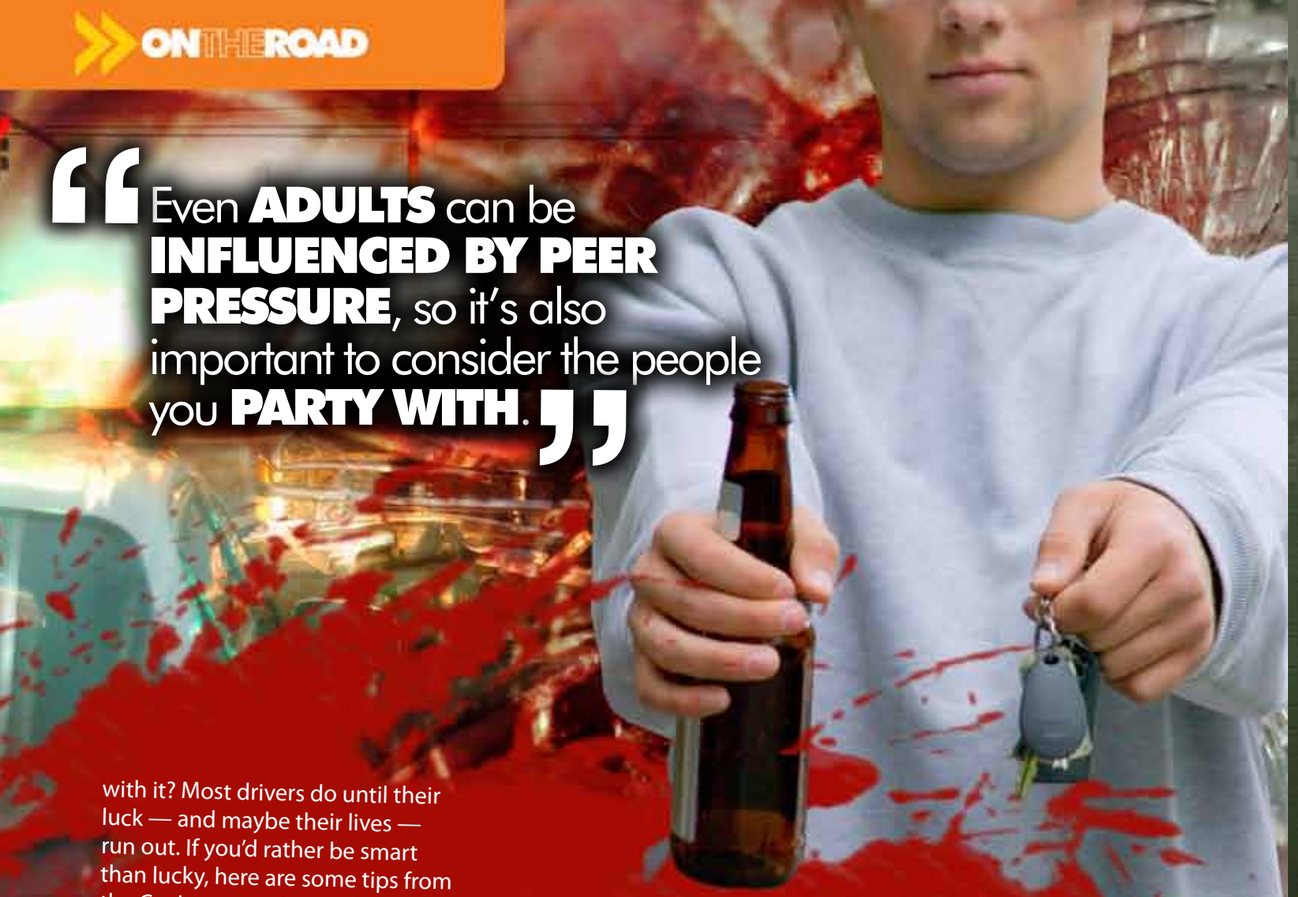
Down went the second glass, followed by a third. Somewhere during the process, I thought California was suffering another earthquake. As I sat there trying to remain upright, I wondered, "Why is the room spinning?"

Much of the following few hours has been lost to memory, along with countless brain cells that didn't survive this "initiation." But as the wee hours of the morning arrived, I realized I still had to drive a couple of my fellow partiers home. Since I'd borrowed my mother's car (the party took place 100 miles from where I lived and I was sleeping over at a friend's house), I wanted to be very careful not to get a ticket or crash.

When I got behind the wheel, I noticed I could only see through pinpoints in the middle of my vision. Everything else was kind of fuzzy. Recognizing my driving skills were somewhat impaired, I figured going slow was going smart. In fact, the only way I could have gone slower would have been to shift into reverse. I managed to drop everyone off safely and not get spotted by a cop. Had I been, I'm sure he'd have felt compelled to question why I was creeping along at 20 mph on a 40-mph street and wandering all over my lane.

I was lucky that night. I made it back — no hits, dings or tickets. I was totally ignorant of what I'd done, putting myself, my passengers and other motorists in danger. After recovering from my hangover (Jerry lied), I had both time and presence of mind to consider the consequences. Given that opportunity, I decided to avoid any repeat performances.

How about you? Have you driven drunk? Did you get away



> "Even **ADULTS** can be **INFLUENCED BY PEER PRESSURE**, so it's also important to consider the people you **PARTY WITH**."

with it? Most drivers do until their luck — and maybe their lives — run out. If you'd rather be smart than lucky, here are some tips from the Car Insurance List website at www.carinsurancelist.com/.

- **Hand Your Keys to Someone Else:** If you're at a bar, ask the bartender to hold your keys. If you're at a party, give your keys to a friend, or have your host put them in a safe location. Wherever you are, and whoever takes your keys, be explicit: they are not to hand them back until the next morning, when you are completely sober.
- **Keep Cab Fare Handy:** If you're barhopping, or even if you're only going to one place, always keep enough money for cab fare in a separate part of your wallet, and forget about it until you need to pay for a ride home. It's also a good idea to keep the number of a reliable cab company programmed into your cell phone, or on a card with your hidden money. If you're a student, you should know that many cab companies or campus police offer "no-questions-asked" rides home when you're too intoxicated to drive.
- **Arrange for a Designated Driver:** If you regularly go out with a group of people, take turns being the designated driver. Yes, this means that the person holding the keys doesn't get to drink that night, but there will be other nights, and watching your drunk friends' behavior when you're sober can be both entertaining and educational.

If you have no other options, don't drink. It may sound ridiculously easy, but if you know the only way home is to drive yourself, you need to simply not drink. After all, you can't drive drunk if you've been sipping only soda or water; and while a good cocktail is tasty, the reality is no one needs to be drunk to have fun.

Even adults can be influenced by peer pressure, so it's also important to consider the people you party with. If they belittle you for not drinking, or aren't willing to take their turns as designated drivers, perhaps you should reconsider who your friends really are.«

LOST

Editor's note: Information published in the accident briefs section is based onw 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.

AVIATION

AH-64D

CLASS A

- The crew experienced smoke in the cockpit accompanied by main transmission CHIP and OIL warning indications. The crew executed an approach but experienced a loss of collective input, and the aircraft crashed.

- The aircraft struck a ferry cable obstacle during cross-country flight training. The front-seat crewmember suffered fatal injuries upon impact with the cable, and the rear-seat pilot successfully landed the aircraft.

CLASS C

- The aircraft experienced an overtorque condition of 132 percent as the crew climbed to clear rising terrain. The aircraft returned to home base without further incident.

MH-47G

CLASS C

- The crew received an over-temp condition on the No. 1 engine during a power assurance test during cruise flight. The digital engine control unit and voice and data recorder readings confirmed 947 C for two seconds.

OH-58D(R)

CLASS A

- Following indications of low fuel pressure and fuel boost pump failure, the engine failed and the aircraft landed hard. An investigation revealed the fuel check valve failed.

CLASS C

- The crew received a mast-mounted sight FAIL instrumentation reading in conjunction with a smoke odor in the cockpit. The crew landed the aircraft, extinguished the onboard fire and returned the aircraft to base on a one-time recovery flight.

UH-60A

CLASS C

- A preflight health indicator test (HIT) identified a No. 1 engine anomaly, and the crew shut down the aircraft. Inspection identified the No. 1 engine inlet cover had been left in the inlet.

UH-60L

CLASS A

- Upon touchdown at a landing zone featuring rising terrain, a local national interpreter became disoriented, stood upright and moved rearward into the moving rotor blades. The crew chief exited the aircraft and recovered the unresponsive local national, who remains on ventilation with a severe head injury.

CLASS C

- The aircraft sustained tip cap damage during a resupply mission.

- Normal maintenance procedures following the aircraft's last flight mission revealed damage to the Section 4 driveshaft cover and one tail rotor paddle and the loss of the auxiliary power unit door.

UH-60M

CLASS C

- The crew experienced smoke in the cockpit in conjunction with the No. 1 engine generator failure indication. The crew landed the aircraft on the airfield and performed an emergency shutdown.

KA300

CLASS C

- The crew had difficulty in manipulating the payload during flight and terminated the mission. Postflight inspection revealed damage to the payload turret.

UAS

MAV

CLASS C

- The operators lost control of the unmanned aircraft (UA) as they input manual controls in response to sudden high-wind conditions. The UA crashed and was recovered.

GROUND

Personnel Injury

CLASS A

- A Soldier and his sister were killed when his private airplane crashed shortly after takeoff.

CLASS B

- A Soldier lost a portion of his finger when his weapon discharged a round as he attempted to clear it.

DRIVING

POV

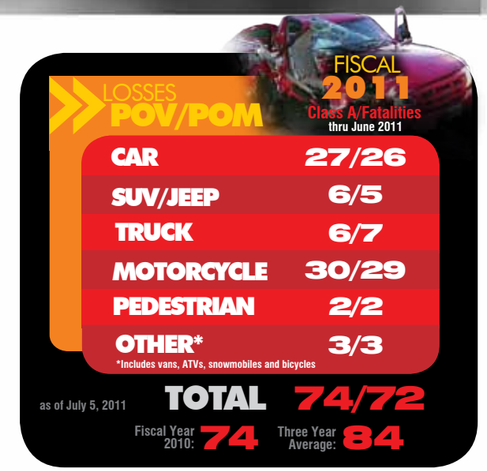
CLASS A

- A Soldier died when his vehicle went out of control and overturned as he was driving back to post at the end of a weekend pass.

- A Soldier suffered severe head injuries when he crashed into a landscape boulder while street racing. The Soldier was extricated from his vehicle and transported for treatment, but later died after being removed from life support. The Soldier was not wearing his seat belt.

CLASS B

- Two Soldiers suffered disabling injuries when they were thrown from their vehicle after it struck a tree. Local authorities reported alcohol and speed were factors in the accident. Seat belt use was not confirmed.



POM

CLASS A

- A Soldier was killed when he lost control and crashed while riding back to his unit from a sporting event. The Soldier had taken Motorcycle Safety Foundation training.

- A Soldier died after he lost control of a borrowed motorcycle at 90 mph and crashed. The Soldier was neither trained nor licensed to ride and wore only a helmet as personal protective equipment. The Soldier was transported to a hospital, where he later died after being removed from life support.

- A Soldier was killed when his speeding motorcycle struck a vehicle at an intersection. The impact threw the Soldier into the rear window of a parked vehicle. He was pronounced dead at the scene.

I wore a Gunner's Restraint

wore a Bicycle Helmet

wore a Respirator

used a Ground Guide

wore a Motorcycle Helmet

What have YOU done to save a life today?

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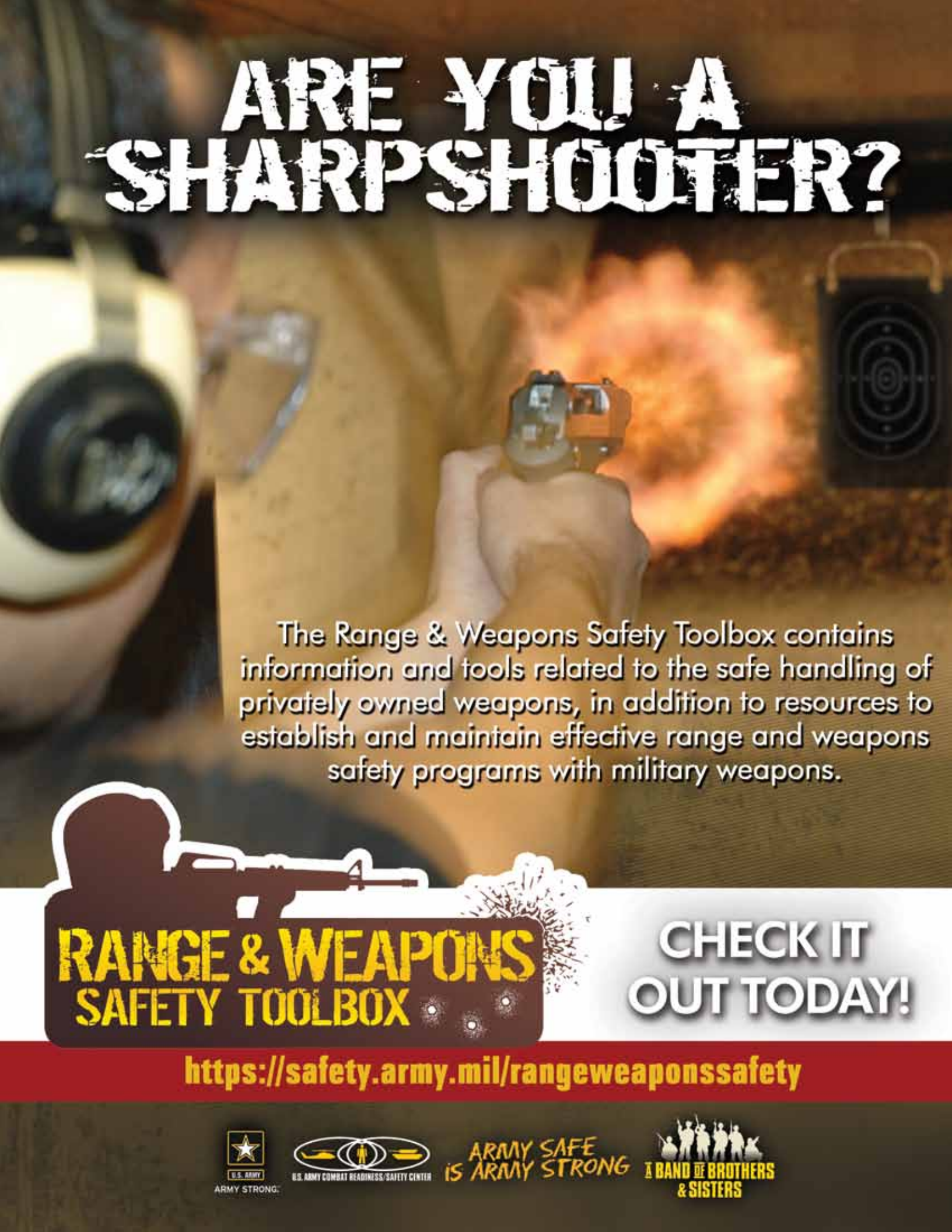
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The Range & Weapons Safety Toolbox contains information and tools related to the safe handling of privately owned weapons, in addition to resources to establish and maintain effective range and weapons safety programs with military weapons.
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MOTORCYCLES: YOU CAN'T KNOW IT ALL

KNOWLEDGE

VOL 5 SEPTEMBER 2011

OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

OPEN SEASON

- CHANGING MISSIONS
- DISTRACTED DRIVING
- TREE STANDS

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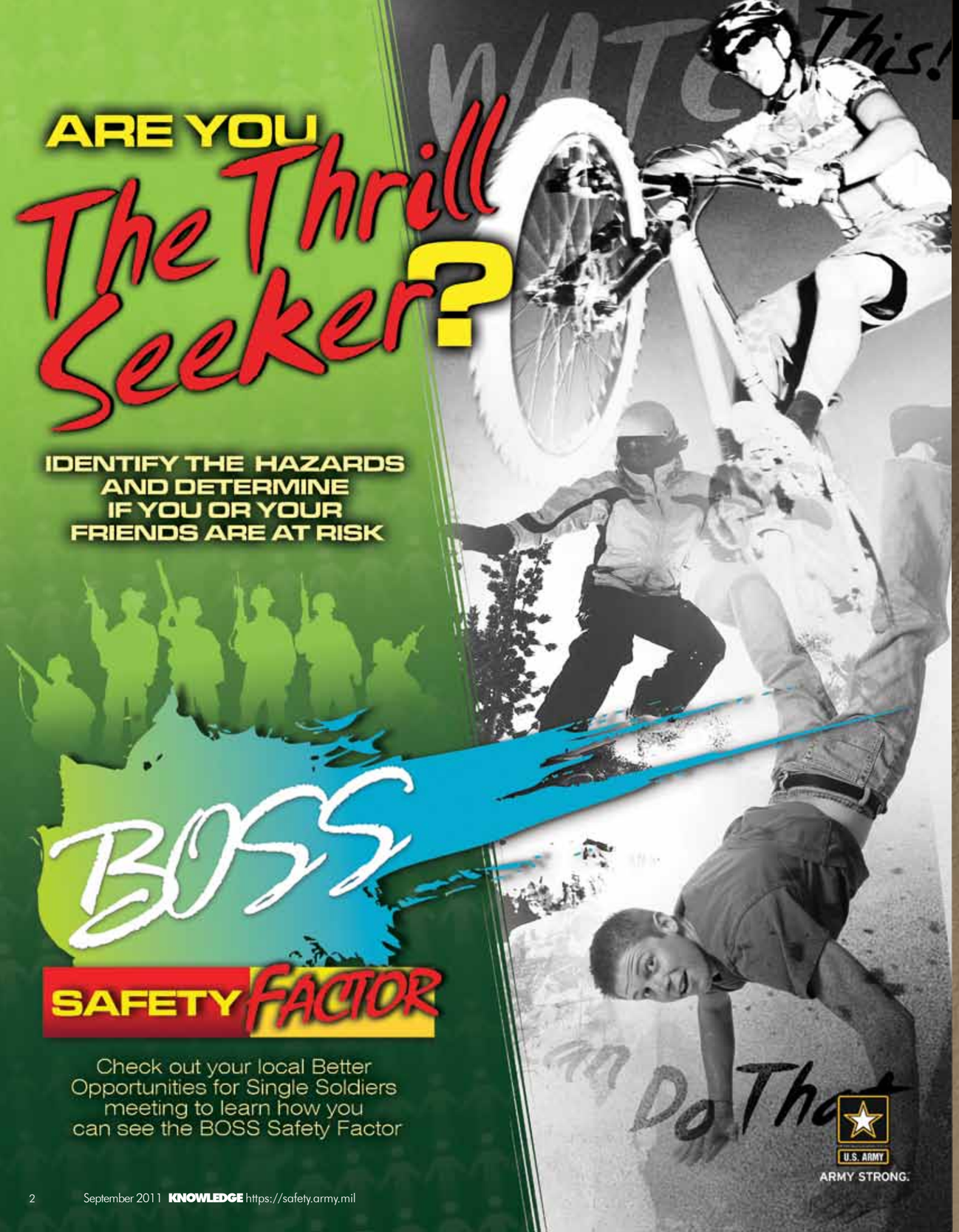

KNOWLEDGE
OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

LEADERS SOLDIERS CIVILIANS FAMILIES

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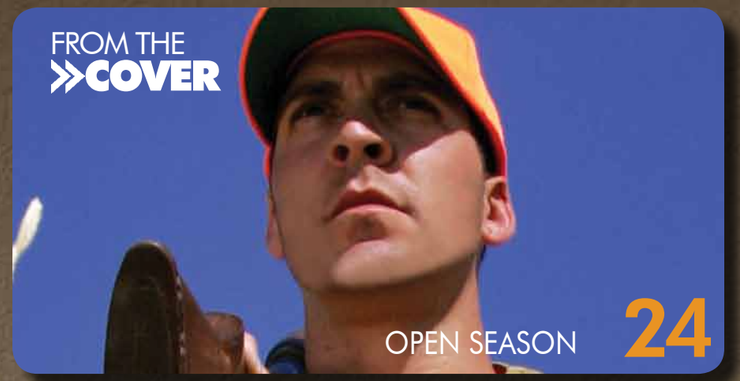

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Mission statement: The United States Army Combat Readiness/Safety Center (USACR/Safety Center) supports our Army by collecting, analyzing and communicating actionable information to assist Leaders, Soldiers, Families and Civilians in preserving/protecting our Army's combat resources.

We welcome your feedback. Please email comments to **safe.knowledge@conus.army.mil**.

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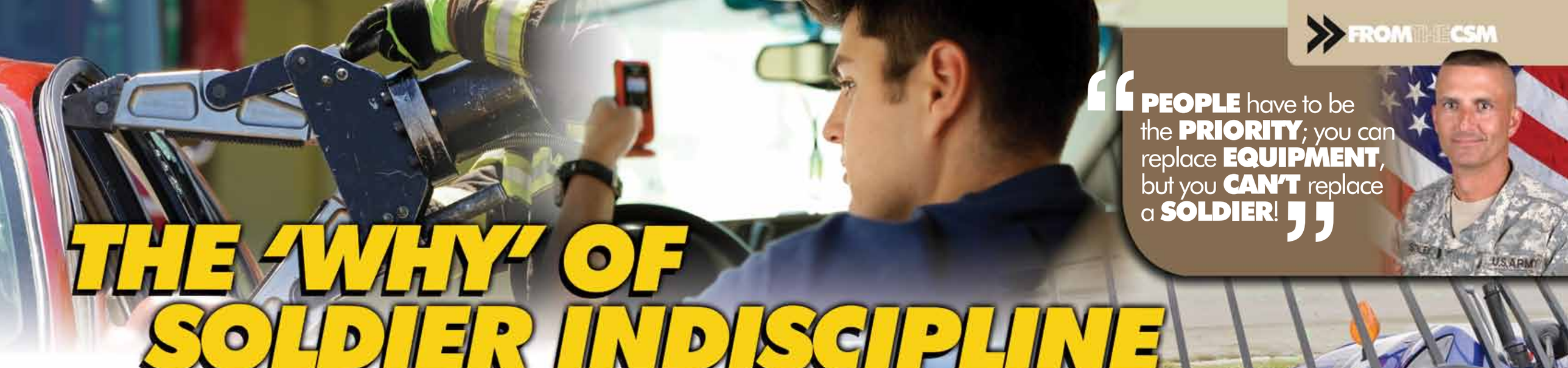


THE 'WHY' OF SOLDIER INDISCIPLINE

> "**PEOPLE** have to be the **PRIORITY**; you can replace **EQUIPMENT**, but you **CAN'T** replace a **SOLDIER**!"

I've seen and done a lot during my years in this great Army, and it's not often that I'm easily surprised. Shortly after I arrived at the USACR/Safety Center, however, I was somewhat taken aback by a single statistic: We lose four Soldiers in off-duty accidents for every one we lose to an on-duty accident. I've been in the field throughout my career, and it can be hard to see the cumulative effects of these losses regardless of where the unit is in the Army Force Generation process. But that doesn't make the negative impacts of a Soldier's death any less real or any easier to accept for his or her battle buddies, Family and friends.

I have several ideas on what's important in Soldier safety, but I'd like each of you, particularly our junior NCOs, to think about something. Why is it your Soldiers can do everything right on duty, but mess it all up when they leave to go home? We've all seen them: the Soldier who unbuckles his seat belt right outside the gate, the one who never wears a helmet off post and the other who habitually speeds well in excess of posted limits or drives after a night of drinking with his buddies. The fact is there are always a few Soldiers who throw away everything that's important to them at the end of the day. As Leaders, it's up to us to figure out why they do so and how to reach them before something tragic happens.

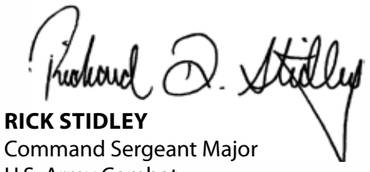
During my time as an NCO, three essential elements have remained constant in keeping Soldiers safe: discipline, enforcement of basic standards and communication down to the lowest level. We have to place the responsibility for high-risk behavior where it belongs — on Soldiers who willfully disregard the standards and Leaders who turn a blind eye to it. Indiscipline kills Soldiers, not motorcycles or cars! Whether on or off duty, the personal and professional consequences of risky behavior are high, and Leaders have to show their Soldiers they're serious about safety and the enforcement of standards.

I came to the USACR/Safety Center from the 3rd Combat Aviation Brigade, 3rd Infantry Division, and had just redeployed from Afghanistan when I received notification of my assignment here. That deployment is one of the proudest accomplishments I've ever had as a Soldier. After spending a year in some of the harshest environments on earth, flying and driving hundreds of thousands of miles and completing missions that ranged from combat to humanitarian relief, every single one of our men and women came home to their Families and loved ones. This didn't happen because I was their sergeant major or because every Soldier acted safely all the time; it happened because Leaders did their jobs. We had a culture where Leaders were empowered to make tough decisions, Soldiers knew they were held to the standards and communication flowed effectively between ranks and organizations.

I share that story with you because it proves Leaders can develop a culture of safety and still execute their unit's most critical tasks. Although our Soldiers were limited in what they could do off duty and had no access to privately owned vehicles, motorcycles or anything else to potentially get them in trouble, there was plenty of opportunity for indiscipline to creep in on the roads and in the air over Afghanistan. None of our Soldiers were perfect and some might argue we were simply blessed, but there's no doubt that commitment to safety and standards played the biggest role in our success. People have to be the priority; you can replace equipment, but you can't replace a Soldier!

There's no job I love more than taking care of Soldiers, and I intend to do just that as command sergeant major of the USACR/Safety Center. This position gives me a unique opportunity to travel and visit with units around the world, and I look forward to hearing your thoughts on safety and its role in our Army today. I appreciate frank and honest discussions, so please let me know how you feel and how we can help you keep your Soldiers safe. Thank you all for what you do every day!

Army Safe is Army Strong!



RICK STIDLEY
Command Sergeant Major
U.S. Army Combat Readiness/Safety Center

ALL THINGS CONSIDERED

NAME WITHHELD BY REQUEST

The mission, a cross-country flight in Pakistan, was now becoming routine. Our flight of four CH-47s was to depart under night vision goggles (NVG) and take supplies to Kandahar, Afghanistan. Crew selection is always an important part of pre-mission planning, and I was paired with a senior aviator who had just been signed off as an NVG pilot in command (PC). The decision was made that our aircraft would be lead because we both were NVG PCs.

Our flight departed just after sunset and headed north toward Afghanistan. We always flew at altitude while in Pakistan to avoid small-arms fire, but when we crossed the Afghanistan border, we descended to terrain flight altitude. Once inside Afghanistan, the weather began to deteriorate and visibility steadily decreased due to blowing sand. The zero-illumination conditions and blowing sand made artificial lighting useless and a hindrance.

Despite the conditions, we picked our way through the sand dunes to Kandahar. After landing, I went to talk with the other crews about the return trip. After having a conversation with a friend who suggested we make the flight at 500 feet above ground level (AGL), I returned to tell the other pilots the change in plans.

During our run-up procedures, the briefed PC determined it would be too risky to fly at an altitude of 500 feet in Afghanistan. Instead of arguing, I decided we had made it in and we would make it back out the same way. I briefed the rest of the flight on the most current change. We departed Kandahar with no problems for the return trip.

We had been flying for about 15 minutes at 125 feet AGL when the lack of illumination and blowing sand made it impossible to see the desert floor. I was on the controls, and the other pilot was calling out altitude using the radar altimeter. I looked at the radar altimeter and saw our altitude had dropped to 100 feet. I put in a small amount of power to start a climb and noticed the radar altimeter read 80 feet. The next thing I saw was the radar altimeter reading eight feet.

At that point, a crewmember began yelling that he had terrain out the cabin door. I immediately applied maximum power and aft cyclic, but there was a huge impact — much like a car accident. The rotors lit up as the sand flew into the air from the impact. We both struggled to maintain control of the aircraft after striking the ground. No one saw it coming and we weren't sure if it was over, but within seconds, I regained control of the aircraft and returned to level flight.

We suddenly received a call over the intercom from our crew chief (CE) in the back that the ramp was missing. With our hands full flying the aircraft — to include eight caution capsules and inter-flight communications, among others — losing a ramp didn't seem like much of a problem. Hearing fear in the CE's voice, I tried to calm him down by telling him not to worry about the ramp. However, I was not expecting his next transmission: "Clay was on the ramp." Clay was our flight engineer (FE), and I knew there was no way

LEARNED A LESSON LATELY?

We don't have to learn our lessons the hard way — through accidents. We can also learn from close calls, near misses and minor mistakes — both our own and those of others. This is an opportunity for us to share experiences with each other. They can be long or short, recent or from the past. Share your lessons learned with all of Army aviation by sending your "war story" to Knowledge at safe.knowledge@us.army.mil.

he could survive what had just happened.

As hard as it was, we had to make a quick decision. We now had the task of saving the remaining five lives onboard the aircraft. We made a radio call to the rest of the flight to inform them we had lost our FE. The other aircraft volunteered to remain in the impact area to search for Clay. The weather continued to deteriorate and, while conducting a brief search, two more aircraft in the flight almost slammed into the ground.

We decided to make our way back to Kandahar. While en route, we performed a damage assessment. All four landing gear were ripped off, as was the ramp; both main fuel tanks were cracked; and the aircraft structure was bent in two places. We also had multiple fuel leaks and no utility hydraulic system.

Thankfully, there was good news. On our way back, the CE began yelling that we still had Clay. I thought, "What?" The CE spotted him hanging in his harness underneath the aircraft. He had done what was briefed and hooked his tail to the aircraft floor, not the ramp. The remaining three people in the back were unable to pull Clay into the aircraft. I knew that with the blowing sand, we never would be able to get him if we put him down.

We made an emergency call to tower, explained our position, and told them to have an ambulance waiting for us at the end of the runway. As we approached the runway, we had to be extremely careful. We couldn't land because we didn't have any gear, and we didn't want to cause any additional injuries to Clay. We lowered him to the runway, and the CE cut Clay's restraint.

After rescuing Clay, we continued down the runway and were instructed to hover until a landing pad could be constructed. Ground support personnel and fellow pilots built a landing pad out of Air Force pallets. I was able to get the aircraft on the pallets and shut it down without further incident. As it turned out, we'd hit a 150-foot wall of sand on the backside of a river valley. We didn't descend; rather, the ground came up and we never saw it.

Lessons Learned

When I think back on that night, there were many things we could have done that might have helped us avoid this situation. I want people to learn from what we went through because no one died. This was not a training mission, so the rest of the crew and I wanted to make sure we accomplished this mission.

This incident could have ended tragically, and I would venture to say we were about four feet from that happening. Zero-illumination operations are what we train to fly in and learn to love due to the concealment darkness provides. Nevertheless, when flying over very low-contrast terrain with blowing dust and sand, special considerations must be taken, including possible adjustments to altitude and airspeed. When I left Afghanistan, no NVG flights were allowed if illumination was below 23 percent. I'm not sure this restriction is the answer, but it has helped.

We all, as Army aviators, want to complete our missions successfully and safely. We must do whatever it takes to complete the mission, but we can't let things stack up against us to the point an accident happens. Remember that the mission can be changed without canceling it. If you have the luxury of flying with a crew in the back of the aircraft, listen to them. Without our crew's quick thinking and decision-making abilities, this would have been a fatal accident.

The final point I would like to mention is Clay hooked his tail to the aircraft floor and not to the ramp, just the way he had been taught. If he would have done otherwise, well, I don't want to think about that. All things considered, we were very lucky. I hope my experience will help others recognize when conditions warrant a change of mission.

You Can't Know it All

MAJ. HENRY H. WASHINGTON
G3, Accident Investigations Division
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

After riding motorcycles for more than 27 years, one tends to think he knows all there is to know. Well, I am here to tell you nothing is further from the truth.

On Sept. 10, 2010, while on my way to work, I had one of the worst scares of my life. I was riding at the speed limit when a driver in the oncoming lanes attempted to make a left turn as I rode toward her. As I approached, I just knew she had to see my fluorescent vest and the big, bulky Suzuki Hayabusa sport bike I was riding. Just as I was about to go by her, she turned left in front of me to enter a McDonald's parking lot. I quickly pumped my rear brakes and lightly hit my front brakes to slow down and swerve so I didn't T-bone her. As it was, I barely missed going into oncoming traffic and only cleared her passenger-side taillight by inches. What saved me from injury in this incident? It was my experience, training and individual safe riding attitude.

I was surprised that morning. I found out you can't take anything for granted when you're riding. Unfortunately, not all Soldiers who ride have the experience or self discipline to do the right thing. Since fiscal 2004, more than half of Army motorcycle fatalities were single-vehicle accidents where riders exercised poor judgment and made bad risk management decisions. Those were fatalities that didn't have to happen. As riders in the Army, we are given the tools to prevent them. In view of the spike in motorcycle fatalities in fiscal 2011, it's worth taking a moment to review these.

Training

If you're a Soldier, Department of Defense Instruction 6055.04 and Army Regulation 385-10 require that you go to motorcycle "boot camp." Nope, it's not the basic training you went through when you joined up; it's the Motorcycle Safety Foundation's (MSF) Basic *RiderCourse* (BRC). You're given the opportunity to trade what you don't know for the skills needed to survive on the street. Under the guidance of trained instructors, you learn a number of valuable riding techniques, including proper braking, cornering and obstacle avoidance. Aside from the training being a requirement, it makes sense to get all the skills you can before going onto the road. Remember, on the road your motorcycle isn't at the top of the "food chain." Those Soldiers who choose to be reckless reflect poorly on the rest of us riders. Because of that, it's in our own interest to police ourselves and our fellow riders.

Motorcycle Mentorship Program

Not every Soldier out there has 27-plus years of riding experience to call on when things go wrong on the road. But there is a practical answer to that within the Army's Motorcycle Mentorship Program (MMP). The MMP takes new riders out of the controlled environment of their BRC training to give them hands-on experience on the street with seasoned riders. Among the things stressed are wearing the proper personal protective equipment (PPE), how to ride in groups, how to avoid other motorists' blind spots and how to properly corner and maneuver around obstacles. Under the watchful eyes of seasoned riders, new riders don't have to learn the rules of the road the hard — and sometimes painful — way. MMPs also offer riders a positive alternative to off-post clubs where they may be encouraged to ride recklessly.

Dress for the Crash

No matter what kind of motorcycle you ride, eventually you're going to meet the road "up close and personal." When those moments occur, you'll appreciate having something separating your head and your hide from the highway. Asphalt tends to be harsh on bare skin, and concrete can crack even the hardest skulls. Therefore, wearing good PPE is the rider's ace-in-the-hole when things go wrong on the road.

While riders like to look good and there's plenty of expensive, "sexy" gear available, you don't have to put a hole in your wallet to avoid putting one in your hide. You simply need to make sure your gear meets the following standards:

- Department of Transportation-approved helmet that fits well and is in good condition
- Impact or shatter-resistant goggles, wrap-around glasses or a full-face shield properly attached to the helmet meeting American National Standards Institute Code Z87.1
- Sturdy footwear, leather boots or over-the-ankle shoes
- Long-sleeved shirt or jacket, long trousers and full-fingered gloves or mittens designed for motorcycle use
- Brightly colored, outer upper garment during the day and reflective upper garment during the night for on-road riding
- For dirt bike and other off-road riders, knee and shin guards and padded full-finger gloves

While even the best PPE can't fully protect you if you're hit by a car or strike a solid object, it can lessen your injuries and speed your recovery by keeping your wounds clean.

Although it's impossible to eliminate all riding risks, you can lessen your chances of winding up in an Army Ground Accident Report. Your most important piece of safety gear is the one your helmet is designed to protect — your brain. Practice the skills you learned in your MSF training; don't let them get rusty. Seek the wisdom of more experienced riders so you don't have to learn from "scratch," bruise or broken bone. And never assume you know it all when you're riding. Someone's likely to come along and prove you wrong.

WHAT'S ON YOUR NOGGIN?

Not all helmets will do a good job of protecting a rider's head in an accident. Will yours? To find out, go to http://www.nhtsa.gov/cars/testing/comply/fmvss218/.

LISTEN TO THE LOCALS

CHIEF WARRANT OFFICER 2 BENJAMIN L. BOWER
Joint Multinational Readiness Center
Hohenfels, Germany

In the summer of 2002, I was in the U.S. Navy and stationed on the South Pacific island of Guam. Guam is a tropical island where the temperature of the crystal-clear water is in the mid to upper 80s year-round. Abundant ocean wildlife, combined with numerous shipwrecks and other leftovers from World War II, create a perfect ocean paradise. As an avid outdoor enthusiast, I spent a lot of my free time enjoying the ocean's beauty, above and beneath the endless emerald-blue waves. Little did I know I would soon face death more closely than I could have ever imagined.

When I first arrived in Guam in the fall of 1999, I received a mandatory water safety briefing, which was required for all military personnel arriving on the island. We were told of the perils of certain ocean wildlife and wreck diving and how the ocean currents can be treacherous. Of course, I, being a young, strong swimmer and accomplished scuba diver, listened with a detached coolness to the stories of those unfortunate souls who had lost their lives or been injured. I thought nothing terrible like that could ever happen to me.

During my time on the island, I enjoyed the thrills of day and night scuba diving, jet skiing, jungle adventures, cave hunting and the wonderful island food. While all of this was well and good, I wanted something more adventurous. I'd seen breath-hold free-diving competitions on TV and thought that would be an exciting challenge. How great would it be to build up my ability to hold my breath for long periods, dive as deep as possible without worrying about decompression on the ascent and swim free like a dolphin without cumbersome scuba equipment to slow me down? Armed only with a mask, snorkel, weight belt and fins, I attacked this new challenge with enthusiasm and soon fell in love with the thrill of it.

As time went on and my confidence grew, I decided to add another challenge to test my free-diving skills — spear fishing. I had already fished on the reef with an apparatus called a Hawaiian sling, which is a simple device consisting of a 6-foot spear that has a loop of rubber attached to the opposite end. It is good for short ranges and small fish, but I wanted big fish. So, I bought a spear gun that uses very powerful rubber bands to launch a 6-foot steel spear into fish at more than 20 feet away. The spear is attached to the gun with a thin cable, and then the gun is attached by another line to a small buoy at the surface. If you get a really large fish that takes you on a wild ride, forcing you to let go of the spear gun, you can retrieve it and the fish after it tires itself out. This was right up my alley! Whenever I had a free moment, I was in the water hunting the "big ones."

Longing for bigger "game," I decided to set my sights on spearing a shark. I figured the best way to find them was to ask the locals where I could find the best shark fishing. The general consensus was the shallow reef just off the south end of the island was frequented by some decent sharks — not too big, but big enough to be fun. They also warned me the currents there

could be tricky. They told me to ensure I stayed over the reef close to the shore, where the water is relatively shallow. Under no circumstances was I to go out past the reef, where it drops off abruptly into the Mariana Trench. That's where the huge Great White and hammerhead sharks cruise just off the reef. People who go out there don't come back, they warned.

A few days before a friend and I were to go shark hunting, a typhoon passed near the island, causing the surf to be unusually high and rough. Unbeknownst to us, there were very strong currents over the reef. When we slid into the water that day, we were blissfully ignorant of what was about to happen.

