KNOWLEDGE
OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

Recovery Redo

CAPT. JEREMY PHILLIPS
Abu Company, 1-187 Infantry Battalion
Fort Campbell, Kentucky

My battalion was the last maneuver element to execute the brigade fire-control exercise. Our cavalry squadron and two infantry battalions executed the lane for several days in severe weather with no safety issues. We were lucky to have beautiful weather now, but the lane was a little soggy in places. Two companies at a time maneuvered one heavy weapons section each in up-armored HMMWVs and two rifle platoons through the breach of a wire obstacle.

During my company's blank fire iteration, the direct fire, simultaneous explosive breach and indirect fire all went according to plan. About 100 meters from the objective, though, one of our gun trucks got stuck in some pretty deep mud. Although we were able to complete the lane, we had to recover the vehicle before the next two companies could start the first live iteration of the day. It was at that point we encountered a significant unexpected risk.

The weapons section's plan to self-recover the vehicle with the other gun truck and tow strap they brought along was the obvious first option, but it was immediately apparent that wouldn't work. Looking around the objective, the only other vehicle nearby was my battalion commander's Mine Resistant Ambush Protected All-Terrain Vehicle. We figured that should do the trick. After all, it's got "all-terrain" in the name — plus, it's heavier.

The M-ATV certainly is heavier, weighing about 15 tons, compared to about 5 tons for an M1151 HMMWV. Those of you who've had recovery operations go bad will immediately see our mistake: the much heavier M-ATV sank in the mud and got stuck just as badly as the

first vehicle. "Well," we thought, "at least there is a wrecker on the lane."

When the wrecker arrived with the trained H8 recovery operations NCO at the helm, we thought he would make short work of the situation. Instead, he proceeded to back up to the M-ATV and get the wrecker stuck too! So now we had three progressively heavier vehicles stuck with no other recovery assets on the range. To make matters worse, daylight was slipping away for the live iterations.

After some quick thinking, we came up with another plan, but it was a long shot. We figured we might be able to pay out the winch on the wrecker to an LMTV on a nearby road and pull it out. As the driver let out the winch, however, it became apparent it had some significant fraying. It seemed like the cable might not last long under pressure, but we were determined to try anyway. Of course, the cable snapped almost instantly.

The wrecker had a locker full of chains, so we hooked them up to the LMTV and tried again. The H8 NCO, who was driving the LMTV, tried to pull the wrecker by driving quickly to the end of the chain and jerking the stuck vehicle. After a few attempts, the stuck vehicle was clearly moving a little bit, but I stopped the driver and told him I didn't think this would work. He assured me it was working, so I backed away. On the very next attempt, the chain snapped right next to the pintle and launched back toward the cab of the wrecker.

Army Techniques Publication 4-31 defines the sudden strain on a cable or chain as "acceleration impact" and the technique of snapping a cable to tension as "shock loading." The ATP specifically warns against using this method or allowing it to happen by accident. Luckily, nobody was hurt by 30 feet of chain flying back at the vehicle, which is known as backlash. As a matter of fact, the vehicle wasn't even scratched. However, now we knew we were really stuck, so we stopped our futile attempts while another wrecker was summoned.

