

**AMMO STORAGE: HOW SAFE IS YOUR ARSENAL?**

# KNOWLEDGE

VOL. 6 JUNE 2012

OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY



## DRIVING DRUNK

ONCE IS ALL IT TAKES

- RIP CURRENTS
- FALL PROTECTION
- HYDROPLANING



## AIRCREW COMPLACENCY



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### 2012 National Safety Month

During the past several years, our Army has reduced preventable accidents to near peacetime levels. This remarkable success has been achieved despite the high operations tempo of our continuing missions overseas, proving once again the diligence and dedication of our Soldiers. We commend each and every one of you for your hard work in making safety a top priority, both on and off duty.

While risk management deserves our attention and focus 24/7, our Army is again placing special emphasis on safety this summer by observing National Safety Month in June. This annual commemoration provides each of us with an opportunity to evaluate our safety programs and make necessary adjustments for the months ahead. One of four topic areas will be highlighted each week during the month — Civilian safety, ground safety, aviation safety and driving safety. To facilitate training, the U.S. Army Combat Readiness/Safety Center will release programs and tools targeted to each of these areas through the end of June, so visit their website at <https://safety.army.mil> often for products that will help you keep your Soldiers and Civilian employees safe.

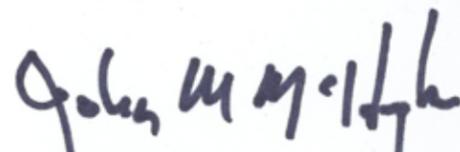
Looking past June, the fourth quarter (July-September) is historically the deadliest time of the year for our Soldiers off duty. Privately owned vehicle and motorcycle accidents dominate fatality reports, but drowning and other water-related deaths have also been on the rise in recent years. Compounding the tragedy, indiscipline is cited as a root cause in most of these losses. Discipline and standards are at the core of our profession, and preventable deaths due to reckless behavior hit our units, our Families and our surviving Soldiers especially hard. Engagement between Leaders and Soldiers, and among peers, is the key to identifying high-risk behavior, addressing indiscipline and saving lives. We ask that leaders actively promote an atmosphere of risk mitigation for all activities both on and off duty to ensure the safety and well being of the Force.

Thank you for your support of National Safety Month and for doing your part to reduce preventable accidents across our Army. Keeping our Soldiers safe is both a force protection and a readiness issue – and it is everyone's responsibility. The smart decisions we make every day will have a lasting impact on our Army now and into the future.

ARMY SAFE IS ARMY STRONG!

  
Raymond F. Chandler, III  
Sergeant Major of the Army

  
Raymond T. Odierno  
General, United States Army  
Chief of Staff

  
John M. McHugh  
Secretary of the Army

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U.S. ARMY COMBAT READINESS/SAFETY CENTER

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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](mailto: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.



# FORGING THE WAY AHEAD

“**SOLDIER-TO-SOLDIER** engagement is making a **HUGE DIFFERENCE** in **BOTH** on- and off-duty **SAFETY.**”



**A**nother season of change is upon us, and our Army is getting summer off to a great start by officially observing National Safety Month during June. Army Leadership is asking that commanders across the force take this opportunity to evaluate their safety programs and prepare for the months ahead, which are historically the deadliest time of year for our Soldiers off duty. I'd like to kick off the month and the 101 Critical Days of Summer with an evaluation of my own, looking at the amazing strides our Army has made for safety and the people who have made that success possible.

First, I cannot express how proud I am of the way our Leaders have grown during the past decade. They have accepted every challenge put before them and accomplished increasingly complicated missions not only well, but more safely than ever. From the first-line Leader through the entire chain of command, engagement has been the key to our Army's historic reduction of preventable accidents during wartime. This is a feat

unprecedented in our nation's history, and it couldn't have happened without our Leaders remaining focused and looking out for their Soldiers all the time. Our Soldiers have grown right along with their Leaders. Those of us who wear the uniform have always been concerned for one another's well-being, but I've never seen the level of engagement regarding safety among peers as what exists today. Whether it's reminding a friend to wear a seat belt or

personal protective equipment, slowing down on the highway or calling a cab after a night of celebrating, Soldier-to-Soldier engagement is making a huge difference in both on- and off-duty safety. I commend our men and women for the fantastic job they are doing for each other and ultimately our Army, whether on patrol in Afghanistan, in the barracks back home or at a backyard cookout. After more than 10 years of war, our Family members have

shown an amazing resilience and accepted the hardships of Army life with grace and dignity. Our Army remains ready for any challenge because its backbone, our Families, is forged with steel that gets tougher by the day. As such, our spouses, children, parents and siblings have proved indispensable in promoting safety. Leaders, please remember to include your Families in your safety programs — we owe it to them as part of the Army Team and, when aware of the risks, they are a vital and influential part of your safety program, helping our Soldiers make the right life decisions to stay safe.

Additionally, our safety professionals and Army Civilians continue to work diligently to keep Soldiers safe. I've said many times there is no more noble goal than striving for Soldier safety, and I emphatically repeat that statement now. Our Civilian safety professionals often work in the shadows of day-to-day operations, but their impact is felt all the way to the front line. Commanders are extremely fortunate to have these

highly educated and motivated professionals within their ranks, and I encourage you to take full advantage of their expertise in all matters. Even the most mundane of topics could have safety implications, and the knowledge and wisdom of these safety professionals has proven priceless both in theater and back home. Finally, the USACR/Safety Center team has grown and evolved with the rest of our Army Family. Leaders and Soldiers have provided invaluable feedback that has led to important changes in the way we provide training, outreach and tools to help them live safer lives. Army safety is becoming more professionalized and mainstream than ever, and this success is due to the combined efforts and support from senior Army Leadership, Leaders in the field, and the work accomplished daily at the USACR/Safety Center.

Whether you're a Leader, Soldier, Family member or Civilian — thank you for what you have done and continue to do. It has been an honor to serve alongside

each of you, and I ask that you welcome our incoming director of Army Safety, Brig. Gen. Tim Edens, with the same enthusiasm you have shown me these past three years. I have no doubt our mission will continue to flourish in his capable hands, especially with your help. Now and always, we will see you on the high ground; in the meantime, continue to keep safety a part of all you do each and every day, on and off duty. God bless our Soldiers, their Families and our Army Civilians! «

**Army Safe Is Army Strong!**

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

# HOW SAFE IS YOUR ARSENAL?

PAUL CUMMINS  
U.S. Army Technical Center for Explosives Safety  
McAlester, Okla.



**I**n a tactical environment, a Soldier's access to ammunition and explosives is virtually unlimited. Downrange, Soldiers may go to bed with their boots on, their web gear full of grenades hanging on the back of their bunk and a Light Anti-Tank Weapon stored on the floor underneath. As a Soldier, what are you to do to keep yourself and your battle buddies safe?

To begin with, Soldiers need to remember to treat weapons and ammo with respect. Never point the muzzle of a weapon at a buddy or anything you don't intend to shoot. Don't store inert or dummy munitions in the same location you store your live ammo. In addition, ensure your dummy/inert munitions are clearly marked. Inert munitions are valuable training tools, but remember, training never starts with the words "watch this."

Muzzle awareness and proper storage — hooah, got it. That's it, right? Not exactly. Let's say you've been designated as the ammo officer during this deployment and you're responsible for the storage of all the ammunition and explosives on your contingency operating base. Your commander informs you that you have a shipment of your unit's basic operating load showing up in two days. The previous unit's ammo

officer hands you a crumpled piece of paper that is supposedly a list of their remaining ammo, tosses you the keys to some containers and jumps on the freedom bird home. Reluctantly, you go to the first container (luckily, it's located next to your tent and the dining facility), unlock the door and peek inside. What greets you is a stack of small-arms ammo that looks like it's been there since World War II. Not only that, it looks like someone shook the container like a martini.

When you open the second container, you're relieved. This one is neatly stacked with 60 and 81 mm mortars and 105 mm rounds. They even have ammunition data cards on top. That's all good, except your unit doesn't use 105 mm rounds and doesn't even have a 105 mm gun. What's a Soldier to do? Actually, you have help. Your brigade safety officer and brigade ammunition warrant officer know about ammo

and explosives safety. Besides their immediate assistance, they know the ammunition specialists throughout the theater that have experience with your issues.

A good first step is to set up a visit with an ammunition logistics assistance representative, or ammo LAR. The ammo LAR is a brigade asset that will help with storage compatibility, unserviceable ammo, packing, excess ammunition and documentation. This representative works closely with quality assurance specialist ammunition surveillance and the theater explosives safety officers. The QASAS are at the larger forward operating bases' ammunition transfer holding points and ammunition supply points. The theater explosives safety officers are generally at higher headquarters. Together, with your brigade safety officer and ammo warrant officers, their jobs

## DID YOU KNOW?

The Range and Weapons Safety Toolbox is a centralized collection of online resources for managing range operations and safe weapons handling. The toolbox hosts various references and materials, including publications, training support packages, multimedia products, ammunition and explosives information, and safety messages and alerts. The toolbox also provides links to useful sites and tools like the Defense Ammunition Center's Explosives Safety Toolbox and the Ground Risk Assessment Tool. Check it out at <https://safety.army.mil/rangeweaponssafety/>. Shoot straight, stay safe.



are to provide you the assistance needed to establish a safe and effective ammunition storage site.