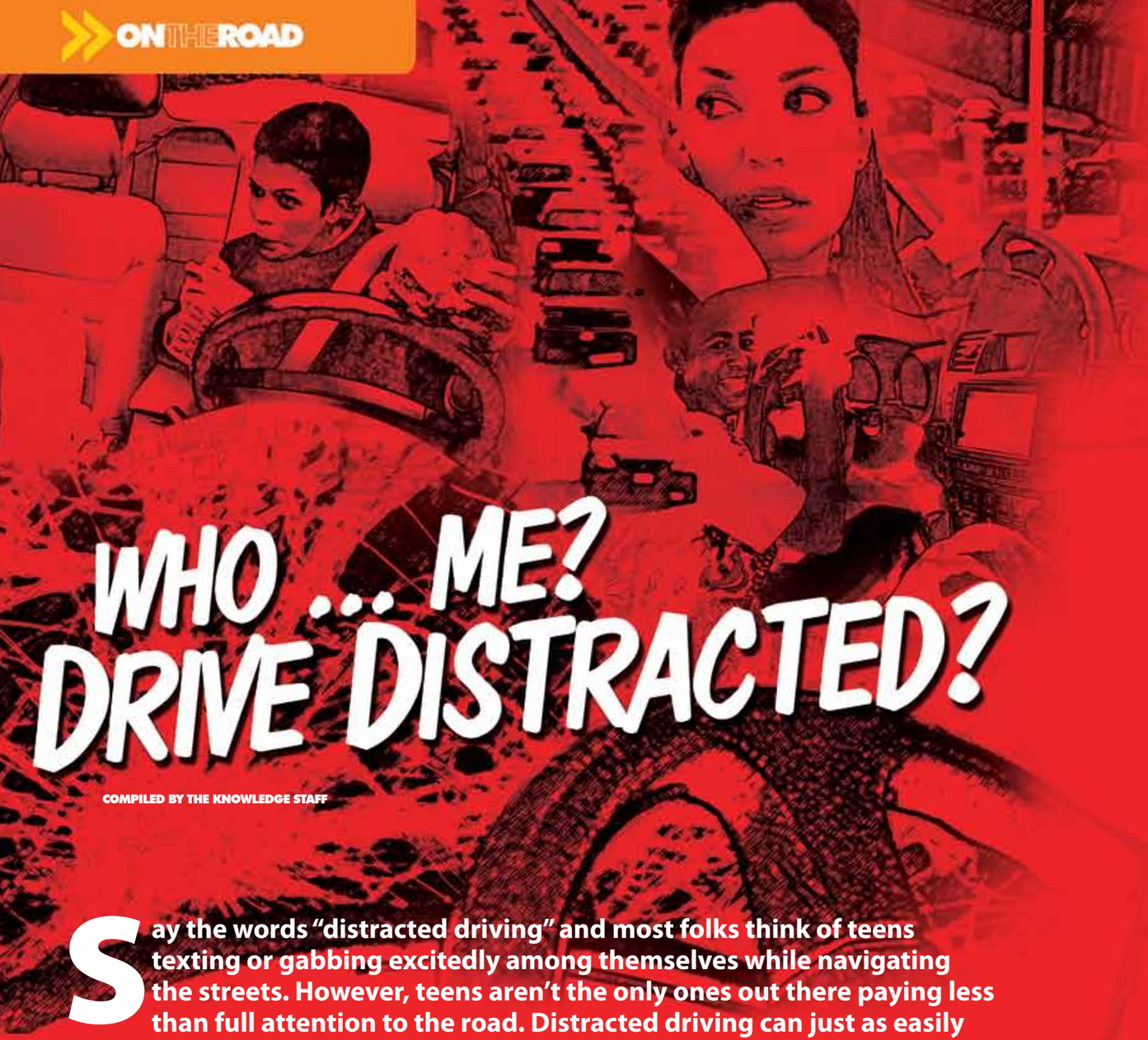
We snorkeled just a few yards away from the pier where we'd entered the water and promptly noticed we were moving very quickly over the reef. I signaled to my buddy that we should head back, and he replied with the OK sign. As we turned to head back, I realized we were not getting any closer to the pier. The current was taking us straight out to sea! The huge waves crashing on the jagged shoreline on either side of the rip current we were in made it suicidal to swim perpendicular to the shore like you are supposed to do. I felt a huge wave of despair as we were helplessly swept out past the protection of the reef and into the black void of the open ocean.

After two hours of fighting the current, we were both mentally and physically exhausted. One of us would have our head in the water searching for sharks while the other would watch for boats — the whole time wondering if we would ever see our loved ones again. As I prayed for a miracle, we drifted into a path of calm water. With renewed hope and the very last bit of our strength, we swam in that thin path all the way to the pier. Once there, we had to be helped out of the water due to utter exhaustion.

We were blessed that day. The wise decision would have been to wait for calm conditions and monitor the currents before jumping into the water. We also didn't leave ourselves an escape route. I learned many lessons that day I'll never forget. I'm thankful I survived and hope my story will prevent another thrill-seeker from making the same mistakes.

DID YOU KNOW?

The deepest known point in Earth's oceans is called The Challenger Deep at the southern end of the Mariana Trench. Located about 210 miles southwest of Guam, it is more than 36,000 feet — or about 6.8 miles — deep.



WHO ... ME? DRIVE DISTRACTED?

COMPILED BY THE KNOWLEDGE STAFF

Say the words "distracted driving" and most folks think of teens texting or gabbing excitedly among themselves while navigating the streets. However, teens aren't the only ones out there paying less than full attention to the road. Distracted driving can just as easily happen to anyone — maybe even you.

According to information at www.distraction.gov, the official government website for distracted driving, there are three different types of distraction that can set up drivers for a crash. They are:

- Visual — taking your eyes off the road
- Manual — taking your hands off the wheel
- Cognitive — taking your mind off what you're doing

Texting is perhaps the classic example of distracted driving. What makes it so dangerous is it involves all three types of distraction. However, distracted driving is not limited to texting or talking on a cellphone. Here are some other examples that fit the description:

- Eating and drinking
- Talking to passengers
- Grooming
- Reading, including maps
- Using a smartphone or navigation system
- Watching a video
- Fiddling with the car stereo

To combat the distracted driving problem, the Department of Defense has banned drivers from using hand-held cellphones on military installations. Also, many states and municipalities have joined the campaign to eliminate distracted driving by imposing their own restrictions.

Have you ever noticed the driver in the lane beside you holding a cheeseburger in one hand, a drink in the other and steering with their knee? Such "dashboard dining" — a common practice for some motorists — is also distracted driving. What about you? Have you ever tried to avoid spilling your soda or having the pickle squirt out of your hamburger while changing lanes? Be honest.

Chances are, if you drove on post this morning, you may have driven distracted. After all, what happens after you show your Common Access Card (CAC) to the gate guard? You're expected to be on your way, all the while fumbling to get your CAC back into its carrier. While both hands are busy doing that, how are you steering — with your elbow? And where are you looking and what is your mind focused on?

The simple solution to the "CAC distract" is to put it in your shirt pocket, toss it on an empty seat or maybe put it in the cup holder in the console. Whatever you choose, it's a lot safer to put it back in the holder after arriving at work and shutting down your vehicle.

A closer look at data from distraction.gov reveals some surprising facts from agencies such as the National Highway Traffic Safety Administration:

- Twenty percent of injury crashes in 2009 reportedly involved distracted driving.
- Of those killed in distracted driving crashes, 995 reportedly involved a cellphone-distracted motorist.
- In 2009, 5,474 people were killed on U.S. roadways and an estimated 448,000 were reported injured in distracted driving crashes.
- Drivers younger than 20 are the most at risk, with distracted driving playing a role in 16 percent of all highway fatalities for this age group.
- The Insurance Institute for Highway Safety reports drivers using hand-held devices quadruple their risk for injury-producing accidents compared to those who stay off the phone.

So how badly does distracted driving impair a driver's skills? The University of Utah found drivers using cellphones, including hands-free models, had similar reaction times to motorists with a blood alcohol concentration of .08 percent (legally drunk).

The statistics prove distracted driving is dangerous. But the real question is the one you'll have to ask yourself: "What am I doing behind the wheel that is more important than driving?" Then ask yourself, "Is it more important than living?"

"I'M IMC!"

The afternoon began as if it were just another day of flying Black Hawks in southern Iraq. We received our mission the morning prior and had all the planning and details worked out. Our mission was to transport a downed aircraft recovery team (DART) to recover a CH-47 that had a precautionary landing on a secure forward operating base (FOB) during the night. I was the Chalk 2 pilot in command (PC) flying with another warrant officer with whom I graduated flight school two years earlier. We had been flying in country for five months, completed multiple missions together and were comfortable flying in the local area.

CHIEF WARRANT OFFICER 2 ADAM KELLERMAN
A Company, 1st Battalion, 106th Assault Helicopter Battalion
Illinois Army National Guard
Peoria, Ill.

About two hours before launch, we received our weather brief and were informed that we could expect excellent visibility and no ceilings during our flight. However, there was a thunderstorm building in northeast Iraq, but it was not considered a hazard to us. We were briefed for a 1,000-3 (1,000-foot ceiling and 3 statute miles of ground visibility) night vision goggle (NVG) flight because we would be returning after dark under goggles. We had executed this mission many times in the past weeks and considered it routine.

As we neared takeoff time, there was some confusion with arrival times of the DART recovering the Chinook. They showed up on the ramp unorganized and searching for lost equipment and personnel. After this convoluted episode, we were 45 minutes behind schedule, but this wasn't a time-dictated mission. During the start-up process, flight lead experienced a maintenance issue that set us back two hours, requiring us to fly goggles through evening nautical twilight. We received a new brief and updated weather report and launched to accomplish the mission.

> "**TENSION** was **BUILDING** in the cockpit and I knew my pilot was **HESITANT TO TAKE OFF.**"

The flight was uneventful until we were about 20 miles south of the FOB. At that point, we noticed lightning north of the FOB and discussed this with the other aircraft. We concluded the lightning was far enough away to not be a threat and only visible because we were wearing NVG. Flight lead made the tower call and cleared us to the forward arming and refueling point (FARP) to refuel and then reposition to parking to wait for the Chinook to trail us back south.

As we neared the FOB, tower notified us the FARP was closing due to lightning. However, we persuaded them to remain open long enough for us to refuel. On final, tower again radioed and requested our intentions after refuel. They stressed weather was approaching the FOB and we didn't need to loiter long in the landing zone. Through our Blue Force Tracking, we received approval to leave the DART team and return to base without the Chinook, as our battalion did not want two UH-60s to remain overnight.

Following refuel, we repositioned and began unloading personnel and equipment. We noticed the wind was increasing and there was dust in the air. Tower, at this point, was adamant we take off shortly and not remain on the ground long. Following flight ready calls, flight lead called tower requesting a "present position takeoff" departing to the south, which was approved.

The wind continued escalating with visibility diminishing due to dust. Flight lead picked up and turned to the south for departure. I was in the left seat, looked left and noticed the buildings and lights began to disappear in the oncoming haboob. Tension was building in the cockpit and I knew my pilot was hesitant to take off.

After a few seconds of discussion, he announced I could have the controls. I knew at this point if we did not take off, flight lead would be flying single ship back to base because it was impossible for them to return to parking. I announced I had the flight controls and departed with an immediate right turn toward the south. I still had visibility and my right-rear crew chief (CE) had eyes on flight lead and was verbally clearing my right turn.

All of a sudden, everything disappeared. We were engulfed in the haboob at about 200 feet above ground level. My CE announced he could not see anything. With seconds seeming like eternity, I announced I had inadvertently entered instrument meteorological conditions (IMC) and initiated the proper procedures. The only thing on my mind was to stop turning, level the aircraft and, most importantly, climb.

After about 30 seconds, the horizon began to appear and visibility improved as we exited the haboob. Just as fast as we were engulfed, we were in an unrestricted visibility environment heading south.

As a young PC, this event was a pinnacle in my career, allowing me to see just how fast a dangerous condition can occur. Following this event, I realized I had endangered my crew and myself by not choosing a more conservative course of action. I learned a lot from this experience. I tell myself to constantly learn every day; evaluate my options; make conservative, effective decisions; and strive to apply them to future operations.

THE FIVE C's

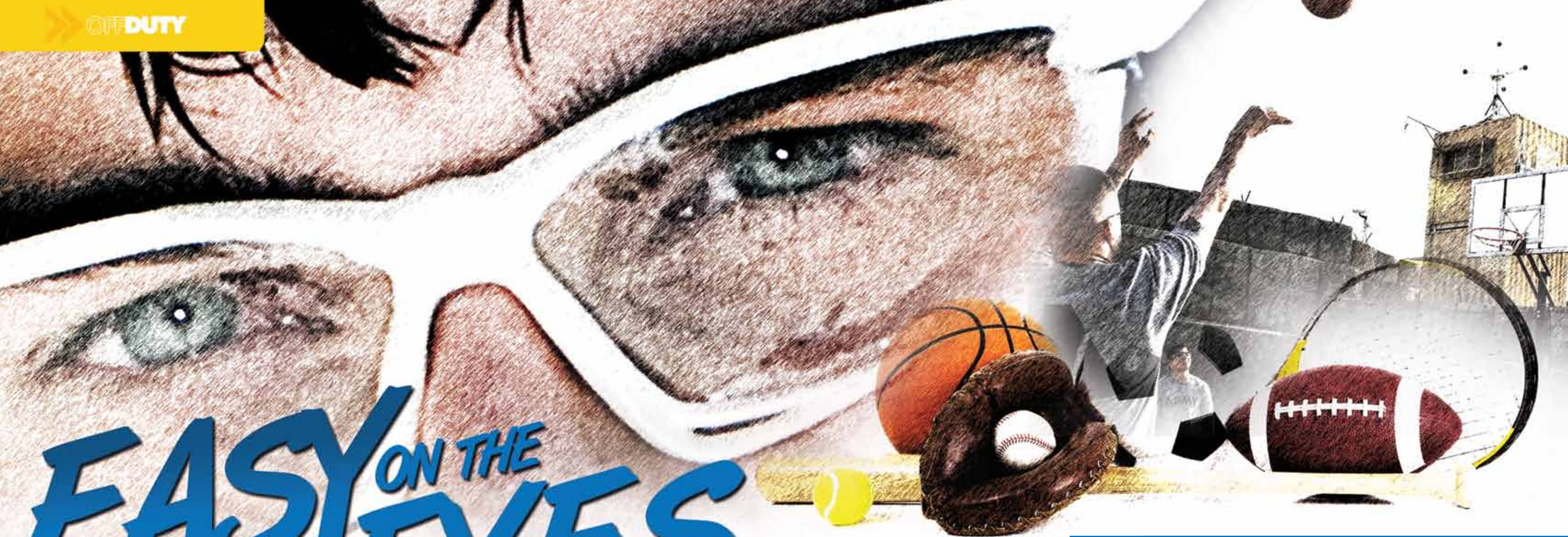
The Army has procedures that prepare us in the event that we go inadvertent instrument meteorological conditions (IIMC). We brief procedures with the crew before every flight. The aircrew training manual clearly states, step-by-step, what to do. Local standing operating procedures also provide guidance in case we accidentally punch into the clouds.

The Five C's

The Five C procedure is a fast-acting antidote to confusion and anxiety during the first 10 to 15 seconds after IIMC. It is within these critical seconds that the battle with IIMC is won or lost. If aircraft control can be maintained during this initial crucial period, the chances of surviving an IIMC experience are greatly enhanced.

Whether all Five C's will apply in each IIMC circumstance will depend on existing conditions (e.g., terrain, obstacles, etc.).

1. **Control of the Aircraft:** This is the most important factor in recovering from IIMC. You must convince yourself ahead of time that if you enter IIMC and lose ground reference, your only option is to immediately transition to instrument flight. Level the wings in the attitude indicator, maintain heading, adjust to climb power and adjust to climb airspeed. Once you make the transition, control is established by crosschecking the flight instruments. If you fail to make this transition, you're in serious trouble. The four subsequent C's depend on the successful accomplishment of this first C.
2. **Coordination:** Crews must discuss what each will do in case of IIMC. It should be understood that the pilot on the controls will concentrate on the instruments while the pilot not on the controls will back up the instrument scan, along with all his normal duties, and look outside for a place to land. When flying multiship, each aircrew must coordinate between flights.
3. **Clearance:** To ensure the highest terrain feature along the route of the flight will be cleared, gain altitude with a straight, controlled climb. Use minimum safe altitudes and low-illumination routes. In mountainous terrain, consider briefing multiship IIMC breakup to maintain heading and deconflict by airspeed and altitude.
4. **Course:** Select and turn to the appropriate heading or maintain heading as dictated by terrain.
5. **Call:** Make required radio calls for assistance. Coordinated radio frequencies should be specified and posted in the aircraft.



EASY ON THE EYES

CARLLA JONES
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More than 40,000 people a year suffer eye injuries while playing sports, according to Prevent Blindness America. However, 90 percent of these injuries can be prevented by using protective eyewear. It's important to remember that whatever game, whatever age, participants need to protect their eyes.

Sports-related eye injuries happen as a result of direct contact with other competitors and from equipment such as bats, balls, pucks, rackets, darts and guns (even air guns). According to the National Society to Prevent Blindness, the leading cause of sports-related eye injuries in 5- to 14-year-olds is baseball; in 15- to 24-year-olds, it's basketball. In general, the sports with highest risk for a sports-related eye injury for players not using protective equipment are basketball, racquetball, lacrosse, baseball and paintball. Sports that present a medium risk for sports-related eye injuries without the use of protective measures include tennis, football, golf and soccer.

The good news is almost all eye injuries can be prevented by understanding safety practices and using the proper protective eyewear. Ensure protective eyewear for sports meets requirements specified by the American Society for Testing and Materials (ASTM). Published ASTM standards include:

- ASTM F803, Standard Specification for Eye Protectors for Selected Sports, which addresses racket sports, women's lacrosse, field hockey, basketball, baseball and soccer
- ASTM F1776-01, Eye Protective Devices for Paintball Sports
- ASTM F513-00, Eye and Face Protective Equipment for Hockey Players

Remember that regular glasses do not provide enough protection when playing sports. Safety goggles with polycarbonate protectors should be used for racquet sports or basketball. Batting helmets with polycarbonate face shields should be used for youth baseball. Helmets and face shields used when playing hockey should be approved by the U.S. Amateur Hockey Association.

FYI

For more information about vision conservation, visit the Tri-service Vision Conservation and Readiness Program website at http://dodvision.com/ or Prevent Blindness America at http://www.preventblindness.org/. To view ASTM standards, visit http://www.astm.org/Standard/index.shtml.

Protective eyewear is only effective if it's worn, and its use should become a habit for participants of all ages. When purchasing protective eyewear, make sure it is designed specifically for that sport or other activity. Check the label on the product to verify the product has been tested, approved and certified.

If an eye injury occurs, consult an eye-care professional immediately. Keep the injured person still and calm to avoid worsening the injury. For chemical injuries, rinse the eye with water for about 15 minutes before transporting the person to medical care. Wash hands thoroughly before touching an irritated or injured eye, and never rub an eye that has any foreign material in it.

Make vision a health and safety priority. Protect yourself and the ones you love from eye injury. Wear protective eyewear and make sure your children use it too.

OPEN SEASON

RETIRED SGT. 1ST CLASS JEFF TOLLE
Cadet Command Safety
Joint Base Lewis-McChord, Wash.

For many Americans, the start of hunting season stirs fond childhood memories of outdoor adventures spent in the field, learning how to hunt from our fathers or another adult. Along with hunting skills, many other lessons about the outdoors were learned. Those lessons have kept countless hunters safe over the years. However, judging by the number of annual hunting accidents, some could stand a refresher course.

Hunter Education

In an effort to reduce hunting accidents, the first mandated hunter education program started in New York in 1949. As these programs spread across the country, safety coordinators established the International Hunter Education Association (IHEA) and developed a core training program to teach young hunters the proper use of firearms and hunting safety. Over the years, this program has evolved into more than just about safety. The goal of hunter education is to instill responsibility, improve skills and knowledge and encourage the involvement of beginner and experienced hunters. Responsible, ethical behavior and personal involvement are essential to safe hunting. In many states, hunters are required to show proof they have completed an IHEA-approved hunter education program before they can purchase a hunting license.

Hunting Seasons

Most of us think of fall as the time of the year when hunters take to the woods in search of big game. However, depending on which state you reside, hunting season can start as early as August and run through the end of January. This time of year can be especially dangerous because of the different activities that attract many non-hunters to the outdoors. There are also some areas where hunting occurs year-round, so it's important to know your local schedule so you don't accidentally wander into an area during open season.

Different Weapons and Hunting Methods

There are many different types of weapons used for hunting, including rifles, shotguns, muzzleloaders, pistols, bows and crossbows. It is imperative you become thoroughly familiar with your weapon, the proper ammunition it uses and all the potential hazards associated while in use. Different weapons can be operated in different hunting methods, so be sure you know the safety procedures for hunting. Also know the rules for when you or other hunters will be hunting from the ground or walking through an area.

Hunting Accidents

Self-inflicted gunshots are one of the most common causes of accidental discharge injuries and fatalities. These accidents can be greatly reduced by following the

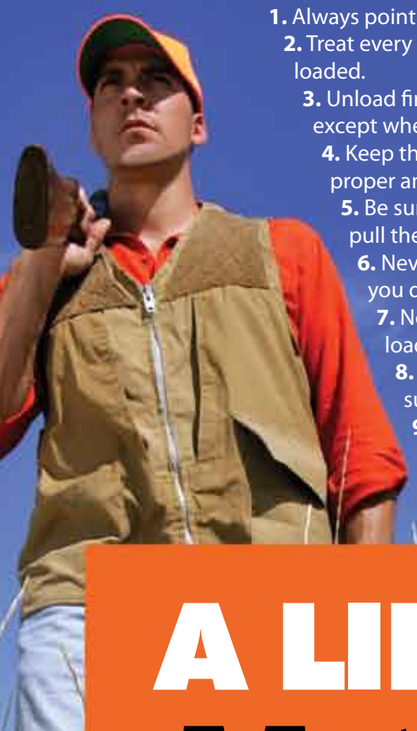
FYI

In an effort to reduce weapons handling accidents, the U.S. Army Combat Readiness/Safety Center has developed the Range & Weapons Safety Toolbox, available at https://safety.army.mil/rangeweaponssafety. Check it out today!

SURVIVAL OF THE FITTEST

A good survival kit should fit inside a small pack and weigh just a little more than 4 pounds. Here are some items your kit should include:

- A lightweight nylon sweat suit (Be prepared should you have to spend the night in the woods)
- Waterproof matches or lighter
- Compass or GPS
- A sturdy, sharp knife
- Duct tape
- Water purification tablets
- Collapsible water bottle
- High-calorie food (candy bars) or beef jerky
- Nylon string or parachute cord
- Signal mirror
- Large handkerchief
- Ax, hatchet or portable saw
- Flashlight and back-up batteries
- Multipurpose tool



IHEA's Ten Commandments of Safe Gun Handling:

1. Always point the muzzle in a safe direction.
2. Treat every firearm as though it were loaded.
3. Unload firearms and open the action except when ready to shoot.
4. Keep the barrel clear and choose proper ammunition for the firearm.
5. Be sure of your target before you pull the trigger.
6. Never point a firearm at anything you don't want to shoot.
7. Never climb or jump with a loaded firearm.
8. Never shoot at a flat, hard surface or water.
9. Store firearms and ammunition safely.
10. Avoid alcohol and drugs before and during shooting.

Preparation and Survival Skills

It is essential you carefully plan your hunt. Keep the following tips in mind for your next trip:

- Always let someone know exactly where you are hunting, who you'll be with and when you'll return. Leave a map with your hunting "spots" inside your vehicle so help can find you if you don't come home on time. Carry a cellphone or two-way radio. However, be aware that many backcountry areas do not get cellphone service.
- Always carry a survival kit in your backpack and restock it every season before opening day. For items to stock in your kit, see the "Survival of the Fittest" info box on page 25.
- Know how to survive. Take a course or read a book on techniques unique to your location. Know how to obtain water, food and shelter, with water being the most important. The smallest tip could save your life. Play the "what-if" game.
- Learn first aid and know how to use it on yourself if necessary. Practice self-administered first aid. You'll have a better grasp on your limitations and be able to react instinctively when seconds count. Also, be prepared if you know there are poisonous snakes or if you have allergic reactions to insect stings or bites.
- If using a tree stand, make sure you understand and follow the manufacturer's instructions. Select a live tree with a diameter that matches the requirement for your tree stand. Before each use, inspect the tree stand for loose, missing or broken parts. Also, always wear a safety harness when climbing or sitting in a tree stand. For more information on tree stands, see the article "Accident Free in the Tree" on page 28.
- If using an all-terrain vehicle (ATV), be sure you have taken a course in ATV safety, wear all necessary personal protective equipment and slow down so you have control. According to the Consumer Product Safety Commission, there are more than 800 deaths and 135,000 injuries related to ATVs each year. About one-third of those deaths and injuries are to children under 16 years old.

> "It is **ESSENTIAL** you carefully **PLAN YOUR HUNT.**"

For hunters, not much can compare to being back in the woods — touching, smelling and being a part of nature. Keeping these tips in mind should allow you to have fun and successful hunting seasons for years to come without putting yourself or others at risk for injury or death.«

A LIFETIME OF BAD DREAMS

LEON KNOX
Fort Rucker, Ala.

My most memorable hunting trip was also my last. The memories of that trip still seem as real today as they did 30 years ago. Unfortunately, they only come in the form of nightmares.

When I was 12, my father bought me a new 12-gauge shotgun for my birthday. It was the best present I'd ever received, and I couldn't wait to try it out. I got my chance a few days later when my father took my four brothers and me hunting.

We left the house that morning before the sun came up. I remember the ground was still covered with a thick frost, revealing the footprints of all of the animals that had passed before us. The trip started out great, and we shot our first squirrel shortly after entering the woods. About two hours later, however, it took a dangerous turn.

We were all walking through the woods in somewhat of a skirmish line. Unbeknownst to the rest of us, though, one of my brothers had gotten too far ahead, which put him in the direct line of fire. When another squirrel ran in front of us, I took aim and fired. I didn't see my brother until it was too late, and three of the six shots hit him square in the back. When we got to him, he was bleeding profusely.

For what seemed like an eternity, we all took turns carrying my brother on our backs until we got back to the truck. I had never been so scared in my life and was thankful when we finally arrived at the hospital. Up till now, all of us had remained fairly calm. But when our mother arrived at the hospital in a frantic state, the tears began to flow. Fortunately, none of my brother's wounds was life threatening. You can't imagine the relief I felt. I thought I had killed him.

Looking back on this accident, it's easy for me to see the error in my father's judgment. I know he meant well, but giving a gun to an immature 12-year-old with no training was a bad idea. As a parent, I would never put a gun in the hands of one of my children without first teaching them how to handle a firearm. My family and I were really lucky my brother wasn't killed.

Shooting my brother was the absolute worst experience of my life and it still haunts me. Today, I don't even like to handle firearms, and I can't stand the thought of shooting an animal. To any parents contemplating buying a gun for their child, please make sure you first consider their age and maturity. You just may save someone a lifetime of bad dreams.«

ACCIDENT IN THE TREE

MINNESOTA DEPARTMENT OF NATURAL RESOURCES
www.dnr.state.mn.us

Tree stand accidents are the leading cause of injury to hunters. In fact, one in three people who hunt from an elevated stand will have a fall resulting in serious injury. The following information will provide you with tips and information for safe tree stand hunting.

Common Types of Tree Stands

- Fixed-position stand. This stand is designed to be placed on a tree trunk and remain secured in that spot.
- Vertical ladder stand. This type of stand has a ladder that supports the shooting platform. The ladder is usually divided into short sections that can be assembled on site. The ladder "legs" extend at a slight angle out from the stand and tree trunk and are secured to the trunk via supporting arms and belts.
- Climbing stand. The most popular type, this stand is designed to "walk" up a tree trunk with the hunter to a desired elevation.
- Permanent stand. This stand may be placed in a tree or cluster of trees and left there. They are exposed to weather and may deteriorate. Never trust the safety of a permanent tree stand built previously by someone else.

Safety Harnesses

- Always wear a safety harness, also known as a fall arrest system, when you are in a tree stand, as well as when climbing into or out of a tree stand.
- A safety strap should be attached to the tree to prevent you from falling more than 12 inches.
- In the event of a fall, harnesses provide some "cushion," generally about 4 inches, which is the result of the alternately tightening and slipping of the harness as well as the normal stretch of the material.
- Always inspect the safety harness for signs of wear or damage before each use.
- Follow all manufacturers' instructions for use of a safety harness and stand.

Three-Point Rule

Always have three points of contact to the steps or ladder before moving. This could be two arms and one leg holding and stepping on the ladder, or one arm and two legs in contact with the ladder. Be cautious because rain, frost, ice or snow can cause steps to become slippery. Check the security of the step before placing your weight on it.

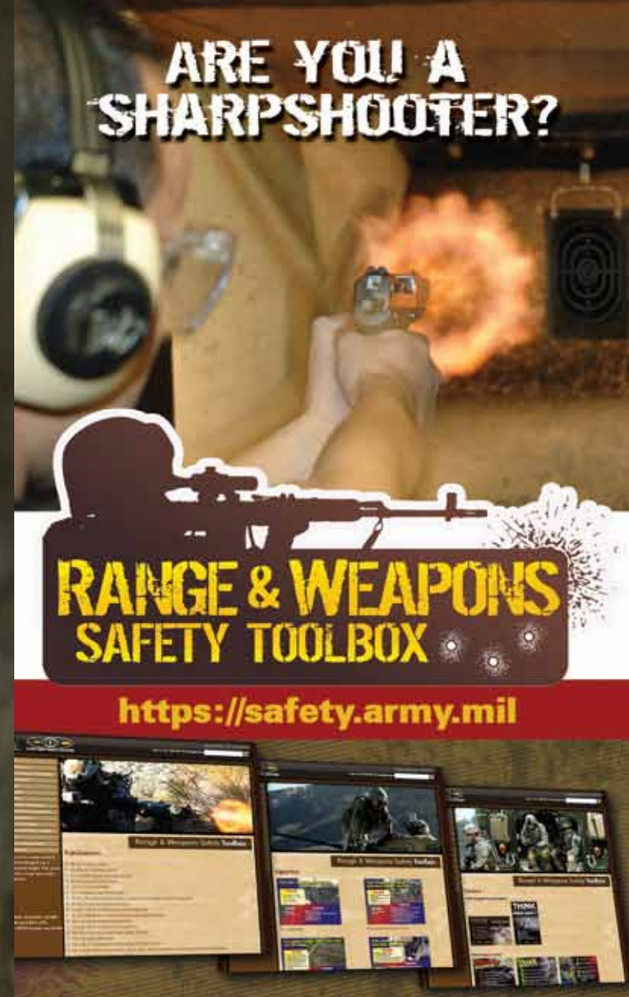
Recovery from a Fall

- In the event of a fall in a harness, try to recover as soon as possible. The longer you stay suspended from your harness, the harder it will be to recover.
- Seek suspension relief by grabbing onto the tree trunk or climbing steps.
- Take the weight off your harness as soon as possible.
- Once you have a firm hold on the trunk or climbing steps, use the three-point rule to climb back into — or down from — your stand.
- Replace your harness with a new one in the event of a fall, especially if you have cut your tree tether.

Safety Guidelines

- Always use a haul line to pull up your gear and unloaded firearm or bow to your tree stand. 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 tree stand. Pick a live, straight tree that fits within the size limits recommended in your tree stand's instructions.
- Always hunt with a plan and, if possible, 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, even when you are suspended in your tree stand.
- Know your physical limitations. Don't take chances. If you start thinking about how high you are, don't go any higher.
- While climbing with a tree stand, make slow, even movements of no more than 10 to 12 inches at a time. Have proper contact with the tree and/or tree stand every time you move and follow the three-point rule.

Editor's note: Information reprinted with permission from the Minnesota Department of Natural Resources website at www.dnr.state.mn.us.



The Range & Weapons Safety Toolbox contains information and tools related to the safe handling of privately owned weapons in addition to resources to establish and maintain effective range and weapons safety programs with military weapons.

CHECK IT OUT TODAY!

FLATLINED

BOB VAN ELSBERG
Strategic Communication Directorate
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

Each heartbeat brought Lt. Col. Robert Key a little closer to death. Bleeding profusely, he was barely alive as he was wheeled into the emergency room (ER) at Vanderbilt Hospital in Nashville, Tenn. He'd already received four units of plasma during the flight from his crash site on Kentucky Highway 41A near Fort Campbell's Gate 6. Suddenly, someone yelled, "Code Blue!"

The ER wasn't where Key had planned to spend the night back on May 29, 2007. He'd worked a bit late to finish the standing operating procedures for his brigade's rear detachment and emailed a copy to four of his co-workers. He kidded them that someone needed to have a copy should he get hit by a truck on his way home. He couldn't have imagined how prophetic that would be.

Key left his office and got ready for the ride home. A dedicated motorcycle rider for more than 25 years, he liked cruisers. Donning his chaps, vest, gloves, helmet and goggles, he got on his Harley-Davidson Fat Boy and headed out Fort Campbell's Gate 3. He could have turned right and gone home through Tiny Town, his normal route. However, it was such a nice day he decided to take a more leisurely cruise. Turning left, he rode along Highway 41A North toward Interstate 24. He had no idea he was about to meet a dangerous driver on the road.

Mark Bruner (a fictitious name) was also headed north on Highway 41A, one hand wrapped around a bottle and the other on the wheel. Driving a company truck, it wasn't even 5 p.m. and he was already drunk. In a hurry, he'd decided to use the turning lane dividing the highway's north and southbound lanes as his personal "passing" lane. There was a liquor store ahead and he had a date with another bottle. But he wouldn't keep it.

Key had just gotten back up to speed after stopping for a red light. Cruising in the far-right lane, he was aware of the cars in the lanes to his left. Everything seemed normal — or so he thought.

Meanwhile, Bruner realized he was almost to the entrance for the liquor store's parking lot. Quickly, he turned right to cut across all three northbound lanes. But he didn't quite make it. Key's 700-plus-pound Fat Boy was about to turn Bruner's four-wheel-drive pickup into a three-wheeled wreck. Seeing the white truck with its red lettering suddenly pull in front of him, "I grabbed a handful of clutch and hit the brakes," Key said.

He also instinctively steered toward the truck's right-front fender, knowing he was more likely to survive being thrown over the hood than into the pickup's windshield or roofline. Almost instantly, the Fat Boy's solid front wheel slammed into the pickup's right-front wheel, tearing it off the axle.

The impact shattered the bones in Key's left arm. The Harley then pivoted toward the left, smashing the pickup's passenger side. As it did, the bike's left engine guard folded back, catching Key's foot as he was thrown off the bike. Key landed unconscious on the far side of the truck. April Niblett, a nurse from Fort Campbell's Blanchfield Army Community Hospital (BACH), was driving home and happened on the accident. Leaving her car, she ran to Key, who was lying on his back in the road. Holding his head still, she spoke gently as she tried to calm him. The injured rider asked her to call his wife and gave Niblett her number. Looking at Key, Niblett noticed his eyes were wandering as if his mind was trying to process what had happened. Joined by others offering to help, she checked him for injuries.

"We did a 'once-over' — just looking for any injuries we could see with the naked eye," Niblett said. "Obviously, there was blood, so I went to the trunk of my vehicle, where I kept my medical bag. I opened it and started handing out gloves and we started bandaging the injuries where we could."

Working on his left side, Niblett was using a pair of shears to remove his glove when she saw he was bleeding profusely from a compound fracture to his wrist. She

immediately bandaged his wound to staunch the flow of blood.

But for Key, survival wasn't certain.

"I remember thinking, 'Man, you have died this time — I don't think you're going to make it out of this one,'" he said.

Police arrived at the scene first and called Vanderbilt, requesting Key be airlifted to the hospital. Later, as he was being loaded into the helicopter, his wife told him, "I love you and I'll see you when you get to Vanderbilt," Key said.

Those words meant the world to the severely injured rider.

"I told the flight medics, 'Don't let me die before we get to where we're going … you've got to keep me alive at least that long," Key said.

Nibblet's efforts had kept Key from bleeding out at the accident scene, buying precious minutes before emergency medical technicians arrived. During the flight to Vanderbilt, the flight medics did their best to keep him alive. Even so, he barely got to the ER before he bled out and flatlined. He'd need four more units of blood before doctors could get his heart beating again and stabilize him. More than a week later, he awoke in the intensive care unit, surprised to find a cast on each limb.

During his first week in the hospital, Key underwent five surgeries to repair 82 fractures. Over the following six months, he would undergo four more operations. Several doctors performed the surgeries, each a specialist for the injury being operated on. The collection of metal pins, screws and plates used in Key's surgeries read more like a shopping list for AutoZone than one for medical supplies.

After spending more than three months at Vanderbilt and a skilled nursing facility in Clarksville, Tenn., Key returned home for rehabilitation. Exactly a year later he returned to work at Fort Campbell, working at BACH through the Warrior Transition Battalion's "Work Site" program as he continued therapy and healing. Grateful to be alive, he recognized the things that made the difference that day.

"I'm a firm believer in helmets," Key said, noting he'd suffered a severe concussion during the accident. "Putting padding between your 'coconut' and whatever you're going to hit is going to help."

He's also a believer in wearing personal protective equipment.

"I always wear leather," he said. "Any kind of cushion you can put between you and whatever you're going to hit, I think, in some way, bleeds off part of the energy. … It kills me to see kids out there in T-shirts, shorts and tennis shoes. They're going to get burned from the pipes and the asphalt."

He also believes riders need to practice their survival skills to protect themselves from drivers like Bruner. Each time he returned from a deployment, he found a safe location and practiced his emergency braking and maneuvering skills. He believes it enabled him to make the split-second decision that likely saved his life.

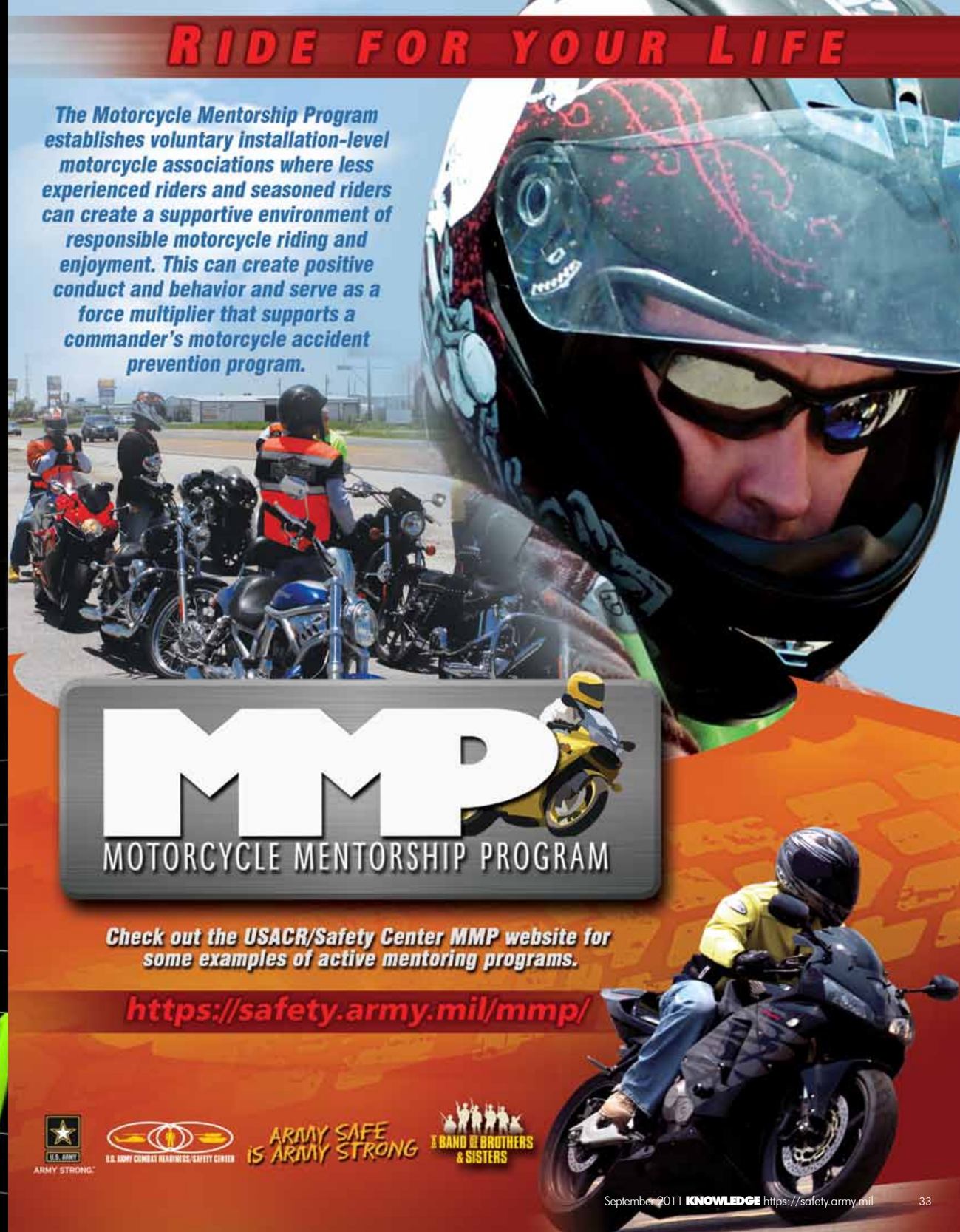
"I think this was one of those one-in-a-million accidents," Key said. "I really didn't see it coming, but I have to think that I instinctively chose to hit that truck where I wanted to."

And then there was Niblett. By helping him at the scene, she gave him the precious minutes needed until emergency medical personnel arrived. By doing that, Key believes she saved his life.

Some riders break the rules and pay the price. Others are the victims of motorists who, like Bruner, disregard others' safety. Key believes he survived that day because he'd protected himself by being prepared for the worst. In his mind, survival is no accident — it's the result of making the right choices.«

RIDE FOR YOUR LIFE

The Motorcycle Mentorship Program establishes voluntary installation-level motorcycle associations where less experienced riders and seasoned riders can create a supportive environment of responsible motorcycle riding and enjoyment. This can create positive conduct and behavior and serve as a force multiplier that supports a commander's motorcycle accident prevention program.



MMP
MOTORCYCLE MENTORSHIP PROGRAM

Check out the USACR/Safety Center MMP website for some examples of active mentoring programs.

https://safety.army.mil/mmp/

ARMY STRONG
U.S. ARMY COMBAT READINESS/SAFETY CENTER
ARMY SAFE IS ARMY STRONG
A BAND OF BROTHERS & SISTERS

Unforeseen Hazards

CAPT. JEFFREY B. MEINDERS
1st Battalion, 145th Aviation Regiment, 1st Aviation Brigade
Fort Rucker, Ala.

Many pilots who have been overseas have experienced some noncombat-related close calls. The extreme temperatures, dusty conditions and less-than-ideal parking situations add up. Combining these factors with fatigue or complacency can create a recipe for disaster. This was the setting for one of my "closer" calls to damaging an aircraft.