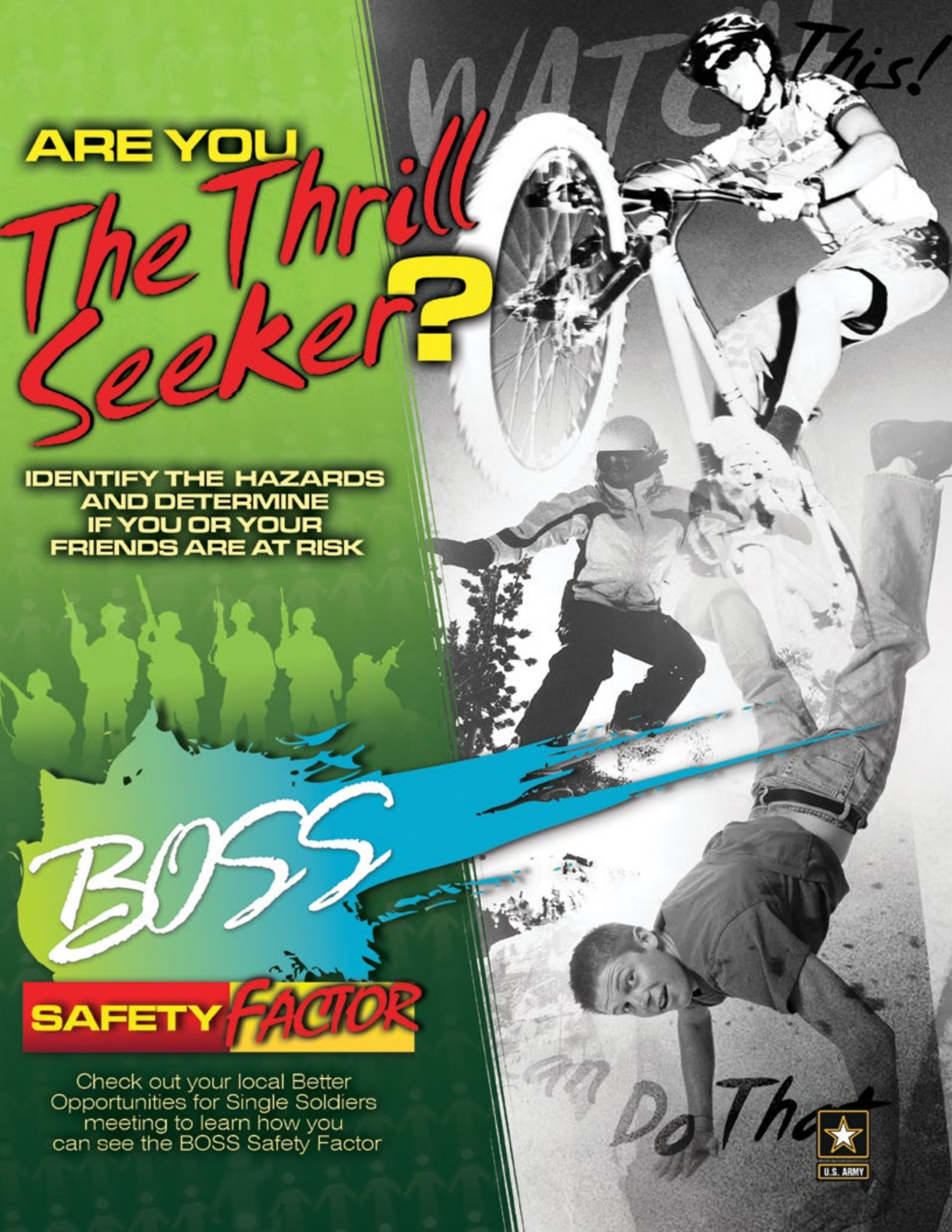
"A haphazard approach to recovery can lead to dismemberment, death, and/or damaged equipment."

— Army Techniques Publication 4-31, 27 August 2014

In hindsight, our mistakes during this operation were comparable to other failed recovery attempts I've assisted with or witnessed. The focus was on recovering the vehicle as quickly as possible without desyncing the brigade operation. It is the responsibility of the unit commander, officer in charge or senior personnel onsite to pause, plan and conduct risk management. I was uncomfortable with the wrecker driver's actions, and as an officer, I should have stopped him immediately. However, I let my concern for the timely execution of the range override my gut feeling.

Many times the most thorough training or operational plan will only mention recovery operations in passing on the CONOP slide. Leaders should remember that DD Form 2977, Deliberate Risk Assessment Worksheet, has a risk assessment review section at the end for changing conditions or plans. It is meant to encourage the systematic review of residual risk levels. In this case, the officers and senior NCOs present should have paused, evaluated the conditions and available resources, and made some better decisions about the asset and method of recovery. This is common-sense stuff, although all of it is covered in detail in ATP 4-31, Recovery and Battle Damage Assessment and Repair.

If you are ever executing similar missions, or encounter unexpected circumstances on a range or mission, take the time to plan and mitigate risk. A little patience and forethought will go a long way. Using established recovery tactics, techniques and procedures or approved recovery steps is essential. It may not always be practical, but for inexperienced leaders, consulting the ATP or unit SOP can allay concerns about proper use of equipment. In the absence of a hardcopy SOP on the scene, discuss the plan and recovery methods with the Soldiers and NCOs that will execute it to make sure only appropriate techniques are used and everyone understands the plan. Army Safe is Army Strong! ■


ARE YOU
The Thrill Seeker?
IDENTIFY THE HAZARDS AND DETERMINE IF YOU OR YOUR FRIENDS ARE AT RISK
BOSS
SAFETY FACTOR
Check out your local Better Opportunities for Single Soldiers meeting to learn how you can see the BOSS Safety Factor
U.S. ARMY

KNOWLEDGE
OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

Safety in Numbers

RETIRED CHIEF WARRANT OFFICER 5 ROBERT REYNOLDS
U.S. Army Africa
Vicenza, Italy

Riding in a group can be exciting and provide you an opportunity to share a great experience with old friends while meeting new ones. Compared to riding alone, however, you'll need a different set of skills to keep you and your group safe. Here are a few safety tips to ensure everyone has an enjoyable time.