Now, what can you do to help yourself? Start by organizing your ammo. Put it on pallets, separated by lot number. Record these different lot numbers and give the list to your ammo LAR or brigade ammunition warrant officer. They will review the list, focusing on items that are suspended or restricted. Let them know which munitions you don't need and what items will likely require replenishment in the future. If you know some items are unserviceable or restricted, segregate these from the rest of your assets. Again, don't store your inert/dummy/training munitions with your regular ammo.

With a complete list of all your ammo, your next step needs to be looking up net explosives weights

in your "yellow book" (Hazard Classification of U.S. Military Explosives and Munitions). Using your calculator, you figure out that you have 1,500 pounds net explosives weight in your containers. Maybe having your ammo storage "conveniently" located next to your tent and the dining facility isn't such a good idea. Bring this to the attention of the COB mayor. It might be time to move your arsenal.

OK, separate ammo by lot numbers, check. Call the ammo LAR, check. Segregate unserviceable items, check. Coordinate with the COB mayor, check. Point muzzles at the bad guys only, check. Wait, what about that LAW rocket? Maybe storing it underneath your bunk isn't the best place. Come to think of it, you probably don't need the web gear with grenades hanging off the back of your bunk either. But

you just convinced the COB mayor to relocate the ammo to a safer location. Consider a ready ammo storage location. Just enough to meet mission requirements, but not so much that we have to crawl over it to get to what we need. Sounds like a good recommendation for the first sergeant.

Safely handling and storing ammunition and explosives in a tactical environment isn't as simple as some think, but it's much easier when you ask for and get the help you need. Remember, you can meet mission requirements better when you have a safe and effective storage location.◀

*Editor's note: The guidelines, tips and best practices in this article are applicable at COBs as well as forward operating bases and combat outposts.*



# ARE YOU READY?

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

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

**Don't you want to protect your combat power?**

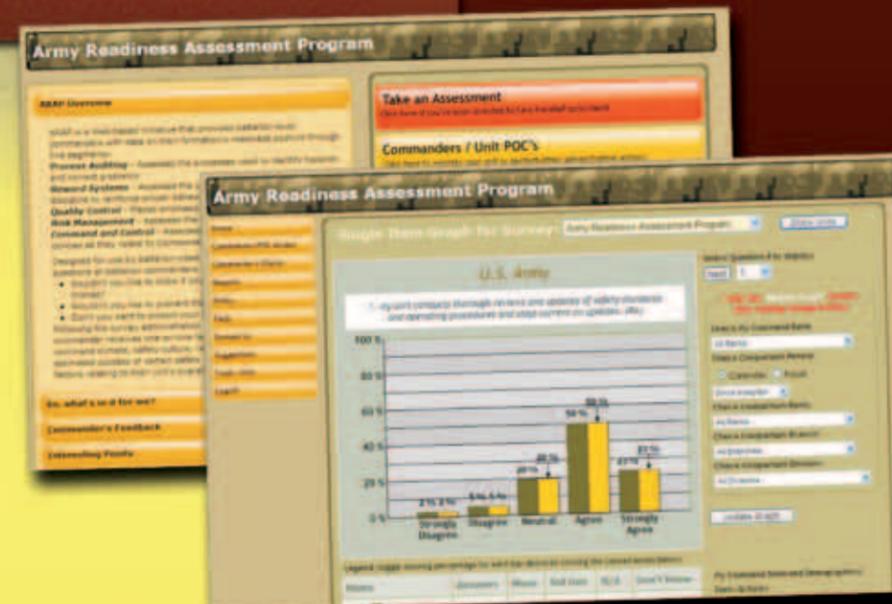
## ARAP

ARMY READINESS ASSESSMENT PROGRAM

**ARAP is a Web-based initiative that provides battalion-level commanders with data on their formation's readiness posture.**

**Sign up for your assessment today!**

**<https://unitready.army.mil>**





# RECIPE for COMPLACENCY

**CHIEF WARRANT OFFICER 2 KYLE JOHNSON**  
U.S. Army Air Ambulance Detachment  
Yakima Training Center  
Yakima, Wash.

**W**e were on a routine night training mission on Fort Stewart, Ga., to prepare us for combat operations. I was sitting in the jump seat in one of two CH-47s operating in the southeast corner of the range. We were flying south on Blue route heading toward Jaeck landing zone, where another CH-47 was practicing pinnacle landings. Our instructor pilot was in the left seat while the pilot in progression was on the controls in the right seat. The weather was fine and we had good visibility. There were only a few other aircraft operating on the range that night, so we didn't anticipate much risk. That mindset would prove a recipe for complacency.

While Army aviators talk a lot about crew coordination within the cockpit, if they're not flying formation, they often don't say much about other aircraft being a factor. When training, you don't typically have a coordinated plan of maneuver with other aircraft in the area. A radio call here and there typically does the trick.

As we neared the airfield, we made a common traffic advisory frequency call to let the other aircraft know we were heading their way. They responded, advising that they had us in sight and would stay clear of us. We took this as a green light to continue without worrying too much about what the other aircraft were doing. I was watching the CH-47 as it came off the pinnacle, but the halo effect of their lights through my night vision goggles made it difficult to see which direction they were flying. The IP was looking inside, setting up the radios, while the PI was on the controls heading toward the LZ in preparation for landing.

I watched the other Chinook as it gained altitude

and turned to the right, appearing to fly away from us. We all know that an aircraft will tend to look stationary in the sky if it's headed for a midair collision. If my memory serves me right, I thought the Chinook appeared to be moving very slowly to the left. Again, I didn't think much of it considering they were going to stay clear of us. I assumed they must be heading away from us as they departed the area.

I was wrong, however, and things suddenly got a bit hairy as, within a second or two, reality set

in. As we got closer, the halo in my NVG quickly disappeared and I realized they weren't flying away from us — they were coming almost directly at us from our 1 o'clock position. I keyed my intercom system and yelled, "Pull up, pull up, pull up!" The IP looked up, took the controls and pulled up and to the right, missing the other Chinook by what appeared to be a disk or two. It all happened so fast that nobody was able to judge the distance accurately. As far as I know, the other crew never even saw us.

This situation reminds me that anything can happen, even when you least expect it. We thought we'd done the right thing by announcing our position to the other aircraft in the vicinity. We thought we mitigated the danger when they told us they had us in sight. We dropped our guard too soon and barely avoided a catastrophic accident. This was a good reminder to me and the other members of my crew to always stay cognizant of the conditions and dangers — no matter what the situation — whether training or in combat. Being complacent, even if it's just for a few seconds, can kill you.◀◀

“While Army **AVIATORS** talk a lot about **CREW COORDINATION** within the cockpit, if they're not flying **FORMATION**, they often **DON'T** say **MUCH** about **OTHER** aircraft being a **FACTOR.**”

# PUSHING the LIMITS

**CHIEF WARRANT OFFICER 3 TODD JACOBSON**  
Operational Support Airlift Command Regional Flight Center  
Fort Hood, Texas



**T**here I was, the “temporary” untracked aviation safety officer for my company, purposely speeding on my motorcycle after work and — worst of all — right in sight of my company! Looking back more than six years later, I have to shake my head and ask, “Why would I do such a stupid thing?”

Neither then nor now could I provide a logical answer to that question. Was I a new motorcycle owner? No, I’d been riding sport bikes for more than seven years. Was I trained to ride a motorcycle properly? I sure was; I’d completed the Army-approved Motorcycle Safety Foundation Experienced *RiderCourse* more than once and also taken the dirt bike course. Did I fit the demographic of an unsafe rider? Not completely. Although my age put me within the target demographic of Soldiers between the ages of 23 and 33, I was considered an experienced rider. I always wore my personal protective

equipment and wasn’t labeled a high-risk Soldier. I was a chief warrant officer at the time and mentored many Soldiers in my company. Sure, I’d just come back from deployment and perhaps felt the need to blow off some steam. However, I should’ve considered some other method for doing that. At the speeds I was traveling, had I been distracted or needed to make a slight correction, I’d have ended up the subject of a preliminary loss report.

The thought of costing my unit some of its combat readiness wasn’t enough motivation to stop my high-risk activities. Despite the safety briefs I’d given or heard presented by my commander, I chose to push the limits on my bike. By my actions, I contradicted what I was

## JUST THE FACTS

**DIXON DYKMAN**  
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**I**n fiscal 2011, there were 178 motorcycle accidents, including 47 Class A (an accident resulting in a fatality, permanent total disability or \$2 million in damage), nine Class B, 93 Class C and 29 Class D accidents reported to the U.S. Army Combat Readiness/Safety Center. These accidents resulted in the loss of 45 Soldiers. There were also 122 Soldiers who received nonfatal injuries as a result of these accidents. In addition to the loss of life and injuries, these accidents cost the Army 1,504 workdays, 518 days of hospitalization and 3,556 days of restricted duty for the Soldiers involved.