If a warning light comes on, a chip light flashes or a system fails completely, most of us can recognize the problem and execute the corrective emergency procedure. However, what about emergencies not covered in the checklist? Training Circular 3-04.11, Commander's Aircrew Training Program for Individual, Crew, and Collective Training, states, "A PC [pilot in command] is an aviator that has demonstrated the judgment and ability to perform all of the mission requirements for the assigned aircraft, uses proper procedures and operates the aircraft safely and maturely." This means being ready for anything that comes along and quickly understanding the effects. Here's my story.

I was returning from a night mission flying an AH-64D in eastern Afghanistan, and the sun had just come up as we taxied into parking at Forward Operating Base Salerno. As I turned to line up in the drive-through parking setup, my canopy cover flew into the air. These canopy covers are 8- by 12-foot heavy-duty pieces of canvas with straps hanging off them in all directions. It was supposed to have been locked away in the flyaway box located on the parking pad.

My mind started spinning with options and possible consequences. Do I continue forward and hope the cover passes behind me or do I pull the engines off and bring the rotor brake to lock? I thought if I could reduce the induced flow, I could stop the canopy from being sucked in or whipped back through the tail rotor. I didn't even want to imagine what could happen to the crew chief (CE) on the wing cord on the opposite side of the parking pad if the straps came toward him.

Nothing in the checklist even remotely covered this type event. The pilot in the front seat was also fixated on the cover flying over us, wondering why the locked box where the cover was stored was even open. I knew this was a dangerous situation and time was not on our side. I reduced the collective and applied the brakes, as the cover was about 20 feet above and five feet in front of my rotor. The cover stayed aloft in the upward flow of air created by the ground effect and floated over to the next parking pad. We landed safely and I was more than relieved nobody was hurt.

What Happened?

The CE that launched the aircraft had gone back to the flyaway gearbox and left the cover out for unknown reasons. Whether the CE had been sidetracked, re-tasked or an emergency came up, he forgot to close or lock the box, which definitely caused an eye-opening experience for the crew that morning. We saw how easily a dangerous situation materializes by someone's distraction. This could've been a catastrophic accident, damaging the main and tail rotors, requiring the whole driveline to be replaced and, most importantly, injuring or killing all personnel within 50 feet of the aircraft.

Lessons Learned

Remaining alert while on a long deployment can be stressful, and that is why supervision and teamwork are so crucial to the Army's mission. Not every accident can be predicted, and simply avoiding risks is not safe. That's why we rely on inherent training to know what to do when we have an emergency.

The training PC candidates go through plays a major part in the thought process and actions taken during non-standard emergencies. My unit instructor pilots focused on airworthiness and how to keep the aircraft flying. Challenge pilots. Use "what-if" questions to lead pilots into unfamiliar territory, bringing them outside their comfort zone and into discovery mode. In the long term, challenging pilots increases the safety success of your organization.

ALMOST DEAD TIRED

SGT. CAMERON RICHARDSON
B Troop, 3-17 Cavalry
Hunter Army Airfield, Ga.

Late-summer mornings in Florida are beautiful at 6 a.m. — not that I noticed that day. I'd been driving for eight hours and my eyes could barely focus on the 18-wheeler in front of me. I'd been following him for probably 20 miles or so — I can't say for sure because I was tired and losing track of time. We were both speeding, doing 80 mph in a 70-mph zone. I'd been using him as a focal point. As long as I paced him, I figured I'd make it to Miami on time. I'd gotten comfortable following him and never saw the line of vehicles stopped ahead.

Suddenly, everything seemed to happen in slow motion. The truck slammed into traffic stopped in front of him. His brake lights never lit up, meaning he never noticed the vehicles had stopped. I shifted into fourth gear and slammed on the brakes. Before my eyes I saw the trailer's wall rippling as sparks bounced off my hood.

Fortunately, I was awake enough to react in time. As I came to a stop, I started to realize what had just happened. The semi in front of me had just rear-ended another semi.

The accident happened in the interstate's center lane, and I'd stopped halfway into that lane. I turned on my hazards and pulled into the left lane to block traffic. I grabbed my flashlight and my phone as I jumped out.

I'd never called emergency services before, but I think I did well. I stated my name and location before explaining what happened. The emergency operator told me I sounded calm. I didn't feel like telling her I'd lived through countless attacks by the enemy.

I approached the truck and could see it was badly damaged. I climbed up to look through the driver-side window into the cab. When I saw the driver, he had a deep depression in his forehead. I immediately knew it was bad. I couldn't open the door and, instead, reached through the shattered window to shake him. Although I yelled and shook him, he never answered.

Hoping to do some good somewhere else, I ran to the truck he'd hit and found the hood open and leaning forward. As I got closer, I could see the rubber on the asphalt. The tire marks must have stretched 20 feet.

Reaching the cab, I found an old man who was trying to remove his seat belt. That scared me. I didn't know if he had any spinal injuries, so I told him to sit back and not move.

As I was climbing down from the truck, the first police officer arrived.

I later learned that the truck driver in front of me had fallen asleep at the wheel. As I suspected, he was dead before emergency personnel arrived. The older man in the truck he hit was hospitalized for three days and released.

I'd witnessed firsthand how fatigue and complacency can kill and had almost become a part of that accident. That gave me a lot to think about. I'd begun my trip the night before after working 12 hours that day and then driven for eight hours with only a single stop for gas.

Ever since this accident, I've made sure I get at least eight hours of sleep before taking off on a long trip. When I'm on the road, I pull over every couple of hours and, if needed, take an occasional nap. I do these things now because I know firsthand that if I'm driving fatigued, I might as well be driving drunk.

TOO TIRED TO CARE?

Falling asleep at the wheel can turn your vehicle into an unguided "missile" on the highway. To prevent that, the National Safety Council offers the following tips:

- **Maintain a regular sleep schedule that allows adequate rest.**
- **When the signs of fatigue begin to show, get off the road. Take a short nap in a well-lit area. Do not simply stop on the side of the road.**
- **Avoid driving between midnight and 6 a.m.**
- **When planning long trips:**
  - **Share driving responsibilities with a companion.**
  - **Begin the trip early in the day.**
  - **Keep the temperature cool in the car.**
  - **Stop every 100 miles or two hours to get out of the car and walk around; exercise helps to combat fatigue.**
  - **Stop for light meals and snacks.**
  - **Drive with your head up, shoulders back and legs flexed at about a 45-degree angle.**

After the storm

We've all been told what to do when a hurricane or tornado is heading toward our location. But what about once the storm has passed and we're faced with the daunting task of storm clean-up? Unfortunately, I learned firsthand after Hurricane Ike struck the Gulf Coast in September 2008.

STEVE RAMKE
Bayne-Jones Army Community Hospital
Fort Polk, La.

Ike covered my "little slice of heaven" in coastal Louisiana — seven acres with a pecan orchard and other fruit trees — with 4 feet of salt water from the Gulf of Mexico. Along with the water came logs, fences, marsh grass, snakes and all kinds of other hazardous items. While some of those items are not necessarily hazardous by themselves, they have secondary hazards associated with them. Let's take a closer look.

Drift logs were everywhere on my property. The logs weren't really hazardous; however, using the saws and axes required to cut them into easily movable pieces brought risks. Before operating a chainsaw, familiarize yourself with the saw and its safety features. Also wear personal protective equipment, including hearing and eye protection. When sawing the logs into sections, cut them into manageable pieces. Even small sections can be heavy, so have enough people to lift them safely and practice proper lifting techniques using your legs rather than your back.

Washed-up fences were another problem after Ike. Many of these fences had barbed wire attached to them, which can cause cuts and puncture wounds to unprotected skin. The barbed wire also posed a risk to clean-up vehicles, as it could puncture a tire and result in an expensive repair and loss of valuable storm recovery time. Always watch where you step and wear gloves when handling fences.

A lot of marsh grass also washed up along my fence line. In fact, I removed four 16-foot trailer loads of grass from the area. Hazards came from using the rakes and pitchforks needed to remove the grass from around the fence. A good stretch before starting helped prevent pulled muscles. Additionally, we wore gloves to reduce blisters, as well as steel-toed shoes — just in case something heavy rolled out onto our feet. Constant communication with other workers was also very important to prevent accidental injury.

After Ike, wild critters were an unexpected concern. When I opened my shed, a snake fell out on me! I chased several other snakes out of the shed, and almost stepped on another just outside the door. Any time a log or fence post was moved, someone was on hand to search for snakes. Also, when removing marsh grass from the fence, a spotter was used to look for snakes that may be hiding in the mess. Even nonpoisonous snakes can give a painful bite, so just avoid all snakes if possible.

Since much of hurricane season runs through summer, the weather following a storm is often hot and humid — especially in the Deep South. In an effort to get the job completed, we often ignore basic needs. Avoid overexertion by taking proper rest breaks and staying hydrated. Also consider wearing a wide-brimmed hat to keep the sun from beating down on you and sunscreen to protect your skin from sunburn.

Although these are the lessons I learned while restoring my land back into a personal "Garden of Eden," it by no means is an all-inclusive list. No matter a hurricane, tornado or flood, each offers its own unique challenges. Remember, always prepare for the encroaching storm, but also plan for its aftermath.

FYI

For more information on storm cleanup safety, visit the Federal Emergency Management Agency website at www.fema.gov or Centers for Disease Control and Prevention at www.cdc.gov.

DID YOU KNOW?

The Atlantic hurricane season runs June 1 through Nov. 30. Although deadly hurricanes can occur throughout the season, they historically peak in September, according to the National Weather Service. The Eastern Pacific hurricane season runs May 15 through Nov. 30.

LINKS TO A MISHAP

CHIEF WARRANT OFFICER 4 TERRANCE TAYLOR
B Company, 2nd Battalion, 149th General Support Aviation Battalion
Grand Prairie, Texas

Many contributing factors typically lead to an accident, rather than one single event. If any link in the chain is broken, the scenario changes and the mishap could be avoided. This is not just an aviation safety officer's words from a PowerPoint presentation; it is a fact.

There we were one sunny Saturday in December on standby to help fight forest fires when we got the word to launch three aircraft. Everything was uneventful — or so we thought. **Link No. 1** in the chain: the radar altimeter was written up on the aircraft as unreliable, which was a common occurrence at the time. A risk assessment performed by the crew determined it as an acceptable low risk since most of the aircraft had the problem. The crew would mitigate the risk by good crew coordination and ensuring the barometric altimeter was current and used for reference for height above the ground. The mission was executed, one flight of two and a single ship, en route to two separate locations.

Link No. 2 in the chain: During the first 45 minutes of the flight, the mishap aircraft experienced a hydraulic pump fault light, followed by excessive vibrations and increased temperatures. We executed a precautionary landing (PL) and began searching for the problem. It was determined that a hydraulic pump was failing and required replacement. The repair took most of the day as we waited for a part and completed the replacement. During that time, we received numerous calls wanting to know when the aircraft would be available to fight fires, as the fire situation was becoming critical and threatening civilian structures. The stress level and the desire to get into the firefight were beginning to rise. The crew completed the maintenance procedures and performed a maintenance run to ensure the system functioned as required.

> "EVERYTHING was uneventful — OR SO WE THOUGHT."

The rush was on … **Link No. 3**. As the crew prepared for takeoff, we discussed required actions for arriving on the scene. Once there, we made contact with the overhead control aircraft that provided us a location to begin firefighting. The location was a large house, and the families were standing outside. Excitement was elevating. The mishap crew made a pass over the target to ascertain a good approach. In turn, we surveyed the departure path as well as a water drop point. Due to the winds and smoke, the approach path direction was limited and placed us over a set of large power lines. We performed a risk assessment and decided to remain high over the power lines and then descend to the drop point once clear. To mitigate further, we referenced the barometric altimeter and provided positive crew coordination to ensure wire clearance.

The radios suddenly got very busy as the mishap aircraft made six successful water drops. Due to the wind shift, we decided the seventh drop would be the last in this direction. Overhead control was in the process of handing off to a replacement crew and providing the handoff briefing over the radio, making aircraft internal communication difficult. This was **Link No. 4.**

Link No. 5: On approach for the final drop, the pilot not on the controls made a call stating the wires appeared closer than on previous runs. However, he took no other actions other than to direct the aircraft to the drop location. In a blink of an eye, the aircraft shook and began to climb. We first thought it was a heat riser when the crew chief (CE) on the load shouted, "We just hit wires and I punched the load!" That was followed by, "Clear up right!" from the right-side CE to get the aircraft clear of the fire zone and smoke.

Lessons Learned

Breaking the accident chain of events is easier than it might seem, because any chain is only as strong as its weakest link. The mishap chain was five links long, and breaking any one of those links could have prevented the accident. For the first link, we accepted the risk and implemented controls; however, we didn't effectively evaluate our controls during the mission and failed to make effective control adjustments.

While the second link was unexpected, a PL is a hazard that can be mitigated and controls put into place should the event occur, alleviating the need to rush.

The third link was a direct result of the PL and the desire to complete the mission, preventing clear thoughts to prevail to cancel the mission due to the amount of time it took to get back in the air.

The fourth link could have been broken by putting the intercommunication system pin switches down to improve internal aircraft communication.

Last, but not least, the fifth link could have been broken by the pilot not on the controls being more assertive and taking more aggressive actions when warning us about the power lines. A simple power adjustment could have been enough to clear the wires.

All of the links in this chain of events could have been covered through good composite risk management, which might have prevented the mishap and enabled the crew to complete the mission.

I love to ride my motorcycle, and the weather was looking promising. I'd been checking The Weather Channel and anticipating riding to work at Fort Hood, Texas. Finally, the weather was nice enough that I thought I'd give it a chance.

NEVER FOOL WITH MOTHER NATURE

CHIEF WARRANT OFFICER 3 KRISTOPHER A. PHILLIPS
A Company, 4th Battalion, 227th Aviation Regiment
1st Air Cavalry Brigade, 1st Cavalry Division
Fort Hood, Texas

I'm what you'd call a "50-50" rider. If the chance of rain is greater than 50 percent or the temperature is lower than 50 F, I'd prefer not to ride. The temperatures had been consistantly above 50 F for the last few days, so I decided to skip checking the weather and just ride into work. After all, since each day had been a little warmer than the previous one, why bother?

Well, wouldn't you know it, Mother Nature decided to play a trick on me. After conducting my "accu-window" weather check and confirming it was "clear, blue and 22," I grabbed my motorcycle personal protective equipment (PPE) and suited up. After telling my wife goodbye, I mounted up and started the ride. The trip to work was uneventful.

I got to the office and was greeted with a few "Hi's." When I took off my PPE and turned around, I saw the company rider-mentor looking at me inquisitively. He asked, "Did you ride in today?" For a moment I thought of telling him, "Nope, I'm just wore my PPE today so I could break it in." But, after consideration, I decided not to say that and answered, "Yep — I rode in."

It was at this point he decided it was a good time to inform me of my error of not checking The Weather Channel. Apparently the 55 to 60 F temperatures of the past few days were not to be. The forecast was calling for temperatures in the low 30s by 10 or 11 a.m., with rain and a chance of snow afterward.

> "This **EXPERIENCE** taught me to **ALWAYS CHECK THE WEATHER** from a respectable source before heading **OUT TO RIDE.**"

Instead of heading back home with my tail between my legs to fetch my Honda Pilot, I decided to wait until lunch to ride home. After lunch, we were to meet at a theater on the main post for a briefing and then be released. The theater was only about 10 minutes from the hangar and from there it was only another 10 minutes to home. I figured I could ride slowly on post to reduce the effect of the wind chill on my body. Boy, was I about to be surprised!

We headed to lunch a little before 11 a.m. to get a head start on the traffic. The weather was still bearable enough to ride straight home and swap vehicles, but I opted to go out with the guys for lunch. This was my second chance to go home and swap vehicles, but, instead, I decided to "tough it out."

While we were eating lunch, the sky fell in. As we headed for the theater, I was given a third opportuinity to avoid riding in the rain and cold. One of my buddies offered to take me in his vehicle to the theater. But, since it was only a short distance, I decided to ride.

I got to my motorcycle and waved to my buddy as he took off for the briefing. As I mounted my bike, I thought, "Man, it is cold!" However, now I was stuck with my decision.

I'd barely pulled out when I was already drenched. However, I kept telling myself, "I can do this!" I got about halfway to the theater when I lost feeling in my hands. The rain had also pooled between the gas tank and my legs and was starting to freeze. At that point I decided to go straight home, change into some dry clothes and get warm before hypothermia set in.

This experience taught me to always check the weather from a respectable source before heading out to ride. After all, I'd never take off on a flight without backing up my accu-window forecast with an actual weather briefing. The same thing goes for riding. Never fool with Mother Nature.

LOST

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, email safe.knowledge@conus.army.mil.

AVIATION

AH-64D

CLASS B

- The aircraft experienced a No. 2 engine "high-side" failure during flight and subsequent transmission/main rotor overtorque/speed. The aircraft landed without further incident.

MH-47G

CLASS A

- During initial aerial refueling qualification training, the main rotor blade cut the refueling hose from the MC-130 tanker.

UAS

RQ-7B

CLASS B

- The unmanned aircraft (UA) experienced overtemp conditions and the recovery chute was deployed for emergency landing. The UA was never located.

CLASS C

- The UA initiated an uncommanded full throttle upon landing and became airborne for about 10 feet. The UA then bottomed out, touching down between landing hooks, and came to rest off the runway.

- The UA experienced a generator/engine failure about 20 minutes into flight. The recovery chute was activated and the UA was recovered with damage.

GROUND

ACV

CLASS A

- A Soldier died when the Mine Resistant Ambush Protected All-Terrain Vehicle he was riding in overturned. At the time of the accident, the driver was attempting to correct the vehicle after it ran off the highway. The driver and gunner suffered non-life-threatening injuries.

CLASS A

- A Civilian was killed when his semi-truck struck the 120 mm gun tube on an M1A2 that was on counter indirect fire patrol. The Soldiers in the M1A2 were not injured.

Personnel Injury

CLASS A

- A Soldier lost his eye when he was struck in the temple by a round from another Soldier's firearm. At the time of the accident, the Soldiers were cleaning their weapons.

DRIVING

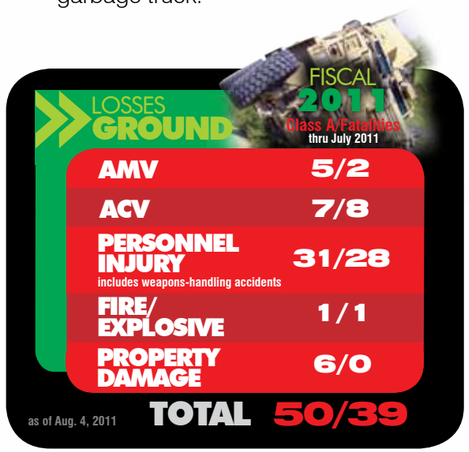
POV

CLASS A

- A Soldier was killed when he was struck on the driver's side by a tractor-trailer at a four-way intersection. The Soldier, who was wearing his seat belt, reportedly failed to yield the right of way at the intersection.

- A Soldier died after he was ejected from the backseat of a vehicle that overturned when the driver drifted off the road.

- A Soldier died when his vehicle crossed into the oncoming lanes and collided head-on with a garbage truck.



POM

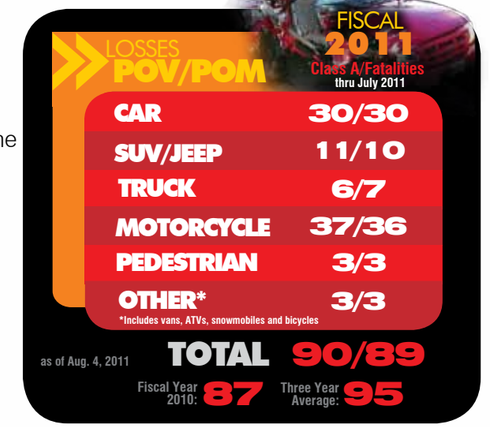
CLASS A

- A Soldier was killed when his motorcycle was struck from behind while he was stopped on the side of a road.

CLASS B

- A Soldier suffered a potential permanent partial disability when his motorcycle collided with a utility trailer being towed by a pickup.

- A Soldier possibly lost the use of his foot when his motorcycle was cut off by a motorist who did not have the right of way. The Soldier did have an operator's endorsement, but was not registered as a motorcycle operator by his former installation.



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WINTER HYDRATION: DRINK FOR YOUR HEALTH

KNOWLEDGE

VOL 5 OCTOBER 2011

OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

FIGHT THE FREEZE

- TENT FIRES
- DUST LANDINGS
- DROWSY DRIVING

+

MANAGING RISKS

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Family engagement kit

On the home front, a Soldier's "battle buddy" is often his or her Family. Check out the new Family Engagement Kit to learn how you can look out for the safety of your Soldier. The kit features a variety of tools, including videos, real-life stories, resources and tips to keep your Soldier safe.

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LEADERS SOLDIERS CIVILIANS FAMILIES

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U.S. ARMY COMBAT READINESS/SAFETY CENTER

ARMY SAFE IS ARMY STRONG

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Mission statement: The United States Army Combat Readiness/Safety Center (USACR/Safety Center) supports our Army by collecting, 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 email comments to **safe.knowledge@conus.army.mil**.

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> "We're **GETTING** better and better as an Army at **ENGAGEMENT** and **STANDARDS ENFORCEMENT**, the two most **CRUCIAL** elements of safety."

MAINTAINING THE MOMENTUM

Fall is a time of change — forests transformed with brilliant hues of orange and gold, the hot, humid days of summer giving way to crisp autumn air and the promise of upcoming holidays and a new year just ahead. It's also the time of year we traditionally change command at the U.S. Army Combat Readiness/Safety Center, and I'll be handing over responsibilities as commanding general and director of Army safety later this month. But before I go, I'd like to share how proud I am of the superb job each of you has done for safety during my tenure here.

I came to the USACR/Safety Center just as our Army was making a remarkable turnaround in safety performance. Between fiscal 2005 and fiscal 2008, accidental fatalities fell nearly 30 percent even as the OPTEMPO in theater hit record highs. That incredible momentum continued into 2009 and 2010, when fatal accidents dropped to their lowest level since September 2001. And while it will be several weeks before fiscal 2011 totals are final, projections show we should be on par with the past two years.

What all of you — our Leaders, Soldiers, Family members and Civilians — have accomplished is something unprecedented in our Army's history: not just simply reducing, but slashing accidental fatalities during a time of war. We're getting better and better as an Army at engagement and standards enforcement, the two most crucial elements of safety. This is especially true on duty, where we expect double-digit reductions in most accident categories for this fiscal year. Considering the demands of two separate conflicts and the millions of duty hours performed both in theater and in garrison these past 10 years, that's truly outstanding news.

Off-duty safety remains our biggest challenge — as it has been for almost 40 years — and I encourage you to continue engaging with your Soldiers and their Family members. It's hard to enforce standards when your Soldiers aren't with you, and that's why we have to continually stress the importance of discipline and the Warrior Ethos during and after the duty day. Additionally, we must include Family members in our safety programs. No one knows a Soldier better than his or her parents or spouse, and they're the best advocates we have for safety off duty. It all goes back to fostering a holistic safety culture and instilling a safe lifestyle Soldiers carry with them wherever they go and whatever their activity.

While people are the most important tool in our safety arsenal, we can't forget about the wonderful programs that have proven effective during the past several years. Privately owned vehicle and motorcycle crashes remain the No. 1 accidental killer of our Soldiers, but we have made tremendous gains with programs like the Motorcycle Mentorship Program, the Motorcycle Progressive Training Model and Remedial Driver's Training. Commanders have the ultimate responsibility for implementing and growing programs like these, and I ask that you do everything possible to make them succeed.

Finally, please continue working with your young Soldiers to develop them into tomorrow's safety Leaders. Not that long ago, safety was a compliance-based, check-the-block requirement that was often viewed as an afterthought rather than a priority. That mindset is rapidly changing, and we now have a perfect opportunity to make safety a career-long and life-long value for the many thousands of young men and women in our ranks today. Engage with them, listen to them and learn from them — they are our Army's present and future, and we owe them the safest start possible.

Through a decade of conflict and the hardships of wartime service, each of you has proven there's no force on earth that can match the dedication and integrity of this great Army Team. We've come a long way because of you, and I look forward to hearing of even more success in the months and years ahead. It has been an honor and a privilege to serve alongside you, and you have my heartfelt thanks and eternal gratitude for everything you do to keep our Soldiers, Families and Civilians safe and ready for the fight.

Army Safe is Army Strong!

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

Dying to Impress

STAFF SGT. DAVID LOPEZ
U.S. Army Aeromedical Research Laboratory
Fort Rucker, Ala.

Riding down the street, I couldn't shake the feeling something was wrong. That morning, I'd decided to take my young son riding with me, but we'd only gone a couple of miles when I had a foreboding of disaster too intense to ignore. I took my son to the mall where my wife worked, planning to leave him with her while I rode the bike home. I didn't want him with me if something happened.

Unfortunately, the store where my wife worked wouldn't allow her to watch him while I rode home and then drove back. So I put him back on my bike and carefully rode home, wondering all the while what I was sensing as we cruised through the streets and intersections. I was relieved when we safely turned into the driveway. Still, I couldn't I shake this ominous feeling.

We pulled off our riding gear and went into the house. Because this was my son's first ride, I'd bought him a complete set of personal protective equipment (PPE). After all, wasn't that what my older brother, Hector, had taught me? He'd been a Motorcycle Safety Foundation (MSF) instructor where we'd grown up in Puerto Rico. He'd also taught sport bike riding techniques and participated in National Hot Rod Association drag races. He was an avid rider and was very good at what he did. He'd drilled safety into me from the moment I purchased my first motorcycle, making sure I bought a machine I could handle.

We'd been home about 15 minutes when the phone rang. Picking up the receiver, I heard my wife's trembling voice. Before I could speak, she told me Hector had been killed in a riding accident. My fears hardened into reality as she told me the facts.

Riding with friends on their sport bikes, he'd been racing on a narrow, winding road. It was 97 F with 100 percent humidity that day in Puerto Rico. Anyone who has ever ridden in such conditions knows that heat and precise riding are fatiguing. Even though my brother was noticeably tired and dehydrated, his friends encouraged him to push his limits. And there was no way Hector would be the last rider in the group or head home before finishing the ride.

Hector had led the pack as they reached a fork in the road. Suddenly, a horse and rider trotted out in front of him. Locking his Yamaha R1's brakes, he flew off and struck a metal support wire, breaking his neck. His friends stopped, but they couldn't help him. For 17 minutes, he lay on the side of the road gasping for his breath before he died. He'd made a common mistake made by many of us who ride in groups. He'd succumbed to peer pressure and died while trying to impress his friends. That was three years ago, but I still miss him every day.

So what does this have to do with you? If you're a rider, maybe a lot.

Riding motorcycles is becoming increasingly popular among Soldiers. We buy motorcycles for practical reasons, such as their lower cost compared to cars and greater fuel economy. Riding also gives us something in common with other Soldiers who ride and bonds us with them. Unfortunately, even after taking the required MSF rider training, some Soldiers still choose to ride irresponsibly (indisciplined). Wanting to look cool, tough or be part of a group, they ignore traffic laws and ride their bikes too fast for conditions or their skills. Giving in to peer pressure and trying to fit into a group, they ride

"UNFORTUNATELY, even after **TAKING** the required MSF rider **TRAINING**, some Soldiers **STILL CHOOSE** to ride **IRRESPONSIBLY (INDISCIPLINED).**"

to the edge of their abilities and beyond.

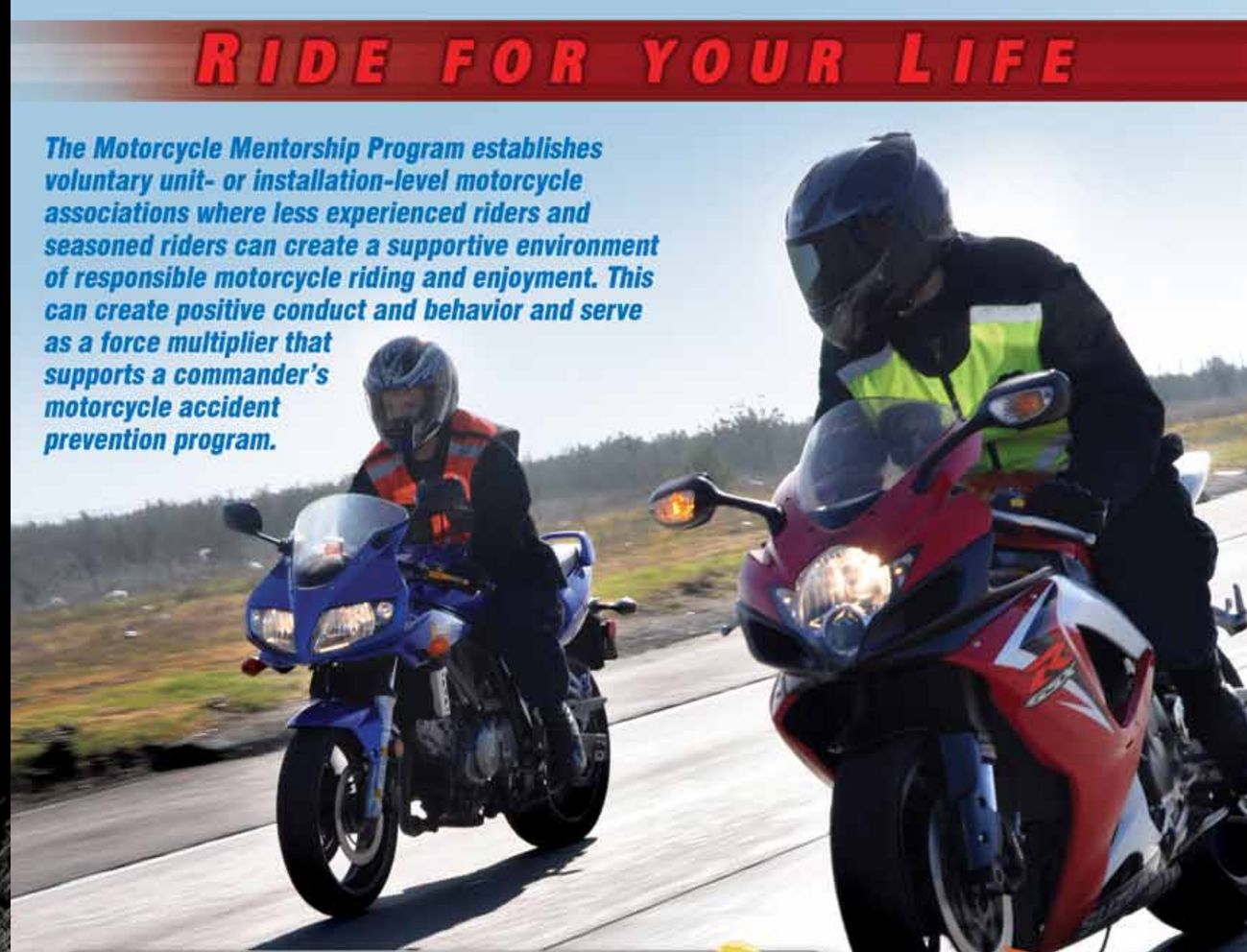
This doesn't have to happen to Soldiers. Just like we did during deployment, we need to stick together and make sure we and our buddies make smart choices while riding. To do that, we can:

- Identify the risks and control them by using composite risk management.
- Perform preventive maintenance checks and services on our motorcycles so they're ready for the road.
- Start off riding smaller, less-powerful and less-expensive motorcycles. Only after mastering them should a rider consider something bigger, more powerful and more expensive.
- Learn from others' experiences. During group rides, pair new riders with experienced riders to transfer riding skills. This is a key element of the Army's Motorcycle Mentorship Program (MMP). If your organization or installation has an MMP, joining is a great way to build skills and camaraderie with other riders.
- Plan a route within the skills of the group's least experienced riders.
- Do a riders' brief before group rides. Brief the route and plan stopping points along the way.
- Use effective PPE when riding. A simple, long-sleeve cloth shirt will disintegrate almost immediately when it touches the pavement. Skin grafts are painful and costly.
- Avoid giving in to peer pressure. If the group is engaging in risky riding or breaking the law, choose to ride safely and obey the law. If the group leaves you behind, ride at a safe pace and catch up with them at the next stopping point.
- Ride to arrive! «

Editor's note: The author manages the MMP for the U.S. Army Aeromedical Research Laboratory.

RIDE FOR YOUR LIFE

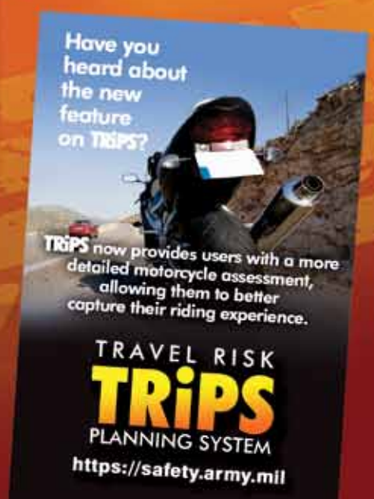
The Motorcycle Mentorship Program establishes voluntary unit- or installation-level motorcycle associations where less experienced riders and seasoned riders can create a supportive environment of responsible motorcycle riding and enjoyment. This can create positive conduct and behavior and serve as a force multiplier that supports a commander's motorcycle accident prevention program.



MMP
MOTORCYCLE MENTORSHIP PROGRAM

Check out the USACR/Safety Center MMP website for some examples of active mentoring programs.

https://safety.army.mil/mmp/



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SEEKING HEAT?

During a fire, seconds count. That's especially true when it comes to tent fires. A fire can engulf a tent in just 10 seconds and destroy it in 60. That gives Soldiers little time to react.

MICHAEL WOOD
Ground Task Force
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

For Soldiers, working and training in all weather conditions is part of the job. As the mercury begins to drop this winter, more Soldiers will seek heat from space heaters and stoves. Most of these devices will do their job properly, but they'll also increase Soldiers' risks to fires. In an effort to combat these risks, the product manager, Force Sustainment Systems, manages a family of space heaters authorized for use by Army units. Units alerted for deployment should assess their environmental requirements versus on-hand space heaters and order the required heaters before deployment. Approved and tested Army personnel heaters include:

- **H-45 space heater (NSN 4520-01-329-3451):** The H-45 replaces the old potbelly M-1941. The H-45 will heat general-purpose and TEMPER tents and burns liquid and solid fuels.
- **Arctic space heater (NSN 4520-01-444-2375):** The Arctic heater replaces the gasoline-burning M-1950 Yukon heater and is a lightweight, portable heater for five- and 10-man Arctic tents. The Arctic heater burns liquid and solid fuels.
- **Small space heater (NSN 4520-01-478-9207):** The small space heater is ideal for use in smaller tents such as the four-man Soldier/crew tent. It burns liquid fuel and has a built-in tank, precluding the need for an external fuel can and stand.
- **Convective space heater (NSN 4520-01-431-8927):** The convective space heater provides forced hot air for tents and shelters. This heater generates its own power and recharges its battery.
- **Thermoelectric fan (NSN 4520-01-457-2790):** The thermoelectric fan is a compact, self-powered unit that fits on top of any military tent heater. The fan uses some of the heat to turn the fan blades, which circulates heated air, improves comfort and saves fuel.

Another hazard linked with tent heaters is carbon monoxide (CO), a poisonous, colorless, odorless and tasteless gas produced as a result of the incomplete burning of natural gas and other carbon-containing materials such as kerosene, oil, propane, coal, gasoline and wood. When breathed into the body, CO enters the blood and deprives the heart, brain and other vital organs of oxygen. Low levels of CO can result in shortness of breath, mild headaches and nausea — symptoms that are often confused with food poisoning, influenza and other illnesses. At moderate levels, individuals exposed to CO may experience tightness across the chest, severe headaches, dizziness, drowsiness and nausea. Extended or high exposures may result in vomiting, confusion, muscle weakness, collapse and even death. Leaders must ensure their Soldiers are trained to recognize potential sources of CO and the symptoms of CO poisoning.

DID YOU KNOW?

From fiscal 2006 to 2008 in Iraq, the Army lost one Soldier and more than $1 million of equipment due to electrical fires. The causal factors of these fires were unlicensed, unqualified personnel installing electrical wiring to tents; the use of non-Underwriters Laboratory (UL) or European Conformité Européenne (CE) certified electrical products; and overloaded electrical circuits. Future losses can be prevented by ensuring only qualified personnel install electrical wiring to tents and facilities, conducting regular fire inspections to search for electrical hazards and providing guidance to Soldiers on electrical hazards in tents. Other measures to mitigate electrical hazards include keeping electrical connections off the ground and away from wet areas; reducing the number of electrical items plugged into receptacles; ensuring electrical extension cords aren't "daisy chained" (several extension cords connected together); and using UL and CE power cords. Fire extinguishers must also be available, fully charged and in plain sight.

Before using a space heater or stove in a tent, keep the following tips in mind:

- All heaters and stoves should be operated in accordance with the applicable technical manual.
- Place stoves in sandboxes when heating tents with wooden floors.
- Even in extreme cold, do not operate heaters at full capacity.
- Ensure tents have battery-powered smoke and CO detectors installed.
- In the event of a tent fire or suspected presence of CO, first and most importantly, evacuate the tent.

During the winter, it doesn't get much more miserable than being stuck outdoors in a tent. By following the proper precautions when using space heaters or stoves, Soldiers can ensure they'll stay warm and safe on the coldest of nights.

If you're an Army aviator, you're going to fly in the desert. It's just a matter of time. It's important for all pilots to understand dust landings and train for them. I'm not an instructor pilot (IP) or an expert on dust landings, but I did make multiple dust landings in Iraq. I'd like to share my lessons learned.

SAFE DUST LANDINGS

CHIEF WARRANT OFFICER 4 JOHN R KING
81st Army Regional Support Command
U.S. Army Reserve
Huntsville, Ala.

While Army aviation operates primarily from fixed bases, the Soldier you're supporting doesn't. He is operating from a forward operating base or other type of base; however, that Soldier will be your eyes on the ground. He is your forward air controller and will be a valuable asset if you use him correctly. Remember, the ground Soldier thinks in relationship to what he knows; he is not a pilot. A 10-degree slope for him is level ground, or a landing zone (LZ) clear of all vegetation is a good LZ. Not all boundary obstacles are identified as hazards to flight. The power of your aircraft and the dust it can kick up is usually underestimated. You're responsible for the safety of your crew, passengers and aircraft, so you must adhere to the four C's for flying in the desert.

Competence

Before you ever start any type of dust training, know the basics. Know and understand the limits of your aircraft. You should understand what the instruments are telling you. This may seem like a "duh" statement, but it is important. I'm not talking about check ride knowledge; I'm talking about understanding power requirements and aircraft limits. Hot, heavy and in the dust is not the time to hear the low-rotor horn.

I flew a UH-60A in Iraq after many years in the UH-1H and OH-58A/C. When I started flying the Black Hawk, I was amazed with its power. I never thought power would ever be a problem, but I was wrong. I was fortunate enough to have an IP who made sure I understood my aircraft. He stressed that understanding my aircraft is like target shooting — hitting the target would get me through a check ride, but I needed to aim for the bull's-eye.

Once you understand your aircraft, it's time to train. Training means in a controlled environment as close to the actual conditions in which you will fly. You must push past your comfort zone to get competent in dust landings. If you only train to a requirement, you're cheating yourself. Flying instrument flight rules (IFR) is different from flying in the clouds. Flying in light dust is different from flying in real dust conditions. Train where it's nasty and make sure you help your crew chiefs clean the aircraft afterward. Remember, training is perishable — train, train and train some more.

Cognizance

Most LZs will have a fixed pad and an accepted approach procedure. Others may have nothing more than an orange marker panel. It really doesn't matter. You still have to understand your landing environment. Do you remember all the acronyms you learned in flight school? This is where you use them. Do a high recon. Know your approach axis, obstacles (in and out) and winds. If you find a more suitable landing area, ask for it. I've even asked for smoke when I couldn't establish winds. Know where the dust cloud will form. Conduct a low recon. Look for trouble spots such as slopes, wadies or even unexploded ordnance. Look for obstacles like boulders, sheep and poles. Are there building materials, tents, tarps or portable latrines that could be blown down or sucked into your rotor system? Don't make the mistake of thinking that because you're landing to an improved area, you won't pick up dust.

Though hardened landing areas are usually better than unimproved ones, they still have the potential for dust. I remember landing to a road that turned into a dust bowl. Know what you're landing into because

when the dust begins to billow and swirl, you may momentarily lose visual references.

Do a map analysis. Remember where you land will be your next takeoff point. Keep this in mind when you go in. What will be your obstacles going out? If you're going to refuel or pick up passengers, remember your power requirements will change.

Dust landings are a lot like flying an instrument landing system approach to the ground. You pick a spot, set an approach angle and land with zero to near-zero forward speed. Your world becomes very small, very fast. It's important you have done everything to understand your touchdown point before getting into the dust cloud. This leads us into my next discussion point.

Color/Contrast

The color of the sand tells a lot about the type you're landing in. Know the difference between dark-colored and light-colored sand. Dark-colored sand is usually a better place to land. Light-colored sand seems to be finer and more likely to form dust clouds.