Of those who died, the majority (42 of 45) were enlisted. Of those, 26 were sergeants and below. Additionally, nine were staff sergeants, six were sergeants first class and two were master sergeants/sergeants major. Three Soldiers who died were either commissioned or warrant officers. While the youngest fatality was 19 and the oldest was 48, 13 of the Soldiers who died were 23 years old or younger. The average age of a motorcycle crash victim was 30.2 years old. Most of the victims had completed the required training, wore personal protective equipment and were licensed to operate their motorcycles. However, four Soldiers weren’t wearing helmets, four didn’t have a motorcycle operator’s license and five hadn’t completed Motorcycle Safety Foundation training. Twenty-six fatalities occurred during daylight hours, 16 occurred at night and the remaining three occurred at dusk. One in four fatal accidents involved Soldiers who had redeployed within the previous 180 days.

Sport bike accidents accounted for 23 fatalities. In fact, 10 Soldiers were killed while operating a Suzuki GSX-R-series motorcycle. Cruiser accidents accounted nine fatalities, with six of those Soldiers riding Harley-Davidsons. In 13 fatal accidents, the motorcycle type wasn’t reported.

As summer begins and more Soldiers take advantage of the warm weather to ride their motorcycles, there will likely be more accidents. Of the 45 fatalities in fiscal 2011, 29 died between the months of April and September. Riders must remain vigilant for other vehicles while operating their motorcycles and observe local traffic laws. Leaders must ensure that all riders follow Army regulations and policies when operating motorcycles.◀

telling my Soldiers. What finally snapped me back into reality was the thought of leaving my wife without a husband and my kids without a father. I didn't want to miss spending the rest of my life with them.

So, what will it take for us to understand that when we push ourselves to the limit on our bikes, sooner or later we're going to lose? Whether it's safety videos put out by the U.S. Army Combat Readiness/Safety Center or realizing our Families are more important than our need for speed, we — especially us sport bike riders — need to change the way we ride. If we don't, someone higher up will do it for us.

Look at the PLRs — the statistics don't lie. Motorcycle accidents and fatalities are a big safety concern. In fiscal 2010, 39 of 153 PLRs — more than 25 percent — reflected motorcycle fatalities. Don't get me wrong; I'm not saying we shouldn't buy and ride motorcycles. I still ride

and I love it. However, we need to choose to ride safely and responsibly. If we don't, we might not get the option in the future.

The Army is losing too many Soldiers and, with the training we receive, we should be smarter than this. We're provided the MSF's basic, experienced and sport bike courses for free. When we return from deployments, we get refresher training through newly created mentorship programs. Still, for some reason, too many riders decide to test themselves by pushing their bikes to the limit. I was lucky, but statistics and PLRs show many riders are not.

I decided to discuss my mistakes openly to encourage others to ride responsibly. Fortunately, I wasn't hurt and my wakeup call came in time to make a difference. Please don't let your wakeup call come too late.◀◀



“The thought of **COSTING** my unit **SOME** of its combat **READINESS** wasn't enough **MOTIVATION** to **STOP** my **HIGH-RISK** activities. **DESPITE** the safety **BRIEFS** I'd **GIVEN** or heard presented by my commander, I chose to **PUSH** the **LIMITS** on my **BIKE.**”

# 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.*



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

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

Have you heard about the new feature on TRiPS?

TRiPS now provides users with a more detailed motorcycle assessment, allowing them to better capture their riding experience.

**TRAVEL RISK TRiPS**  
PLANNING SYSTEM  
<https://safety.army.mil>

# My Not-So-Fun FOURTH

RETIRED GUNNERY SGT. JEFF CARLSON  
U.S. Marine Corps  
Lafayette, Ind.

**W**hat holiday is better than the Fourth of July? **None — especially when you're an 11-year-old boy fascinated with firecrackers, bottle rockets and anything that goes "boom!"**

What's not to love about the Fourth of July? Barbecues, staying up late and watching all the magnificent fireworks were annual traditions when I was growing up. One afternoon, my friends and I decided to start the festivities a little early and headed to a local fireworks stand. We looked in awe at all the wonderful Chinese-made packages of fun and picked out our favorites. My friend, Eric, chose bottle rockets, while another friend grabbed some firecrackers. I picked out some Roman candles. In those days, you could buy anything you wanted as long as you

told the fireworks stand owner it was for your father.

With our purchases in hand, we happily rode our bikes back to Eric's house because he had a huge backyard and his parents were never home. After all, who wants parents around when you're doing things you're not supposed to do? Eric went searching inside his house for something we could blow up and returned with several of his brother's model cars. After loading the cars with fireworks, we spent the next hour destroying them. Yes, we did this without parental supervision, proper personal

protective equipment or regard to our safety.

Once the cars were satisfactorily dismantled, it was time for the bottle rockets. We started off by launching them out of an old Pepsi bottle. At first, we'd light them, step away and watch them explode in the air. After a while, however, we decided it would be more fun to hold the Pepsi bottle so we could shoot them at various things in the yard. While this was fun, it was not very smart or safe.

Once the bottle rockets ran out, it was time for the big finale — Roman candles! For those who aren't familiar with Roman candles, they are

long, narrow cardboard tubes that shoot fireballs. As I held one of the Roman candles, I noticed a warning on the side that stated, "Do Not Hold in Hand." "Really," I thought. "How can we enjoy the fireballs if we don't hold them?"

Throwing caution to the wind, we decide to ignore the warning and hold the Roman candles anyway. It started wonderfully — colored balls of fire shooting everywhere. Suddenly, as I pointed mine at a tree, I heard a weird pop and saw a cloud of smoke. Then I felt a searing pain in my right hand. The candle had exploded in my hand! All I could think of was the warning label and how it was right.

I nervously looked at my hand to survey the damage. There was blister the size of a silver dollar swelling up, and I was now in horrible pain. Luckily, that was the extent of the damage. My fingers were intact and I wasn't bleeding. However, my parents did ground me for two weeks when I told them what happened. Take my advice and heed the warning labels on fireworks. They're there for a reason. ⬅

To help you celebrate safely this Fourth of July, the Consumer Product Safety Commission and the National Council on Fireworks Safety offer the following safety tips:

- Always read and follow label directions.
- Have an adult present.
- Buy from reliable sellers.
- Use outdoors only.
- Always have water handy (a garden hose and a bucket).
- Never experiment or make your own fireworks.
- Light only one firework at a time.
- Never re-light a "dud" firework (wait 15 to 20 minutes and then soak it in a bucket of water).
- Never give fireworks to small children.
- If necessary, store fireworks in a cool, dry place.
- Dispose of fireworks properly by soaking them in water and then disposing of them in your trashcan.
- Never throw or point fireworks at other people.
- Never carry fireworks in your pocket.
- Never shoot fireworks in metal or glass containers.
- The shooter should always wear eye protection and never have any part of the body over the firework.
- Stay away from illegal explosives.

# ALL JACKED UP

**CHIEF WARRANT OFFICER 3 LEWIS BLASE**  
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Fort Polk, La.

**I**t had been a long trip, but my destination was now less than an hour away. I was on the second day of a roughly 11-hour road trip to my new assignment at Fort Polk, La. The day had been filled with frustrating delays, thanks to waking up late that morning, traffic jams and long lines at gas stations. Every delay seemed worse than it actually was and my mid-afternoon arrival time had slipped to early evening. The sun was beginning to set when, finally, I felt my trip was coming to an end. That's when "it" — a blown tire — happened.

I could feel my SUV pulling to the right as the road noise got louder. Because my vehicle was less than a year old, my supervisor gave it only a quick inspection before I took off. That's not to say we "pencil-whipped" it, but we definitely didn't look all that hard for problems.

I pulled into the right-side emergency lane. Luckily, I was on a four-way divided road, so traffic could get over if needed. Not that there was any traffic now, late as it was on a Tuesday afternoon. If I hurried, I had just enough daylight left to change the tire before it got dark. And that was important because there weren't any streetlights and I didn't

have a flashlight. If I didn't fix it quickly, I'd have to wait for a tow truck, delaying my trip even more.

I shifted into "Park," turned on my flashers and headlights, checked my rear and side view mirrors for approaching traffic and then climbed out. I circled around the front of my SUV and saw the right-front tire was flat, sitting on the rim. Rather than spending a lot of time looking for the leak, I got the jack handle and lug wrench from the back of the SUV and then crawled underneath and dropped the spare tire. It was dirty, but it was full of air and didn't show any signs of dry rot or damage.

I quickly rolled the spare next to the flat tire. I positioned the jack under the vehicle frame at what looked like the most secure and logical spot. I'd changed several tires in the past, so I thought this wouldn't be any different. The jack had a label stating, "WARNING: Consult owner's manual before use." I disregarded the warning and raised the jack just enough to contact the jack point on the vehicle. I then grabbed the lug wrench, turned the lug nuts loose and jacked up the vehicle so I could

pull off the flat and slip on the spare. I'd taken off the lug nuts from the flat and was starting to remove it when my SUV leaned forward on the jack, bending it beneath the vehicle's weight. Instantly, I grabbed the spare tire and slid it beneath the wheel hub, barely making it before the jack gave way. I quickly jumped back, expecting my SUV to continue rolling forward and to the right. Fortunately, it stayed right there.

Because I'd been in such a hurry, I'd forgotten to set the emergency brake. Between that and the vehicle's weight shifting as I removed the flat, the jack began leaning and gravity did the rest. I called a tow company and an hour and a half later, the SUV was ready to go again.

What I thought was an easy task turned out to be a dangerous accident waiting to happen. Complacency and being in a hurry

can have tragic consequences. All it took for me to avoid that danger was to slow down, take a step back and apply some composite risk management. The hazards — including the approaching darkness, the sloping roadway and failing to follow the recommended directions for the jack — could all have been identified. Had I read how to change a tire in the owner's manual, it would have reminded me to apply the emergency brake. Just the loss of daylight alone without having any artificial light available should have made calling a wrecker a no-brainer.

Even when the task seems easy and routine, taking a step back and looking at the larger picture can save you time and, in worst-case scenarios, from getting hurt. A long time ago someone came up with the saying, "Haste makes waste." That's a piece of wisdom that still applies today.◀

**“Had I READ how to CHANGE a tire in the owner's MANUAL, it would have REMINDED me to APPLY the emergency BRAKE.”**



# INCLUDE YOUR CREWMEMBERS

**CHIEF WARRANT OFFICER 2 JOSIAH A. JOHN**  
 A Company, 2nd Battalion, 158th Assault Helicopter Regiment,  
 16th Combat Aviation Brigade  
 Joint Base Lewis-McChord, Wash.

**I**t was a fairly routine flight. The flight crew, besides me as pilot in command, included a senior chief warrant officer as the pilot and a specialist and sergeant as the crew chief and gunner in the back of our UH-60. It was getting late in the evening and we were on the last leg of our combat circulation flight over Iraq. The weather reports showed conditions deteriorating slightly, but the weather was still within our briefed minimums and the unit command had approved the flight.

We were flying just north of Ramadi en route to our home base of Taji when we came into an organized ambush. It seemed like our aircraft was subject to the “golden bullet” rule because the first rounds went up into our hydraulic deck and disabled the pilot assist module. The next rounds impacted somewhere in the transmission section, knocking out our stabilator automatic control. Luckily, we still had manual control of the stabilator. We managed to get out of the ambush, but not until another

chain of rounds went through the cockpit, taking out my pilot. I immediately took the controls, got on the radio and declared an emergency and notified my trail aircraft of the situation. I looked up just as the weather we’d anticipated would remain legal dramatically worsened. Before we knew it, we were in inadvertent instrument meteorological conditions.

Luckily for me and the crew, this was just a simulation performed as a part of my pilot in command evaluation. The flight taught me an important lesson

about flying as a crew — that it is important to get the backseaters involved in the flight. As pilots, sometimes we fail to integrate our crews fully into the mission. As much as feasible, they need to be involved in every aspect of the mission from the train-up and planning phases through the post-mission after-action review. This training should include at least a basic understanding of the operation of the avionics we use up front. In the situation I described, I had one crewmember on a restraint harness across the center console trying to program the GPS for an approach into Taji. I was flying off the aircraft boost while, at the same time, trying to explain to him how to program the approach we wanted into the GPS. Had I trained him on the ground before the mission, it would have only taken a few minutes. Under much less stressful conditions, he’d have had a better chance of retaining the training.

Including crewmembers in the required pilot training classes we conduct on a regular basis would also be valuable. While crewmembers are involved in the general

courses, when the subject turns to a pilot-specific topic — such as aerodynamics or emergency procedures — too often they’re released to their own duties without the option of remaining behind to learn more.

Planning and briefing missions are also a phase of operations where, more often than not, crewmembers are left out because it does not pertain to them. The result is crewmembers are unfamiliar with the mission route and unaware of any anticipated threats they need to be watching for. Able to see beside and behind the aircraft in ways that we pilots cannot, crews are vital to mission safety. By including crewmembers in mission briefings, they can be more effective at identifying potential threats.

Regardless of how you do it, make sure you include your crewmembers as active participants in the flight. From pre-mission planning to post-mission AAR, your crewmembers are a vital part of your team.◀

# THE STRAIGHT



**COL. MANUEL VALENTIN**  
Command Surgeon  
U.S. Army Combat Readiness/Safety Center  
Fort Rucker, Ala.

**A**s Soldiers, we are expected to meet rigorous height and weight standards and perform well physically. Unfortunately, many Soldiers resort to an “easy” solution for weight loss and improvement of their physical prowess in the form of metabolic enhancers. While many of these enhancers are legal and readily available at commissaries and exchanges, as well as local chain stores and online, there are banned products on the market. Soldiers need to be aware that the purchase or use of drugs, supplements or banned products, or the misuse of prescription drugs, is illegal and may be punishable under the Uniform Code of Military Justice. Let’s take a look at thermogenics and stimulants to see exactly how they affect our bodies.

Thermogenics are drugs or supplements that facilitate weight loss and increase energy. Most thermogenic products usually contain stimulants that increase energy levels and blood flow, leading to an increase in body temperature. They are typically classified by the Food and Drug Administration as food additives; therefore, they’re not controlled by state or federal medical agencies. Common substances used as thermogenics contain different forms of caffeine such as kola nut, guarana and green tea. Other thermogenic substances include bitter orange, ma huang (ephedra) and dimethylamylamine, or DMAA, which was originally sold as a nasal decongestant.

In 2004, the FDA banned the use of ephedra in over-the-counter supplements. Recently, the Department of Defense suspended the sale of products containing DMAA at all military installations pending further study because a Soldier died after collapsing during a unit run and another died following a physical fitness test.

Even over-the-counter thermogenic supplements can be associated with significant side effects, many of which can be life threatening. These include changes in heart rate, increased

body temperature, addiction, gastrointestinal problems and anxiety, among others. Nationwide, many deaths have been associated to their use because of significant cardiac compromise or severe heat injuries. Although many over-the-counter supplements and energy enhancers can produce injury or death, the latest emphasis has been on DMAA, mostly as a result of the possible link between the recent deaths of the two Soldiers and their suspected use of products containing this supplement.

Most medical professionals acknowledge that DMAA is linked to serious medical conditions, including dangerous increase in blood pressure, headaches, lightheadedness, stroke, depression, irregular heartbeat, dehydration, tremors and lethal exhaustion. In our Army population, the usual mechanism of bodily injury from the use of thermogenics is heat injuries, which could lead to heat stroke. Although increased ambient temperature can contribute to heat injuries, these can also occur with low ambient temperature, and we have seen an increased trend of heat injuries during the cooler months of fall, winter and early spring. We do know thermogenic substances can cause a dramatic and rapid

increase in body temperature. If our natural compensating mechanisms are overwhelmed, this increase in temperature can lead to heat stroke or death.

For now, the FDA and DOD continue to study many of these substances, including DMAA. Although these products remain legal, many have been placed on the U.S. Anti-Doping Agency’s banned list. The DOD has promised that better guidance for many of these drugs is forthcoming after the review of past and current research.

Although the use of vitamins and certain amino acids are encouraged for most individuals, the use of performance-enhancing substances and over-the-counter weight loss supplements is not recommended. If you feel you must use these products for any reason, consult your personal physician, as he or she can discuss the pros and cons of each product as it pertains to your specific health and set of circumstances.

In the meanwhile, there is no substitute for a well-balanced meal, good rest and moderate exercise to achieve your weight or performance standards. Try not to bet your life on the alternative. ◀



# ONCE IS ALL IT TAKES

**1ST LT. TAMMI COLEY**  
B Company, 1st Battalion, 145th Aviation Regiment  
Fort Rucker, Ala.

**T**he night began innocently enough — just a group of friends celebrating graduating Army flight school. We started with dinner and ordered a round of beers. I was driving that night, and I knew (or thought) one beer wasn't going to get me drunk. As we continued to eat, we ordered another round of beers. With a stomach full of food and two beers, I felt sober and drove everyone to our next location, where the celebration continued.

When the night finally ended, my buddy asked me, "Are you OK to drive?" Despite the amount of alcohol I drank, I thought I felt fine and believed my blood alcohol concentration was under the legal limit. I am embarrassed to say I was wrong, which I found out when I was pulled over by the local police and later arrested for driving under the influence.