Vegetation is your friend. When you pick your touchdown point, make sure you have something you can use to judge closure rates and drift. I found a little bush that was no more than 15 feet off my nose at about a 30- to 45-degree angle. If I didn't have that, I would look for a sandbag, a big rock or a vehicle track. Just make sure it lies within your rotor disc area when you touch down. Because of the vortices of the rotor system, you should be able to maintain a visual contact with your reference point during the touchdown phase of your landing. If you're landing using night vision devices, visual awareness of your surroundings becomes more critical. Be prepared to temporarily lose your reference point during the approach sequence.

Crew Coordination

I flew more than 750 hours of combat time in Iraq. For the majority of the time, I flew with the same crew chiefs. Though my front-seaters changed, it was the crew chiefs that provided my guidance.

In a dust landing, it takes a crew to reach the ground safely. The key to our success was communications. In our crew, the pilot not on the controls handled the radios, monitored the instruments and scanned for obstacle avoidance. One crew chief would clear the aircraft and keep a visual on the wingman. The other crew chief would clear his side and call the dust cloud. It was important the crew was able to communicate a lot of data quickly. The pilot on the controls would fly the aircraft.

Each crewmember needed to keep a visual reference to the ground. If anyone lost visual, he or she would announce it to the crew, and the pilot on the controls would confirm the communication. If everyone lost sight of the ground, the pilot on the controls would make a go-around decision. All members of the crew had a right to call a go-around. If someone other than the pilot on the controls called a go-round, it might come with directions or a description why the go-round was called. Here's how it sounds:

P: "Before landing check is complete."
P*: "Go-around is to the left, over the wires 100 feet. I have my touchdown point in sight."
CE1: "Wires. Hold your descent."
P*: "Holding."
CE1: "Chalk 2 is two discs 5 o'clock."
P: "I have a ditch 30 meters 11 o'clock."
P*: "Roger."
CE1: "Clear wires."
P*: "Cleared of wires."
CE2: "Dust forming at the tail."
P*: "Roger."
P: "Drifting left."
P*: (Response by control input.)
CE2: "Dust at the doors, I've lost the ground."
P*: "I have the ground."
CE1: "I have the ground."
CE2: "Dust is overtaking."
P*: "Still have my reference."
CE2: "I have the ground. Clear down right."
CE1: "Clear down left."

Then we would land. If a go-around was needed, it would be something like this:

CE2: "Go-around, barbwire."
P*: "Go-around." (Pilot initiates a climb)
P: "Chalk 1 is go-around (to Chalk 2)."
P: "50 feet (AGL), 800 (TGT) climbing."
(TGT limits would be called if TGT was the limiter; torque would be called if torque was the limiter.)
P: "80 feet, 846 stop collective."
P: "100 feet clear the wires, clear to go left."
CE1: "Clear left; Chalk 2 is three discs back 5 o'clock."
P: "Chalk 1 is coming left (to Chalk 2)."

As complicated as it was to land in the dust as Chalk 1, it was, in some respects, more complicated for Chalk 2. In a flight of two, the trail aircraft has to make a decision that doesn't confront Chalk 1 — whether to land with Chalk 1 or wait until he lands and the dust settles and then come in after him. The right answer is — it depends. A multi-ship landing is best accomplished with everyone landing at the same time. The trail aircraft should position itself as to maximize the benefits of the wind. If possible, Chalk 2 should position itself behind and upwind of Chalk 1 and try to touch down simultaneously with Chalk 1. If, however, you're flying to an area that is dirty or unknown, Chalk 2 may elect to delay his landing until Chalk 1 is down. This will allow you to gauge the dust and gives room to Chalk 1 if he needs to do a go-around.

This discussion would be deficient if I didn't address go-arounds. Go-arounds are free. As pilots, our No. 1 priority is the safety of the passengers and crews. If a landing doesn't feel right, do a go-around. Will your fellow pilots say something? Probably. I can tell you it took me three attempts to get into one dirty LZ. My co-pilot initiated the first go-around, and the second was by me. My brothers kidded me. I also had my crew chiefs tell me they thought I made the right decision. That was good enough for me. I value the opinions of the folks in the arena more than those watching from the cheap seats.

Army aviation is vital to the success of the mission in the Middle East. In the year I was in Iraq, my troop of eight UH-60A aircraft flew an estimated 28,000 troops. We did every type of mission, including resupply, air assaults, passenger hauling and even reconnaissance. We also provided crews to support VIP missions. In every mission, you could count on certain things: the days were long, hot and tiring and, more times than not, we had to land in dust.

I hope my experience helps those of you who are following. When you go over, please fly safe.

> "It's **IMPORTANT** you have **DONE EVERYTHING** to **UNDERSTAND** your touchdown point **BEFORE GETTING** in the dust cloud."

SEDANS • TRUCKS • OFF-ROAD VEHICLES • MOTORCYCLES • PEDESTRIANS

STOMP-ing OUT ACCIDENTS

DRIVING TASK FORCE
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

The overwhelming majority of Soldiers who die in off-duty privately owned vehicle (POV) accidents do so needlessly, according to the U.S. Army Combat Readiness/Safety Center (USACR/Safety Center). Despite the fact Soldiers are taught a disciplined approach to on-duty safety through composite risk management (CRM), accident reports identify Soldier indiscipline as the primary cause of these fatal crashes. It is obvious such training works because of the declining number of on-duty accidents. Unfortunately, many Soldiers leave CRM behind when they leave the post. The result has been an alarming increase in off-duty POV accidents, especially those involving motorcycles.

Although Leaders are engaging Soldiers on the importance of applying CRM to off-duty safety, far too many Soldiers make flawed risk decisions and suffer the consequences. Recognizing that, the USACR/Safety Center has developed the Sedans, Trucks, Off-road vehicles, Motorcycles and Pedestrians (STOMP) program. The program's goal is to develop a media campaign to provide Soldiers with constantly updated information on driving safety.

The key to STOMP is monthly Training, Indiscipline, Planning and Safety (TIPS) messages designed to help Soldiers transition the CRM training they've used on duty to the challenges they face on the road. A major component of TIPS will be monthly posters and advertisements provided electronically to Army publications. Because these will be provided in electronic form, installation publishers can modify them to suit the needs of their audience.

Why this new emphasis and program? Leaders understand their ability to directly oversee their Soldiers' safety often ends when that Soldier drives or rides off post. The choice to be safe must also exist within the individual Soldier if off-duty POV accidents are to be reduced. STOMP and TIPS are designed to help Soldiers accurately assess their risks on the road and make wise, life-saving choices.

While the ideal goal would be an accident-free Army, that lies beyond the realm of possibility. However, what is possible is that Soldiers can take responsibility for their safety, regardless of their duty status, and dramatically reduce driving and motorcycling fatalities. STOMP and TIPS are tools designed to help make that happen.

DRINK FOR YOUR HEALTH

Dehydration is a leading cause of injury for Soldiers. To keep them in the fight, it's essential they remain properly hydrated — even during the winter.

SGT. 1ST CLASS CHRISTOPHER BUSHWAY
U.S. Army Mountain Warfare School
Jericho, Vt.

The average adult loses 1½ to 2 liters of water each day. Being in a cold-weather climate can add to this water loss through the increased excretion by the kidneys, perspiration and evaporation from the lungs (the breath you see on a cold day). To make matters worse, Soldiers may be less interested in drinking water during cold weather and, as a result, become dehydrated. This can lead to inadequate blood flow to the extremities, which can contribute to a Soldier developing a cold injury such as frostbite or trench foot.

According to the U.S. Army Research Institute of Environmental Medicine, Soldiers should take the following steps to maintain adequate hydration during cold-weather operations:

- Soldiers must drink even when they are not thirsty. Leaders should establish a program of regularly scheduled hydration.
  - Soldiers should drink at least two to six canteens of water each day.
  - Cold suppresses thirst, so schedule drinking at regular intervals. Actual fluid requirements are dependent upon the level of physical work performed, the temperature and what Soldiers are wearing and carrying.
- Eating snow or ice for moisture is inefficient, may irritate the lining of the mouth and may lower body temperature. It is better to melt snow or ice and purify it before consuming.
- A cup of hot coffee or tea can be a welcome "pick-me-up" in the cold, but excessive caffeine consumption leads to difficulty sleeping, depending upon individual tolerances. Soldiers should be cautious to avoid sudden withdrawal from caffeine, however, as this can cause adverse symptoms such as severe headaches and nausea. Hot cocoa is generally a better beverage than coffee in the cold. Cocoa is warming, much lower in caffeine and high in needed carbohydrates.
- Alcoholic beverages can give a false feeling of warmth and impair judgment, which may be detrimental in the harsh cold.
- Avoid consuming excess salt (more than the amount normally provided in military rations).

First sergeants and support personnel bringing water to line units can usually tell if Soldiers are hydrating properly by their daily consumption. During winter, it's not unusual for Soldiers to drink a gallon of water or more each day when moving extended distances in mountainous terrain. Buddy teams must also be trained so Soldiers can encourage each other to drink plenty of water. Soldiers must understand the importance of pushing fluids before, during and after exertion.

Staying hydrated in cold weather also takes more effort than in warmer temperatures because canteens sometimes freeze. To prevent this, Soldiers should carry at least one canteen in the front chest pocket of their Gore-Tex jacket to allow body heat to keep the water from freezing. Because water freezes from the top down, the canteen should be placed upside down in the pocket. The simple act of positioning the canteen properly will ensure there is at least a quart of water always available.

For Soldiers, working and training outdoors is part of the job — no matter how extreme the temperature. Enforcing proper hydration during cold weather is one of the easiest ways to ensure Soldiers stay healthy and arrive ready to fight. «

FYI

The adequacy of fluid intake can also be judged by urine color and volume. Dark-colored urine — orange snow instead of light yellow snow — and not needing to urinate upon awakening from a night's sleep are indicators of significant dehydration. Be aware, however, that this technique may not work for Soldiers who take vitamins, supplements or medications that discolor the urine.

And the Winners Are ...

The creativity of our Army's Soldiers was once again on full display in the fiscal 2011 Peer to Peer Safety Video Competition. And while there were many great submissions, three videos stood above the rest to take the year's top prizes.

The first-place video, titled "Safety Strong," was submitted by the 187th Medical Battalion at Fort Sam Houston, Texas. Through a series of short, but pointed, vignettes — each reinforcing an important safety principle — the video illustrates safety is everybody's business and no one is above the rules.

Second place this year went to Headquarters, Department of the Army, G3/5/7 Comprehensive Soldier for the video "Distracted Driving is Drunk Driving." In less than 60 seconds, the video uses a clever combination of live action and animation to demonstrate the "multitasking" that takes place behind the wheel in many vehicles on our roadways and the disastrous consequences that often come with it.

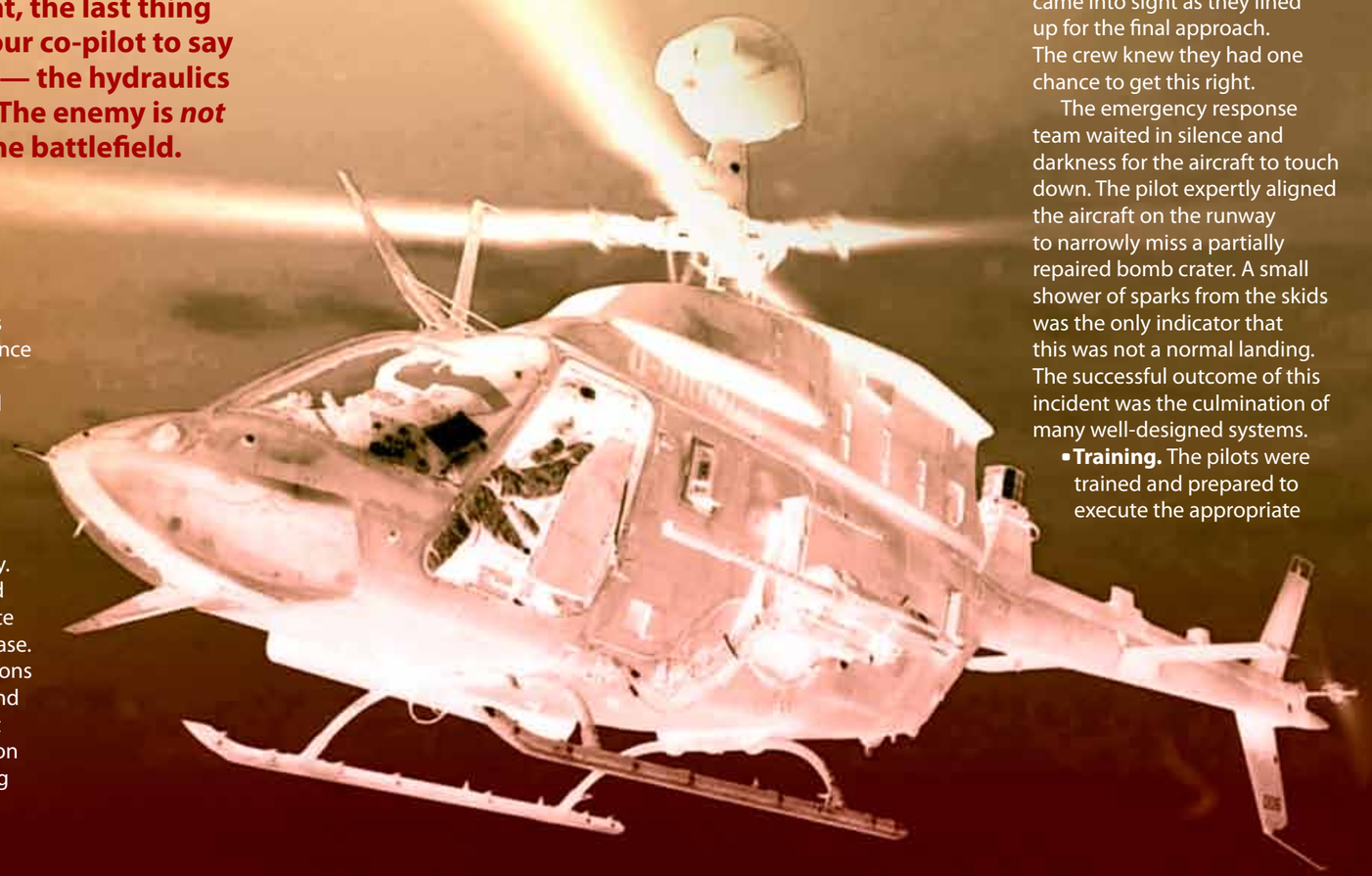
"I'm still pulling glass out of my arm." That's the essence of the video "POV Safety" — the third-place submission from the 4th Brigade Combat Team, 1st Armored Division, from Fort Bliss, Texas. The video recounts the details of a POV accident that left a Soldier with multiple injuries and a smashed vehicle, all because fatigue, inexperience and road conditions can add up to a big problem when you don't plan ahead.

The winners will receive certificates and "Safety Emmy" trophies from the U.S. Army Combat Readiness/Safety Center, as well as cash prizes from Better Opportunities for Single Soldiers to benefit their garrison BOSS chapter. Congratulations to all the winners!

SURVIVING THE ENEMY AND MORE

RETIRED CHIEF WARRANT OFFICER 4 MARK A. MARTIN
4th Military Information Support Group (Airborne)
U.S. Army Special Operations Command
Fort Bragg, N.C.

On a dark night in a combat environment, the last thing you want your co-pilot to say is, "Hold on — the hydraulics just quit!" What now? The enemy is *not* the only variable on the battlefield.



It was a dark night with almost no illumination. The OH-58D Kiowa Warrior crew was conducting routine reconnaissance and security during combat operations in support of ground forces. An hour and a half into the mission, a collective servo hydraulic fitting failed and the aircraft began losing hydraulic fluid. The controls became stiff and the aircraft pitched violently.

The crew correctly diagnosed the situation and took immediate action to return the aircraft to base. They alerted the tactical operations center (TOC) of their situation and informed the battle captain that they would be executing a run-on landing to the forward operating base's (FOB) bomb-crater-damaged, partially lit runway. The battle captain activated the pre-accident plan and notified the forward arming and refueling point (FARP) at the end of the runway. Despite the FOB having no other crash rescue assets, the crew chiefs, FARP personnel and others collected all available fire extinguishers and moved to the edge of the runway to await the aircraft's arrival.

In the cockpit, the pilots' training and nine months of combat experience translated into precision and calm under pressure. The dimly lit runway came into sight as they lined up for the final approach. The crew knew they had one chance to get this right.

The emergency response team waited in silence and darkness for the aircraft to touch down. The pilot expertly aligned the aircraft on the runway to narrowly miss a partially repaired bomb crater. A small shower of sparks from the skids was the only indicator that this was not a normal landing. The successful outcome of this incident was the culmination of many well-designed systems.

- **Training.** The pilots were trained and prepared to execute the appropriate emergency procedure. Additionally, the TOC personnel and battle captain understood the urgency of the situation and were trained in the pre-accident plan. First responders realized they lacked the required crash rescue resources to take appropriate steps to further protect the crew in the event the landing was unsuccessful. However, the lack of resources doesn't relieve their responsibility to provide the best possible opportunity for success. Realistic training starts at home station and must be re-evaluated and refined once in the area of operations.
- **Facilities.** Deployed units face complex hazards that, if not adequately controlled, are likely to cause loss of combat power. Leaders in a combat zone must assess all accidental hazards, as well as combat threats. In this case, leadership assessed the hazards associated with operating from an unlit runway and provided high-quality, solar-powered lights to aid the aircrew in completing a successful approach. Continuous improvements to facilities are required throughout deployment. Failure to make continued improvements or plan for remote emergencies results in an unacceptably high risk. Prioritization of efforts and appropriate allocation of assets and resources is the key to success in this area.
- **Operations.** The foundation for Army aviation operations is the air mission brief (AMB). The air mission commander makes use of the AMB and integrates composite risk management (CRM). Aircrews should leave the AMB with a clear understanding of the mission and commander's intent. A thorough and detailed AMB ensures crews have the necessary information and guidance to understand and manage the hazards they will face during the mission and ultimately accomplish their goal. The enemy is not the only variable on the battlefield. Aircrews must understand and manage both tactical and accidental risk while performing their wartime mission. It is the commander's responsibility to ensure his or her staff monitors and enforces CRM during mission execution.

Summary

Combat operations require managing the hazards associated with both tactical and accidental risk. In a combat environment, the two coexist at all times. My experience in Operation Iraqi Freedom shows that a well-trained and prepared unit can manage both successfully. CRM increases understanding at every level of the dangers associated with operating in a tactical environment. A proactive safety program lays the foundation for success in times of emergency.

FIGHT the FREEZE

BENJAMIN MINCHHOFF
U.S. Army Aviation Engineering Directorate
Fort Drum, N.Y.

Cold weather can have numerous adverse effects on Soldiers in combat. While cold injuries such as hypothermia and frostbite are serious medical problems, a Soldier's performance can be affected well before he or she is taken out of the fight. For instance, numb skin and heavy clothes hinder Soldier task performance. Soldiers also might become emotionally detached, lose motivation or be reluctant to leave their tents or sleeping bags. Fortunately, many of these problems are avoidable if Soldiers dress properly for the weather conditions.

The Army has greatly improved issued clothing and, with proper wear, Soldiers can be generally comfortable in all climates. The key is proper layering, which allows Soldiers to stay warm and dry while avoiding overheating. Any cold weather clothing ensemble consists of three layers: the base layer, insulating layer and shell. Soldiers who understand these layers can tailor their clothing to specific conditions and missions.

The Base Layer

The base layer is closest to the skin and designed to wick moisture away from the body so the wearer stays dry, warm and comfortable. The base layer's fabric and weight are very important. Cotton performs poorly in the cold because it holds moisture against the skin. Soldiers will sweat even in the cold, so cotton should be avoided at all costs.

Polypropylene, polyester and merino wool are good base layer fabrics. Issue items that work well as base layers include the Army Combat Shirt (ACS), the Fire Resistant Environmental Ensemble (FREE) Underlayer and Base Layer, and the Extended Cold Weather Clothing System (ECWCS) Light-weight and Mid-weight top and bottom. The T-shirt issued with the Army Combat Uniform is made of a wicking fabric and is also a good base layer. Many Soldiers use a wicking base layer but still wear a cotton T-shirt and drawers underneath, defeating the base layer's purpose.

Soldiers should tailor the base layer's weight to their activities and the outside temperature. For instance, they should wear a thinner base layer during high-aerobic activities and a heavier base layer during stationary activities.

The Insulating Layer

The insulating layer traps warm air against the body. Soldiers can use multiple insulating layers, depending on their activity level and the outside temperature. Light, bulky fabrics such as wool, down, polyester fleece or synthetic pile fabrics that trap air make the best insulating layers.

Army-issued items used as insulating layers include the FREE Mid-weight Layer and

FYI

Have you ever heard of COLD — the catchy acronym that describes dressing correctly for cold weather? Here's a refresher:

- **Keep clothing Clean**
- **Avoid Overheating**
- **Wear clothing Loose and Layered**
- **Keep clothing Dry**

Extreme Weather Removable Liner, field jacket liner and ECWCS Fleece. Soldiers should be slightly cold when they start out on a patrol or other strenuous activity to keep them from overheating and sweating. These Soldiers should carry their insulating layer in their rucksack and put it on when they make a stop.

The Shell

The shell protects the body and the other two layers from elements such as wind, rain, snow and dirt. A good shell is the best defense against wind and water. (Unless combined with a shell, most insulating layers do not protect against wind and rain.) Waterproof breathable fabrics, called hardshells, such as Gore-Tex are the standard by which most shells are compared.

A new category in shells has been gaining momentum recently in outdoor sports and the military. Called softshells, they are highly breathable, windproof and water resistant, but not waterproof. Softshells are designed for use in dryer climates during more aerobic activities where breathability is more important than water resistance.

Army-issued hardshells include the FREE Extreme Weather Outer Layer and ECWCS Extreme Cold/Wet Weather Jacket and Trousers. Issued softshells include the FREE Light Outer Layer and Intermediate Outer Layer, the Army Elements Fleece and the ECWCS Wind Jacket and Soft Shell Jacket and Trousers. Remember, a good shell not only protects against wind and water, it also breathes to let perspiration escape.

At Night

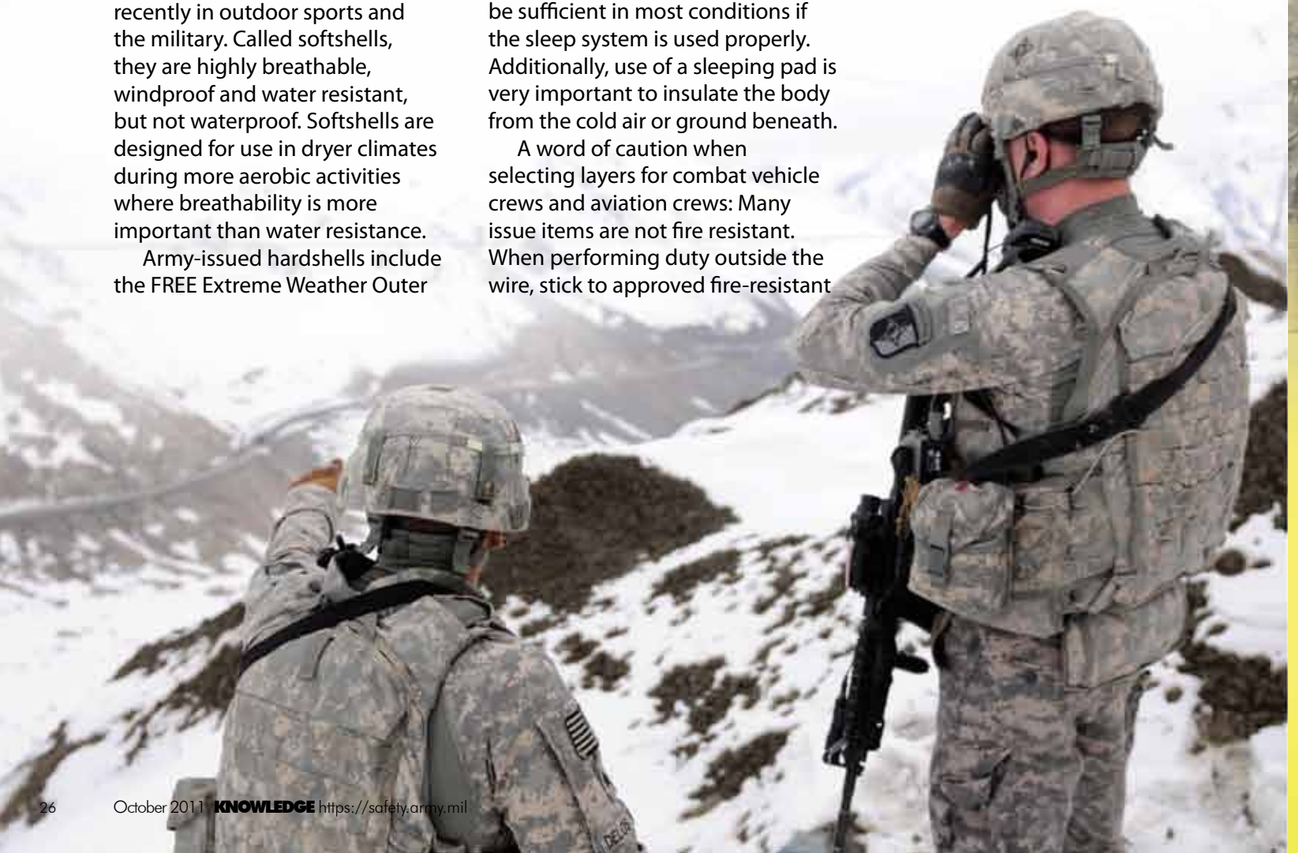
These layering principles also apply to boots, gloves, headgear and sleeping systems. The Army Modular Sleep System has three parts that generally follow the three-layer system and should be tailored to specific sleeping conditions.

Soldiers don't have to wear a lot of clothes at night to stay warm. Physical training shorts and a wicking T-shirt (not cotton) will be sufficient in most conditions if the sleep system is used properly. Additionally, use of a sleeping pad is very important to insulate the body from the cold air or ground beneath.

A word of caution when selecting layers for combat vehicle crews and aviation crews: Many issue items are not fire resistant. When performing duty outside the wire, stick to approved fire-resistant garments (e.g., ACS, FREE and AEF).

Individual Soldiers' backgrounds and physical attributes also greatly influence their cold weather tolerance. While one Soldier might be comfortable wearing light layers during a mission, another might need heavier layers for the same conditions. Leaders need to take this into consideration before deciding on a one-size-fits-all approach to duty uniforms and allow for some flexibility.

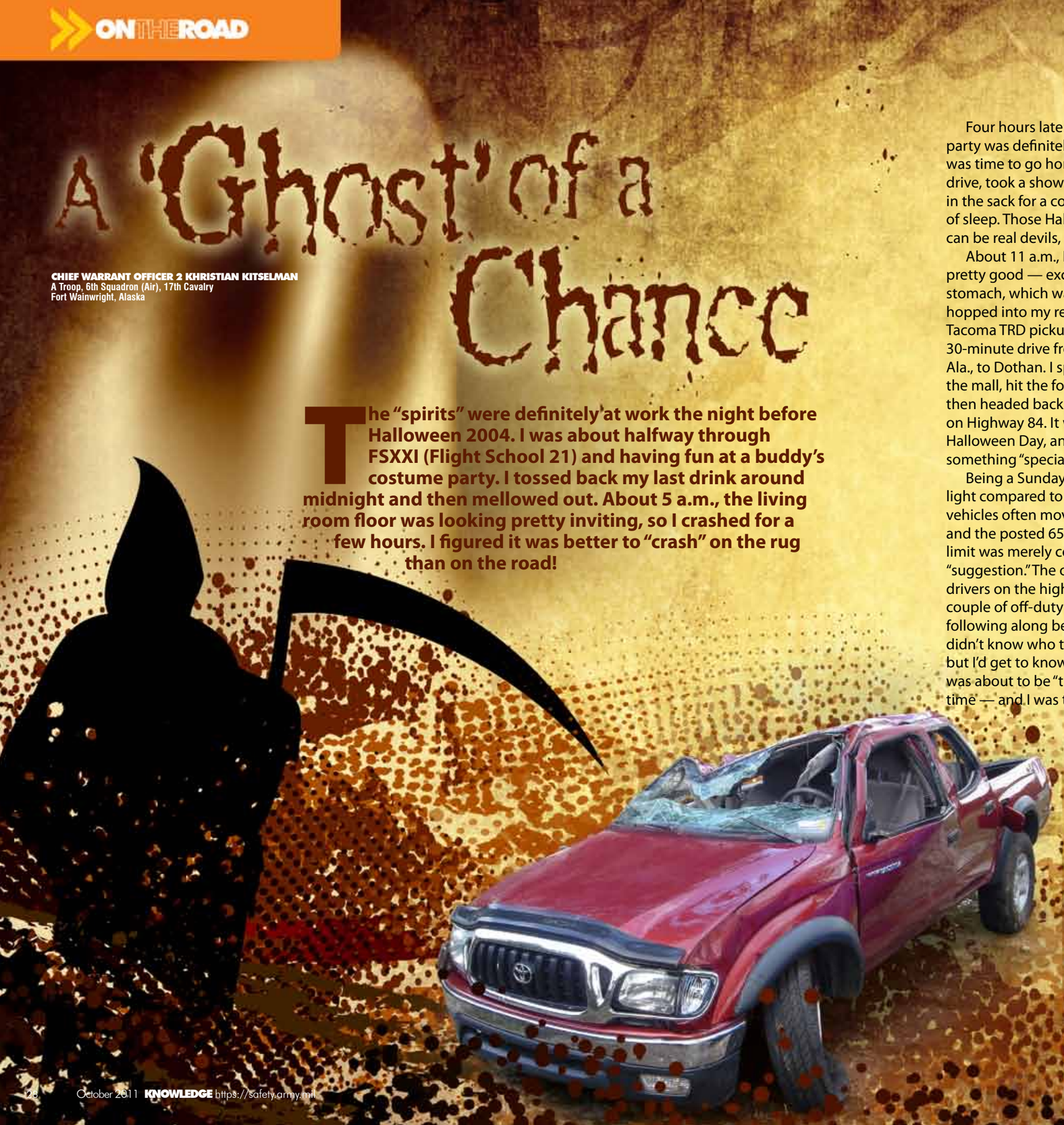
The Army will continue to work and fight in cold weather. Remember the principles above and keep in mind they work not only for combat, but also for off-duty outdoor activities such as hiking, skiing, hunting, running or sitting in the bleachers at a football game. Cold weather doesn't have to be a hindrance. Take advantage of Army-issued equipment and stay ready for the fight.



A 'Ghost' of a Chance

CHIEF WARRANT OFFICER 2 KHRISTIAN KITSELMAN
A Troop, 6th Squadron (Air), 17th Cavalry
Fort Wainwright, Alaska

The "spirits" were definitely at work the night before Halloween 2004. I was about halfway through FSXXI (Flight School 21) and having fun at a buddy's costume party. I tossed back my last drink around midnight and then mellowed out. About 5 a.m., the living room floor was looking pretty inviting, so I crashed for a few hours. I figured it was better to "crash" on the rug than on the road!



Four hours later, I woke up. The party was definitely over and it was time to go home. I made the drive, took a shower and collapsed in the sack for a couple more hours of sleep. Those Halloween "spirits" can be real devils, don't you know?

About 11 a.m., I was feeling pretty good — except for my stomach, which was growling. I hopped into my red 2003 Toyota Tacoma TRD pickup for the 30-minute drive from Enterprise, Ala., to Dothan. I spent an hour at the mall, hit the food court and then headed back to Enterprise on Highway 84. It was now Halloween Day, and the spirits had something "special" in store for me.

Being a Sunday, traffic was light compared to weekdays when vehicles often moved in herds and the posted 65-mph speed limit was merely considered a "suggestion." The only other drivers on the highway were a couple of off-duty Army medics following along behind me. I didn't know who they were then, but I'd get to know them later. It was about to be "trick-or-treat" time — and I was totally clueless!

Trick!

As my eyes slowly closed and I drifted off to Oz, the medics' eyes quickly widened as I drifted off the road. According to them, my truck veered to the right and then made a sharp left turn before hitting a road sign. When my front tire hit the grassy median dividing the lanes, the Toyota began flipping. Luckily for me, every time my truck hit the ground it was on the passenger side. When my truck stopped doing tricks (can anyone say, "Rollover, Toyo?"), I crawled out of what was left to survey the damage. The Tacoma was trashed and I wasn't feeling all that well either.

Treat!

Remember the medics? After watching my Halloween highway hijinks, they stopped to see if I was still among the living. They convinced me I'd closed the gap between this world and the next sufficiently that I'd best stay still and await the ambulance. In due time, the emergency medical technicians arrived, strapped me to a stretcher and hauled me to the hospital which, fortunately, was nearby. However, the "treats" were only just beginning.

As they rolled me into the emergency room, I looked like a monster. Half of my left ear was hanging by a scrap of flesh, and I had a large bruise across my chest. In fact, the bruises were more than skin deep — they went all the way to my stomach and lungs. Then there was the dislocated rib and muscle strain that left me contorted and moaning like a zombie. And it wasn't even Halloween night yet!

Fortunately, despite all the injuries, this Halloween tale ultimately ended with my body and spirit still intact. I can credit that to having gotten into the habit of wearing seat belts years ago. Without them, I wouldn't have had a "ghost" of a chance.

There are lots of excuses people make for not wearing their seat belts. You've probably heard some of them, things such as:

- They're uncomfortable.
- I'm only going down the road.
- I'm a safe, careful driver.
- I'll just brace myself.
- I'm afraid I'll be trapped inside the car.
- I've got an air bag.
- It'll wrinkle my clothes.

I braced myself and ended up with strained muscles. My air bags deployed, but they didn't save me — it was my seat belt that kept me alive in the cab.

Facts are, seat belts are mandatory for front-seat occupants and, in most cases, backseat passengers in all but one state. And if you're a Soldier, you know it's not optional. Uncle Sam wants you, and he wants you in one piece!

So, how about you this Halloween? Will you drive by the rules or fly with the ghouls? Personally, I'd rather skip the tricks and enjoy the treats.

Who Needs a Shot of Adrenaline?

NAME WITHHELD BY REQUEST

As Army aviators, we strive to prepare ourselves for any emergency situation we may encounter. Many hours are spent in the aircraft practicing emergencies to the extent regulations allow. We study Chapters 5 and 9 of our operator's manuals and spend hours in our respective simulators practicing emergency procedures and scenarios. Many of us reach a level of confidence that makes us think we can handle just about anything. Combine that confidence with the good fortune of never experiencing a serious emergency, and your guard may slip a little.

Flight simulators are great tools for emergency procedures and mission training. However, after a while, the simulator can become routine — if you let it. In the back of your mind, you know you can't get physically hurt. How many dual-engine or tail rotor failures have you performed in the "box" and walked away? Do you treat emergencies in the simulator with the same intensity you would in the aircraft? It's too bad a flight simulator can't give you that shot of adrenaline when an actual emergency occurs. That extra jolt adds another aspect to your decision-making process. Here's my story:

The mission was a day, live-fire exercise in support of U.S. Air Force A-10s conducting graduate instructor pilot training for their Joint Air Attack Team (JAAT) phase. The original plan called for two sorties of two Apaches, each providing attack helicopter support against an armored column and surface-to-air missile threats. Our aircraft was scheduled to be part of the first sortie, but due to maintenance problems, we were unable to make the first turn.

Maintenance repaired the aircraft, and we joined the second flight to get some valid training. The mission brief had been conducted earlier in the day. Since we were originally scheduled for the first mission, we hadn't put emphasis on the second mission portion of the brief. My commander and I thought this wouldn't be a problem because it was a day mission and we had already flown parts of the range earlier in the week.

We completed the brief with the second flight, ran up and departed on time as Chalk 3. Because of his previous JAAT experience, my commander was the air mission commander (AMC). We were armed with white phosphorus rockets but no 30 mm ammunition.

As we entered the range, we received a call from the Air Force instructor that we were shifting engagement areas and targets due to range issues. There just went a large part of pre-mission planning. We received the updated mission data and pressed on. It was a longer flight than originally planned, so fuel management was critical.

When we arrived at our firing position, the radios were already busy. The A-10s were ready. We talked to the ground forward air controller and simulated artillery to expedite getting set in our firing position. The AMC in the front seat received a situation report, and we began to run the mission. Because

FYI

In an effort to better serve the aviation community, the U.S. Army Combat Readiness/Safety Center's Air Task Force has launched a new tool with a familiar name — Flightfax. The intent of this online-only publication is to provide Army aviators with a monthly look at near-term accidents, aviation safety issues and a "blast-from-the-past" article from the Flightfax archives.
To view the site, go to https://safety.army.mil and click on the Flightfax link under the Flight Safety tab. You will need an AKO password to access the page. For more information, contact the Air Task Force at DSN 558-3530 (334-255-3530) or email airtaskforce@conus.army.mil.

of the sense of urgency, I didn't take the time to do a proper assessment of our firing position (maneuvering altitude, fly-away plan, etc.) and brief the AMC because I was too focused on acquiring targets, looking for the A-10s and trying to help the AMC. The A-10s made their runs as we engaged our targets, covering their egress.

About 10 minutes into the engagement, I heard two loud reports at the rear of the aircraft and thought I felt a vibration in the flight controls. I started to ask the AMC if he had heard the noise when he cut me off. He shouted, "That's us, that's us!" I guess he heard the same thing. I immediately nosed the aircraft over to establish forward flight. I then asked myself, "Where am I going?" Here comes the adrenaline. We had two Apaches firing rockets on our right, A-10s to our front ingressing and egressing from the left and right, and our firing position was backed up against some tall hills behind us and immediately to our left. We still had no idea what was wrong with our aircraft.

I quickly decided I was going to land. I let my AMC know of my intentions, picked a landing spot off the nose of the aircraft and shot a quick approach. However, our airspeed was too fast for the approach. On top of that, I had hastily misread the terrain. We landed firmly at about a 45-degree angle to down-sloping terrain, running left to right. After a considerable amount of ground run, I was able to bring the aircraft to a stop. The postflight inspection revealed no damage, and maintenance was unable to find or duplicate what had happened. It had to have been luck because skill or precision wasn't what got us safely on the ground.

> "It's too **BAD** a flight **SIMULATOR** can't give you that shot of **ADRENALINE** when an actual **EMERGENCY** occurs. That extra jolt **ADDS** another **ASPECT** to your **DECISION-MAKING** process."

Lessons Learned

As we headed back to the airfield, I replayed in my mind what had happened, my actions and what I could have or should have done to minimize the risks to the hazards we encountered. The list was long. The most important point was I allowed the mission changes, compressed timeline, sense of urgency and other distractions to prioritize my adherence to procedures and standards. The whole sequence of events could've been a lot less intense if I had stuck to the standards, regardless of the situation.

Like I said before — we were lucky. No one was injured (physically) and the aircraft was OK. I got another chance. My boss and I are still flying, and I always try to apply what I learned that day. The scenarios in the "box" are no longer routine or repetitive. Simulators are unpredictable but realistically challenging. You're definitely going to get a shot of adrenalin with in-flight last-minute changes; but that's OK, I really don't need another one.

Left, Right, Left

NAME WITHHELD BY REQUEST

"Left, right, left" — no, we're not talking marching cadence here; we're talking about where smart drivers will be looking before sticking their noses into an intersection. Sure, it's common sense, but that doesn't mean it doesn't have to occasionally be "drilled" into the brains of some of us thicker-headed folks.

It was 1 p.m. on a perfect winter day in North Dakota. The sun was shining, the skies were blue and the roads were clear — you couldn't have asked for better driving conditions. I'd just finished gassing up my car and paying the bill. I'd gotten back in, bucked up (which probably saved my life) and pulled out of the station to head home.

Arriving at a familiar intersection, I stopped and then looked left and right. Everything looked clear, so I hit the pedal and started pulling forward. Imagine my surprise when suddenly a car T-boned me on my driver's side door, breaking my arm and shoving me into the middle of the intersection. The front and side air bags "exploded" into action, breaking my nose and sending blood everywhere. Thankfully, my seat belt kept me inside the car.

It's no surprise my vehicle was totaled. Shortly after the accident, a police officer arrived and asked me what happened. I told him I'd looked both ways before pulling out and didn't see anyone coming. He asked, "Did you look left, right and then left again?"

I said, "Oops … well, uh ... no, sir, I didn't."

About then the "clue bird" landed. The "lights" came on as I realized it would've only taken a fraction of a second to take one last look to the left to be sure. Instead, to save what — a millisecond or two — I trashed my car and painfully rearranged a few body parts. And the fun wasn't over. The police officer provided me a little "memento" of the incident — a $235 ticket for failing to yield the right of way. Not exactly a perfect ending to a perfect day.

If there is one good thing about learning lessons the hard way, it's that they tend to stick. It's now "muscle memory" for me to take that second look to the left. After all, things can come at you very quickly — especially if you're not looking — and mess up your day, or worse. Let me tell you from experience, the old excuse "I never saw him" will only earn you a dirty look and a ticket from a police officer. And don't count on it getting you a lot of sympathy from the doctor, especially if he's just finished patching up your victims.

> "The front and side air bags **"EXPLODED"** into action, **BREAKING MY NOSE** and sending blood everywhere. Thankfully, my **SEAT BELT KEPT ME INSIDE** the car."

When you're stopped at an intersection, pause for a moment to recall your drill instructor's "soothing" voice barking, "Left, right, left!" as you marched down the street. It might just keep you "in-step" with safety.

AVOID 'SMELLING THE BARN'

GUNNERY SGT. STERLING B. GRAHAM
2nd Marine Division,
2nd Assault Amphibian Battalion, A Company
Camp Lejeune, N.C.

Twentynine Palms, Calif., is home to the largest training area in the U.S. Marine Corps. Unfortunately, it's also home to a lot of accidents.

As a young noncommissioned officer, it was my third trip to Mojave Viper, a combined arms exercise we participate in yearly at Twentynine Palms. The base is located in the center of the Mojave Desert, and training is extremely challenging. Knowing this, we began preparing our Amphibious Assault Vehicle platoon on vehicle, weapons and environmental safety. After three months of training, it was finally time to make our pilgrimage out west to train. This year, however, we would learn a very hard lesson.

After a long flight to California, we arrived at our new home for the next 60 days — Camp Wilson, which is located 20 miles from the main base. Camp Wilson serves as the staging area for all training units and is very basic. While there, we live in Quonset huts, eat field rations and enjoy few comforts of home. However, there is one bright spot at Camp Wilson — the Warriors Club, which serves hot chow and beer. There is little time inside of the base camp once training starts, so any free time at the end is highly anticipated.

The last few days of training were hot and fast-paced, and the Marines had performed well during the exercise. Artillery fire, machine guns and infantry all moved in unison to complete the training. Everyone "smells the barn" at the end of an operation, and completing the Mobile Assault Course was no different. Now it was time to head back to Camp Wilson to clean the weapons and enjoy the Warriors Club.

The pace of the movement should have been an indicator of things to come. The Marines were speeding through the desert mountain passes and I had to tell my driver to slow down on several occasions. Once we were back at the base camp, there was plenty of work left to complete. The vehicles had to be safely parked and cleaned, and the weapons had to be cleared and cleaned. As always, I stressed to my crew the most important rule of clearing our weapons: Never point your weapon at anything you don't intend to shoot.

I then climbed on top of my vehicle to pull the barrel out of my M2 .50-caliber machine gun, ensuring my body was out of the way. It is easy to stand in front of the barrel of the weapon to uninstall it, and all the Marines knew this. The M2 has a huge round, and if it discharged anywhere near you, it was seriously going to hurt you. As I was removing the barrel from my gun, I heard a loud bang down the line. I immediately knew it was the sound of a discharging M2. The next thing I heard was terrible — "Corpsman up!" I knew someone was hurt.

While removing the barrel of his M2, a crew chief violated one of the cardinal safety rules by standing in front of the weapon and was struck by a round that was left in the chamber. The round passed through the young Marine's chest and left a large exit wound. He was dead before he hit the top of the vehicle. To make matters worse, he had just re-enlisted and was engaged to be married.

As we sat around waiting for the commotion to subside, the fact that we had needlessly lost a brother began to hit us. The worst part was it easily could have been avoided if he had slowed down and maintained muzzle awareness. For those who were there that day, this tragedy will always be a reminder of what a weapon can do when we fail to adhere to the rules.

FYI

Looking for more information on safe weapons handling? Visit the U.S. Army Combat Readiness/Safety Center's Range & Weapons Safety Toolbox. The site aids commanders and Leaders in the management of range operations and safe weapons handling by providing a centralized collection of resources to establish and maintain safe and effective training programs for ranges and both military and privately owned weapons. Check it out at http://safety.army.mil/rangeweaponssafety.

Get Belted!

BOB VAN ELSBERG
Strategic Communication Directorate
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

"Oh, crap!" I yelled as I jammed on the brakes. An Army vehicle with four Soldiers came across the intersection from my left, violating right of way. Thanks to a tall brick wall, they couldn't see me and I couldn't see them until they entered the intersection. We were in Germany and they had deployed from Fort Carson, Colo., to participate in a field exercise. They were about to help me fulfill my mission for the day (read on to find out how).

"Wham!" — I nailed them broadside as they crossed my lane. I heard them scream and saw the vehicle briefly tip up on its driver-side wheels before it rolled off to my right. I was thrown forward maybe three inches before my shoulder strap bit into me, keeping me from being impaled on the steering wheel or eating the windshield.

After I caught my breath, I jumped out and put up a warning triangle on the road behind the Volkswagen van I was driving and checked the Soldiers inside their vehicle. They were all shaken but uninjured, thanks to the fact they'd all been wearing their seat belts.

The German police came, assessed the situation and cited the other driver for the accident. I looked at him and thought I'd hate to be him when he explains this to his first sergeant. The good part was that no one had to be taken away in an ambulance. Seat belts in both vehicles prevented that.

You know you are responsible to make sure you and any passengers riding with you are wearing seat belts. But did you know there's a wrong way to wear them? Putting them on improperly reduces their ability to protect you and can actually increase your injuries. Check out the following tips for proper wear from the National Safety Council:

Lap Belt

- Be sure the belt is snug. Slack allows room for movement before or during the crash, increasing the risk of spinal cord or head injuries.
- Be sure the belt is flat. A twisted belt concentrates the stress on a small body area, increasing the likelihood of injury.
- Sit with your seat back upright. If the seat is reclined, you can slide under the belt, strike the dashboard or front seat and increase the possibility of abdominal injuries.
- Sit back deeply in the seat.

Shoulder Belt

- Be sure the belt is snug. Too much slack could result in facial and chest injuries.
- Wear the belt over the shoulder, across the collarbone and diagonally across the chest.
- Do not wear the belt under the arm. The collarbone is strong enough to distribute the crash forces, but the ribs are likely to break and puncture the lungs, heart, liver or spleen that lie beneath them.
- Do not wear the belt in front of your face or neck.

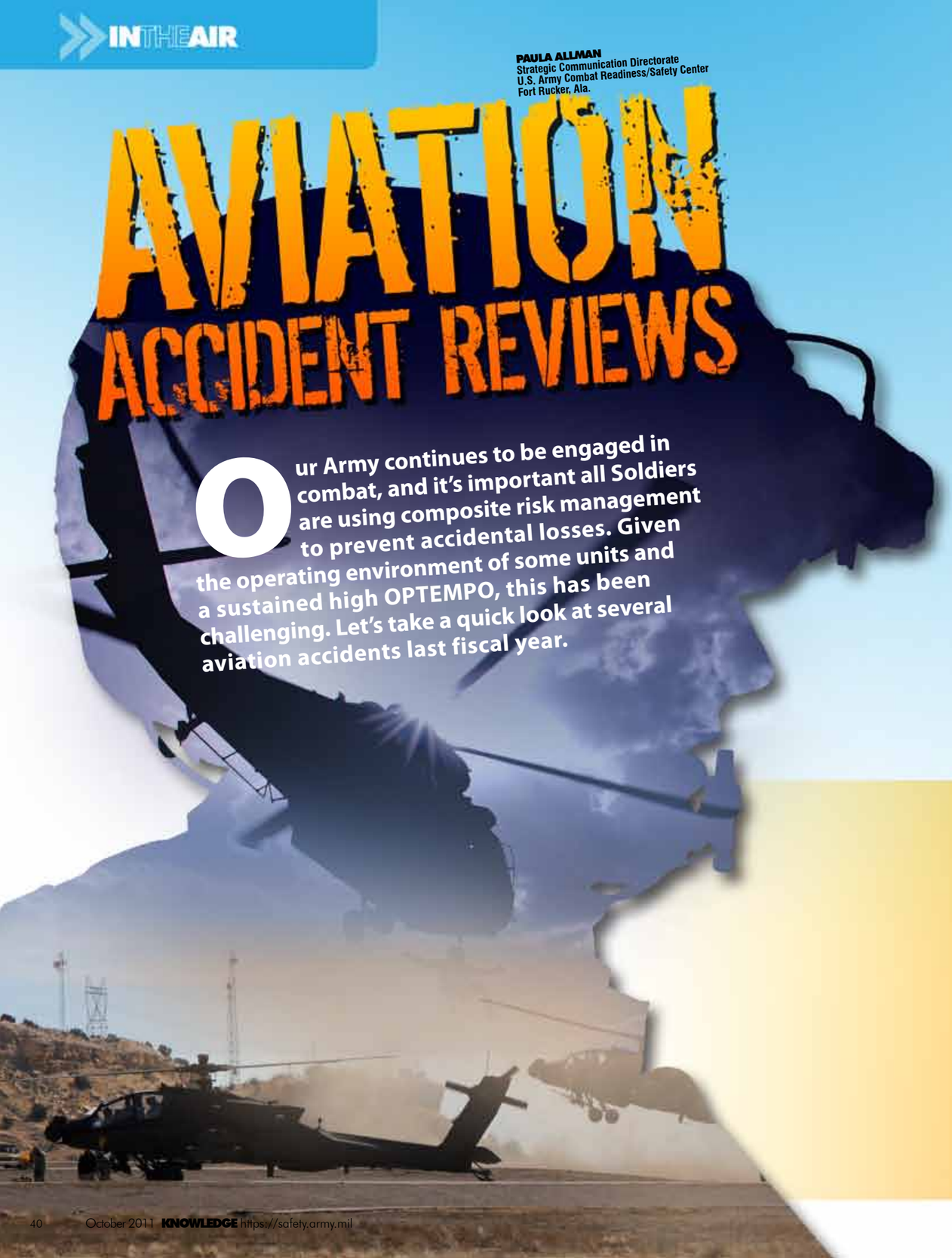
The Weirdest Things Happen

I'd spent the entire day driving around the maneuver area looking for a crash between a civilian vehicle and an Army vehicle. The mission was to write a story on driving safety for the division's newspaper, which we were producing in the field. Unsuccessful, I was driving through a German village before reaching our field location when, at the last moment and at the last intersection, I fulfilled my "mission."

After finishing with the police, I drove the Volkswagen with its crumpled front end back to our field location. When I reported to my NCOIC, he could barely keep a straight face. Later on, he wrote on the duty board, "Sgt. Van Elsberg couldn't find a crash so, instead, he had one. Mission accomplished." «

PAULA ALLMAN
Strategic Communication Directorate
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

AVIATION ACCIDENT REVIEWS



Our Army continues to be engaged in combat, and it's important all Soldiers are using composite risk management to prevent accidental losses. Given the operating environment of some units and a sustained high OPTEMPO, this has been challenging. Let's take a quick look at several aviation accidents last fiscal year.

Loss of Visual Reference

While executing an approach to a partially improved helicopter landing zone (HLZ), the crew lost visual reference with the ground. The pilot on the controls stopped the descent at about five feet above ground level (AGL). The aircraft began drifting to the left, struck a small dirt berm with the main landing gear and rolled left, striking an armored bulldozer with the main rotor blades.

Lessons Learned

While engulfed in a severe dust cloud, the crew was unable to read the cockpit instruments and allowed the aircraft to drift to the left, striking the bulldozer. The pilot lacked experience. He was on his first assignment out of flight school and received only the minimum training in performing dust landings before the accident.

The pilot in command (PC) should have ensured the approach was continued to the ground or directed the landing to be aborted by executing a go-around. The PC was overconfident in the skill level of the pilot and of his own skill level.

Haste Makes Waste

While conducting an approach to hover under night vision goggles (NVG) in a low-contrast desert environment with zero illumination, the crew established a greater-than-anticipated rate of descent over down-sloping terrain to maintain a target AGL altitude. When the terrain along the route flattened out, the crew was unable to arrest the rate of descent before the bottom of the aircraft struck the ground. The aircraft incurred significant damage.

The pilot on the controls had fixated on the vicinity of the intended landing zone and failed to recognize the aircraft was in a significant descent while maintaining a constant AGL altitude. Once the aircraft was established at 150 feet AGL, the pilot shifted focus to the demanding tasks associated with performing the upcoming loss of visual reference approach to hover and did not maintain a proper scan. Subsequently, when the terrain along the flight path flattened, the pilot didn't recognize the aircraft's closure rate with the ground.

A few seconds later, the PC noticed the aircraft had descended to 100 feet AGL and warned the pilot to watch his altitude. Immediately after the warning, the low altitude audible warning sounded and the aircraft struck a 40- to 50-foot-tall sand dune. The crew applied positive thrust and regained control of the aircraft, recovering to their home airfield. The aft landing gear was severely damaged. The aircrew landed the aircraft on pallets and shut down the engines.

Lessons Learned

The pilot's actions were a result of haste. Leaders, reinforce the importance of crews maintaining proper scanning techniques in all modes of flight. Ensure crews address the adaptations necessary to maintain appropriate vertical closure rates over uneven terrain and areas of low contrast. Finally, conduct desert/mountain environmental training prior to deployment when able.

In addition, the PC, having complete confidence in the pilot, let his guard down, failing to maintain proper orientation and inadequately

DID YOU KNOW?

The U.S. Army Combat Readiness/Safety Center has produced several crash rescue videos for use in training first responders, both military and civilian. The videos feature emergency response to Army helicopter accidents and explain how to shut down aircraft engines, fuel systems and electrical systems as well as the proper and safe way to remove injured pilots and passengers from wreckage. The videos also identify the kinds of weapons and ammunition that might be onboard each type of Army aircraft and explain how to "safe" such weapons before entering danger zones. The videos are currently available online at https://safety.army.mil. You will need an Army Knowledge Online password to access the Air Task Force link. The point of contact is Perry Humble, Air Task Force Directorate, at DSN 558-9377 (334-255-9377), or email perry.calvin.humble@us.army.mil. You can also electronically order the videos through the Defense Automated Visual Information System website at http://www.defenseimagery.mil/index.html. It's unrestricted and features an easy-to-use full-text search engine that can quickly find any audiovisual production in the defense inventory.

> By the very **NATURE** of your **WORK** as an **AVIATOR**, you engage in **HIGH-RISK** activities.

supervising the pilot during the maneuver. Aviators must avoid the tendency to let down their guard when flying with experienced crewmembers. There are many examples of highly experienced crewmembers being prevented from making mistakes by their less experienced crewmates.

Assess and Re-assess Missions

While conducting a NVG flight over water at 400 feet AGL with a ground speed of 100 knots in challenging weather conditions, the crew initiated a turn into an area void of visual references and failed to recognize the aircraft was descending and accelerating. The aircraft impacted the water in a left nose-low attitude, resulting in six fatalities and destruction of the aircraft.

Lessons Learned

During the mission planning process, there are many decisions made that affect overall mission risk. Leaders, identify hazards and make a mission risk determination through the evaluation of information such as mission objectives, weather criteria, crew selection, route planning and HLZ selection to name a few. The result is an accurate assessment of mission risk from which an execution decision is made.

It's important Leaders take every measure to reduce mission risk to the lowest possible level before the mission begins. But remember, risk management does not end with mission approval.

Hazards present themselves throughout mission execution, requiring the air mission commander to continuously evaluate newly identified or evolving hazards and update the level of mission risk.

Summary

By the very nature of your work as an aviator, you engage in high-risk activities. The Army's goal is to help you mitigate risks — including those you face every day in the cockpit. Active leadership is the key to halting accidents. When Soldiers violate a procedure or standard, Leaders must take immediate action to correct the violation. In effect, failure to correct the violation sets a new, lower standard and legitimizes the shortcut. Leaders at every level must establish procedures and set and enforce standards that focus on doing things, including the routine things, the right way every time. This is something we owe our Soldiers.

Tasks, conditions and standards, standing operating procedures and regulations have been developed over time for a reason: to ensure safe, efficient operations. Taking or allowing shortcuts does not help Soldiers, nor does it help in combat. Combat requires agility of thought in planning, aggressiveness in action and persistence in execution. Enforcing standards is one of the best ways Leaders can take care of Soldiers.

If it happens ...

The often difficult and confusing task of accident reporting has just gotten easier. On Oct. 3, the U.S. Army Combat Readiness/ Safety Center releases ReportIt, a new, web-based tool that consolidates several existing Army systems into a single, user-friendly accident reporting application.

ReportIt features a pre-populated, question-based interface that allows any user, even those without previous reporting or safety experience, to perform reporting tasks. Leaders and safety professionals are still able to report injury and loss data for the total force — whether military, civilian or contractor — but with expanded capabilities that provide a more complete picture of accidental loss within our Army.

The initial ReportIt launch covers both on- and off-duty ground and manned aviation accidents. Additional releases for UAS/aerostat reporting and a portable disc for non-networked systems are scheduled through fiscal 2012.

LOST

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, email safe.knowledge@conus.army.mil.

AVIATION

AH-64D

CLASS A

- The crew experienced an in-flight emergency during cruise flight at 11,300 feet mean sea level and 85 knots indicated airspeed. The crew was able to land the aircraft; however, the aircraft incurred major damage.

CH-47D

CLASS A

- The aircraft was conducting a combat night insertion of ground troops into a non-standard helicopter landing zone when it suddenly descended while on short final and landed hard.

CH-47F

CLASS B

- The aircrew experienced severe brownout conditions and, upon touchdown, struck a ditch, causing significant damage to the forward portion of the aircraft. The front-right main landing gear was sheared off, causing damage to the structural members and airframe buckling.

CLASS C

- The crew was hover taxiing the aircraft when a parked UH-60L sustained damage from rotor wash.

MH-60L

CLASS C

- The aircraft sustained damage to the forward-looking infrared radar turret, PLS antenna and undercarriage as the result of a rapid descent.

OH-58D(R)

CLASS A

- The crew experienced a control malfunction during hovering flight, and the aircraft impacted the ground.
- The aircraft crashed during combat operations.

UAS

PUMA

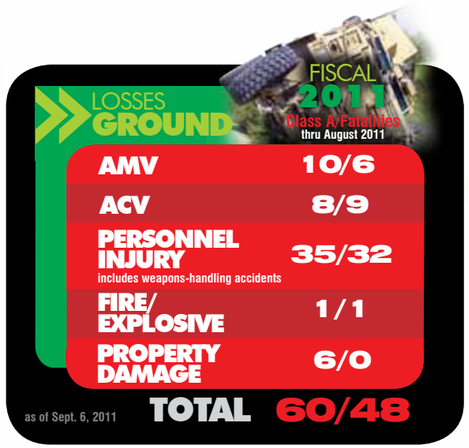
CLASS C

- The unmanned aircraft (UA) was flying recon of an area and lost link with the ground control station. The UA was not recovered.

RQ-7B

CLASS C

- The UA experienced instability during landing attempts and was allowed to expend fuel before descent with the recovery chute.
- During a training flight, the UA descended due to suspected ignition/generator failure. The recovery chute deployed and the UA was recovered.
- During a recon mission, the UA experienced engine failure and crashed.
- The UA experienced engine failure and crashed. The aircraft was recovered.
- The UA experienced overtemp conditions. The flight termination system deployed; however, the aircraft sustained damage.



GROUND

ACV

CLASS A

- Four Soldiers were killed when their Mine Resistant Ambush Protected All-Terrain Vehicle overturned during a river crossing. A fifth Soldier was able to escape the submerged vehicle and survived.

AMV

CLASS A

- A Soldier died after he was ejected from a HMMWV that overturned when he swerved to avoid an animal in the road.

Personnel Injury

CLASS A

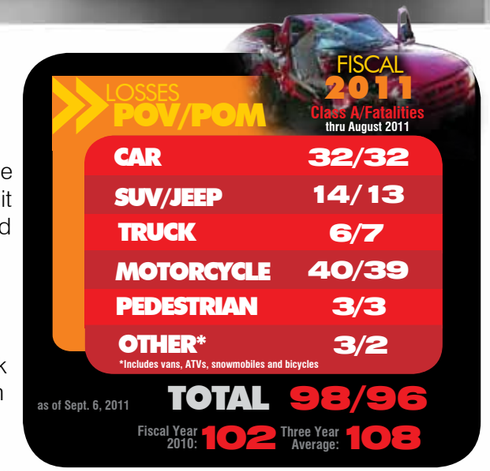
- A Soldier died after he fell off the roof of his two-story home shop.
- A Soldier died after the privately owned vehicle he was repairing at his residence fell off the jack and pinned him underneath.
- A Soldier was found floating in a river. Attempts to revive him were unsuccessful.

DRIVING

POV

CLASS A

- Two Soldiers, one riding unbelted inside the pickup's cab and the other riding in the truck's bed, died when their vehicle went out of control and crashed on a forest road.
- An unbelted Soldier was killed when his vehicle left the road and crashed.
- An unbelted Soldier died after he was ejected from his van when it hit a fire hydrant, overturned and struck a vacant house.
- A Soldier speeding on an unlit rural route swerved to miss an animal, went off the road, struck an embankment and died when her car caught fire.
- A Soldier traveling to unit training ran off the road, struck a tree and later died after being transported to a hospital for treatment.
- A Soldier was killed when the car he was riding in ran off the road, struck trees, overturned and landed on its roof. The Soldier was riding in the backseat and wearing his seat belt.



POM

CLASS A

- A Soldier died after he ran off the road and crashed while trying to avoid a piece of wood that had fallen from a pickup ahead of him. The Soldier was wearing a helmet.
- A Soldier was killed when he lost control of his motorcycle while trying to negotiate a curve, went off the road and struck a fence. The Soldier was wearing full personal protective equipment (PPE) and had been licensed and trained.
- A Soldier was killed when he lost control of his motorcycle on a highway access ramp, slid nearly 700 feet, crashed and was thrown into a concrete barrier. At the time of the accident, the Soldier, who was wearing full PPE and was licensed and trained, was driving more than 100 mph.

TAKE THE CHALLENGE, LEARN THE LESSON.

FIREARMS safety techniques

GIVE IT A SHOT!

Visit https://safety.army.mil/firearm-safety and get on target today

Firearms Safety Techniques, an interactive site, is available for Soldiers, Family members and Civilians to learn about off-duty safe firearms handling. Visit the site for more useful firearms safety resources.

ARMY STRONG.

U.S. ARMY COMBAT READINESS/SAFETY CENTER
https://safety.army.mil

ARMY SAFE IS ARMY STRONG

A BAND OF BROTHERS & SISTERS

SOLDIERS LEADERS CIVILIANS FAMILIES

What does "Take 5" mean to you? If you're like most people, you're probably thinking "take a break." But in safety, time can be both your enemy and your friend. That's why we're asking you – wherever you are and whatever your plans – to Take 5 and think about your environment and situation. Then ask yourself one simple question:

Am I making the right decisions?

Take 5 for Safety

Five minutes, five seconds – or even shorter or longer – take the time to assess your situation and make the smart choices that can save not only your life, but also the lives of those around you.

Take 5 ... then take action.

ARMY STRONG.

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ARMY SAFE IS ARMY STRONG

A BAND OF BROTHERS & SISTERS

TEXTING BEHIND THE WHEEL: A HANDFUL OF DANGER

KNOWLEDGE

VOL 5 NOVEMBER 2011

OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

SNOW WHITE FLIGHT

- PREFLIGHT CHECKS
- COLD WEATHER PPE
- WINTER DRIVING

+

A FROZEN TURKEY TALE

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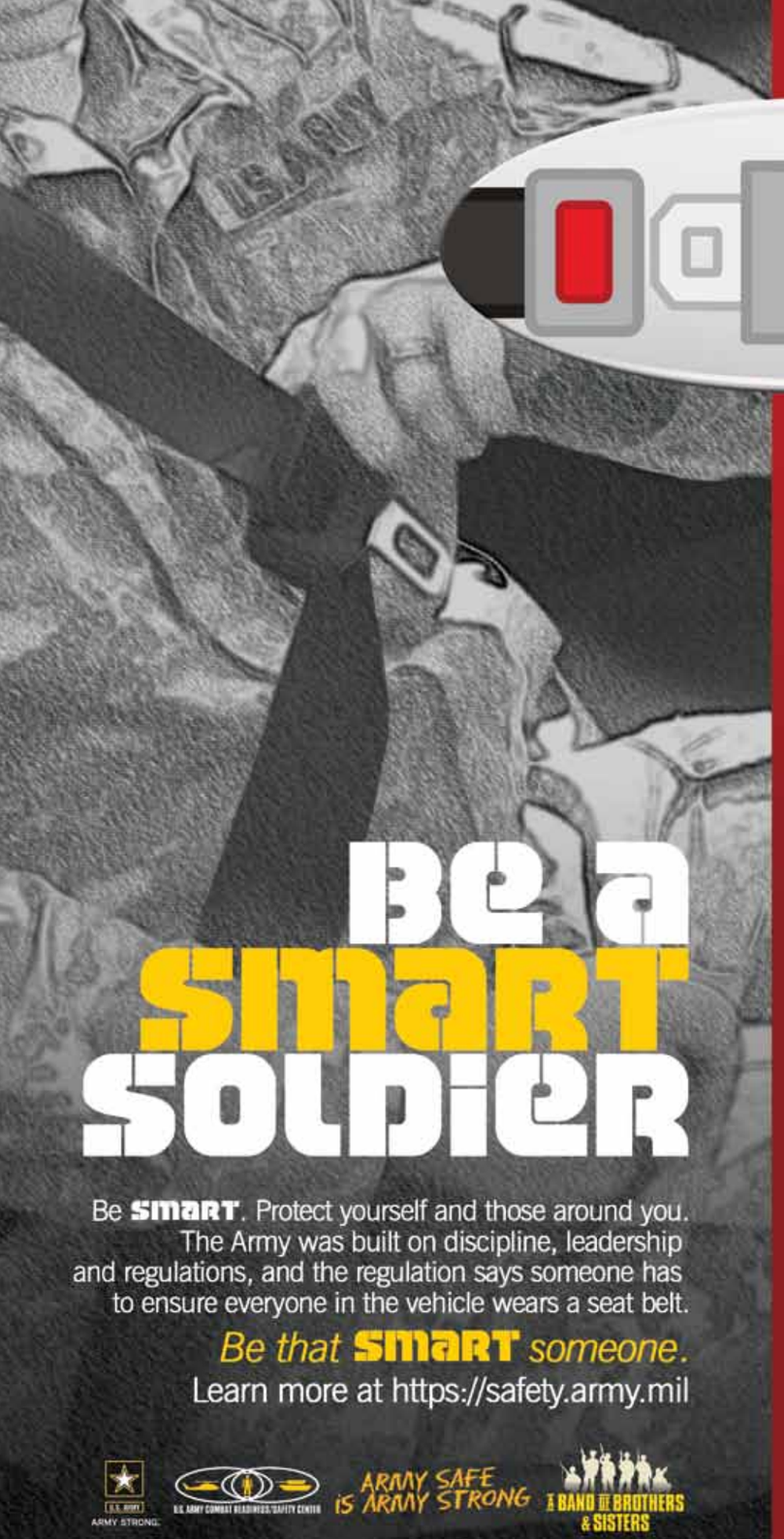
SCAN HERE FOR KNOWLEDGE ONLINE



SMART

SAFE
MATURE
ACCOUNTABLE
RELIABLE
TRUSTWORTHY

KNOWLEDGE

OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

LEADERS SOLDIERS CIVILIANS FAMILIES

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Mission statement: The United States Army Combat Readiness/Safety Center (USACR/Safety Center) supports our Army by collecting, 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 email comments to **safe.knowledge@conus.army.mil**.

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> "Leader engagement and standards enforcement remain **CRITICALLY IMPORTANT** to this **FIGHT**."

RAISING THE HEAT ON RISK

At the direction of Headquarters, Department of the Army, the U.S. Army Combat Readiness/Safety Center's change of command and my retirement have been postponed until further notice. I will retain duties as director of Army Safety and commanding general, USACR/Safety Center. I thank you all for your support and hard work during the past three years and look forward to serving with you in the months ahead.

We're just a few weeks past the close of fiscal 2011, and preliminary figures show our Army held steady on accidental losses during the year, with neither a decline nor increase in Soldier fatalities from 2010. Late reports or reclassifications could change final numbers somewhat within the next few weeks, but there's no doubt our Leaders and Soldiers are doing a fantastic job keeping the focus on safety every day. The fact our Army has maintained historically low fatality rates during a time of war is remarkable, and our challenge will be carrying that momentum forward and saving even more lives in 2012.

Leader engagement and standards enforcement remain critically important to this fight. In fact, the two are mutually dependent — being an engaged Leader means enforcing the standard! On-duty fatal accidents continue to drop because Leaders are more involved in the details of their Soldiers' activities, from PCC/PCI to keeping Soldiers focused throughout mission execution. Off duty, however, the lack of direct supervision shows: Last year, 78 percent of all accidental losses occurred after duty hours and on weekends. Not every Soldier behaves recklessly off duty, but there are many who do and, unfortunately, some pay a deadly price.

If you're not directly engaging with your Soldiers every day, there's no better time to start than now. The chilly nights of fall are quickly giving way to the full effects of winter, and driving hazards will become a real problem as snow and ice appear more frequently in the coming months. Dangerous road conditions and indiscipline are a tragic combination, and many high-risk Soldiers won't change their driving behaviors to accommodate the weather. We have to reach them now and enlist as many of their buddies as possible to keep them on a safe path. None of us should feel awkward about pointing out risky behavior and acts of individual indiscipline. I ask that all of you, both Leaders and Soldiers, assume this responsibility for the good of our fellow Soldiers and our Army.

Information is power, and the USACR/Safety Center strives to give you the tools that will help keep your Soldiers safe. Particularly timely right now is our Safe Fall/Winter Campaign, a toolkit that contains feature articles, videos and posters focused on seasonal safety topics. The campaign is a valuable resource for updating safety boards, building safety briefs or just starting a dialogue on potential hazards, so please download your kit today at https://safety.army.mil. We'll be adding new media to the campaign periodically, so be sure to check back often for the most up-to-date information available. We also recently launched "Roadrageous," a great program designed for Soldiers displaying risky driving behaviors. This is a fantastic tool commanders can use to address and correct high-risk drivers within their formations.

The holidays are near and during this season of thanks, I want to say again how grateful I am for each of you and the dedication you continue to show every day for safety. I wish you all a blessed Thanksgiving and wonderful holiday break filled with Family and friends. Play it safe and always remember the fellow Soldiers who are counting on you!

Army Safe is Army Strong!

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

READY OR NOT?

MASTER SGT. TONY HERNANDEZ
G-4 MT, 3rd Marine Division
Okinawa, Japan

The mission was always the same: Safely transport equipment and personnel over treacherous, enemy-laden terrain in Afghanistan. Over the previous 80 or so missions, we'd followed all of the procedures and it showed. We'd been in country for about six months and hadn't had a single mishap. All procedures were pretty much being conducted from memory. Although we didn't realize it at the time, we were becoming complacent. Then the unthinkable happened.

It was early evening and our convoy commander was summoned to the command operations center. A unit that had been engaged in combat earlier in the day had a disabled vehicle on the north side of a mountain pass. We'd just returned from that northern area after a 36-hour convoy and were looking forward to some much needed rest. But as luck would have it, someone needed assistance, so we headed back out.

This particular pass was well known to the convoy. It was the enemy's preferred location for ambushing coalition forces. All of our combat experience had been gained in this rugged, often impassable stretch of mountainous terrain. This area had become our war zone, and we were always prepared for an enemy encounter. We were meticulous in our planning and had never suffered a casualty. We were good … or so we thought.

This night was no different, and we were motivated to go back out and "get some." The night vision equipment, as well as all our infrared equipment, had been checked and double-checked for serviceability — just in case. We never wanted to find out that a piece of equipment was not working properly when we needed it most. We were always ready for war.

The convoy commander conducted the convoy brief while the assistant convoy commander made sure all communication equipment was operational. We had food for three days and enough water to last at least five days. We also had plenty of ammunition in case of a heavy battle — something we hadn't been exposed to yet. We'd followed these procedures for the previous six months and had everything down pat. We'd never been in a gunfight only to realize we'd forgotten something or could have done better if we'd brought something else. We were past second-guessing. In fact, other convoy commanders would often ask for our help in employing the same procedures and tactics.

Eventually, we departed for another potential encounter with the enemy, expecting once again to prove our superiority. We'd mastered our tactics and procedures, and there was no way we could come up short. We'd been in at least seven firefights with the enemy and always came out on top.

The enemy's weapons of choice were improvised explosives devices, which were spread throughout the pass. The convoy commander had just finished radioing headquarters that we were three kilometers from the pass when

the first vehicle in our convoy, a Mine Resistant Ambush Protected vehicle, hit an IED. Engineers had swept the area for IEDs, but, as was often the case, these explosive devices were more sophisticated. This particular device had a carbon-based fuse, which made it harder to spot with our metal detectors.

The convoy commander, who often rode in the first vehicle, had already hit five other IEDs before this one. However, this device was so powerful that it caused significant damage to the MRAP and totally dismantled its mine roller. Fortunately, no one was injured. The mine roller had done its job — saving lives and equipment.

The MRAP's crew was evaluated and treated, and the convoy continued. The damaged MRAP moved to the second spot in the convoy until we arrived to recover the disabled truck. There, the convoy commander decided to replace the turret of his MRAP with the one from the disabled vehicle. The Marines took a much-deserved rest while the switch was made. Once the vehicle was recovered, it was time to head south again.

About a kilometer south of the earlier IED blast, the convoy began taking indirect and small-arms fire. The convoy commander decided to use a "leapfrog" method to get everyone out of the kill zone and gain fire superiority. (This is where one gun truck provides suppressive fire until the next one comes up to replace it. The vehicles continue leapfrogging until all are out of the kill zone.)

Everything was going well until the damaged MRAP began shooting and hitting well below its intended target. The truck's fire was ineffective, and the enemy was gaining the upper hand with their machine guns. That's when the convoy commander called in the other gun trucks to provide suppressive cover fire while all the other trucks got out of the kill zone. Luckily, there were eight gun trucks in this convoy. When all the trucks had passed, we outflanked and eliminated the enemy.

Once we returned to base, the weapon on the damaged MRAP was examined by an armorer to determine why it was shooting so low. He discovered the barrel had been damaged internally from the IED blast — something we hadn't considered. This provided us an important lesson learned: We must always conduct preventive maintenance checks and services on all of our convoy vehicles, regardless from where we are departing.

PMCS are the checks, service and maintenance required to be performed before, during and after any type of vehicle movement or before the use of equipment. Most pieces of equipment have a PMCS chart used to go over every detail needed to ensure the proper function of every mechanical item or non-mechanical surface. Checks are also done at weekly, monthly, semi-annual, annual and bi-annual intervals, dependent on the specific equipment.

Doing a PMCS check every time equipment is used will reduce the number of failures and prevent accidents. It will also reduce the number of injuries during training deployments and exercises, improve effectiveness in combat and increase the Soldier's ability to implement their equipment. As we discovered, one damaged weapon left unchecked can put an entire convoy in danger.

FYI

To learn more about Preventive Maintenance Checks and Services, vehicle operations and ground safety programs, visit https://safety.army.mil/groundsafety/.

Handful of DANGER

RETIRED ARMY SGT. 1ST CLASS CINDY R. MCCLENDON
Fort Buchanan Garrison Safety Office
Puerto Rico

It was Thursday afternoon and my company was having its end-of-the-day formation. I was looking forward to the beginning of a four-day weekend. When it was time for the safety briefing, my company commander spoke first, saying the usual, "Don't drink and drive, and don't drink underage." Next up was the first sergeant. He began by saying how important every Soldier was to the company.

From that point on, I didn't hear a word he was saying because I was too busy mentally planning my weekend. I was thinking about getting my hair and nails done, what I would wear to the club that night and calling my boyfriend to arrange to meet up after the club.

Finally, the first sergeant finished his safety briefing and we were released until Tuesday morning. I ran to my room, changed out of my uniform and dashed to my car. Traffic was congested on the road, but that didn't prevent me from picking up my cellphone and trying to call my boyfriend to make arrangements. I tried to call him twice, but got no answer. While I was dialing his number a third time, I almost ran into the car in front of me. Oops! Still, I got no answer.

I got my hair and nails done and tried calling my boyfriend again, but the phone just rang. While driving back to post, I decided since I couldn't reach him on the phone, I'd just send him a text. I began texting as I drove, looking down at the phone, pressing two letters and then looking back up at where I was going. This went on until I looked up and saw I'd drifted into the oncoming lane and was about to hit a car head-on. I quickly dropped the phone and pulled back into my lane. However, when I dropped my phone, it landed on the passenger-side floor. Now that I was back in my lane, I wanted to finish my text. I tried several times to reach over and pick up my phone, each time taking my eyes off the road for just a second or two.

I finally reached my phone and consoled myself with the thought, "I only drove off the road once or twice." I had started texting again when I suddenly heard a car horn. I looked up at the road and quickly hit my brakes. I'd hit the side of a car in an adjacent lane. I remember seeing a "Baby on Board" sign on the side window. I hoped there wasn't a baby inside.

I immediately got out of my car, only to hear the baby crying. I thought, "What have I done?" I called 911 and then asked the lady in the car, "Are you and the baby all right?" Her reply was, "If you hadn't been texting and driving, we'd all be all right." I called my first sergeant, who immediately came to the scene of the accident. When the police asked what happened, the lady didn't tell them I was texting while driving; however, she had told my first sergeant. He said, "Didn't you listen to my safety briefing? I said absolutely no texting while driving. It's just as bad as drinking and driving!"

My first sergeant was very disappointed with me. He said, "Up until this point, I thought you were a responsible Soldier." This made me feel even worse. I had plenty of warning signs on the road that day while I was driving, but I chose to ignore each one.

How could I be so irresponsible? My car was wrecked, I injured two people, my first sergeant was disappointed and the company commander took away my four-day weekend and many more to follow. Still, I consider myself lucky. I could've killed myself and two other people.

Since that day, I've never again talked or texted on a cellphone while driving. I pay close attention to safety briefings and remind my fellow Soldiers to never text and drive. After all, is it really worth a collision to have a conversation?

Check Your FUEL Sample

CHIEF WARRANT OFFICER 3 SCOTT SIMS
Company B, Brigade Special Troops Battalion
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Author's note: In the interest of time and sensitivity of personnel, I will only use my name. I will refer to the senior leader as "Pilot 2." This experience was not only about complacency, but also about not doing the right thing!

I was designated as the pilot in command for the flight of Pilot 2 and myself. Our tasking was to launch an OH-58A/C from our facility; fly an hour north, where we would perform a range sweep; refuel; and then return to home station. It sounded easy, and we had done it many times before.

However, the following factors caused us to have a not-so-routine flight that day:

- The mission was assigned the day prior, and I decided to do the preflight the evening before.
- The facility standing operating procedures stated that fuel samples could not be taken while aircraft were in the hangar.
- For the next morning's mission, I coordinated a time to arrive at the airfield and a proposed takeoff time.
- Pilot 2 showed up early and had the aircraft moved out to the launch pad.
- I arrived later and Pilot 2 gave me the "ready-to-go" sign.

Here was the start of my failure to do my PC duties. I started the aircraft, everything was going fine and we were on schedule. As we cleared the airfield, I asked Pilot 2 to start a fuel check. As he wrote down the numbers, we both looked at each other and said, "Those numbers can't be right." I told Pilot 2 I was turning back; something was obviously wrong. Our fuel gauge was reading 600 to 650 pounds of fuel, which is not where it should have been. We landed back at our facility without incident.

Pilot 2 asked me if I had checked the fuel sample. I told him I hadn't because I assumed he'd done it after pushing the aircraft outside the hangar. As it turned out, he hadn't checked the fuel sample either.

Our maintenance personnel pulled a sample and found water in the fuel. After further inspection, they found water had just made it to the fuel pump and filter. We had, at most, only seconds before the engine would have stalled due to lack of fuel.

Going a step further, we examined the maintenance records and asked the crew chiefs why there was so much water in the fuel. We found out the engine had been washed just prior to the flight. The crew chief, attempting to unclog the engine deck drain, had sprayed water up the fuel vent tube instead of the engine deck drain tube. Both tubes come out next to each other on the pilot's side of the aircraft.

I should have paid attention during the preflight and asked the right questions. If I had, we could've identified the problem, avoided the incident and performed our mission with another aircraft. Also, had I properly checked the fuel sample and not assumed the other pilot had accomplished that, we would've completed this mission successfully.

AIRBORNE!

A Frozen Turkey Tale

WILLIAM J. EGGLESTON
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Deep-frying has become a very popular way to prepare Thanksgiving turkeys in recent years. Aside from the fact it tastes great, it's also a good way to speed up the cooking process. Using traditional roasting methods usually takes up to five hours; but with a deep fryer, an entire turkey can be ready in about 30 minutes, depending on its size. One Thanksgiving morning, I awoke ready to give deep-frying a shot.

In preparation for my holiday feast, I had removed the 20-pound turkey from the freezer three days prior to defrost. I was confident this would give the bird plenty of time to thaw. Ever the safety-conscience individual, I read the directions for my new deep fryer and stationed it exactly 20 feet from the house, almost to the end of my driveway. Then I hooked the fryer to the propane tank and started the fire. I filled the fryer to the designated line with peanut oil, and in less than 20 minutes, the thermometer read 375 F.

Once I removed the wrapping from the turkey, I thoroughly cleaned it inside and out. I noticed the inside of the turkey was extremely cold, but I was sure it had defrosted. After adding seasoning and using a syringe to inject the turkey full of butter, I headed to the fryer.

By now, the thermometer on the fryer read 495 F, and I knew it was time to drop in the turkey. I placed the bird into the frying basket and again checked the thermometer, which now read 500 F. Lifting the lid off the pot, I dropped the turkey into the hot oil.