Prior to my arrest, I attended the mandatory safety briefs. For me and most of my classmates, briefs were just a check-the-block necessity to have our leaves and passes approved. I can tell you what my classmates were thinking during the brief — if they were even listening. It was either, "I am so lucky I didn't get caught last weekend," or, like myself, "I rarely go out, and when I do, I'm never the one

## WHAT'S IT WORTH?

**MAJ. JENNIFER CLARK**  
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U.S. Army Combat Readiness/Safety Center  
Fort Rucker, Ala.

**P**arties are fun. Getting a DUI is not. Putting your life, your passengers' lives and the lives of innocent motorists and pedestrians at risk should be deterrent enough. If you are lucky enough not to have injured anyone, you may still face a variety of administrative or punitive actions because of the DUI.

If a Soldier receives a DUI on post and is not prosecuted by civilian authorities, the command may pursue punitive (Uniform Code of Military Justice) action ranging from an Article 15 to a trial by court martial. If a Soldier receives a DUI off post, he or she will face prosecution from the civilian authorities. However, this would not prevent the Soldier's command from pursuing punitive action for associated conduct not prosecuted by civilian authorities such as Article 133, Conduct Unbecoming an Officer and Gentlemen; Article 134, Disorderly Conduct; or Article 95, Resistance of Arrest.

A General Officer Memorandum of Reprimand is automatically initiated and the chain of command will make filing recommendations. They could recommend permanent filing, which means the reprimand goes into a Soldier's official military personnel file and follows them wherever they go. There are other possible administrative actions the command could take regardless of the Soldier's prosecution by civilian authorities or having received UCMJ action. Examples are a non-transferable suspension of favorable action — a flag — lifted when court proceedings or UCMJ is served and complete; revocation of pass and/or driving privileges; a Relief for Cause evaluation report; a bar to reenlistment; and if convicted by a civilian court, an administrative reduction in grade.

Injury due to driving under the influence may result in a finding of not in the line of duty - due to own misconduct. Soldiers could find themselves losing pay and/or a variety of veterans administration benefits.

Is driving under the influence of drugs or alcohol worth it? Be smart and always make sure you have a designated driver. <<

driving." Unfortunately, I am living proof that once is all it takes.

As many of us look to our peers for advice, guidance and council, I am writing this to you, Soldier to Soldier. My hope is to inspire at least one other Soldier to not make the same decision I did when I chose to get behind the wheel after drinking alcohol.

I have the same dream as many of you. When I was 8 years old, I told my father, "Daddy, I want to be an officer in the Army and I want to fly helicopters." As a 67J aeromedical evacuation officer, my path to flight school may have been slightly different than some aviators, but it was no less difficult. I took the same flight physical as everyone

else, assembled a packet that was reviewed by a flight board and I waited patiently ... anxiously for the results. When I received the phone call congratulating me on my acceptance, I thought I had finally achieved my childhood dream. That dream came to a screeching halt the night I drove while intoxicated.

I am now facing a General Officer Memorandum of Record, which will most likely end my career. No more flight school, no more promotions and no more Army. As I write this, my future in the armed services is uncertain.

Although the end of your career may seem like the end of the world, DUIs can have more

serious consequences. How many Soldiers do we have to lose to drunk driving? How many innocent Family members do we have to lose after being hit by a drunk driver? I consider myself lucky that a police officer pulled me over before I wrapped my car around a tree or hit an innocent motorist driving the opposite direction.

Could you bear the guilt of taking someone's life? There is also the organization as a whole to consider. We are an Army at war. I was chosen above my peers to fill a slot as a 67J. As a result of my mistake, there is the very real possibility that I will be separated from the Army, and this slot will go unfilled. Consequently, there may be one less pilot available to evacuate a wounded Soldier.

Unfortunately, many of us try to subjectively judge our level of impairment without knowing exactly how a BAC of .08 feels. I know now that if I had even the slightest doubt of my sobriety, I should have called a taxi and never subjected my friends to ride in my vehicle or risked my career. It didn't matter whether I had one beer or 10 before getting behind the wheel. It wasn't worth taking the chance.

While people might react differently to alcohol, we can't use the excuse of not feeling drunk to justify a stupid mistake. Our careers, our lives and the lives of those around us are at risk and are worth far more than any taxi fare. As a Soldier, I can tell you from first-hand experience.◀◀



Do You



Us?



Stay Connected to Safety

Check out the U.S. Army Combat Readiness/Safety Center's Facebook page for the most recent news stories, videos, photos, reminders, alerts and announcements by the Army's premier safety professionals.

Join the USACR/Safety Center community on Facebook. Also, don't forget to connect with Army safety at these sites:



**G**rowing up in northern Maine, I didn't have much experience with swimming in the ocean. My family had taken a handful of camping trips to Maine's coast, but my swimming experience was associated with lakes, rivers or pools. However, I had seen a Discovery Channel show about the dangers of rip currents and tips on how to get out of them. Years later, I recalled these tips when I found myself caught in a dangerous situation.

# Don't Get Ripped

**CHIEF WARRANT OFFICER 3 MEAGHAN FALONE**  
C Company, 1st Battalion, 126th Aviation Regiment  
Maine Army National Guard  
Bangor, Maine

A few friends invited me on a weekend trip to Panama City Beach, Fla. At the time, we were about six months into our flight school training at Fort Rucker, Ala., and had definitely earned a break from our studies. I packed an overnight bag and we headed south to the beach.

The next morning, we headed out onto the beach. I was feeling a little under the weather from the previous evening's activities, so my goal for the day was to lie in the sun and relax. I was doing just that when the guys asked me to join them in the water. I knew I wasn't a strong swimmer and the waves were pretty large, but I figured I'd just jump in for a second to cool off.

At first, we were laughing and letting the waves crash into us. I didn't intend to go in past where I could touch the bottom with my feet, but as I was jumping through a wave, I lost my balance. It all happened so fast

that I was oblivious to the fact that the current was pulling me out. I looked over at my buddies and one of them asked if I was OK. They were farther out than I and looked to be turning to come back to shore. I answered that I was fine. I decided I should also head back to shore. That's when I realized I was in trouble.

Waves began crashing over my head. I was swimming and swimming but wasn't going anywhere. One of my friends saw me struggling and yelled for help, but the sound of the waves muffled his cries. I joined in, trying not to panic, remembering what I had watched on television about

## » FYI

**Water-related fatalities were on the rise during fiscal 2011, with 11 Soldiers losing their lives to drowning or boating accidents. The U.S. Army Combat Readiness/Safety Center developed the Water Safety interactive website to promote water safety awareness through user challenges, informational videos and links to related safety resources. The site provides realistic challenges and scenarios Soldiers and their Family members are likely to encounter while at the beach, lake, pool or other bodies of water. Visit <https://safety.army.mil/safetycity> to learn more.**

## » DID YOU KNOW?

Before your next beach trip, keep the following tips in mind:

- **Get yourself familiar.** Google the beach you're visiting so you can find information such as if there is a lifeguard on duty, the condition of the water, etc.
- **Pay attention to the warning flags.** Know what the different colors mean, as well as your swimming experience level.
- **Trust your instincts.** If it doesn't feel safe, it probably isn't safe.

Visit the National Oceanic and Atmospheric Administration website at <http://www.ripcurrents.noaa.gov/tips.shtml> for more rip current safety tips.

rip currents. However, the waves were relentless and wouldn't stop crashing over my head. I didn't know how much longer I was going to be able to stay afloat. The guys were yelling words of encouragement. I tried swimming parallel to the shore, but I still wasn't moving.

I then started to panic. I thought about a discussion we had in the car on the drive down about how being an aviator is one of the most dangerous jobs in the Army. I thought, "How ironic, I'm going to die, but the cause is not going to be related to flying. All of this work in the Army was for nothing." I then thought of my Family.

As my head went underwater, I thought, "This is it." I was exhausted from fighting the current and out of ideas on how to save myself. Suddenly, someone grabbed my arm, pulled me to the surface and told me to relax. It was one of my friends, who, fortunately for me, had

been a lifeguard prior to flight school. He put his hands on my waist and pushed me up out of the water so I could breathe. We eventually made it to shore, where he helped me to my towel. I was in complete shock. I had to go to the car and sit for a few minutes to compose myself.

If you get caught in a rip current:

- Remain calm to conserve energy and think clearly.
- Don't fight the current. Swim out of the current in a direction following the shoreline. When out of the current, swim toward shore.
- If you are unable to swim out of the rip current, float or calmly tread water. When out of the

current, swim toward shore.

- If you are still unable to reach shore, draw attention to yourself — face the shore, wave your arms and yell for help.
- If you see someone in trouble, get help from a lifeguard. If a lifeguard is not available, have someone call 911. Throw the rip current victim something that floats and yell instructions on how to escape. Remember, many people drown while trying to save someone else from a rip current.

I should have done many things differently that day. I'm lucky that I'm able to share my story; some folks don't get the chance.◀



**F**or years, the U.S. Army has performed maintenance on rotary-wing aircraft deployed in the field, including war-threatened areas around the globe. In the field, it is standard practice for maintenance personnel and flight crews to climb on top of CH-47 helicopters to inspect and service the rotor blades. This practice was necessary for accomplishing the mission, but it came with unsecured high-risk maneuvers, resulting in serious injuries and even fatalities.