To my surprise, the oil started rapidly rising to the top of the fryer with no indication of stopping. The next thing I heard was a loud "BOOM!" as the turkey ascended 40 to 50 feet into the air. Hot oil flew out of the fryer 15 feet in every direction, even falling on my next-door neighbor's car. As I searched the sky for my turkey, I didn't notice the peanut oil had also leaked down the sides of the fryer and reached the flames of my propane tank. That started a fire that spread 15 feet around the fryer. I then watched in horror as my front yard went up in flames! Since I was now unable to turn off the propane, the fire kept growing until the fire department arrived, extinguished the fire and shut off the tank.

So what went wrong? For starters, my turkey was not fully defrosted. I kept the turkey in the refrigerator three days prior to cooking it and it still didn't fully thaw. I also examined the bird while cleaning it — double checking that it was defrosted — but apparently it wasn't. Plus, I exceeded the ideal oil temperature for deep frying a turkey, which should be between 325 and 350 F.

Deep frying a turkey is very dangerous, especially for first-timers. A lot of things can go wrong with a fryer filled with hot oil. If you're considering deep-frying a turkey this Thanksgiving, here are a few safety and cooking tips from the U.S. Department of Agriculture and www.turkeydeepfryersinfo.com that can help make your holiday meal delicious, not infamous:

- Select a cooking vessel large enough to submerge the turkey completely in oil without it spilling over. The oil should cover the turkey by 1 to 2 inches. To determine the amount of oil needed, do a preliminary test using water. Place the turkey in the cooking utensil and add water to cover. Then remove the turkey and measure the amount of water. This is the amount of oil needed.
- Choose a safe location outdoors for frying a turkey. The turkey fryer needs to be outside on a flat surface. Do not deep fry a turkey in a garage or a covered carport.

- Always keep a fire extinguisher (rated for grease fires) nearby. Large oven mitts or fireplace gloves must be worn. Always wear eye protection, although full-face protection would be even better. Do not allow guests, especially children and pets, near the turkey cooker.
- When placing the turkey into the oil, turn off the flame. Slowly and carefully lower the turkey into the hot oil. Once the turkey has been safely lowered, turn the flame back on and constantly monitor the temperature of the oil with a thermometer during cooking. Never leave the hot oil unattended. Allow approximately three to five minutes per pound cooking time. Remove the turkey from the pot and drain the oil from the cavity. Check the temperature of the turkey with a food thermometer. The turkey is safely cooked when the food thermometer reaches a minimum internal temperature of 165 F in the innermost part of the thigh and wing and the thickest part of the breast.
- If the turkey is not done, immediately return it to the hot oil for additional cooking. When the turkey is done, remove it from the oil and place it on a sturdy tray lined with paper towels. The skin can be golden to dark brown to almost black. Let it rest about 20 minutes before carving.

> "**DEEP FRYING** a turkey is very **DANGEROUS**, especially for **FIRST TIMERS**. A lot of **THINGS** can go **WRONG** with a **FRYER** filled with **HOT OIL.**"

Regardless of your reason to deep fry your next turkey, it should be noted that there are some inherent and real dangers associated with frying a bird. You need to be absolutely sure you put safety first and take every precaution to ensure you have a safe holiday. Gallons of hot oil and open flames should never be taken lightly.

Take 5

Deep Fried, Safety Style

- Keep the fryer in full view while the burner is on
- Place the fryer in an open area away from all walls, fences or other structures
- Never use the fryer in, on or under a garage, breezeway, carport, porch or any structure that can catch fire
- Raise and lower the food slowly to reduce splatter and avoid burns
- Cover bare skin when adding or removing food
- Check the oil temperature frequently
- If the oil begins to smoke, immediately turn off the gas supply
- If a fire occurs, immediately call 911 or your local fire department; never attempt to extinguish the fire with water

Source: Consumer Product Safety Commission

ARMY STRONG. U.S. ARMY COMBAT READINESS/SAFETY CENTER https://safety.army.mil ARMY SAFE IS ARMY STRONG BAND OF BROTHERS & SISTERS

A Lot to be Thankful For

SGT. 1ST CLASS MARK C. STEINFELD
Forces Command
Fort Bragg, N.C.

Many of us will hit the roads this holiday season to spend time with Family and friends. While you're planning for the good times, don't forget to plan for a safe road trip as well. Back in 1999, my Family hit the road to go from Fort Stewart, Ga., to spend Thanksgiving at my parent's home in Florida. When we sat down for our Thanksgiving meal, we wound up having more to be thankful for than we originally anticipated.

We'd made the four-hour drive dozens of times. Everything had become automatic; we knew the route, speed limits and construction zones. I was riding in the front passenger seat. I'd gotten the flu shot the day before and, as was common back then, feeling pretty miserable. I reclined the seat, opted not to wear my seat belt for the sake of comfort and drifted off to sleep.

I woke up two hours later to the sound of car horns blaring as we slowed down on Interstate 295 near Jacksonville, Fla. We'd encountered dense traffic and rain — a deadly combination. I had an overwhelming urge to put on my seat belt and did so. Less than five minutes later, we were doing at least 40 mph when we skidded into the back of a tractor-trailer. As we were skidding, I felt utterly helpless and I remember yelling, "Brace yourself!"

Time seemed to move slowly during the impact and I was acutely aware of each detail. I felt small ripples and vibrations as the hood buckled. Suddenly, we came to a violent stop. The air bags deployed, hitting my face hard enough to momentarily knock me unconscious. White powder from the air bags was everywhere. Most importantly, however, the seat belts worked and kept me from being thrown into the windshield or ejected forward between the car and the trailer.

Physically, I suffered only bruised ribs and a totaled car, while the driver had only minor scratches to her hands. My then 9-month-old daughter — who was sleeping in the backseat in her properly installed, rearward-facing car seat — was uninjured. The next day, which happened to be Thanksgiving, we sat at the dining room table and said a prayer of thanks that we were alive and not planning a funeral.

When I tell this story, many say it's a miracle I'm still here. Certainly, if I hadn't buckled my belt when I did, I wouldn't have survived. How many people are fortunate enough to get the chance to put on their seat belts just before they need them?

I'm not going to count on being that lucky twice in this life. Now, when I hit the road, I count on everything I have — not just my air bags, but also my seat belts — to protect me should there be a "next" time. Some things are too important to leave to chance. «

DON'T LEAVE YOUR SAFETY TO CHANCE

Before hitting the road, hit the U.S. Army Combat Readiness/ Safety Center's website at https://safety.army.mil/ and check out the Travel Risk Planning System, otherwise known as TRiPS. By putting safety into the front end of your planning, you won't have to count on luck.

TRAVEL RISK TRiPS PLANNING SYSTEM

RULE OF THUMB

NAME WITHHELD BY REQUEST

When on duty, most of us are usually pretty good at wearing our personal protective equipment. So why do we fail to properly protect ourselves when we are off duty? For example, if given the task of cutting the grass, we should perform the job in boots, long pants, goggles or glasses and hearing protection. Other examples of good PPE use include the equipment Soldiers wear when handling chemicals or hearing protection on firing ranges. I believe the reason we are not as good at protecting ourselves when we are off duty is we don't always follow the safety "rule of thumb." As we head into winter, it's time we consider it.

A colonel at my last duty station always included the safety rule of thumb message in his briefings prior to every long weekend. Although put into different words, the message was also something I heard several times while attending the Aviation Safety Officer Course. The safety rule of thumb states that there is no difference to you, your Family or the unit if you cut off your thumb while at work or when off duty. If you lose a thumb, your Family has to take care of an injured Soldier, and the unit suffers by losing your expertise. This ideology applies to every injury, and the safety message should reverberate throughout our ranks. We need to take care of ourselves and look out for each other on and off duty.

As a kid, I ice-skated a little bit. When I arrived at my duty station in Alaska, I became fascinated with the speed and grace of hockey players. I signed up for skating lessons at the physical fitness center, and on the first day watched a Soldier's wife lose her footing, fall backward and bang her head on the ice. As the blood pooled on the ice and she was carried away on a stretcher by the medics, I thought, "I'd better get a helmet." But I didn't … at the risk of looking uncool. I was lucky enough to complete all of my lessons without hurting myself. (Coincidentally, that same winter, a Soldier in my company was not wearing a helmet and suffered a fatal injury while snowmobiling.)

After learning to skate, I was ready for recreational hockey. Can you imagine a 29-year-old about to play his first hockey game? I asked the fitness center front desk attendant what equipment was required to play. He told me all I'd need was a helmet and stick. So, I bought a nice helmet, some shin pads, a cheap stick and showed up for the next recreational hockey session. Since this was a "no-check" league, I figured I had all the equipment I would need. I was wrong.

During my second game, I smashed my pinky finger between my stick and the glass. Four years later, it's still crooked. Fortunately, over the next couple of years, my hockey game improved. During that time, I watched as the "newbies" came in to give the sport a shot. Just like I had a few years earlier, they came in partially protected and most left limping.

> "I strongly **ENCOURAGE** everyone to **CONSIDER** a comprehensive **PPE PLAN** before hitting the **ICE** or **SLOPES**."

During the ASOC, I was curious about winter sport-related accidents, so I cruised through the U.S. Army Combat Readiness/Safety Center's accident database. I found several skiing accidents, most of which resulted in injuries to the head, wrists and knees. I strongly encourage everyone to consider a comprehensive PPE plan before hitting the ice or slopes. Last year, a Soldier suffered a spiral fracture because a ski binding was too tight and failed to release in a fall. The majority of knee ligament sprains resulting from skiing are due to binding failures. Numerous skiing websites emphasize the importance of a properly fitting, properly functioning binding.

Most of us will participate in some hazardous activity this winter. We need to evaluate our experience level and put away our egos. All of the accidents and injuries I've mentioned most likely could have been prevented with the proper use of protective gear.

Before you participate in any off-duty activity, evaluate the event as you would while on duty. Don't choose to accept greater risk because you're not on duty. On or off duty, the safety rule of thumb always applies.

SNOW WHITE FLIGHT

BRIAN BLANTON
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It was October 1997 when my UH-60 flight crew and I had a mission to fly from Croatia to our higher-command base in Bosnia for the pilots to attend a briefing. Little did I know what was in store for us.

The flight was one of many we took to Bosnia, but this time it was a little different. It was snowing. The normal day began by going through the checklist to make sure we had everything. The brief was standard, and the pilot in command briefed about the snow in the weather forecast. The flight normally took 15 minutes when it was clear, blue and 22; for non-aviators, that's basically a nice, sunny day.

I preflighted the helicopter, loaded the equipment and made sure everything was in place. The pilots and I geared up and started our normal before-takeoff routine. Once we were in the air, the snow wasn't too bad. Although we could've taken many different routes, the one that is most important in weather is the "bad weather" route. We went the normal route.

During the flight, we were lighthearted, joking and talking about how we needed to beat the weather coming back. Once we landed in Bosnia, the pilots left for their briefing and I started maintenance on my helicopter. Our crew had a plan that when they were done with their brief, I'd be done with maintenance.

While conducting maintenance, I noticed the snow was coming down hard. I looked toward the bad weather route and it didn't look good at all. I checked my watch periodically and looked at the sky to see if the weather was going to cooperate with us. Sometimes it would get bad and then it would let up. I thought it was going to be the luck of the draw when we could take off.

After I was done with maintenance, I got off the helicopter as one of my pilots met me to discuss an issue. He told me our PC was checking weather and a Soldier needed her bags loaded onto the helicopter because she was returning from emergency leave and had to get back to base.

I loaded the Soldier's bags and briefed her. My pilots then came out and said the weather wasn't good; however, as a team, we decided we could fly the low weather route and be fine. My pilots briefed the return flight. It was a standard brief, just with snow added to it. We took off and started flying toward the bad weather route when a big gush of snow plowed into us. We slowed down and discussed our options of either returning to our home station or staying in Bosnia. We decided we didn't want to stay in Bosnia; we wanted to go home.

For the past six months, we had the same crew. We had about 250 accident-free flight hours. We all knew each other well and worked well together. For that reason, we started down the low weather route. We quickly realized this wasn't going to be the normal 15-minute flight. As we chugged along, the weather got worse. One of the pilots upfront said he couldn't see the ground. The other pilot and I quickly picked up our scan and replied we could see the ground. About 45 minutes went by flying like this. We finally got a little bit of a break with the snow letting up, but that only lasted about 20 minutes.

We were back in the thick

of the falling snow. During this entire time, the crew talked about what to do if there was an emergency, whiteout or other various problems that could happen. As I scanned my area, I could see houses about 50 feet below us — backyards, parked cars and animals. I suddenly heard both pilots say they couldn't see the ground. My heart pounded and I quickly replied with, "I've got the ground — I can see the ground." Now I knew we were in for a long flight.

As we chugged along, one of my pilots navigated and kept us on track so we knew our location on the map. For the next hour and a half, every 10 minutes one of us — or two, at times — would say we couldn't see the ground. To say the least, it was very tiring and stressful.

We were about 10 miles out from our base in Croatia. A little relieved, we thought we were home at last. Unfortunately, we were "counting our chickens before they hatched" because right in front of us stood 100-foot-tall power lines. The PC's plan was to hover up and see if we could cross the power lines. However, as we ascended, we quickly realized that was not going to happen, so we descended and settled on the ground. This was the first time we were able to land because there were landmine threats in the Balkans and we were briefed to only land in plowed fields.

We pondered for a while on how we were getting across the power lines until one of the pilots suggested landing in someone's backyard and taxiing under the power lines, a family came out and watched us from their back porch.

Once we made it under the power lines, we picked up and flew back to base. A normal flight of 15 minutes took us 2½ hours. I was glad to be back. Once we shut down the helicopter and took off our flight gear, we conducted an after-action review. We all knew we hadn't done what was best for the crew. Our wanting to get home overcame our thinking rationally and being safe.

Lessons Learned

We should have done many things differently. I truly believe the most important thing we did right was we kept talking and monitoring each other. We discussed and analyzed all actions as a crew as we planned and executed this mission. Crew coordination saved our lives that day.

We had a lot of faith in our pilots to get us home safely. Both were experienced, and one was the forward support team lead for our area. Looking back, however, it was clear we had gone from having faith in our pilots and ourselves to becoming overconfident. As many crews have found out the hard way, being overconfident in a helicopter can put you underground in a casket. We were fortunate to live to tell our tale.«

> "We all **KNEW** we **HADN'T** done **WHAT** was **BEST** for the crew. Our wanting to get **HOME** overcame our **THINKING** rationally and **BEING SAFE.**"

A JOYRIDE GONE BAD

RETIRED COL. NEIL MILES
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It was a cool fall night in the sandhills of Nebraska, and I was about halfway through my shift as a state trooper. Assigned to a remote duty station, I'd learned to work by myself. When something happened, many times I talked directly with the local sheriff's office, which was in the middle of my work area. I was patrolling near the city of Alliance when I received a radio call of an accident with injuries.

The dispatcher gave me the location as seven miles south of Alliance at the county line. I recognized it as a big curve on Hall Ranch hill. The dispatcher reported a vehicle had overturned, pinning the driver beneath it, and that an ambulance had been called from the volunteer fire station. I activated my red lights and siren and rushed to the location.

As I approached the scene in my patrol car, I could see a large vehicle on its top in the northbound ditch. A deputy sheriff also arrived as I bailed out of my unit. When we ran down to the car, all we saw was a hand sticking out from beneath it. The deputy grabbed the exposed hand and shouted to the person that we were there to help. The young man gripped the deputy's hand and would not let go. As we looked to the left, we could see fuel leaking onto the ground from the gas tank. The driver, a 14-year-old boy, was pinned face-up with only about two inches between his head and the car's caved-in roof.

We realized we had to get him away from the car before it had the chance to catch fire. We knew there was no way the two of us could lift the car and free him. The deputy stayed with him as I ran to my unit and retrieved a spade from the trunk. When I got back to the wrecked vehicle, I quickly dug a trench in the sandy soil beneath the driver as the deputy continued to console him and grip his hand. Once the trench was deep enough, we slid the driver into it and pulled him from beneath the car to safety. He cried as we freed him from what had been a death trap and the possible danger of being burned alive. In the distance, we could hear the siren of the approaching ambulance that would transport him to the hospital.

Once we got the vehicle removed from the scene, we drove to the hospital to check on the boy's condition. I interviewed him and his parents to complete my investigation. The interviews revealed that the boy had been home alone and decided to take the family car for a joyride. He was speeding when he lost control in the curve, went into the ditch and rolled twice and the car landed on its roof. Not wearing his seat belt, he was thrown through the driver-side window onto the soft sand, where he landed on his back. As so often happens in rollover accidents, he was ejected into the path his vehicle was rolling, and the car landed on top of him. Ending up well away from the highway, he was able to reach a piece of chrome door trim and flag down a passing motorist.

Although the car was a total loss, the young driver walked out of the hospital the next day with just bumps and bruises. The fact that he survived was purely a matter of luck. Most ejected motorists who wind up beneath their vehicles don't walk away.

So what about you? When it comes to seat belts, will you obey the rule or hope to be the lucky exception? If you roll the dice and lose, you may come up short — six feet short.

DID YOU KNOW?

According to the National Highway Traffic Safety Administration, occupants who are wearing their seat belt are 75 percent less likely to be killed in a rollover crash.

If it happens ...

ANNOUNCE YOUR ACTIONS

It was late summer in Korea during my annual proficiency and readiness test as a UH-60 crew chief. As the flight instructor was evaluating me, the standardization (flight) instructor was evaluating the FI. And upfront in the cockpit was the standardization pilot, evaluating a new instructor pilot. So, there was a lot going on, but there was also a lot of experience in the aircraft.

CHIEF WARRANT OFFICER 2 ANDDREA K. POSTMA
C Company, 1/168th General Support Aviation Battalion (Air Ambulance)
Sacramento, Calif.

We made our rounds in the traffic pattern, with the pilots demonstrating their capabilities on the controls and the abilities of the aircraft. The crew chiefs in the back were conducting their duties clearing the aircraft, fuel checks, backing up the pilots on the checklist, etc. The SP decided to demonstrate the single-engine hover capability. He reached up and announced he was retarding the No. 2 power control lever to idle. The No. 2 PCL was confirmed, he retarded the PCL to idle and the IP made a nice, slow visual meteorological condition approach.

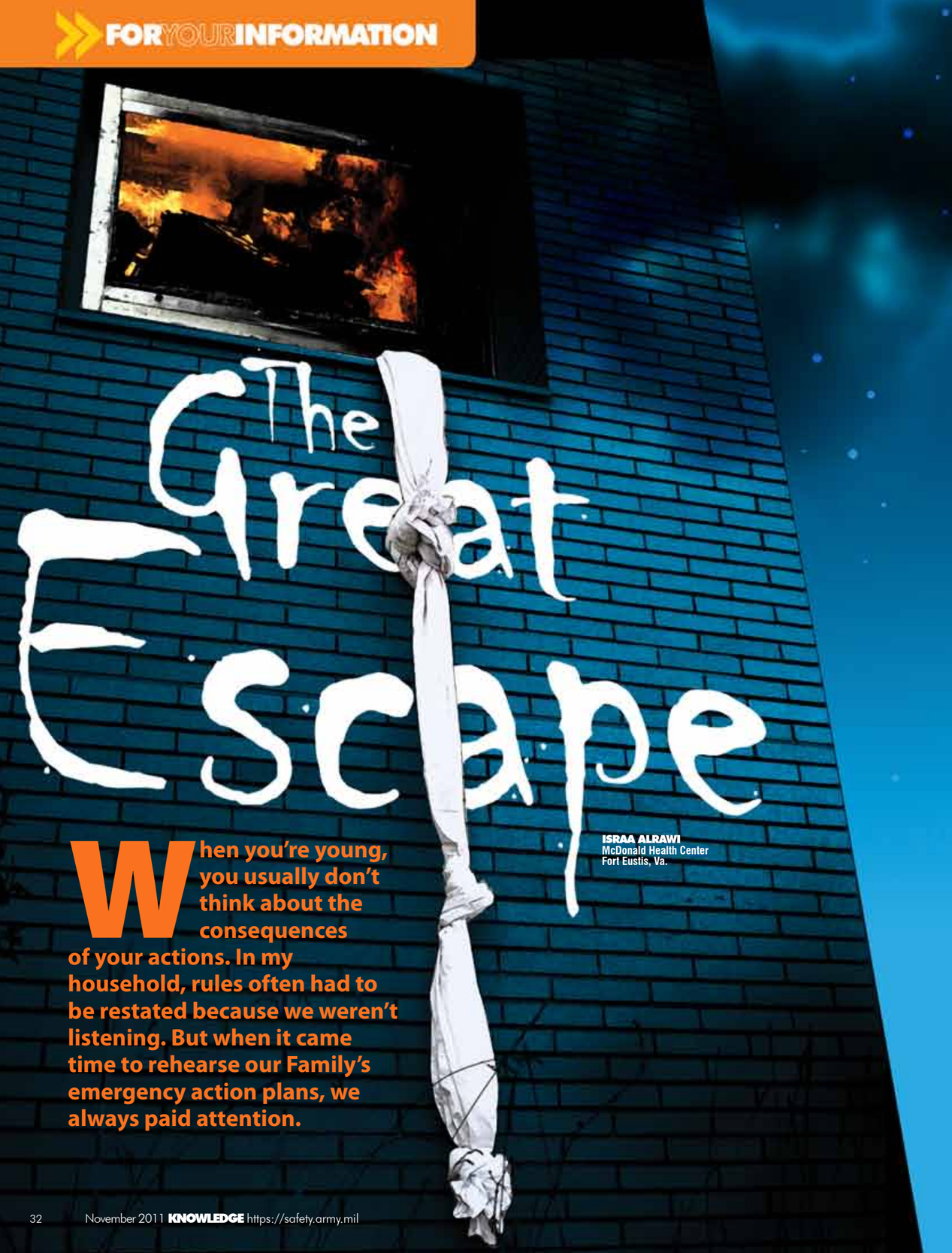
As we were making the approach, tower called and asked us to sidestep to the parallel taxiway because of other traffic inbound for landing. We came to about a 20-foot hover over the taxiway while the SP discussed the maneuver with the IP. Tower called again to ask our intentions and informed us of more traffic on approach. The SP, after much banter with the tower, refocused his attention to the IP on the controls. However, he must have forgotten what stage he was in the training. He reached up, grabbed the No. 1 PCL and proceeded to retard it to idle. The IP responded by lowering the collective and trying to bring the aircraft down and forward onto the taxiway.

On the way down, I reached up and grabbed onto my little yellow handholds in the crew window. Before anyone could say anything, we were on the ground. The aircraft came down and forward for a short distance, then made a rapid turn to the left. This rapid turn was due to the tail wheel lock pin shearing, allowing the tail wheel to turn. As the aircraft spun around and leaned to the right, I saw the main rotor blades near the ground. I thought they were going to hit and prepared for the worst when, suddenly, the aircraft leveled off and came to a stop. Our hearts were pounding as we looked around at each other. Then, finally, somebody came over the intercommunications system and asked if everyone was OK. Not knowing what damage had occurred, we shut down the aircraft in place. Fortunately, nobody was injured and, after shutting down, we immediately contacted maintenance to tow the aircraft back to the hangar. An inspection revealed no real damage, other than the sheared tail wheel lock pin.

Lessons Learned

Crewmembers are always briefed on crew coordination, specifically "announce actions," before every mission. The distracted SP made the mistake of not communicating with his crew. He should have announced his actions and then refocused on his training.

As stated in Chapter 6 of the aircrew training manual, crew coordination errors have caused a significant number of accidents before and during flight. Clearly, I had failed to offer assistance to the SP because he had more experience in the cockpit. I had fallen into the trap of assuming the more experienced pilot had everything under control. However, as a crew, we all failed to keep focused on the maneuver. I accept my role and clearly understand what I should have done to prevent it from happening.



The Great Escape

When you're young, you usually don't think about the consequences of your actions. In my household, rules often had to be restated because we weren't listening. But when it came time to rehearse our Family's emergency action plans, we always paid attention.

ISRAA ALRAWI
McDonald Health Center
Fort Eustis, Va.

It was a cold night and my sister and I had lit some candles on top of the dresser in our shared bedroom. At some point, we both fell asleep while the candles continued to burn. A few hours later, we were awakened by a strong smoke odor. When I sat up in my bed, I thought I was dreaming. The dresser was on fire and our door was closed! Apparently, one of the glass candle holders had broken, allowing the flame to ignite the dresser.

I knew we had to get out of the bedroom as quickly as possible, but the burning dresser was blocking our exit. The only other escape route was through the windows. To alert my parents in the other bedroom, I banged on our common wall and yelled, "Fire!" While my dad ran to get the nearest fire extinguisher, my sister and I put our escape plan into action.

First, we opened all three windows as quickly as possible to keep the smoke from building inside the room. Next, we removed the bed sheets and tied them together to make a rope. We then tied one end of our rope tightly around the bed and threw the other end out the window. Finally, we climbed down the rope to the driveway, where we met the rest of our family.

Although the fire department was called, my dad was able to put out the fire — but not before the dresser, a wall and parts of the door and my sister's bed were destroyed. Most importantly, though, no one was injured or killed thanks to the fire emergency plan we were taught and executed.

Never underestimate the usefulness of an emergency action plan for your Family, especially one that outlines what to do in case of a fire. When teaching a fire emergency plan, consider doing the following:

- Take a course at the local fire department about developing a fire emergency plan.
- Identify possible fire hazard materials around the house.
- Map out all exit routes in and around the house.
- Identify all fire extinguishers and learn how to use them properly.
- Place all emergency numbers near the telephone.
- Practice a fire drill using all the escape routes.
- Discuss and research any questions or concerns about fires.

Taking these simple measures, or even just talking about what to do in case of a fire, can help save lives. I look back now and wonder what would have happened if we'd never been taught an action plan. What if we didn't know how quickly fires escalate? Would my sister and I have been able to escape on time? We sometimes have an "it-won't-happen-to-me" attitude. The truth is anything can happen. When it does, you should be ready. «

FYI

According to the National Fire Data Center's Topical Fire Report: Candle Fires in Residential Structures:

- **Annually, an estimated 23,600 fires in residences are caused by candles, resulting in 1,525 civilian injuries, 165 fatalities and $390 million in direct property loss.**
- **Women are more likely to be injured or killed in residential structure candle fires.**
- **December has the highest occurrence of candle-ignited residential structure fires. More than one-third of these fires begin in a bedroom, and more than half were started because the candle was placed too close to combustible materials.**

To learn more, visit www.firesafety.gov.

My Icy Introduction

It was well after dark and I'd been staring at a lot of Interstate 40 West that December day. I was partway across Oklahoma, and home in San Diego was another day-and-a-half's drive. It was time to find a cheap hotel and get some sleep.

BOB VAN ELSBERG
Strategic Communication Directorate
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

I saw an exit ahead and, off to the right, the lights of a gas station. I took the off ramp, which fed onto a street headed toward the town. It had snowed that day, but I was supremely confident that my all-season radials could handle the snow and slush. Growing up in Southern California, I'd never actually driven on snow, so I was clueless about what it would do to my traction. I was almost to the intersection with the town's main street when the light turned red. Crap — I could see a hotel just across the street! I wasn't in the mood for delays. I thought about pulling a "California stop" (slowing down, checking both ways for cops and easing through). But, wouldn't you know it, there was a police car slowly approaching the intersection from the left. I pushed in the clutch and hit the brakes.

I was going a bit fast, but I trusted my tires to get a grip so I wouldn't get a ticket. Imagine my surprise

DIGGING IT — SNOW TIRES

As reassuring as it may be to have all-season radials on your vehicle, these popular tires are not necessarily the best choice in severe winter conditions. True snow tires use a softer rubber compound and have very deep treads to help them "bite" into the snow. This improves their traction and helps keep the vehicle from sliding, especially during braking. You can identify these tires by the mountain/snowflake symbol on the sidewall. For really difficult situations, there are tires equipped with metal studs to give you improved traction on snow and ice.

However, there are some downsides to these tires. Because of their softer rubber compound, snow tires wear down much more quickly than all-season radials when driven on dry roads. Also, studded tires can damage road surfaces and, as a result, are not legal in all states. Typically, those states that allow studded tires limit their use to between certain winter dates. If you are uncertain about the studded tires laws for your state, visit the American Automobile Association website at http://drivinglaws.aaa.com/ and click on your state on the U.S. map. As you scroll down through the driving laws, you will see if studded tires are allowed and the approved dates for their use. It's also important to know that when you use snow or studded tires, you need to put them on all four wheels of your vehicle.«

> "Whatever else, it's **VITAL** to treat **ICE- AND SNOW-COVERED** roads with **RESPECT** and drive **ACCORDINGLY**."

as I slid into the intersection, slowly spinning counterclockwise until my rear tires bumped against the far curb. I'd barely felt the "thump" when I noticed the police cruiser through my windshield. It was hard not to notice it, with its lights flashing. "Great," I thought — between this ticket and the price of a cheap hotel room, I could've stayed in the Hilton back in Oklahoma City. So much for my blind faith in all-season radials!

Since then, I've lived in Germany, Missouri and New Mexico and learned a lot more about driving in the snow. I've learned all-season radials are not the one-size-fits-all best answer for every driving condition. During winter, purposefully designed snow tires and, when and where legal, studded tires offer greatly enhanced traction compared to all-season radials (see the information box "Digging It — Snow Tires" on page 34). And, as I learned during winters in Kansas City, Mo., chains can be your best option for traction in the snow and ice. Tire chains can be mounted on your regular all-season radials, saving you the cost of buying an extra set of tires. Of course, with speeds limited to about 30 mph, you won't be cruising on the interstate. However, you will greatly improve your chances of reaching your destination. Whatever else, it's vital to treat ice- and snow-covered roads with respect and drive accordingly.

So you won't have to follow my less-than-pristine example of how not to drive in the snow, check out these tips from the American Automobile Association:

- Accelerate and decelerate slowly. Applying the gas slowly is the best method for maintaining traction and avoiding skids. Also, gradually slow down for a stoplight. Remember, it takes longer to slow down on icy roads.
- Drive slowly. Everything, whether it's accelerating, stopping or turning, takes longer on snow-covered roads than on dry pavement. Increase your following distance to eight to 10 seconds to provide more room to stop.
- Know your brakes. Whether or not you have antilock brakes, the best way to stop is threshold braking. Keep the heel of your foot on the floor and use the ball of your foot to apply a firm, steady pressure on the brake pedal.
- Don't stop if you can avoid it. It's a lot harder to overcome the inertia of a stopped vehicle than one that is still slowly rolling. If you can slow down enough to keep rolling until a traffic light changes, do it.
- Don't power up hills. Applying extra gas on snow-covered roads just starts your wheels spinning. Try to get a little inertia going before you reach the hill and let that inertia carry you to the top. As you reach the crest of the hill, reduce your speed and proceed downhill as slowly as possible.
- Don't stop while going uphill. There's nothing worse than trying to get moving uphill on an icy road.
- If you really don't have to go out, don't. Even if you can drive well in the snow, not everyone else can. Don't tempt fate: If you don't have somewhere you have to be, watch the snow from indoors.

SCAN HERE

In this and future issues of Knowledge, readers will notice some articles are accompanied by a small black-and-white image similar to the one to the right. These images, known as quick reaction codes, are embedded with data that, when captured with a smartphone's QR code reader, will take users to a related U.S. Army Combat Readiness/ Safety Center safety tool. For example, this code links the user to a winter driving safety video. Give it a try. Then let us know what you think of this new method of providing safety information to our readers by emailing Knowledge at safe.knowledge@conus.army.mil.

MICKEY MOUSE BOOTS

Our battalion had deployed on a no-notice brigade recall on New Year's Day. Desert Shield and Desert Storm operations had top priority, and our flight hours had been reduced drastically. As a new pilot fresh out of flight school, my flying skills had deteriorated greatly during the previous six months. I had been working as an executive officer for Headquarters and Headquarters Company, a duty position not conducive to pilot training.

DARRYL FLASPHALER
Rock Island Arsenal
Rock Island, Ill.

The brigade deployed and we were busy at the battalion level resolving the many problems normally encountered during an exercise. We had aircraft and vehicle maintenance issues and logistics and personnel issues — all compounded by the bitter cold. We had been in the field for two days, and I was exhausted from the work and lack of sleep.

A mission came up without warning that involved our HHC command aircraft helping the S-2 communications section set up an FM radio relay station on a nearby mountaintop. Somehow, I ended up being the guy chosen to fly as co-pilot on that mission. In retrospect, I should have been much more adamant about not being ready to fly.

I mentioned my reservations about not being adequately trained or prepared for this mission. However, it became clear that not accepting the mission wasn't an option. It was an early morning flight, so we hit the rack as soon as we were able. We woke up to a temperature of minus 20 F. This forced us to don our winter weather gear, which included the notoriously cumbersome "Mickey Mouse" boots, otherwise known as Extreme Cold Weather Boots.

We conducted the preflight in the dark. I'll never forget how bitterly cold it was, and I was so glad to get inside the cockpit and start the engine. The pilot in command had more than 1,000 hours of flight time, so he was able to accelerate the startup procedure — not because he neglected anything, but because he had the procedure memorized.

I, on the other hand, had just graduated from flight school six months earlier and hadn't had more than three hours per month of flight time for the previous four months. I definitely was not at the same level as the PC in knowledge or skill — and definitely not in experience. The PC and I were different in many ways, not just from a 15A skill level standpoint, but also from a physical standpoint. I am 6 feet 4 inches tall, and the PC was considerably shorter, maybe 5 feet 6 inches tall.

The PC got us through the preflight and startup procedure, gave me a map and told me to take care of the radios. So there I was, all 6 foot 4 inches of me, sitting on the right side of the UH-1 cockpit, map on my lap, heater blowing in my face, grateful to be warm and actually flying again. However, when the PC pulled pitch, the Huey shot up into the air and immediately went into a spin. While rising to about 100 feet, the aircraft must have spun around 360 degrees at least six or seven times. The PC was frantically trying to figure out the problem and then yelled at me to, "Get your $%#! foot off the pedal!" I was mortified when I realized my huge Mickey Mouse boot had jammed under the left pedal and I hadn't been able to feel it! Once I yanked it out, the aircraft returned to normal and we were able to land.

> "I should have **INSISTED** I was **NOT PREPARED** to fly, and I **DEFINITELY** should have thought about how those **BOOTS** would **AFFECT THE PEDALS.**"

Lessons Learned

I blamed myself for what happened on that morning almost 20 years ago. I should have insisted I was not prepared to fly, and I definitely should have thought about how those boots would affect the pedals. Through the years, I have revisited that experience many times and I know now it really was not entirely my fault. It was a combination of things. The PC had not taken into consideration my lack of skill and lack of recent training. He certainly did not consider how someone 10 inches taller might have different issues than he did while flying a helicopter wearing Extreme Cold Weather Boots. I believe if the PC had taken things a little slower and had been more careful and considerate, this incident never would have happened.

Got a 'Flight Plan' for Your Trip?

CHIEF WARRANT OFFICER 5 ROBERT REYNOLDS
U.S. Army Africa Command
Vicenza, Italy

Aviators know the importance of completing a flight plan. As an itinerary for the flight, it provides information on the crew and passengers, the intended route of travel and the final destination. It's a critical feature of conducting safe operations in the aviation environment. But did you know flight plans aren't just for aviators? They're for motorists too.

Sure, you've used the online Travel Risk Planning System program to help plan a safe trip, but there is still more you can do. For example, how about developing your own "flight plan." It should include your proposed overnight locations, information on the hotel you'll be using and, if you're renting a vehicle, the car rental agency information. And before you leave, make sure your Family or a friend has a copy of your plan so they can contact you if needed.

Many of us now have a GPS in our vehicles to help us navigate. However, if needed, could you find your way to your destination by using a map? As a backup to your GPS, have a road map covering the entire route of your trip and know how to read it. After all, what if that nice GPS suddenly stops working or highway closures require a complicated detour?

Breaking down on the road is a dreadful experience. However, it's even worse when you're far from home and in unfamiliar territory. That's why it's important to make sure you're prepared. Carry a cellphone and make sure you have a roadside emergency kit. At a minimum, an emergency kit should include the following:

- Working flashlight and extra batteries
- Reflective triangles
- Compass
- First aid kit with necessary medication
- Scissors with string or cord
- Roll of duct tape
- Water
- Nonperishable, high-energy foods such as canned unsalted nuts, energy bars, dried fruits and hard candy

During the winter months, the following items should also be included:

- Bag of abrasive material, such as sand or salt, in case the vehicle gets stuck
- Ice scraper and snow brush
- Exterior windshield cleaner
- Wooden matches in a waterproof container (preferably the strike-anywhere type)
- Shovel
- Blankets and warm clothing, such as mittens and hats
- Emergency flares
- Towing and tire chains
- Compass

Planning for your trip and any potential emergencies before departing gives you the satisfaction and peace of mind of knowing you've developed a good flight plan. As a backup, make sure your Family or friends know your flight plan in case it's needed. Knowing you've got your safety bases covered will allow you to relax and enjoy your trip.

> "**KNOWING** you've got your **SAFETY BASES COVERED** will allow you to **RELAX** and **ENJOY YOUR TRIP**."

LOST

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, email safe.knowledge@conus.army.mil.

AVIATION

AH-64D

CLASS A

- During approach, the tail rotor assembly separated from the aircraft, resulting in a hard landing.

CLASS B

- The aircraft struck a Persistent Ground Surveillance System aerostat blimp upon repositioning on the airfield. The blimp separated from the tether and was unable to be recovered. The aircraft sustained damage to the No. 3 blade tip cap.

CLASS C

- The No. 2 engine exceeded its limitation of 132 percent during a health indicator test check.

CH-47F

CLASS C

- The crew experienced an uncommanded yaw during release of a slingload and executed an emergency landing. An inspection revealed damage to the ramp and undercarriage.

OH-58D(R)

CLASS A

- Two crewmembers were killed when their aircraft crashed into rising terrain during a training flight.

CLASS C

- During a readiness level progression simulated engine failure autorotation, the aircraft experienced a main rotor speed droop at 89 percent and a subsequent engine overspeed of 108 percent for two seconds.

- The aircraft experienced engine and rotor overspeed conditions of 125 percent for five seconds and 124 percent, respectively, during manual FADEC operations. The engine required replacement.

UH-60A

CLASS B

- The crew experienced excessive vibrations during the short final approach. The pilots executed an emergency shutdown, and an initial inspection revealed the No. 3 section missing on the driveshaft because of a main rotor blade contact.

- The crew experienced high dust conditions during a medevac pickup, and the aircraft sustained damage on touchdown.

C-26B

CLASS C

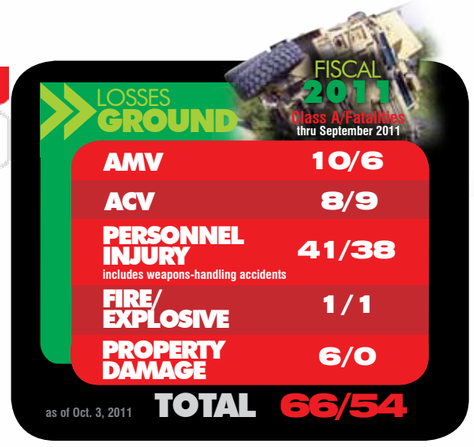
- The aircraft struck a mobile fire extinguisher upon taxiing for takeoff. Emergency shutdown was accomplished and the passengers were evacuated. Damage was reported to the right prop, window, door and fuselage.

UAS

RQ-7B

CLASS B

- The unmanned aircraft experienced a droop in engine RPM during climbout. Controllers were able to deploy the recovery chute, but the UA was damaged during landing.



CLASS C

- The UA experienced an engine failure about one hour into the flight. Operators deployed the recovery chute, and the UA was damaged during landing.

- The UA experienced an uncommanded descent during climbout. The flight termination system was deployed and the UA crashed, resulting in damage.

- While on the return leg, the UA experienced high rotor temp, ignition and engine fail indications. The chute was deployed and the UA was recovered with damage.

GROUND

AMV

CLASS A

- Four M1078 Light Medium Tactical Vehicles were damaged in a chain-reaction accident during a convoy movement in dust conditions.

Personnel Injury

CLASS A

- A Soldier died from injuries he suffered when he drifted off course in his parachute during airborne operations and struck the side of a building.

- A Soldier presumably drowned when he was found unresponsive in a swimming pool at a private residence.

- A Soldier was killed when he fell from a theme park roller coaster while on a family outing.

- A Soldier was killed when he was struck by a vehicle while walking on the road.

- A Soldier died of unknown causes during individual land navigation training.

DRIVING

POV

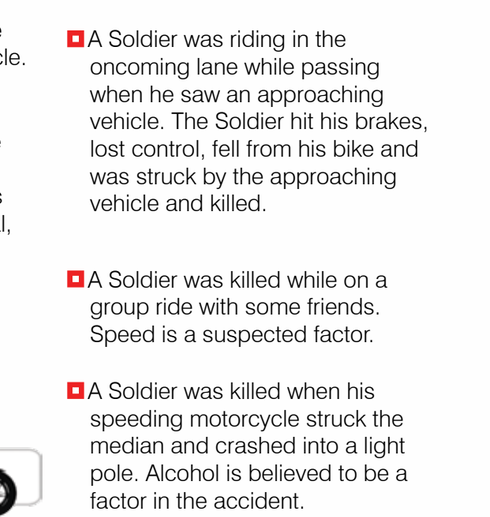
CLASS A

- Two Soldiers were killed when the vehicle they were riding in, driven by another Soldier, went out of control while crossing railroad tracks, became airborne and struck a metal pole. The driver was critically injured, but survived. Speed was identified as a factor in the crash.