# Safe and Secure

**BRIGITTE ROX**  
Corpus Christi Army Depot Public Affairs  
Corpus Christi, Texas

Army aviation flight crews and maintenance personnel at Fort Rucker, Ala., have developed a safer way to get the job done. Their approach has been to design an anchor connector that locks on a Chinook rotor head with the blades still in place. This provides maintenance crews an anchor point for attaching a full-body harness.

In the field, crews often don't have the benefit of aircraft platforms or overhead anchors for tying off, making their task challenging. Additionally, environmental conditions don't lend themselves well to providing

flat nonslip walking surfaces. The rugged working conditions have contributed to too many accidents involving personnel falling from CH-47s.

The Fort Rucker anchor connector dramatically increased the sense of stability and engaged the maintenance crewmember's focus on the mission. While providing field maintenance support, a crew from the Corpus Christi Army Depot recognized this device as a best safety practice when they saw it used at Fort Rucker. CCAD is an Occupational Safety and

Health Administration Volunteer Protection Program Star Site, continuously finding the safest way to get the job done. The CCAD crew noticed the device could not be used when working with the rotor blades removed from the rotor head. This limitation and other related factors were studied by a cross-discipline CCAD team of tool engineers, craftsmen and safety professionals. The result was a redesigned, deployable anchor system with the dual-purpose versatility of functioning on the CH-47 rotor head with or without blades attached.

The anchor connector is a double-ended tubular construction with a central flange section for attaching the limiter of the body harness rig. The tube and flange material is aluminum 6061-T6, known for both strength and lightness, making the anchor relatively easy to handle. Outer diameters

the limiter connects, also functions as an integrated carry handle. Polytetra-fluoroethylene rings are seated at either side of the flange to prevent metal-to-metal impact and abrasion.

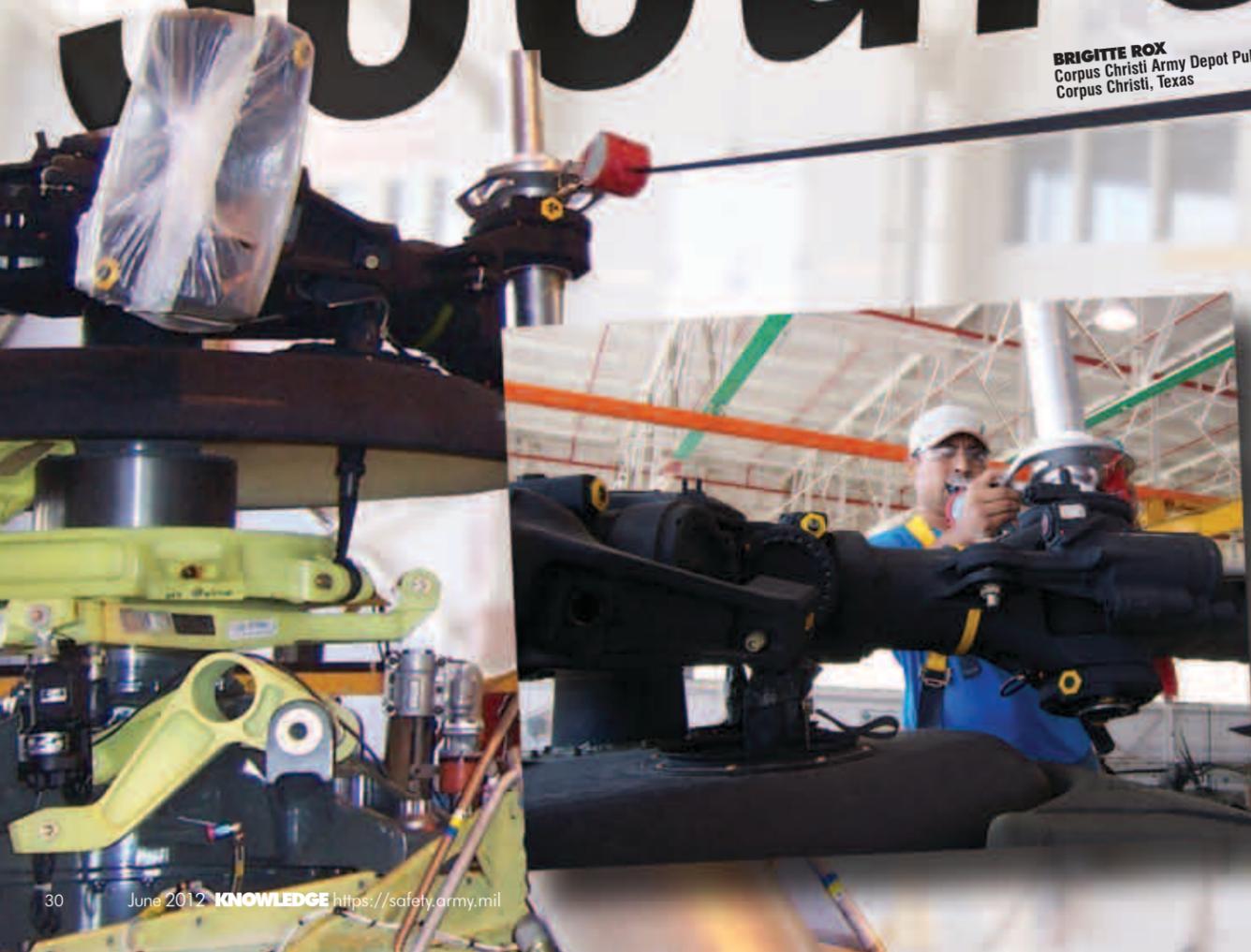
The anchor connector is designed for use by one person as a part of a personal fall arrest system. It must only be used in the manner indicated in the instruction manual provided with CCAD's CH-47 rotary-wing head fall arrest anchorage connector kit. The rated working load of the anchor system is 400 pounds. The complete kit includes a CH-47 anchor connector, a fall arrest limiter, a body harness, a carrying case and an instruction manual.

The fall arrest anchorage connector is a fully deployable tool with lifesaving potential. The goal of CCAD now is to include the fall arrest anchorage connector as standard gear for CH-47

“ In the field, **CREWS** often **DON'T HAVE** the benefit of **AIRCRAFT PLATFORMS** or **OVERHEAD ANCHORS** for tying off, making their task **CHALLENGING.** ”

of the body are precision-milled for inserting into the pitch housing of the rotor head with or without the blade pin installed. The central flange, where

maintenance crews. When faced with the situation of climbing onto CH-47s, crews can get the job done with a sense of safety and security.◀



# BOATING in a Bronco

**RONALD E. HERRIOTT**  
U.S. Army Corps of Engineers, Louisville District  
Louisville, Ky.

**I**t was the start of another beautiful weekend. My wife and I arose at a leisurely hour and loaded our Bronco II with all the things we thought we'd need for a weekend at the family farm. At the time, I was stationed in San Antonio, and the farm was located two hours away. We'd been married three years, and our first daughter was 8 months old. The weather that morning wasn't the greatest, being overcast with frequent showers. However, we loaded our vehicle, fed our daughter and took off.

After an uneventful drive around the city, we merged onto Interstate 10 and continued east. Our daughter had already fallen asleep in her car seat in the back. The rain began coming down harder and my wife and I got into a somewhat heated "discussion," which distracted me from my driving. As a result, I lost track of how fast we were going. As the rain worsened, so did our argument and I picked up speed, hitting 74 mph as I topped a rise. My tires suddenly lost traction with the pavement and began riding on a thin layer of water. I was hydroplaning! What happened next probably didn't last more than 20 seconds, but it felt like an eternity.

I had no control over the vehicle as we went down the rise. Regardless what direction I turned the steering wheel, the Bronco remained in a slow spin. Time seemed to almost freeze and I was acutely aware of my thoughts and actions. I looked over at my wife and yelled, "I have no control!"

The vehicle headed toward the median and spun through the soft grass, sending mud and grass flying everywhere. I was afraid one of my tires might catch an edge on a

firmly embedded rock, stick or something else protruding above ground. That was a particular concern because the Bronco's high center-of-gravity made it prone to rollover accidents. Ahead I could see a 6-foot-wide drainage culvert with a 4-foot drop-off. As we got closer, I was expecting us to hit the drop-off and flip over. Fortunately, the Bronco stopped just short of the culvert.

I looked at my wife, took a deep breath, said a quick prayer of thanks and relaxed

we both checked the backseat to see if our daughter was OK. Surprisingly, she was still sleeping soundly. Exiting the vehicle, I did a walk around and saw the only damage was some mud and grass on our Bronco. I then locked the hubs and drove back onto the interstate toward our destination.

When we arrived at the farm, my father-in-law, who was a former Air Force fighter pilot, told me about a hydroplaning accident he had in an F-101 jet fighter. He said he was

**“ REGARDLESS** what direction I **TURNED** the steering **WHEEL**, the Bronco remained in a **SLOW SPIN** as it **WENT DOWN THE INTERSTATE.** ”

my white-knuckle grip on the steering wheel. Even though we'd been out of control and attempting to steer didn't help, I'd still hung on for dear life. I leaned over to hug my wife and

landing at Ellington Air Force Base, Texas, on a rain-drenched runway. As he touched down, his tires began riding on a thin layer of water, making the aircraft's brakes useless as he



tried to decelerate. He was still going at a pretty good clip when his tail hook failed to grab the barrier and he ran off the end of the runway. Another pilot in my father-in-law's squadron was a NASA test pilot doing research on hydroplaning. My father-in-law learned that the minimum hydroplaning speed equals nine times the square root of your tire inflation pressure in pounds per square inch.

For most automobiles, the recommended tire pressure is between 35

and 40 psi. This means when driving on wet roads, your maximum speed should be less than 54 mph. You can calculate this by using 36 psi as your tire pressure, taking its square root, which is 6, and multiplying it by 9 to come up with 54 mph.

To drive safely in wet and rainy conditions, reduce your speed to below 54 mph for your protection as well as others. Remember, it only takes a second before you're no longer in control.◀

## WHEN THE ROADS ARE WET AND WILD

- Prevent skids by driving slowly and carefully, especially on curves. Use a light touch when steering and braking.
- If you do find yourself in a skid, remain calm, ease your foot off the gas and carefully steer in the direction you want the front of the car to go. You must be prepared to turn the steering wheel repeatedly until your vehicle is traveling in a straight line. For

cars without anti-lock brakes, avoid using your brakes if possible. If your car has ABS, brake firmly as you steer into the skid.

- Avoid hydroplaning by keeping your tires inflated correctly. Maintain good tire tread. *(Editor's note: The old standard of sticking a penny into your tread to see if it touches Lincoln's head may not be the best advice. Check out the stopping tests at <http://www.tirerack.com> and consider using a quarter instead).*

Don't put off replacing worn tires. Slow down when roads are wet and stay away from puddles. Try to drive in the tire tracks left by the cars in front of you.

- If you find yourself hydroplaning, do not brake or turn suddenly, as this could throw your car into a skid. Ease your foot off the gas until the car slows and you can feel the road again. If you need to brake and your vehicle doesn't have ABS, do it gently with light

pumping actions. If your car has ABS, then brake normally. The car's computer will automatically pump the brakes much more effectively than a person can do.

- A defensive driver adjusts his or her speed to the wet road conditions in time to avoid having to use any of these measures.

*Editor's note: Information reprinted with permission from the National Safety Council.*



## WHAT DO YOU THINK?

This month, the USACR/Safety Center is conducting an online readership survey to help us improve **KNOWLEDGE** magazine and ensure we are meeting the needs of our audience. Please help us by taking a few minutes to complete the survey at <https://safety.army.mil>.

**KNOWLEDGE** is your magazine. It should contain information and tools that fit your needs.



# AN ACCIDENT WAITING TO HAPPEN

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**B**ack in the summer of 2008, I was home for a little rest and recuperation from Iraq with a long honey-do list, including some projects I wanted to accomplish myself. Living in Alaska, my first priority was to install a wood pellet stove in an effort to help my wife endure another Alaskan winter. My second project was to build a 12-by-12-foot shed for my toys — an all-terrain vehicle, snowmobile and lawnmower.

As I began working on the shed, I had no idea what was in store for me. I had some construction experience, but I had never built anything this large by myself. I found some plans online and researched all of the building techniques I needed for the project. While downrange, I mentally “built” the shed many times and was confident I had the tools and expertise needed to complete the project.

With all the materials in hand, I began building. Everything started well, except I severely underestimated the amount of time I needed to complete each task. After finishing the floor and framing the walls, I turned my attention to the roof trusses. This is when I encountered my first near miss.

To reach the trusses, I stood on the top step of my 6-foot stepladder, which was positioned on the newly built floor. I rationalized that I could

mitigate the risk of standing on the top step by using the top plate of the completed wall for balance. What I didn’t expect was that in the process of struggling to nail the two trusses together, I wiggled the ladder so now only three legs were still on the floor. The fourth leg was hanging over the edge, touching nothing!

“The Consumer Product Safety Commission **REPORTS** that more than **90,000 PEOPLE** receive emergency room **TREATMENT** for **LADDER ACCIDENTS** each year.”

Realizing my predicament, I attempted to go down the ladder, keeping my weight back and away from the floating leg. No luck; with my first step, the ladder tipped over. Fortunately, I was still holding on the completed truss assembly and didn’t fall. As I was hanging there, a nail that was sticking out caught my sweatshirt. Thankfully, as I dropped to safety, the sweatshirt tore instead of holding me hostage.

Unfortunately, my second near miss wasn’t far behind the first. With the roof constructed, my next task was to cover it with felt paper and architectural shingles. Laying the first couple courses of shingles was the tricky part. I borrowed several ladders and was able to line them up side-by-side across the 14-foot span of the roof. This allowed me to step from ladder to ladder — instead of climbing up and down — as I worked my way across the roof applying the base course of shingles. This worked fine until I got in a hurry, stepped wrong and missed one of the ladders. However, I was able to catch myself on the roof and prevent a fall. Other than a scraped arm and having to change my shorts, I escaped uninjured.

By shortcutting safety protocols to complete my project, I narrowly missed injury not once, but twice! Remember, safety guidelines are in place for a reason. The Consumer Product Safety Commission reports that more than 90,000 people receive emergency room treatment for ladder accidents each year. Don’t be one of those statistics. Never step on the top step or bucket shelf or attempt to climb or stand on the rear section of a stepladder.

Do-it-yourself projects can be rewarding and save you money. But if you don’t take precautions and factor safety into your project, can you afford the consequences of an accident?◀

# DIY HOME SAFETY CHECKLIST

Use a checklist as a guide to help with the do-it-yourself projects you are tackling in and outside your home. This checklist is not all-inclusive; you can visit the Safe Kids USA website at <http://www.homesafetycouncil.org/> to learn more about ways to protect your home and Family.

CHECKLIST	
Have you read the owner's manual for the specific tools you will be using? <b>KNOW THE TOOL:</b> This point will ensure you use the tool properly and safely.	
Is it the proper tool for the job? Forcing a tool to do something that it was not intended to do can result in an accident.	
Did you examine each tool for damage before using it? Torn electrical cords exposing wires can cause electrocution; a broken handle can send a hammer head flying into the air, striking yourself or someone standing near your project.	
Are you wearing the proper personal protective equipment for your project? Dropping a board, power drill or saw on your foot while wearing flip-flops can cause a serious foot injury.	
Do you have a clean and uncluttered work area? Slipping or tripping hazards can cause you to fall onto tools or the ground, resulting in broken bones or puncture wounds.	
Are you working in a damp, wet area or in standing water while using an electrical power tool? Keeping cords and tools away from these areas will prevent electrical shock and electrocutions.	
Are you working in an area that has combustible materials or flammable liquids (cloths, gasoline, paint thinners, etc.)? Placing an electric drill with a hot drill bit or a hot saw blade on or near combustibles and flammables can cause a fire. These can also cause a serious burn to you.	
Will you use a ladder during your project? Make sure the ladder is in good working condition.	
Is the ladder erected on a level surface? If your ladder is positioned on an unstable area, it could tip over, causing you to fall.	
Is your extension ladder positioned properly? Use the 4-to-1 rule for extension ladders. For each 4 feet of distance between the ground and the upper point of contact (such as the wall or roof), move the base of the ladder out 1 foot.	
Is your ladder placed near high-voltage electrical wires or cables? Metal ladders contacting these wires will cause an electrocution.	
Do you have local emergency numbers available and posted? If an accident does happen, you don't have time to look for the phone number of your emergency agency.	



## Family engagement kit

<https://safety.army.mil>

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.



# Adhere to Checklists

NAME WITHHELD BY REQUEST

**I**t took 15 years in the cockpit, but I have become a born-again believer in the importance of checklists and procedures. I once followed them religiously, but over the years, as I became a skilled pilot, I no longer needed them — or so I thought.

I'd been back in the fleet for two weeks after an absence of two years. I'd been flying every day and relearning tactics and my aircraft. There I was, hanging onto the vertical stab — wind rushing through my hair and the scream of the engines (as well as my electronic countermeasures officer) ringing in my ears. I was befuddled. How did I forget to perform another mission-critical item? How did I get so far behind the aircraft? As I sat alone in my room, I thought back to a night long ago ...

It was during a recovery that was winning high marks for buffoonery. The room was very quiet as the Commander, Air Group muttered and swore. Finally, as the recovery was completed, the CAG turned slowly to the assembled group of commanders, executive officers and department heads and growled, "The most dangerous SOB on that flight deck is a new XO." We all nodded sagely. I had no idea what he was talking about.

numerous distractions and low proficiency is no way to go through a line, period.