- A Soldier was killed when an oncoming vehicle crossed the centerline and struck his vehicle.

- A Soldier swerved to avoid an object in his path, went off the road and struck a tree. The Soldier was extracted from his vehicle and taken to a hospital, where he later died.

- A Soldier was killed when he crossed the centerline and collided with an approaching tractor-trailer.



POM

CLASS A

- Two Soldiers were riding at high speed when the lead rider struck a pickup and crashed. The second Soldier then hit the downed bike and was thrown into oncoming traffic and killed. The other Soldier was hospitalized and survived. Both Soldiers were trained, licensed and wearing personal protective equipment.

- A Soldier was riding in the oncoming lane while passing when he saw an approaching vehicle. The Soldier hit his brakes, lost control, fell from his bike and was struck by the approaching vehicle and killed.

- A Soldier was killed while on a group ride with some friends. Speed is a suspected factor.

- A Soldier was killed when his speeding motorcycle struck the median and crashed into a light pole. Alcohol is believed to be a factor in the accident.

IS THE SAFETY ON?

The Range & Weapons Safety Toolbox contains information, tools and links related to the safe handling of military and privately owned weapons.

RANGE & WEAPONS SAFETY TOOLBOX

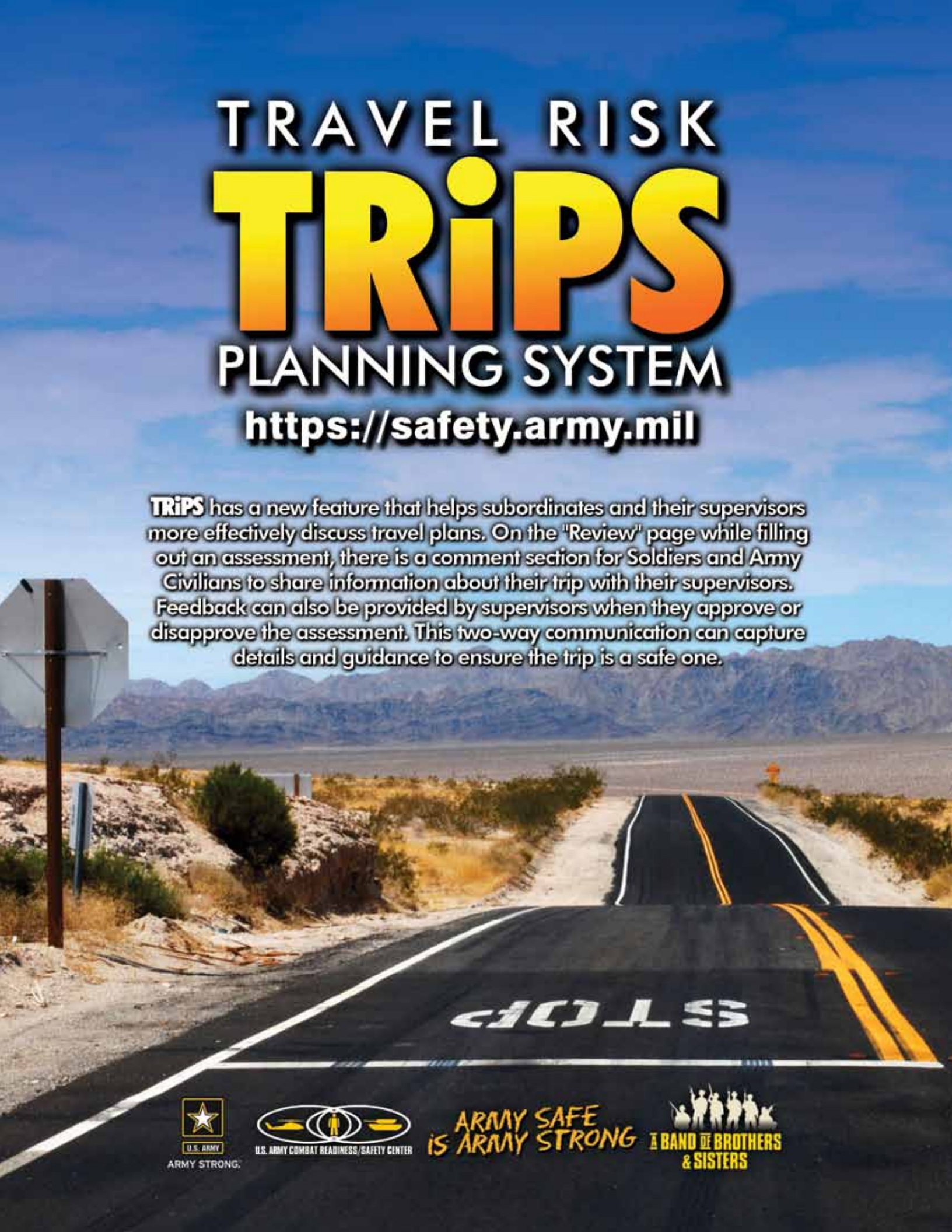
https://safety.army.mil/rangeweaponssafety

ARMY STRONG

U.S. ARMY COMBAT READINESS/SAFETY CENTER
https://safety.army.mil

ARMY SAFE IS ARMY STRONG

BAND OF BROTHERS & SISTERS


TRAVEL RISK
TRiPS
PLANNING SYSTEM
https://safety.army.mil
TRiPS has a new feature that helps subordinates and their supervisors more effectively discuss travel plans. On the "Review" page while filling out an assessment, there is a comment section for Soldiers and Army Civilians to share information about their trip with their supervisors. Feedback can also be provided by supervisors when they approve or disapprove the assessment. This two-way communication can capture details and guidance to ensure the trip is a safe one.
STOP
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CRASH DYNAMICS LAB: BREAKING THE LINKS TO DISASTER

KNOWLEDGE

VOL 5 DECEMBER 2011

OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

FIREPROOF YOUR HOLIDAYS

- WINTER PMCS
- CREW COORDINATION
- TIRE RATINGS

+

LEGAL WEATHER

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SCAN HERE FOR KNOWLEDGE ONLINE

Take 5

Fireproof Your Holidays

- Ensure your artificial tree is fire retardant and certified by a recognized consumer protection agency such as Underwriters Laboratories
- Make sure fresh trees are well-watered
- Inspect holiday lights for frayed, worn wires and replace if necessary
- Keep decorations away from heat vents/fires
- Never leave food alone on a hot stove

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KNOWLEDGE

OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

LEADERS SOLDIERS CIVILIANS FAMILIES

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Mission statement: The United States Army Combat Readiness/Safety Center (USACR/Safety Center) supports our Army by collecting, 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 email comments to **safe.knowledge@conus.army.mil**.

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FROM THE DASAF

Our Army Family is once again welcoming the holiday season, and I'd like to thank each of you for the remarkable job you've done during the past year. Whether you spend the holidays relaxing with loved ones or continuing the fight overseas, please know your contributions are appreciated and will endure well into the new year and beyond.

I wish you all a healthy, safe and blessed holiday and look forward to the accomplishments to come in 2012. Play it safe, and always remember Army Safe is Army Strong!«

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

FROM THE CSM

"Leading by the example of **'DO AS I SAY, NOT AS I DO'** is not leadership — **IT'S INDISCIPLINE**, plain and simple!"

DO AS I DO

Leadership is one of the most difficult jobs on the planet, especially in an Army that's been at war more than a decade. The overwhelming majority of our Leaders have done a great job managing the many challenges that have come before them: multiple deployments, doing more with less and preparing for whatever missions their Soldiers might be called to execute. In fact, excellent leadership is at the very heart of our recent success in reducing on-duty accidents to one of the lowest levels ever recorded.

Even so, there are always those Leaders who defy the very standards they're supposed to enforce. Leading by the example of "do as I say, not as I do" is not leadership — it's indiscipline, plain and simple! These Leaders aren't doing their part and either don't realize or don't care that what their Soldiers see them doing has a much greater impact than what they say to them. This mindset is irresponsible at best and fatal at worst, and we can't sit back and hope wayward Leaders will change on their own.

Fatal motorcycle accidents illustrate this point. During fiscal 2011, Leaders at the grade of E5 to O4 comprised 64 percent of all motorcycle-related deaths. Several crashes involved speeds of 90 mph or greater, and a lack of personal protective equipment was reported in many others. What kind of message does this behavior send to young and impressionable Soldiers? Junior Leaders are critical in our fight against preventable accidents, but when they disregard the standard and act recklessly, it sets a negative precedent that affects unit personnel on and off duty.

Curbing this problem requires decisive action now from Leaders from the squad up. Indiscipline is never excusable, and we have to make sure our subordinates — and sometimes even our seniors — are setting and maintaining the highest possible standards. Rank doesn't matter when it comes to safety; no Soldier is more or less accountable than another, and we should foster a culture where corrective actions may be made without fear of retribution.

Knowing our people and setting the standard are what leadership is all about. Dropping in unexpectedly and observing your junior Leaders interact with their Soldiers takes only a few minutes and provides a priceless look into unit dynamics. Talk with your Soldiers and really listen to their concerns. Someone always knows when a Soldier is taking unnecessary risks, but you'll never find out if you don't ask. When it comes to safety, being in the know is what really counts!

Nothing can replace face time with Soldiers, but I firmly believe the Army Readiness Assessment Program is an essential tool for Leaders. It's an eye-opening experience, and no other survey offers more immediate or candid feedback on critical issues linked to Soldier safety, including the unit's leading indicators for potential loss or mishaps. More than one million responses have been logged thus far through ARAP, and it continues to pay great dividends for commanders and Soldiers at all levels. I've been sold on ARAP for years, and I encourage you to sign up your unit if you haven't already.

The holidays and the upcoming new year provide a perfect opportunity to renew our commitment to safety. Look inward at how your behavior and leadership style affects others and ensure your subordinate Leaders do the same. The first life we save should be our own — that's the best possible example we can set for the Soldiers counting on us every day. I wish you all a safe and blessed holiday season, and I'll see you in 2012!«

RICK STIDLEY
Command Sergeant Major
U.S. Army Combat
Readiness/Safety Center

There I was, month 13 of a 15-month deployment. My only thoughts were of going home and reuniting with my Family. The other Soldiers in my unit were doing the same. We were told during this critical time that we needed to be more vigilant and not let complacency set in. An age-old sense of urgency associated with many aviation support profiles — to launch in marginal weather — has been the recipe for far too many aircraft mishaps.

LEGAL … but is it Safe?

CHIEF WARRANT OFFICER 2 DWAINE L. ESCH
C Company, 2nd Battalion, 227th Aviation Regiment
1st Air Cavalry Brigade, 1st Cavalry Division
Fort Hood, Texas

I headed to the hangar to check on my assigned aircraft for the day and then to the tactical command post (TOC) to check the mission profile. It was a familiar mission; a flight of two UH-60Ls were to fly a five-and-a-half-hour ring route under night vision goggles.

At the hangar, the crews continued loading the utility vehicles with necessary supplies and equipment for the mission. Sometime before sunset, I headed out to preflight the aircraft. With the preflight accomplished and the gear prearranged where we wanted it, we headed for the dining facility to grab dinner before our long mission.

The two flight crews met at the TOC for the mission briefing. The mission brief went as usual. The S-3 informed us where friendly forces were in our area, while the S-2 filled us in on where the action was in our battle space.

Another critical step was checking the weather for the evening. We had legal weather; however, the weather report showed a dust storm in our flight path. Although the battle captain knew the environmental conditions, he told us we had legal weather and expected us to accomplish the mission. I expressed my concern and some uneasiness about the situation because our crews had been caught in dust before and knew the consequences. The battle captain instructed us to at least attempt to fly to our first stop.

We boarded our aircraft, started the engines and positioned ourselves at the passenger terminal to pick up our first passengers for the evening. As the passengers boarded, I noticed a slight haze in the distance. Other crewmembers noticed the same thing. We discussed the weather conditions and decided to keep an eye on it. When fully boarded, we took off and headed to the first stop.

It was about a 20-minute flight and as we got closer, the dust storm worsened. Our visibility was rapidly deteriorating and, to make matters worse, we had only a single light source in the distance to determine our visibility. We decided to return to the airfield at that point because once we passed the light source, we wouldn't be able to see much of anything. Our aircrews carefully synchronized our return flight using proven aircrew coordination skills.

I kept an eye on the dust cloud and the instrument panel at the same time, which wasn't a good idea because I soon became disoriented. Relying on the technology rather than my senses, I transitioned inside to the instruments and noticed our nose starting to rise and our airspeed slowing. I informed my co-pilot of my observation and positioned myself to take the controls if he couldn't correct our situation. The co-pilot turned the aircraft and started a climb in preparation for an emergency GPS recovery. Soon we had turned back and all the instruments were reading straight and level. It was only then that I was able to look outside again. I could barely see the ground. We stopped our climb at a base altitude of 3,000 feet and returned to the airfield. This time we were lucky, we arrived without having to use the emergency GPS approach. This event made me realize the importance of instrument meteorological conditions training and proper crew coordination.

Back on the ground with both flights shut down, we secured the aircraft and headed back to the TOC to check with Air Force weather regarding improved visibility later in the evening. We also obtained a report from the battle captain concerning the weather situation at the destination airfield. They were calling for three miles visibility, which is certainly legal weather. However, the weather forecaster at our station did not agree with that assessment.

What we had was conflicting weather briefs from reliable sources. What would you have done in our situation? How do you weigh the importance of the mission with your ability to complete that mission safely? We had passengers, field Soldiers, aircrew and our aircraft to consider. We informed the battle captain of our weather forecaster's concerns of flying the mission. A description of the weather we had encountered earlier added credence to our discussions with the battle captain. He made an informed decision to put the crews on standby in case the weather lifted. When the mission window passed, he canceled the mission.

This was certainly not an isolated incident in country. On another mission, we were told we had legal weather, the forecaster reporting three miles visibility. Yet, when we actually made it to our destination, we could not see the other end of the airfield. Our pilot report, along with others, gave the forecaster more information to augment his observation. As a result, he changed his report to three-quarters of a mile visibility. This team effort ensured a more accurate assessment for the battle captain. On this day, he made the decision to shut down and wait for the weather to pass. The next day, we were then able to make it back to our home base, but not without encountering a slight amount of bad weather along the way.

> "Just because the **REPORT** you receive **SAYS** you have **LEGAL WEATHER**, don't always **ASSUME IT IS ACCURATE**."

Lessons Learned

Just because the report you receive says you have legal weather, don't always assume it is accurate. It is beneficial for flight crews to know the area's weather trends. Research the weather reports and gain the knowledge you need. Compile data from other bases and other crews to help your crew make an informed decision about your mission. Some missions require a second briefing or the completion of another risk assessment. The time it takes to complete this is well worth the effort to ensure the command is aware of the increased risk involved. This additional information will assist the approval authority in making the final decision to accept the risk.

Prior to every flight, all units must use the risk management process to ensure the weather is more than just legal. This process is designed to facilitate the decision-making process. If the benefits of performing the mission do not significantly outweigh the inherent risks of marginal/borderline weather, the flight should be a no-go or implement alternate transportation to accomplish the mission safely. Following these or similar guidelines will result in a higher mission accomplishment rate, a lower weather-related mishap rate and a better image of aviation professionalism.

WINTER PMCS FOR MISSION SUCCESS

Some consider a properly maintained and safely operated Army combat vehicle or Army motor vehicle the Army's first line of defense. Getting to the fight with all the necessary equipment is critical. If Soldiers don't have a way to travel, the unit is less capable of achieving its mission, putting forces on the front line at risk. Cold weather can add another layer of complexity to already challenging conditions for vehicle crews — especially in theater — so it's vital Leaders and Soldiers focus on preventive maintenance checks and services to keep their equipment fully mission capable and safe on the road.

CHIEF WARRANT OFFICER 4 MARC ASSUMPCAO
Ground Directorate
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> "Attention to **DETAIL** is important for **BOTH LEADERS AND SOLDIERS** throughout the year, but driving in **WINTRY CONDITIONS** can be particularly **DANGEROUS.**"

When performing maintenance checks, it's imperative operators or crews follow maintenance standards published in the PMCS tables of the -10 technical manuals. The preventive maintenance checks guidelines listed in TMs help identify potential failures of subcomponents that can cause a main system to fail and result in damage to equipment and injury or death to personnel. Improperly inspected equipment can fail and degrade the unit's readiness.

First-line supervisors are vital in establishing and maintaining effective PMCS programs and ensuring their Soldiers drive in accordance with published standards. Attention to detail is important for both Leaders and Soldiers throughout the year, but driving in wintry conditions can be particularly dangerous. Using properly maintained equipment and following safe driving practices can help prevent accidents and save lives, so be prepared to beat the cold.

Tips for maintaining and driving ACVs and AMVs during winter include:

- Perform PMCS before, during and after vehicle operations.
- Ensure windshield wipers are serviceable and the rubber lip is not torn.

DID YOU KNOW?

Army Regulation 750-1, Army Materiel Maintenance, states that operator or crew preventive maintenance checks and services are the foundation of the Army's maintenance program. Having a strong, solid foundation enables the development of a long-lasting maintenance structure as well as safe posture of personnel. For more information on PMCS and other vehicle-related topics, check out the Driver's Training Toolbox at https://safety.army.mil/drivertrainingtoolbox/.

ARMY COLOR CODES FOR ROAD CONDITIONS

GREEN: Normal driving conditions exist on post. Roads are clear and dry.

AMBER: Cautionary driving conditions exist on post. Roads are very wet or have ice or snow sticking to overpasses, bridges or intersections.

RED: Hazardous driving conditions exist on post. Ice or snow is sticking to most road surfaces. Heavy precipitation and/or high winds may limit visibility. Government vehicles should only be used for mission-critical operations through coordination with DOL.

BLACK: Extremely hazardous conditions exist with life-threatening driving conditions. All roads are covered with ice or deep, unplowed snow. Heavy snowfall and/or high winds causing low visibility is occurring. Only police, fire, medical and DPW equipment may be dispatched. TMP buses may be dispatched to pick up Soldiers in the field who are exposed to extreme cold that could impact on life, health and safety. All other government vehicles will be restricted from movement unless authorized by DOL (mission critical). DPW workers will be allowed to enter the installation and conduct maintenance missions.

Editor's note: The criteria for road conditions vary by installation. Be sure to check with your installation safety office for local road condition color codes.

- Check the windshield-washer fluid reservoir regularly and refill as necessary. Debris from winter roads can be especially grimy.
- Ensure the vehicle battery is fully charged and in good condition.
- Check the lights to make sure all are operating properly. Brush off snow from all headlights and taillights and use low beams so the vehicle is more visible to other drivers.
- Check tires and chains and train your crews how to install snow tires. Inspect tires regularly, checking tread depth and tire pressure.
- When planning for operations in adverse weather conditions, add additional time to travel.
- Check road conditions along the entire route and know the difference between conditions. Road conditions might start out as GREEN or AMBER but be RED further along.
- Take it slow! You'll need additional time and stopping distance on icy roads. Drivers should adjust the following distance between their vehicle and the vehicle in front of them on ice-covered surfaces.
- Apply your brakes early to allow enough time for stopping. If your vehicle is equipped with anti-lock brakes, simply press the pedal down and hold it. In vehicles without anti-lock brakes, gently pump the pedal to bring the vehicle to a stop without skidding.
- Stay alert. Other drivers may fail to use their headlights, reduce their speed or adhere to other appropriate rules of the road.

Leaders need to be cognizant of the importance of PMCS and know it is a force multiplier. Poor PMCS can adversely affect Soldier morale and safety. Today's Army is composed of highly motivated Soldiers. I believe Soldiers are committed to doing the right thing. When given guidance, proper resources and unyielding supervision, Soldiers can and will perform proper PMCS to keep our Army Safe and Army Strong.

Perfecting Aircrew Coordination

COMPILED BY THE DOTD FLIGHT TRAINING BRANCH
U.S. Army Aviation Center of Excellence
Fort Rucker, Ala.

The Army has spent many years developing programs to help aircrews perfect aircrew coordination to prevent accidents and preserve some of the most valuable resources in our Army — the aircraft and, most importantly, the crews who fly them. Aircrew coordination, cockpit communication management, cockpit resource management … all these terms refer to the same basic principles of ensuring an aircrew interacts with information — from the aircraft itself, other crewmembers in the aircraft or outside resources — and takes actions necessary to perform tasks efficiently, effectively and safely.

The widespread use of digital flight recorders in modernized Army aircraft provides valuable information that hasn't always been available in the past. This information is critical in determining the events leading up to an incident. Once downloaded and run through sophisticated modeling programs, this data uncovers what really happened in the accident sequence. When analyzed, these gathered facts reveal the what, when, why and how the accident occurred and how to prevent a similar incident in the future.

The value of Aircrew Coordination Training-Enhanced comes from group discussions of real scenarios and armchair quarterbacking the event. Individual crewmembers are then able to quickly analyze and react to similar situations based on earlier discussions.

Numerous interviews of rapid decision-makers in Malcolm Gladwell's book "Blink" show how making the right decision quickly is a direct result of experience. Thorough system knowledge, practicing emergency procedures and discussing real events during ACT-E training provide that experience for aircrews.

The ACT-E process begins on Oct. 1 of each year to prepare products for the coming year. The Risk Management Information System is a U.S. Army Combat Readiness/Safety Center database that lists most Army accidents in previous years and provides material for ACT-E vignettes. Project managers review these accidents to identify trends that have occurred within each particular airframe. Next, they gather pertinent media such as pictures from the crash site, voice recordings and any other contributing information. Distributed learning media developers then create storyboards for approval, being careful to follow strict guidance on how to present and protect the information.

> "The real **VALUE** of ACT-E is the **GROUP DISCUSSION** and **COLLECTIVE LEARNING** that follow the vignettes."

The developers later produce the video scenarios and learning objectives that result in a beta version for review. This is the final opportunity to direct changes in the product. This entire process is repeated for each airframe to ensure relevant material for each community. The final step is delivery of the products to the U.S. Army Aviation Center of Excellence Directorate of Training and Doctrine for upload to the Blackboard server, typically Oct. 1 of each year. The new ACT-E is then ready for use. Below are two examples of ACT-E scenarios.

- An OH-58D crew experienced an engine failure at terrain flight altitude. There is no good place for an engine failure in any aircraft, let alone in a single-engine aircraft. Other than happening at an out-of-ground effect hover, the next worst time would have to be while conducting terrain flight. With limited reaction time and pilot hesitation and misdiagnosis, the situation was grim. The digital collector indicated the pilot did not lower the collective for more than four seconds. Interviews suggested the pilot not on the controls sensed what was happening, but said nothing as he simply prepared to "ride it in." Proper malfunction analysis and a timely, proper response certainly would have minimized the severity of the crews' injuries.
- Analyzing the statistics for the number of accidents prevented by our safety programs is difficult, but there are stories from bad situations having good outcomes that provide useful insights. One such bad situation involved the loss of tail rotor components on an AH-64D. Having listened to the flight data recorder, I can assure you those two Army aviators did the rest of us proud throughout the 15 minutes between the onset of the emergency and the safe landing back at their home base. The record serves as a reminder of how critical proper crew coordination is during an emergency. The crew's handling of the situation reminds us that crew coordination is not just about communication; it is also about prioritization of tasks and management of workload, not to mention coordination with outside resources.

What happens after these vignettes is the main impact of the program. The real value of ACT-E is the group discussion and collective learning that follow the vignettes. These case studies function as a springboard for newer crewmembers to ask questions and for experienced crewmembers to relay similar events or give a quick class on a related topic.

What Can Your Unit Do?

- Ensure team rehearsals are conducted before mission execution with emphasis on crew coordination, duties and responsibilities. Plan for the worst scenario, especially if the aircraft is "hot and heavy" or the weather is marginal.
- Conduct crew and passenger briefings religiously and meticulously using a leader-approved checklist as part of a standing operating procedure. Brief the actions and responsibilities of all aircrew members beforehand, so if an emergency does occur, there is a plan in place instead of trying to "make it up as you go."
- Emphasize to aircrews the importance of continuing to "fly the aircraft," asking for assistance, offering assistance and continuing to communicate, especially when things start to go bad.
- Conduct after-action reviews or debriefs after the mission and discuss crew coordination successes and deficiencies and how to improve.
- Use the most current ACT-E programs available for your aircraft during the mandatory annual training. For updates, call the USAACE DOTD at (334) 255-9663.

How well do you know the tires on your car? If you're doing a permanent change of station move to Europe and ship your vehicle, do you know if your tires will be safe for the high-speed conditions of the autobahn? Before you get out there and put the pedal to the metal, you need to know your tires' speed rating.

KNOW YOUR TIRES

LARRY A. STRICKLAND
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What is a speed rating?

Developed in Europe primarily for the German autobahn, speed ratings were originally intended to help owners of high-performance cars select tires to match their vehicle's speed capabilities. As of 1991, tires are marked with information designating their size and speed rating. In the following examples, the speed rating is designated by the letters H and/or S: 215/65R16 98 H, 225/50SR16, 225/50SR16 89S or 215/50R16 89S. For more on the most common tire speed rating symbols, maximum speeds and typical applications, see the "How Hot are Your Wheels?" info graphic below. The miles per hour ratings will appear strange due to the ratings being developed under the kilometer per hour criteria.

It's important to recognize that high-speed tire ratings don't mean it is safe to drive the vehicle they're mounted on at high speed. Also, drivers should consider the road conditions or any unusual handling characteristics their vehicle may have. Regardless their tires' speed rating, drivers should never operate a vehicle in an unsafe or unlawful manner.

When replacing a tire, check your owner's manual or the information on the side of the tire to ensure your replacement tire is the appropriate size and style/classification. If the vehicle came with high-performance tires, you may be required to replace the tires with the original or a similar type of tire. Additionally, be sure to not "mix and match" (put different types of tire ratings on the vehicle). Also, your vehicle's tire speed ratings should match your driving style.

Winter driving tires in Europe

According to Consumer Reports, all-season tires aren't the best choice during winter conditions, especially if you have to drive before highway crews are able to clear the roads of ice or snow. Here are some things to consider before driving in Europe during the winter months:

- If you are a skier, most of the alpine areas require the additional use of snow chains, regardless if you have winter tires.
- Studded snow tires may not be approved in the country in which you are driving.
- All-weather or all-terrain tires may not be an acceptable substitute for winter/snow tires. For example, Bavaria has specific requirements for the type of all-weather tires that may be used.
- Check your owner's manual, tire rating, tire manufacturers' specifications and the requirements for the country where you're driving for specific criteria on which tires may be used or required.
- Some overseas U.S. military communities have considered adding tire requirements as part of annual vehicle inspections.

Ensure your move overseas goes well. Have your vehicle checked to meet emission, suspension and other standards, and make sure to have your tires checked as well. Remember, your life is riding on your tires. Make sure they're safe so they'll keep you safe.

HOW HOT ARE YOUR WHEELS?

SPEED RATING SYMBOL	RECOMMENDED MAXIMUM SPEED	APPLIES TO PASSENGER CAR TIRES	APPLIES TO LIGHT TRUCK TIRES
*	above 149 mph (240 kph)	YES	-
Y**	186 mph (300 kph)	YES	-
W**	168 mph (270 kph)	YES	-
V (with service description)	149 mph (240 kph)	YES	-
H	130 mph (210 kph)	YES	YES
U	124 mph (200 kph)	YES	YES
T	118 mph (190 kph)	YES	YES
S	112 mph (180 kph)	YES	YES
R	106 mph (170 kph)	-	YES
Q	99 mph (160 kph)	-	YES
P	93 mph (150 kph)	-	YES
N	87 mph (140 kph)	- YES	YES
M	81 mph (130 kph)	Temporary Spare Tires	-

BREAKING the LINKS

BOB VAN ELSBERG
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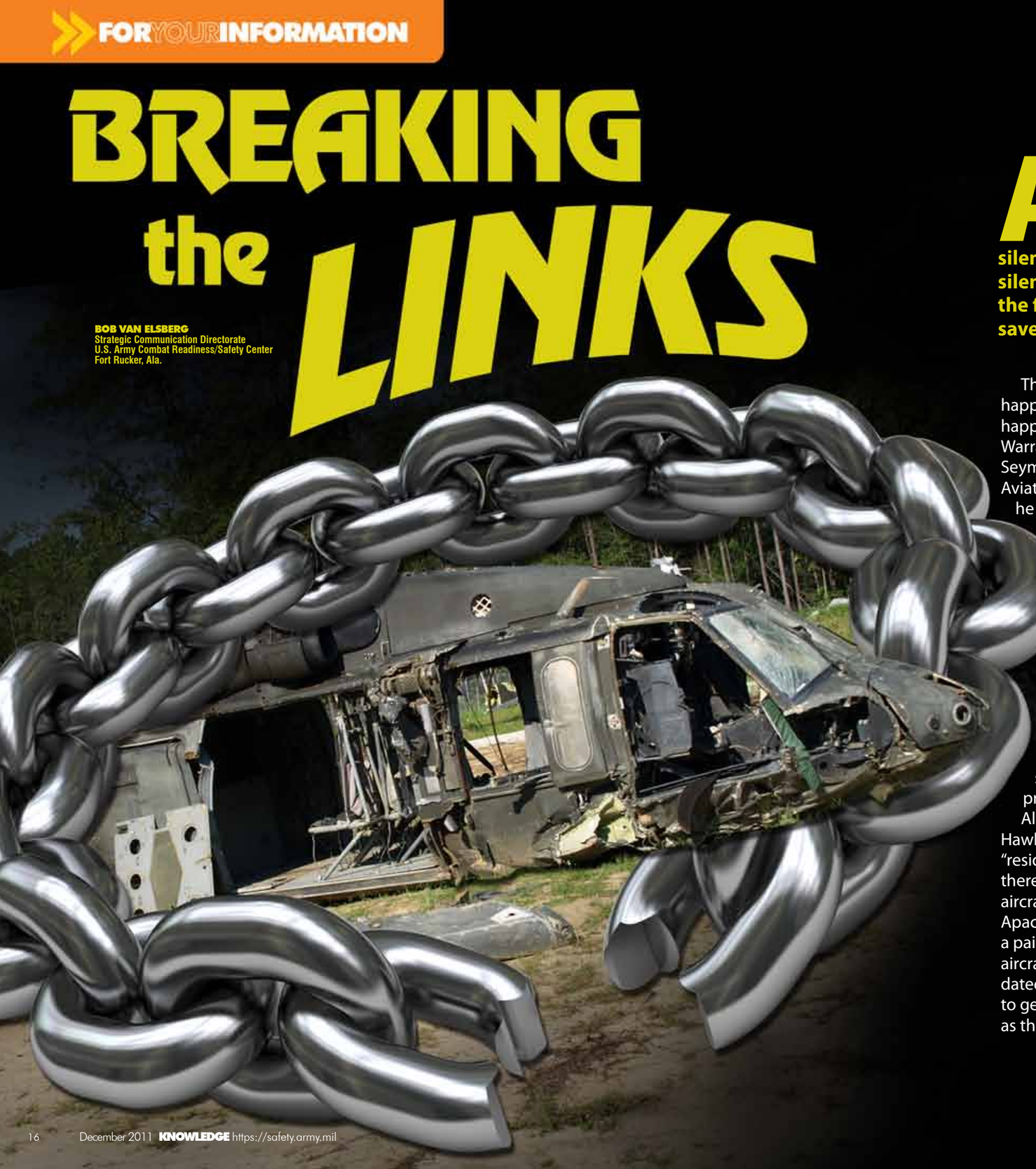

A smashed UH-60 weathers under the hot Alabama sun, its scattered parts forever consigned to the ground. Nearby, in the U.S. Army Combat Readiness/Safety Center's new crash dynamics lab, other aircraft, joined by tactical and privately owned vehicles, rest silently at recreated accident sites. However, these "ghosts" will not remain silent forever. Groups of students learning accident investigation will relive the final moments in these tragic mishaps. What they learn may one day help save Soldiers' lives.

That these accidents happened wasn't merely happenstance, said Chief Warrant Officer 5 Dennis Seymour. As chief of the Aviation Safety Officer Course, he explained there are normally a series of events — typically referred to as links in an accident chain — that result in a crash. Seymour said the goal for students in the ASO, Ground Safety Office Course and Career Program-12 intern program is to learn to spot those links in time to prevent future accidents.

Although the Black Hawk is a relatively new "resident" of the crash lab, there are other modern aircraft, including the AH-64 Apache, CH-47 Chinook and a pair of Hunter unmanned aircraft systems. Although dated, even a UH-1, known to generations of Soldiers as the "Huey," sits damaged from an accident during a Flat Iron mission. When things go wrong in the sky, gravity is most often the victor.

However, not all fatal crashes happen in the air; many more occur on the ground. Modern armored vehicles, designed to protect Soldiers from improvised explosive devices and rocket-propelled grenades, sometimes fall victim to rollover accidents. Reflecting that threat, an MRAP Raptor rests on its side, replicating an accident where a turret came off. Seymour said it's a type of accident that sometimes leaves Soldiers crushed or even cut in half.

As sobering as those thoughts are, combat is not where Soldiers are at greatest risk for fatal accidents. It's when the sounds of battle are far away and Soldiers are home driving their car or truck or riding their motorcycle or all-terrain vehicle that they most often let down their guard. Capturing that reality is a short section of curved, two-lane country road with the guardrail peeled back to the fifth pole. The wreckage of a car bears testimony to how a young Soldier lost control, slammed into the guardrail and died. Elsewhere, a crashed motocross bike recalls the death of an NCO on an installation off-road riding range. A damaged all-terrain vehicle depicts the night an intoxicated Soldier lost his way on an unlit gravel road, went into the trees and was killed. None of these accidents are fictional. Each one, Seymour said, was developed from an actual investigation.

Students in the aviation, ground and civilian intern safety classes are introduced to these accident scenes only after having completed weeks of classroom training. When it's time for them to go face-to-face with the facts, instructors have them assemble a team, selecting a board president, recorder, physician, maintenance

officer and other advisers. They are given what is called a "redacted" (victims' personal information removed) red book containing certain facts about the actual accident. These may include the aircraft's heading, airspeed, where the crash occurred and information on survivors, if any.

Upon arriving at the lab, students tape off the crash site and begin collecting and analyzing the evidence as the board recorder photographs the accident site. Scouring the landscape for ground scars and examining pieces of wreckage for other clues, students unwind the events leading to the crash as they search for the contributing factors. Classes they have received in metallurgy equip them to spot things such as metal fatigue on tail rotors.

Their time at the lab is relatively brief, typically about four hours. After gathering the evidence, the students will return to their classrooms to deliberate the facts. However, that may change in the future, Seymour said. Plans are in place for an onsite industrial hygiene lab that will serve as a classroom, allowing students to easily return to crash sites and gather additional information.

Just as in an actual investigation, once the findings and recommendations have been determined, the students outbrief the unit's chain of command — in this case, their instructors. But when they do, it will be after having gathered information at the most up-to-date and diverse crash dynamics lab within the Department of Defense. Nothing in the sister services or in the civilian community can compare, Seymour said.

That the new lab exists can be credited to Brig. Gen. William T. Wolf, director of Army Safety and commanding general of the USACR/Safety Center, who obtained $800,000 to expand and improve what had been a sorely out-of-date facility. He did so pursuing a specific goal.

"He wanted to make it more relevant to what we're doing today," Seymour said. "That's hard to do when you're using aircraft that are 40 years old. Most of the aviators flying today have never even strapped on a Huey before."

For Seymour, who has served as an accident investigator and is nearing the end of his career, seeing this come together has special significance.

"It's a kind of legacy that we can leave for the younger men and women who will use their training to help prevent accidents in the future," he said. "We've started something here that is going to continue for the Army from here on out." «

What You CAN'T Smell May Kill You

MAJ. RUBEN I. ORTIZ
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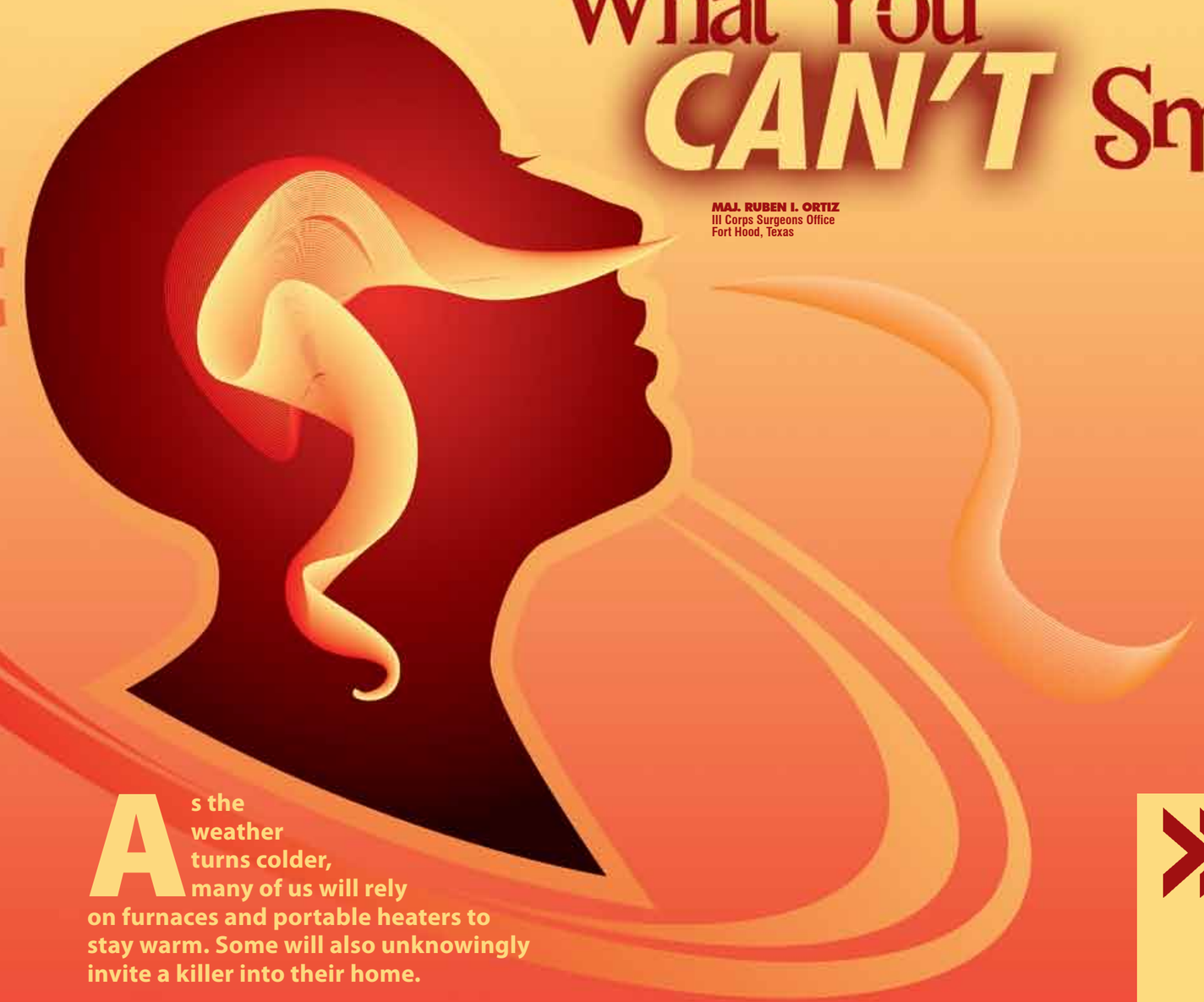

As the weather turns colder, many of us will rely on furnaces and portable heaters to stay warm. Some will also unknowingly invite a killer into their home.

The winter months are when individuals are most at risk for carbon monoxide poisoning. Known as the "silent killer," CO is a colorless, odorless, tasteless and nonirritating gas. According to a Centers for Disease Control and Prevention report, CO poisoning is a leading cause of unintentional poisoning deaths in the United States.

Carbon monoxide develops from the incomplete combustion of wood, coal, oil, kerosene, natural gas, gasoline and propane. People risk exposure to the poison 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 individuals 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.

Preventing many CO poisoning deaths is relatively easy to do with regular maintenance of heating systems and the installation of CO detectors. There are a variety of detectors on the market, all of which monitor the air for high levels of CO. The detector identifies CO from any source; however, it will not detect smoke, fire or any other gas.

For safety's sake, install at least one CO detector near sleeping areas in homes with portable heaters or gas or oil furnaces. Place additional detectors 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.

However, never consider CO detectors as a replacement for properly using and maintaining fuel-burning appliances, the Environmental Protection Agency cautions. 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 website at www.epa.gov.

DID YOU KNOW?

To reduce your chances of carbon monoxide poisoning, take the following precautions:

- **Have 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.**

HERE WE GO AGAIN

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"Here we go again … same old stuff again!" Remember marching to those words? Sometimes it seems like all we do in the Army is train. Each week brings a new method or technique that must be incorporated into our kit bag. And as soon as it is mentioned, you either hear or say those magic words, "Here we go again!"

For Army riders, like me, it seems there are always new training requirements that make us debate if riding is worth the hassle. For more than 20 years, I've loved cruising on the open road and enjoying the ride. For me, it is worth it.