There was no great epiphany. I should have expected it. When I left the cockpit two years ago, I was a seasoned aviator, current in my warfare specialty and proficient. I could juggle and compartmentalize the responsibilities of a strike leader, instructor and department head. While I was confident, I was not complacent. Now back in the cockpit without the proficiency, situational awareness or confidence of two years ago, I made two important discoveries. I depended on the habit patterns I had developed over the years and, unfortunately, I had forgotten many of them.

This is where my renewed faith in checklists and procedures came in. Good habit patterns can be used as a template to overlay on a mission to prioritize and order tasks. They serve as an internal master caution panel. Break a

awareness, they can point to something unsafe or adverse to the mission. However, this ability is perishable, and the longer you are out of the cockpit or away from certain missions, the less reliable these habits may be. Some examples include forgetting the fuel dumps are on, failing to complete combat checks as the strike pushes or starting the descent out of the marshal stack with the incorrect radios or nav aids selected. All these demonstrate the danger of relying on habit rather than checklists.

Habit patterns take time and discipline to develop. When these habit patterns are lost or corrupted, you often don't realize it until it's too late. They have their place in the development of experienced aviators because tactical aviation is a complex and dynamic environment. Anything that can increase one's ability to process data and maintain situational awareness should be embraced. In our profession,

**“I was BEFUDDLED. How did I FORGET to PERFORM another MISSION-CRITICAL ITEM?”**

Now I understand. A new nugget may be green, but he knows enough to ask questions and follow a checklist. Someone who remembers having been there and done that needs to have a large risk management bull's-eye painted on his helmet. Managing high expectations,

habit pattern and a series of intuitive warnings sound: the nagging, vague uneasiness of having forgotten something; the butterflies in the gut; and the hair standing at attention on the back of your neck. When habits are based on checklists, procedures, system knowledge and situational

the intuitive answer is not necessarily the correct answer and often there's enough pressure to shrink one's brain to the size of a peanut. It's an environment made manageable by the adherence to checklists and procedures.◀

**T**he summer of 1996 changed my perception of invincibility. I was only 16 years old, but I learned an important lesson that forever changed my attitude about wearing seat belts. Until then, I'd worn seat belts because it was the law, but I'd never thought about why they were important.

# My Brother's Life

**WILLIAM J. SPURGEON**  
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It was the middle of summer and my best friend, Tom, and I had received our driver's licenses a few months earlier. It was an exciting time because we were now able to do things we couldn't before. Growing up without fathers, we didn't get to go on fishing trips often. It had been quite a while since Tom and I had gone fishing together, so we decided to take advantage of our newfound freedom.

The lake was only 45 minutes away, so we left after work on Friday to find a good overnight spot and get in some early morning fishing. Everything went according to schedule until my older brother, "DeeCee," and his friend, Jim, joined us Saturday and decided to spend the day fishing with us. The lake didn't offer much shade and by 4 p.m. we were out of water. Fortunately, there was a store about 15 minutes down the road.

Because Jim and DeeCee hadn't brought any water or supplies, they felt obligated to accompany Tom and me to the store. Tom's standard cab Toyota only

seated two, so Jim took his Ford Ranger and DeeCee rode with him. Jim typically drove like he was racing in the Baja 1000. While he'd gotten his license the year before and had more experience driving, the best way to describe his attitude about safety was "complacent."

Jim was ahead of us as we drove toward the store. The lake was located on a high plateau, so the road to the store descended the plateau, winding through a series of small hills. Parts of the road had so many curves that it was hard to see what was ahead. When Jim decided to race through some of those, we followed at a slightly slower pace.

We were halfway through the winding portion of the road when Jim hit a patch of dirt from a road construction project and lost control. He overcorrected to the left and then to the right and ran off the road. Sliding

sideways on the dirt shoulder, Jim's Ranger went into a small drainage ditch and overturned.

Neither Jim nor DeeCee were wearing seat belts. As the pickup rolled, I saw my brother's head and right arm fly out the passenger-side window. If the truck hadn't stopped rolling when it did, I'm certain he would have been killed. When I got to the Ranger, I was very

surprised no one was severely injured. Still, the memory of centrifugal force trying to fling my brother out of the truck haunts me to this day.

Watching my brother almost get killed that day made a believer out of me. I realized that when it comes to seat belts, it's not just about following the law. It's about staying alive.◀

## GET BELTED — IT'S GOOD FOR YOU!

Pickups are popular in Montana, so the state's Department of Transportation offers the following safety information to pickup owners.

- Seat belts and air bags are meant to work together. The presence of air bags in a vehicle doesn't mean seat belts are unnecessary.
- Seat belts protect the head and spinal cord from impacts inside the vehicle, such as with the steering wheel and windshield.
- Buckling up on every trip — not just the long-distance ones — can save your life.
- Pickups have a high fatality rate because occupants are less likely to wear seat belts and pickups and SUVs are more likely to roll over than passenger cars.
- For light truck occupants, safety belts reduce the risk of death by 60 percent and moderate-to-critical injuries by 65 percent.
- Restraints prevent ejections. Ejected occupants are four times as likely to die and 14 times as likely to sustain spinal cord injuries.

### DID YOU KNOW?

New Hampshire is the only state without a mandatory seat belt law.

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](mailto:safe.knowledge@conus.army.mil).

AVIATION



**CLASS A**  
 Both crewmembers were injured when the aircraft crashed en route to the base following mission completion. The tailboom separated from the aircraft upon impact.

**CLASS B**  
 The crew received a No. 2 Engine-OUT indication during an ATM hover maneuver at 8 to 11 feet above ground level. The pilot in command assumed the controls and landed the aircraft without further incident. The engine failure resulted in high-side damage to other components, including NR overspeed.

**CLASS C**  
 The post-maintenance test flight inspection revealed damage to the No. 1 engine cowling, which came loose in flight.

The crew experienced a bird strike during ferry flight and executed an emergency landing. The aircraft sustained damage to one main rotor blade, resulting in separation of a one-foot section. Replacement was conducted onsite, and the aircraft returned to home station.



**CLASS C**  
 Postflight inspection revealed ramp damage. The ramp is suspected to have contacted a

rock during a night vision goggle landing to an HLZ.



**CLASS C**  
 The VHF antenna penetrated the undercarriage when the aircraft settled into soft terrain during environmental training. The damage was found during a follow-up maintenance inspection.



**CLASS C**  
 The crew experienced a partial engine failure during a maintenance test flight and landed. Inspection revealed the engine compressor had ingested a mirror that was left in the plenum chamber.



**CLASS C**  
 The aircraft had been used for environmental training and dust landing iterations. Postflight inspection revealed a hole in the intermediate gearbox cover. The crew reported no indications of contact with an obstacle.



**CLASS A**  
 The aircraft contacted the runway with the landing gear in the stowed position during a demonstrated emergency procedure, resulting in damage to the undercarriage.



**CLASS B**  
 The crew experienced a GEN FAIL during flight, followed by loss of link. The aircraft crash landed and was deemed unrecoverable.

The operator lost link following a missed approach. The UA was destroyed after crashing into a mountainside in a military training area.



**CLASS A**  
 A Soldier was killed when the leased non-tactical vehicle he was riding in overturned after the driver swerved to avoid another vehicle. Four of the other NTV occupants, also Soldiers, were injured. All of the occupants were wearing seat belts.

One Soldier was killed and two others injured when the officially leased vehicle they were passengers in struck a telephone pole. The local national driver of the vehicle was reportedly driving above the posted speed limit on a wet road. Seat belt use was not reported.



**CLASS A**  
 A Soldier was killed and his wife critically injured when they were struck by a commuter train as they walked on the tracks over a railroad trestle.



**CLASS A**  
 Two Soldiers riding as passengers died when their intoxicated civilian driver went off the road in a curve and struck a tree.



**CLASS A**  
 A Soldier was killed when he was hit head-on by a driver who'd pulled into his lane while attempting to pass other vehicles.

A Soldier was killed when he collided with a vehicle as it was turning left onto the roadway. The Soldier was wearing a helmet, but was operating with an expired learner's permit and hadn't registered his bike on post.

**CLASS C**  
 A Soldier was injured when a vehicle in the oncoming lane turned left and struck him. The Soldier was transported to a hospital, where his left leg was amputated below the knee. The Soldier had completed motorcycle safety training and was wearing the required personnel protective equipment.



**CLASS C**  
 A Soldier's legs were fractured when he was struck by a vehicle while performing perimeter guard duty on a military reservation.



# 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>

SOLDIERS LEADERS CIVILIANS FAMILIES

# Take 5

for Boating Safety

- Take a boating safety course.
- Know your boat and the rules of the water.
- Check your boat for all required safety equipment.
- Wear a life jacket and have one on hand for all passengers.
- Don't consume alcohol.
- Check the weather forecast.
- File a float plan with a family member or friend.
- Operate your boat at a safe speed.

*Take 5 ... then take action.*



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