If you're curious why I brought this up, it is because there is a new training requirement for riders in the Army. If you check out Army Regulation 385-10, you'll see "motorcycle sustainment training" has been added. What is it? Basically, it puts in place a three-year cycle for riders to go back and retake the Experienced RiderCourse, now known as the Basic RiderCourse II, or the Motorcycle Sportbike RiderCourse.

When I heard about this, I thought, "I've been riding for years and have already completed this training before, so why do I need it again?" However, since I work at the U.S. Army Combat Readiness/Safety Center, I figured I'd better get into compliance, regardless my personal feelings. Therefore, I signed up for the first available Basic RiderCourse II course at Fort Rucker. I showed up with some preconceived ideas of how the training would go. I was in for a surprise.

When I first took the Motorcycle Safety Foundation's Experienced RiderCourse three years ago, I owned a 2008 Suzuki C90T. This time around, however, I was on a 2004 Harley-Davidson Ultra Classic equipped with a full touring package. Trying to adjust to an additional 200 pounds and the Harley's narrower tires, I stumbled going through the corners on the new Basic RiderCourse II. During one of the turns, I drug my floorboard a little. The sound of it dragging on the range surface caught me off guard. The instructor demonstrated the exercise and then began giving me some pointers based upon what he was seeing. I made some adjustments and, suddenly, it was "game on." It was like an epiphany — my bike and I were operating in sync — just like we should be. I also realized the training was working, rebuilding skills that had degraded over time. By the end of the day, I completed the course and felt more confident operating my motorcycle. The attitude, "Here we go again," had changed as I saw the bigger picture. And I was about to need the skills I'd just refined.

The following weekend, I rode to Nashville, Tenn., for the Tennessee State University Motorcycle Rally. Riding in bumper-to-bumper traffic in downtown Nashville, I had a near miss with a distracted driver. Too busy talking on his cellphone and not paying attention to the road, he didn't notice the driver ahead of him slam on his brakes. When he finally did, it was at the last second and he jammed on his brakes. This, in turn, caused me to react accordingly by doing a quick stop. In that instant, I was thankful for the way my training had emphasized following distances, evasive maneuvers and using the front and back brakes to stop without sliding. Where I'd originally taken the course to be in compliance, now I was grateful for the way it prepared me for the risks on the road.

> "No matter how you **MITIGATE THE RISK**, riding a motorcycle is an activity that will **ALWAYS BE RISKY.**"

As an avid rider, I had become complacent in my riding skills and even developed a few bad habits. Both of these were sure telltale signs that I was in need of the refresher training program. The old adage, "It's like riding a bicycle, you never forget," does not apply to riding motorcycles. The skills needed to ride and operate a motorcycle are perishable and need to be refreshed. It is also important to have refresher training when changing motorcycles, as each brand and style operates differently. So when your command says there is new or additional training required for riding a motorcycle, keep an open mind.

No matter how you mitigate the risk, riding a motorcycle is an activity that will always be risky. However, you can still have fun and enjoy the ride. Take the time to inspect your bike, ensure you have plenty of rest, dress appropriately for the ride and take every opportunity to sharpen your skills for riding. Next time you hear that more requirements for motorcycle training are coming, embrace it and know that it may save your life by keeping you on your "A" game.

Fireproof Your Holidays

TRACEY RUSSELL
Ground Directorate
U.S. Army Combat Readiness/Safety Center
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Whether you're celebrating the 12 days of Christmas, eight nights of Hanukkah, seven principles of Kwanzaa or any other special holiday tradition, a fire-safe environment is one gift everyone can appreciate.

According to the U.S. Fire Administration, residential fires peak during the winter months. They estimate more than 400 holiday fires occur in American homes each year, resulting in dozens of deaths and injuries. The following tips, offered by the USFA and National Fire Protection Association, can help prevent your holiday celebration from going up in flames.

Christmas Trees

- Ensure artificial trees are labeled, certified or identified by the manufacturer as fire retardant.
- Choose fresh trees with green needles that do not fall off when touched, and trim one to two inches from the base of the trunk before placing the tree in a stand.
- Place trees at least three feet from heat sources like fireplaces, radiators, candles, heating vents or lights.
- Add water to tree stands daily.
- Never use lit candles to decorate trees, and keep lighters, matches and other sources of open flame far away from trees.
- When a tree begins shedding needles, it's time to dispose of it. Dried-out trees are a fire hazard and shouldn't be left inside or outside the home or garage. Check your local news agencies to find a tree-recycling program.

Holiday Lights

- Before use, inspect holiday lights for frayed wires, bare spots, gaps in insulation, broken or cracked sockets and excessive kinking or wear. All lights should be marked as safe by an approved testing laboratory.
- Never connect more than three light strands together unless the directions indicate doing so is safe. Connect strings of lights to an extension cord before plugging the cord into an outlet. Periodically check wires to ensure they are not warm to the touch.
- Never leave holiday lights unattended while on.
- Bring outdoor electrical lights inside after the holidays to prevent wear.

Holiday Decorations

- All decorations should be nonflammable or flame retardant and placed away from heating vents.
- Never burn wrapping paper in a fireplace — doing so can result in a very large fire that involves the chimney.
- Ensure trees and other holiday decorations do not block exits. In the event of a fire, time is of the essence. A blocked entry or exit puts you and your Family at risk.
- Avoid using lit candles. If you do burn them, ensure they are in stable holders and placed out of easy reach to prevent them being accidentally knocked down. Never leave candles burning unattended.

Cooking

- Keep towels, potholders and curtains away from open flames, ovens and stovetops.
- Never leave cooking food on the stove. A serious fire can start in seconds.

> "While **PREVENTING FIRES** is extremely important, you must also be **PREPARED IN CASE A FIRE** does occur."

- Clean cooking surfaces regularly to prevent grease buildup.
- Never use a stove or oven to heat your home.
- Double-check the kitchen before you go to bed or leave the house to ensure all appliances are off.
- Always wear short or tight-fitting sleeves when cooking.
- Heat cooking oil slowly to avoid burns from spattering grease, and be extra careful when cooking deep-fried food.
- If a cooking fire starts, turn off the stove or burner and place a lid on the pan to smother the flames. Never throw water on a grease fire!

Fireworks

- The best way to enjoy fireworks is to visit public displays put on by professionals who know how to handle fireworks safely.
- If you plan to use fireworks, make sure they are legal in your area.
- Never light fireworks indoors or near dry grass.
- Always have a bucket of water and/or a fire extinguisher nearby. Know how to operate fire extinguishers properly.
- Never wear loose clothing when using fireworks.
- Stand several feet from lit fireworks. If a device does not go off, do not stand over it to investigate. Douse the device with water and dispose of it.
- Always read the directions and warning labels on fireworks. If a device is not marked with contents, directions and a warning label, do not light it.
- Supervise children around fireworks at all times.

While preventing fires is extremely important, you must also be prepared in case a fire does occur. One of the best ways you can protect yourself and your loved ones is to install smoke alarms throughout your home. According to the NFPA, nearly two-thirds of home fire deaths occur in homes with no smoke alarms or working detectors. Pick up new batteries as part of your holiday shopping and test alarms before festivities begin. Also, ensure your Family knows what to do in the event of a fire. Prepare an evacuation plan with at least two escape routes identified from each room and practice it often.

However you choose to celebrate your holiday, take time to work fire prevention into your plans. The new year is waiting — welcome it safely!

A LITTLE SELF CONFIDENCE

CHIEF WARRANT OFFICER 3 QUINCY T. BLUNT
B Company, 1st Battalion, 13th Aviation Regiment
Fort Rucker, Ala.

I've been driving since I was 16 years old. I'd like to think I'm an "average" driver with a safe driving record — barring the occasional speeding violation. I can count on one hand the number of motor vehicle accidents I've experienced. The Army has provided me with very comprehensive driver training to make me aware of the hazards on the road. However, I had one of those lessons reinforced the hard way to help me realize how important that training was.

I was a young, overconfident and slightly arrogant warrant officer at the time, assigned to the 10th Mountain Division at Fort Drum, N.Y. Having grown up in the southwest, I was very unfamiliar with winter driving in the northeast, which can be an extremely harsh, eye-opening experience. As would be expected given the region, winter driving dominated our safety discussions. Multiple driving awareness classes and training sessions were conducted to educate Soldiers such as myself on how to deal with the winter elements.

Unfortunately, like many others, I had the typical "It-won't-happen-to-me" mentality. My car was very reliable and I was so confident of my driving skills that I assumed only an idiot would get into trouble driving in winter conditions. I'd taken some advice and winterized my car, at least as far as I thought I needed to. Unfortunately, I wasn't quite prepared for what was about to happen to me.

One weekend, I made an impulsive decision to travel 70 miles south to Syracuse, N.Y. We'd had some heavy snowfalls during the previous days and I took that into consideration. This particular day the weather was slightly clearer and warmer as I took off during the early afternoon for the hour-long drive to Syracuse. While there, I neglected to keep myself updated on the evening weather forecast. As the evening approached, the temperatures dropped significantly, creating icy conditions on the roads.

Finally, it was time to head back to Fort Drum. I was only about 10 minutes into my return trip when it began to snow. I hadn't taken into account the unpredictability of the lake effect snowfall drivers often experience on Interstate 81 between Syracuse and Watertown, N.Y.

Recognizing the situation, I used some common sense and reverted to my driver's training, slowing down significantly. Visibility went from moderate to poor as I continued going north at 30 to 35 mph with my hazard

lights flashing. At that point, I should have stopped, but I felt confident and told myself, "I'm doing OK. I can tough this out."

I noticed another vehicle ahead of me, but I couldn't determine the distance between us. As I started slowing down, I realized it had stopped in the road. Instinctively, I hit the brakes. Going into a spin, I remembered my winter driving training and turned into the skid. This was the first time I ever actually had to do that, but it indeed assisted in stopping me before I went off the road.

My heart pounded in my throat. After I caught my breath again, I realized I'd spun 180 degrees and was now facing oncoming traffic. I could now see headlights in front of me and quickly flashed my high beams to alert oncoming drivers. This bought me a little time as I waited for the traffic to pass before turning around to go in the right direction. I then proceeded to the next available exit, pulled off the highway and waited for about 40 minutes to let the snow subside. After that, I got onto the road and made it back safely. However, as I drove I saw several drivers who hadn't been as fortunate and had slid off the road.

I will never forget that day and the problems I thought would never happen to me. Over the next couple of years, I saw many other drivers experience similar or worse situations.

My overconfidence was the key factor that put me at risk that night. It led me to exercise poor judgment by trying to drive through dangerous winter weather. I could've easily waited out the snow in Syracuse or pulled off the road when the snow began. However, I let the "it-won't-happen-to-me" mindset blind me to the risks that day.

Sometimes, we rely too much on our opinion of ourselves and our ability to make good decisions rather than viewing things objectively. Overconfidence can be a game changer, and you can't always predict what direction things will go. I learned through this that patience is, indeed, a virtue. In fact, in regard to safety, being patient might just be the best way to avoid becoming a patient!«

> "**UNFORTUNATELY**, like many others, **I HAD** the **TYPICAL** 'It-**WON'T**-happen-to-me' **MENTALITY.**"

NO MARGIN FOR ERROR

CHIEF WARRANT OFFICER 3 JUSTIN TRADER
B Company, 1204th Aviation Support Battalion
Birmingham, Ala.

In the summer of 2000, my commander gave me a mission to set up a CH-47D helicopter static display. The scheduled takeoff time was 7 a.m. with an estimated time en route of two hours. With such an early takeoff time, the pilot in command wanted to preflight the aircraft the night before. Since I was the flight engineer on this mission, I normally would be present during the preflight to assist the pilots with the inspection. However, I was conducting another task on a different airframe and couldn't break free to open panels and remove covers for the pilots. That was the first mistake.

Another FE stood in and assisted the PC with the preflight. Fortunately, our unit worked well together and all FEs were familiar with the eight aircraft assigned to us, including the problems with each aircraft. The PC completed his preflight and the "stand-in" FE locked down all the cowlings, panels and tunnel covers. He then reinstalled all covers and tie-downs in preparation for leaving the aircraft outside for the night.

When I arrived the next morning, I grabbed my gear, logbook and fuel sampling equipment and made my way out to the flightline. When I left the hangar the night before, I could see five aircraft tied down on the flightline. On the aircraft we were taking this morning, I noticed the combining transmission (C-box) cover missing. I stopped for a moment, but then reminded myself that one of the eight aircraft had a missing C-box cover for some time now.

As I approached the aircraft, I assumed this was the aircraft with the missing cover. I continued to get ready for the mission, performing my fuel sample and removing the tie-downs and covers. I double-checked all the latches, panels and tunnel covers for security. Completing a final review of the logbook, I got ready for the mission. This was my second mistake, since I didn't check the logbook for any notation of a missing C-box cover, which would have been required to order a new one.

The rest of the crew arrived and the aircraft was ready to go. About 45 minutes into the flight, my crew chief and I were conducting a ramp and cabin check. I was performing checks upfront while she was in the back of the aircraft checking the maintenance panel and various other areas. She turned to me and asked if I smelled something burning. I checked and the only odor I smelled was hydraulic fluid, which is usual on the ramp of a CH-47D. We double-checked all the levels, temperatures and pressures. There was no indication of any problems, so we monitored the area.

We reached our destination with no incident or hint of odor. After we shut down, we performed a postflight inspection, in which I went straight to the C-box area and found the missing cover. After a quick inspection, I saw an entangled mess — the C-box cover was located in the No. 7 driveshaft and the C-box forward adapter.

Fortunately, the cover had spun with the driveshaft and didn't lodge or cut into the shaft. The only sign of damage was some slightly worn paint from the shaft. What we had smelled was probably the C-box cover heating up as it rubbed against the shaft. We cleaned up the area, found all five metal hooks and removed all canvas bits. Then, after further inspection, we received clearance from maintenance and were able to complete our mission and return home.

Lessons Learned

There were many lessons learned that could have prevented this incident from happening. Fortunately, this did not turn into a catastrophic incident and we were able to return home safely. I thought I knew this aircraft well. However, when I noticed the cover missing during the beginning of the mission, I had already talked myself into believing this was the aircraft with the missing cover. In fact, that particular aircraft was in the hangar. I reviewed the logbook, but I never noticed the cover written up or the part placed on order. I should have caught the write-up because I knew accountability for the cover was important. My assumption could have caused a disastrous accident.

One other lesson learned … in airframes that require a crew of three or more, an FE or CE really should be present to conduct the preflight with the pilots. Someone should have accounted for the cover. Then, of course, a proper recon of the logbook would have prevented the incident.

Additionally, the FE who performed the preflight should have never placed the cover down on the airframe in the driveshaft area. After we reported this incident to the facility, we conducted a safety meeting to prevent these types of maintenance errors. When questioned about his mistake, the FE who performed the preflight was adamant he had not left the cover in the C-box area. In aviation, it is very important to admit when you are wrong. This maintains that level of integrity and lets others know we are really looking out for the best interest of others and the mission. When incidents like this happen, it is far more forgiving if one can admit the mistake, learn from it and share the lessons learned. «

> "In **AVIATION**, it is very **IMPORTANT** to **ADMIT** when you are **WRONG**."

The Little THINGS

LT. COL. PHILLIP MONAGHAN
Joint Force Headquarters
Mississippi Army National Guard
Jackson, Miss.

It was a cold December day in Mississippi. The temperature was a crisp 28 F and expected to drop to 8 F after dark. That was fine with me since deer move better when there is a cold front.

On this particular Friday, I planned to leave work early so I could go hunting at my deer camp that afternoon. I had called my hunting partner the night before to ask him if he was going up that afternoon as well. He and I hunted together as much as possible — not only for friendship, but also for safety reasons. Unfortunately, he couldn't leave early, but said he would make it to the camp later that night.

Ordinarily, the camp was buzzing with other hunters; but when I arrived about 1 p.m., no one was there. I expected that other hunters would arrive soon, so I put my gear in a camper trailer, changed into my hunting clothes and made sure my rifle was ready.

Confident I had everything in order, I signed out of the camp and headed to a deer stand about five miles away. Adding to my confidence was the fact that a standing, unwritten rule at the camp was if a hunter goes out and hasn't checked back in 30 minutes past dark, we (other hunters) go out and search for the tardy hunter.

I drove to a spot where I usually park and walked the rest of the way to a stand about 1,000 meters down a trail into the woods. I crept through the woods slowly as to not scare any deer that may have been out feeding already.

After reaching the stand, I put out some scent and started climbing. This particular stand was a lock-down type with screw-in steps reaching 24 feet up into the tree.

After climbing up, I attached my safety belt to the tree and sat down. At 4:45 p.m., I heard what sounded like deer fighting so I blew my grunt call, waited and listened. The sound stopped. I thought, "Great, you scared him off."

I hadn't heard anything for about 15 minutes when a stick behind me snapped. My heart started beating out of my chest because I thought a buck had gotten behind me. I slowly turned my head to see a big doe to my left with her nose on the scent I had put out. I raised my rifle and "BANG!" she hit the ground.

I looked at my watch and noticed it was only 5:05 p.m. In Mississippi, you can harvest a buck and a doe the same day, so I stayed in the stand hoping a buck would come out before dark. Sure enough, one did and, as he turned broadside, I shot him. He hit the ground and didn't move.

It was still light so I got on the first step, unhooked my safety belt (you might be thinking I was going to fall at this point, but keep reading) and climbed down to look at my deer. I looked at the doe first since she was only 15 yards away; the buck lay across a little creek about four or five yards away.

I put my rifle on my shoulder, crossed the creek and walked toward the buck when he suddenly pushed himself up on his front legs! I was not about to let that buck get away, so I pulled my rifle off my shoulder and began chasing him. In my excitement, I paid no attention to where I was running, tripped on some vines and fell hard on my right shoulder. Even though my arm hurt, I got up and continued the chase. I spotted the buck, lying on the ground again, and tried to raise my rifle with my left arm, but it was too heavy. I put my rifle across my back and got closer to the deer. The buck started pushing himself up again, so I jumped on his back. He bucked, wiggled, kicked and slid out from under me. At that moment, the thought occurred to me this deer might end up kicking me to death! Somehow, though, I managed to get the rifle to his neck and end the struggle at last.

At this point, my arm was useless and now I had the dilemma of getting two deer and myself out of the woods. My goal was to drag the buck back to the creek near the stand and go get help, but the pain in my shoulder had really begun to set in.

I made it to the creek, slid into it and waded through the cold water until I came to a place I could get out. I made my way back to my truck, which happened to be a stick shift, and drove the five miles back to camp in first gear. Luckily, my friend and others were there when I arrived. They could tell I was in real pain and needed help. As my friend loaded me into his truck to take me to the hospital, some of the other guys went to find my deer. I spent a painful and long night in the emergency room with a dislocated shoulder.

The lesson I learned from this experience is to not get in a hurry and overlook the "little things." Even with all my efforts to be safe in the woods by making sure someone knew where I was, using my safety belt in the deer stand and being careful climbing up and down the tree, I still managed to hurt myself badly enough to end up spending the night in the ER. It just proves there are no small hazards. Sometimes, the "little things" can hurt you just as much as the big ones.

The Right to Bear Arms

TRACEY RUSSELL
Ground Directorate
U.S. Army Combat Readiness/Safety Center
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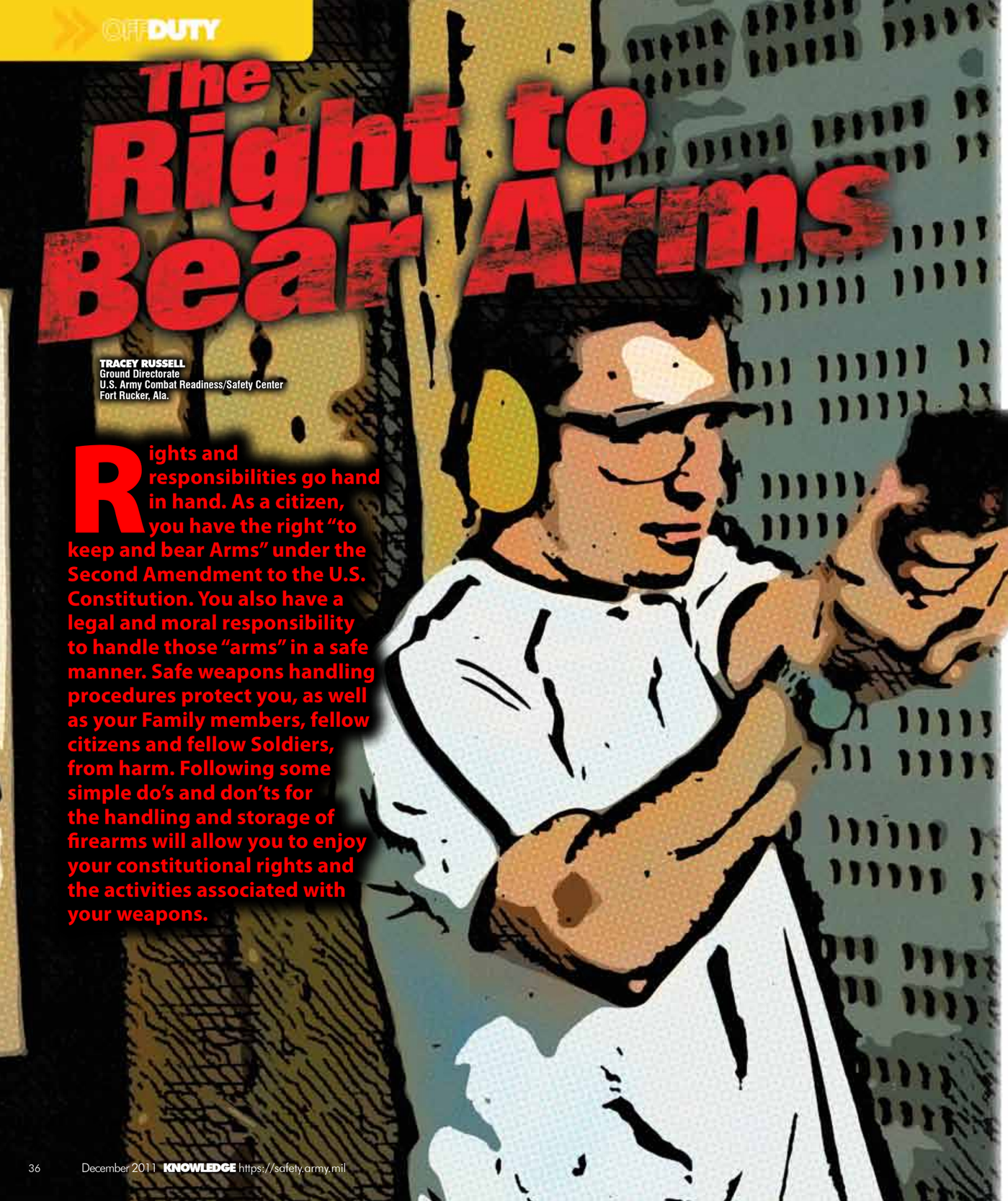

Rights and responsibilities go hand in hand. As a citizen, you have the right "to keep and bear Arms" under the Second Amendment to the U.S. Constitution. You also have a legal and moral responsibility to handle those "arms" in a safe manner. Safe weapons handling procedures protect you, as well as your Family members, fellow citizens and fellow Soldiers, from harm. Following some simple do's and don'ts for the handling and storage of firearms will allow you to enjoy your constitutional rights and the activities associated with your weapons.

Do

- **Get Safety Training.** Do not assume you are an expert with all weapons because you carried an M4 or M9 during a deployment. Different weapons have different handling characteristics and safety mechanisms. Read your owner's manual and sign up for a class.
- **Know Appropriate Laws and Policies.** Laws, regulations and procedures for the transport, storage and registration of weapons vary between different states and military installations. In accordance with Army Regulation 190-11, Physical Security of Arms, Ammunition, and Explosives, senior commanders are responsible for regulating privately owned weapons on Army installations. Policies will cover information such as registration, prohibited weapons and legal compliance requirements. Take time to familiarize yourself with local policies and adhere to them.
- **THINK Weapons Safety:**

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

Don't

- **Handle Weapons Under the Influence.** Weapons and alcohol never mix. Never use alcohol before or while handling a weapon. Also, be aware that other substances such as prescription medications can alter your perceptions and influence your coordination.
- **Point a Weapon at Anything or Anyone You Don't Intend to Shoot.** This applies even if you "know" a weapon is unloaded. Many Soldiers have lost their lives to "unloaded" weapons.
- **Leave an Unsecured Weapon Unattended.** Secure your weapons unloaded so children or others unfamiliar with weapons handling do not have access to them.

For more information, check out the Range & Weapons Safety Toolbox at https://safety.army.mil/rangeweaponssafety. The toolbox includes a section dedicated to privately owned weapons, which contains safety messages, presentations, videos, posters and links to other tools and resources.

Don't take your rights or responsibilities for granted. Whether you are simply a collector, an avid hunter or enjoy target shooting, the safe handling of weapons will allow you to enjoy your activities while preventing someone from being injured or killed. «

THE SILENT RECALLS

BOB VAN ELSBERG
Strategic Communication Directorate
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

You've heard of safety recalls on vehicles, but have you heard of Technical Service Bulletins? Many refer to them as silent recalls — notifications that go to dealerships about mechanical and other kinds of problems with your vehicle. They're called "silent" because, unlike normal recalls, you'll probably never be notified by the manufacturer. For the most part, it's up to you to be aware of these things. And you might be surprised at how serious some of these bulletins are.

I'd barely gotten home from work when the telephone rang. On the other side was one of my co-workers, stuck in the parking lot at work. Try as she might, she couldn't get the transmission in her 2008 Chrysler Sebring to shift from "Park" to "Reverse." She'd called a tow truck, but needed a ride home.

By the time I got there, the tow truck driver had "jimmied" the shifter loose. Prying off a silver-colored piece of plastic trim around the shifter console, he'd used a screwdriver to move a small wire cable to unlock the transmission shifter. He explained he'd had to do this with several Chrysler cars.

That got me thinking. The next morning, I went online and checked out the National Highway Traffic Safety Administration's website. I couldn't find a safety recall on the problem; but then I went looking for any possible TSBs. Following the instructions and navigating through NHTSA's website, I finally got to a button that would allow me to "Retrieve TSBs." When I clicked on it, 13 bulletins popped up, and the first one concerned transmission problems. When I hit the "Get Summary" button, I knew I'd hit pay dirt.

Make/Models: | **Model/Build Years:**
CHRYSLER SEBRING | 2007-2008
CHRYSLER SEBRING CONV | 2007-2008
DODGE/AVENGER | 2007-2008

Service Bulletin Number: | CSN-K16
NHTSA Item Number: | 10034052

Summary:
See document search button for owner letter. Automatic transmission shift lever interlock spring. Transmission gearshift lever interlock spring retainer hook on vehicles may break. A broken interlock spring retainer hook will result in the inability to move the gearshift lever out of the park position. CSC letter was rec'd. *PE

This verified what I suspected after hearing the tow truck driver's comments. The question now was how to deal with it. This wasn't a safety recall where the manufacturer was obligated to notify the owner and repair the problem for free.

I went online to Chrysler's website and found the number for the media relations manager for Chrysler LLC. He advised my co-worker to take the car to the nearest Chrysler dealer and explained the Customer Service Notification (CSN-K16 in the TSB at the bottom of page 38) would identify the issue to the service manager.

My co-worker followed his advice, showing the service manager a printed copy of the TSB, and left the car for service. The dealership repaired the problem without charge and had the car ready for pickup that afternoon. The problem was resolved and my co-worker could now drive her car without fear of being stranded somewhere with a locked transmission. It had been well worth the time to research the issue.

NO LEMONS, PLEASE

There are more than just safety recalls and Technical Service Bulletins on the National Highway Traffic Safety Administration's website that can clue you in on problems you may be having. If, while you're going through the drill to get the TSBs, you instead hit the "Search Complaints" button, you'll see where owners of the same vehicle as yours have reported problems. Repeated problems may become the target of a Defect Investigation, something else you can search on NHTSA's website.

No one wants to get stuck with a lemon. If you're considering buying a used vehicle, you might want to check out the recalls, TSBs and complaints at www.nhtsa.gov/ before laying down your hard-earned cash. You might discover the "sweet" deal you're being offered might leave you with a bitter aftertaste.

I can't promise every vehicle manufacturer or dealership will handle TSBs the same way. What I can say is it's worth the effort to find out if there are TSBs on your vehicle. In doing further research on NHTSA's website, I discovered some TSBs had been upgraded to safety recalls.

Fortunately, checking for TSBs isn't that hard to do. After going onto NHTSA's website, click on "Vehicle Safety" and then "Recalls and Defects." Going to the bottom of that page, look for "Search for Defects Investigations" and click on the nearby "View All" button. Select the "Search for Technical Service Bulletins for Your Vehicle" button and fill out the following screens providing the year, make and model of your vehicle. When you see the "Retrieve TSBs" button, click it. As you read them, you have the opportunity to select "Get Summary" for more information on each TSB.

So what about you? Could there be a TSB lurking out there that could affect your vehicle? The key is to protect yourself by going to NHTSA's website and researching your own vehicle and bringing it to the attention of your dealership. Why leave your safety to chance? «

Editor's note: Chrysler does attempt to reach consumers with notices on TSBs. My co-worker purchased her car in Korea and shipped it back to the United States during a PCS move. Unfortunately, the paper trail between Chrysler and her was broken and she did not receive notice of the problem with her vehicle.

Pushing The Limit

NAME WITHHELD BY REQUEST

Author's note: If the accident crew in the following scenario had known the "how to" of identifying and assessing hazards and establishing controls, they might be alive today to tell their story. Sadly, they didn't. Now it's up to me to tell you where we failed to effectively manage the seemingly minor hazards that combined to claim their lives.

The mission was simple. Night vision goggle currency sustainment training with some formation flying — point A to point B and return; two hours of flight time with a takeoff at 7 p.m. Pretty basic stuff for Apache pilots — no rocket science involved.

Operations had me scheduled as the pilot in command of Chalk 2 and air mission commander for the flight of two Apaches. My backseater was an assistant brigade S-3 scheduled to transfer to our attack unit. He had a lot of flight time but needed this flight to sustain NVG currency. The PC of the lead aircraft was a new instructor pilot, and his backseater was one of the unit's newer pilots. The Chalk 1 pilot needed to complete some readiness level 2 NVG mission tasks and get some NVG time. To evaluate their mission planning capabilities, the Chalk 1 PC and I allowed the two pilots to plan the mission.

After giving the mission planning team a couple of hours, I looked at the proposed route of flight, which would take us over a large lake. Although it wasn't the route of flight I would have chosen, it was OK. There would be no problems with illumination or weather, so one route was probably as good as the other. I glanced at their performance planning card, and it looked good.

We were doing pretty well for crew endurance even though we had to start our 14-hour duty day a little early so we could attend a 9 a.m. safety meeting. We would still have two hours of our duty day remaining when we finished the mission if we took off at 7 p.m. and flew for just two hours. No problem here.

We went to our respective aircraft about 2 p.m. and spent about an hour preflighting. We noted no deficiencies on either aircraft. But where had those clouds come from? The weather forecaster had given us "clear, blue and 22" on the long-range forecast. Oh well, it looked good enough to go. The moon was full and high enough to give us plenty of light, but those clouds might make for a dark night.

To file the flight plan and get weather, we all met in operations. The weather forecast was for light rain, overcast at 1,500 feet and two miles visibility for the entire flight. This weather was a lot different from the previous forecast, but it was still within the unit standing operating procedures requirements and well within the Army Regulation 95-1, Flight Regulations, criteria for operations in uncontrolled airspace.

When we added up the numbers on the risk assessment sheet, it showed the mission as medium risk. How could that be? The weather wasn't that great and the illumination would be reduced because of the weather. Oh well, we had experienced IPs in both aircraft and the mission was fairly simple.

At 6:45 p.m., we cranked the aircraft and everything was going fine. The Chalk 1 pilot had just called ground for clearance to taxi for departure when his engine chip detector light illuminated. The Chalk 1 PC called maintenance while I called operations to advise them of our delay. We shut down both aircraft and waited for maintenance to arrive. When the maintenance crew pulled the chip plug, normal fuzz was all they found. The crew started the aircraft again and rechecked the plug. The light remained out. Once we were released for flight, we realized we'd been delayed almost an hour.

The time was just after 8 p.m. when we finally took off. The ceiling appeared to be lower than forecast, and the winds were beginning to gust, causing us a lot more work as we proceeded on course toward our first destination.

The flight visibility started to deteriorate to below two miles and the ceiling was becoming indistinguishable. I asked the flight lead PC how he was doing. "OK," he said. "The weather will make for some good training."

As we approached a large lake along our route, the visibility decreased to about one mile. Everything might have been acceptable had the route not taken us over the lake. As we crossed the shore, I realized I could not tell how high we were. I called flight lead and told him we were going to pick up additional spacing. He responded with a "Roger" and that we should reach the opposite shore in about two minutes. Suddenly, I couldn't see Chalk 1. I heard the PC transmit, "We're IMC [instrument meteorological conditions], change frequency to approach control!" That was the last we heard from them.

As soon as we lost sight of the lead aircraft, we started a 180-degree right turn while notifying them of our actions. When we completed our turn, we could see lights on the shore. As I looked through the NVG tubes, I could see well enough to remain oriented — well enough to get back home.

I figured the other crew would be busy, so I waited for them to contact me. After a couple minutes of waiting for a call, I tried to contact them. I tried on all three commo radios and got no response.

Our home base tower heard me on guard and asked if they could be of assistance. I asked tower if they were in contact with the other aircraft. They said they were not but would contact approach control to see if they were in contact with the aircraft. I told them what had happened and that we were returning to the airfield.

It took us about 15 minutes to get back to the airfield. Neither one of us said a word. I was so sure the other guys were OK — I just knew they were. But they weren't. I kept going over the day's activities in my mind. What could we have done differently that would have saved that crew?

Lessons Learned

First of all, both crews pushed

the limit of their crew day. This is a hazard that aviators deal with frequently. The safety meeting was important, but there are usually makeup sessions and the crews could have come in later. Coming in later would have optimized the crews' day.

The maintenance delay pushed the crew day a little further toward the extreme. Did anyone on either of these crews ask questions about how everyone was feeling or if anyone was too tired to fly? Even if the IPs did ask, maybe one of the pilots was tired but chose not to speak up because of a John Wayne image he thought he had to maintain. Even if the control of starting the duty day later had been exercised, additional evaluation of fatigue may have revealed tired crewmembers, causing us to reevaluate our mission.

The crews opted to fly this mission with less than visual flight rules weather. Although the weather was well within AR 95-1 criteria for operations in uncontrolled airspace, was it appropriate weather for initial NVG mission training or for currency sustainment? There may be circumstances when an IP feels a pilot is proficient enough to advance to flying in this kind of weather. If this were the case, a good control would have been to review the local inadvertent IMC procedures and discuss specific crewmembers' responsibilities before takeoff.

When the visibility began to deteriorate below two miles, the AMC asked the Chalk 1 PC how he was doing. He responded that it would be good training. Maybe that would be true with a more experienced crew. However, to operate below two miles of visibility at night, a crew should be in the "run" mode of the crawl-walk-run training cycle. Since this was initial NVG mission training for the pilot in the lead aircraft, maybe a more prudent assessment would have warranted turning around or just landing where they were. The visibility was continuing to deteriorate, and the trend was fairly obvious.

It is possible the hazards in the immediate area (wires, trees and so forth) could have precluded a safe landing and the most prudent decision may have been to return to the base field. A good control for this flight might have included a discussion of mission continuation criteria before takeoff.

There were IPs on board each aircraft in this situation, and that may be considered a control measure. Typically, IPs are conscientious and knowledgeable; however, they are not superhuman. In fact, they may require additional instrument training from time to time. Presenting instruction and evaluating it are significantly different from doing it yourself.

The IP of Chalk 2 indicated that when he looked under the NVG, he couldn't see anything. Why continue aided in that situation? On a very dark night with no light to help them judge distance, an aircrew may have difficulty judging how far they can actually see unaided. I consider it to be a high risk to continue flying under aided visibility criteria when unaided visibility is below minimums. The unit SOP may be the most appropriate place to establish local procedures regarding aided versus unaided visibility.

Cumulative Effect of Minor Hazards

A close look at the events leading up to the accident will most likely reveal hazards aircrews encounter frequently, with only minor variations from mission to mission. Individually, each hazard presented could be assessed as a low risk. However, the cumulative effect of all these hazards significantly increased the overall mission risk.

To be effective, risk management does not end with the mission planning. The process of identifying, assessing and controlling hazards must continue throughout the mission as the situation changes. While in flight, we often must accomplish "hasty" risk management because the particular situation may demand an immediate response. Time may not allow extensive hazard identification and analysis. In these cases, do as much of the process as time will permit. Even a hasty assessment is better than just reacting. The secret lies in our ability to fully integrate risk management into our basic decision-making process.

LOST

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, email safe.knowledge@conus.army.mil.

AVIATION

AH-6M

CLASS A

- Both crewmembers were killed when the aircraft descended into trees and crashed during range training.

AH-64D

CLASS B

- The crew encountered rising terrain and diminished visibility. During landing, the aircraft touched down on rocky terrain, damaging the tail boom and stabilator.

CLASS C

- The aircraft experienced a No. 1 engine failure during takeoff. The crew executed a forced landing, touching down on a dirt berm. The aircraft sustained minor damage to the L330 panel and antenna.

- The aircraft experienced an overtorque condition (135 percent for five seconds) during single-engine operation.

- Maintenance personnel identified damage to a main rotor tip cap during interim Table VIII. A precautionary landing was executed, and inspection identified damage to a tail rotor blade.

CH-47D

CLASS C

- The aircraft struck a dirt mound during a roll-on landing and sustained damage to the left-rear landing gear, hydraulic lines and surrounding sheet metal.

CH-47F

CLASS A

- The aircraft entered an uncontrolled descent on final approach for passenger pickup and landed hard, resulting in separation of the aft rotor assembly/transmission.

CLASS C

- The aircraft sustained damage during hot cargo load operations.

HH-60L

CLASS B

- Maintenance discovered lightning had struck the aircraft while it was parked on the aviation support facility ramp.

MH-60K

CLASS C

- The aircraft's main rotor system contacted the ALQ-144 during an undetermined point in flight.

OH-58D(R)

CLASS C

- The crew experienced a bird strike on final approach for landing. Damage was incurred to the mast-mounted sight, transmission, driveshaft, tail rotor gearbox and all four main rotor blades.

- The aircraft experienced a mast torque exceedance (128 percent for three seconds) during a low-power condition demonstration, which required a drive train replacement.

TH-67A

CLASS C

- The crew experienced a chip detector light, followed by engine failure during climbout. The instructor pilot conducted an autorotation to the stagefield, and the aircraft made ground contact, resulting in separation of the aft portion of the tailboom, vertical fin and tail rotor gearbox.

UH-60A

CLASS B

- The crew was landing for patient pickup when the left landing gear settled into soft ground, resulting in the main rotor blades contacting rising terrain.

UH-60L

CLASS B

- Maintenance discovered lightning had struck the aircraft while it was parked on the aviation support facility ramp.

UAS

RQ-7B

CLASS A

- While in a holding pattern, the unmanned aircraft collided with a C-130. Damage was incurred to both aircraft.

CLASS B

- The UA descended during flight, following a generator failure and an earlier Health and Usage Monitoring System alert for oil pressure. The crew deployed the landing chute, and the UA was recovered with damage.

CLASS C

- The UA's landing gear collapsed upon touchdown, impacting the payload and undercarriage as it slid off the runway and impacted terrain.

- The UA experienced rising operating temperatures and loss of altitude during flight. It crashed during an attempt to return to its operating station and was recovered with damage.

- The UA touched down hard during landing and struck a HESCO barrier, resulting in damage.

- The UA descended during flight, following a generator failure and an earlier HUMS alert for oil pressure. The crew deployed the landing chute, and the system was recovered with damage.

GROUND

Other

CLASS A

- A Soldier was killed when the SUV he was driving overturned as he returned to the compound following guard duty. Two other Soldiers were treated and released.

- A Soldier was killed when he was struck in the head with decking panels that fell from a forklift after a ratchet strap broke.

Personnel Injury

CLASS A

- A Soldier and his passenger were killed when the civilian single-engine aircraft he was piloting crashed on approach to the runway.

- A Soldier died when he was struck in the head with a round from an M4 as he and two other Soldiers cleaned their weapons.

DRIVING

POV

CLASS A

- A Soldier was driving with his wife and their newborn when he lost control of the vehicle and it struck an embankment and overturned. The wife, who was also a Soldier, was ejected and killed.

- A Soldier was killed when his SUV left the roadway and struck a tree. The Soldier wasn't wearing his seat belt.

POM

CLASS A

- A Soldier was killed when he lost control of his motorcycle at high speed, went off the road and crashed into a fence post. Although the Soldier was wearing a helmet, it was not properly fastened and came off during the accident.

- A Soldier died after he lost control of his motorcycle while trying to exit an interstate and struck a terminal barricade, splitting his helmet in half. Alcohol was a contributing factor in the accident.

- Two Soldiers were riding side-by-side when a minivan entered their path of travel from an adjoining road. One Soldier died when his motorcycle struck the vehicle, and the other was injured when he laid down his bike to avoid the collision. The deceased Soldier was licensed, trained and wearing full personal protective equipment.

- A Soldier was killed when he struck a vehicle that entered his path of travel and was thrown from his bike. He was licensed, trained and wearing full PPE.

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