Safety briefings

Successful group rides begin with a short meeting before departure providing detailed information about the adventure. Leaders should provide all riders with maps and information concerning the route of travel, speeds, road hazards, weather, and fuel, rest and meal stops. In addition, the ride leader and the sweep and trail riders should identify themselves and demonstrate the proper hand and arm signals. The checklist below provides a useful guide for these meetings:

- Review the destination and route of travel.
- Describe how to handle lane changing and what actions to take if the group gets split up.
- Demonstrate and explain each hand signal and insist everyone use those signals.
- Determine the level of riding experience of any new group members.
- Assign new members to slot positions until the trail rider is satisfied they can properly handle their bikes.
- Have all riders inspect their bikes to ensure everything is in order. As an extra precaution, have everyone do a quick check of the bikes next to them.

"Riding with a group can be a great experience if everyone understands the rules and abides by them."

Formation makeup

It's important to maintain a staggered formation to make the group more visible to drivers and allow an adequate safety space around the riders. Also, group riding helps prevent riders from being separated by traffic. To create a staggered formation, the lead riders should position themselves in the left third of the lane with the second rider following at least one second behind and in the right third of the lane. This staggered formation should be copied by the following riders in the group, each alternately taking the left or right third of the lane while maintaining a

safe following distance. Because it's possible for a group to become too large, riders can be split into smaller formations of five to seven motorcycles.

Traversing intersections

Intersections are particularly dangerous for riders, as many motorists may fail to notice motorcycles. When turning at intersections protected by traffic signals, groups should proceed either single file or in a tight, staggered formation. At unprotected intersections, riders should proceed individually. The group can reform once everyone has safely negotiated the intersection.

Safe passing

How groups should pass slower traffic depends on the type of road. When there are sufficient multiple lanes — such as on freeways or interstates — riders should pass as a group when directed by the lead rider. On two-lane highways and roads, riders should pass individually when it's safe.

Handling roadside emergencies

Whenever riders require assistance, the group members behind them should stop and provide help. Riders ahead of the incident should continue to the next scheduled stop and wait for everyone to catch up.

Conclusion

Riding with a group can be a great experience if everyone understands the rules and abides by them. Maintaining the integrity of the formation, taking cues from the lead rider and safely operating your bike will allow everyone in the group to enjoy the open road. ■

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 USACRC MMP website for some examples of active mentoring programs.

https://safety.army.mil

U.S. ARMY

READINESS THROUGH SAFETY

KNOWLEDGE
OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

Check and Verify

SGT. 1ST CLASS PAUL R. PASCUAL
Headquarters and Headquarters Company
12th Combat Aviation Brigade
U.S. Army Garrison Ansbach, Germany

As a young Soldier, I was excited about working in aviation. I was immediately responsible for protecting the lives of everyone who entered and operated my "bird," as well as maintaining the aircraft when it was not in flight.

In the Army, military personnel are Soldiers first; in aviation, crew chiefs are Soldiers committed to safety first. As a newbie, I never accomplished tasks or missions without an NCO overseeing my work. Fortunately, I had an NCO who taught me what right looks like and ensured I followed all safety practices while performing my duties. I've always looked up to my NCOs and leaders. Early in my career, I set a goal to one day become an influential NCO who holds the line and enforces the standards.

Day-to-day missions bring adventure

As a platoon sergeant assigned to an attack reconnaissance battalion during the 1st Cavalry Division's deployment to Operation Iraqi Freedom 06-08, I was responsible for the maintenance of nine aircraft and ensuring my Soldiers/crew chiefs performed their jobs properly and safely. The air cav brigade was responsible for all aviation assets and support of the division.

The high operational tempo of our missions took its toll on both man and machine. As a senior NCO, I ensured my Soldiers and aircraft were always ready for the missions. Our crew chiefs conducted scheduled and routine maintenance before and after each mission on 12-hour shifts. I stressed to them that proper maintenance is the key to a safe and successful mission and post-flight inspections are just as important as pre-flights. Aviators and crew chiefs performed these inspections; however, this wasn't always the case, especially after a six-hour mission. We conducted preventive maintenance checks and services, oil samples and gun inspections on a daily basis due to consecutive and sometimes concurrent missions.

I will never forget one particular PMCS job I inspected. Generally, platoon sergeants in a flight company have limited inspection authority. The crew chief asked me to sign off on an inspection after he had installed panels. Incidentally, crew chiefs don't install panels before the technical inspector performs the safety checks. Nevertheless, I developed a trust with my crew chiefs since they had performed this inspection numerous times.

I checked all the panels for proper installation; however, I was having second thoughts about signing off on the inspection. I needed to check an R510 panel to ensure the grease plug was tightened properly on the tail rotor intermediate gearbox. I removed the panel and was shocked to see what was found behind it.

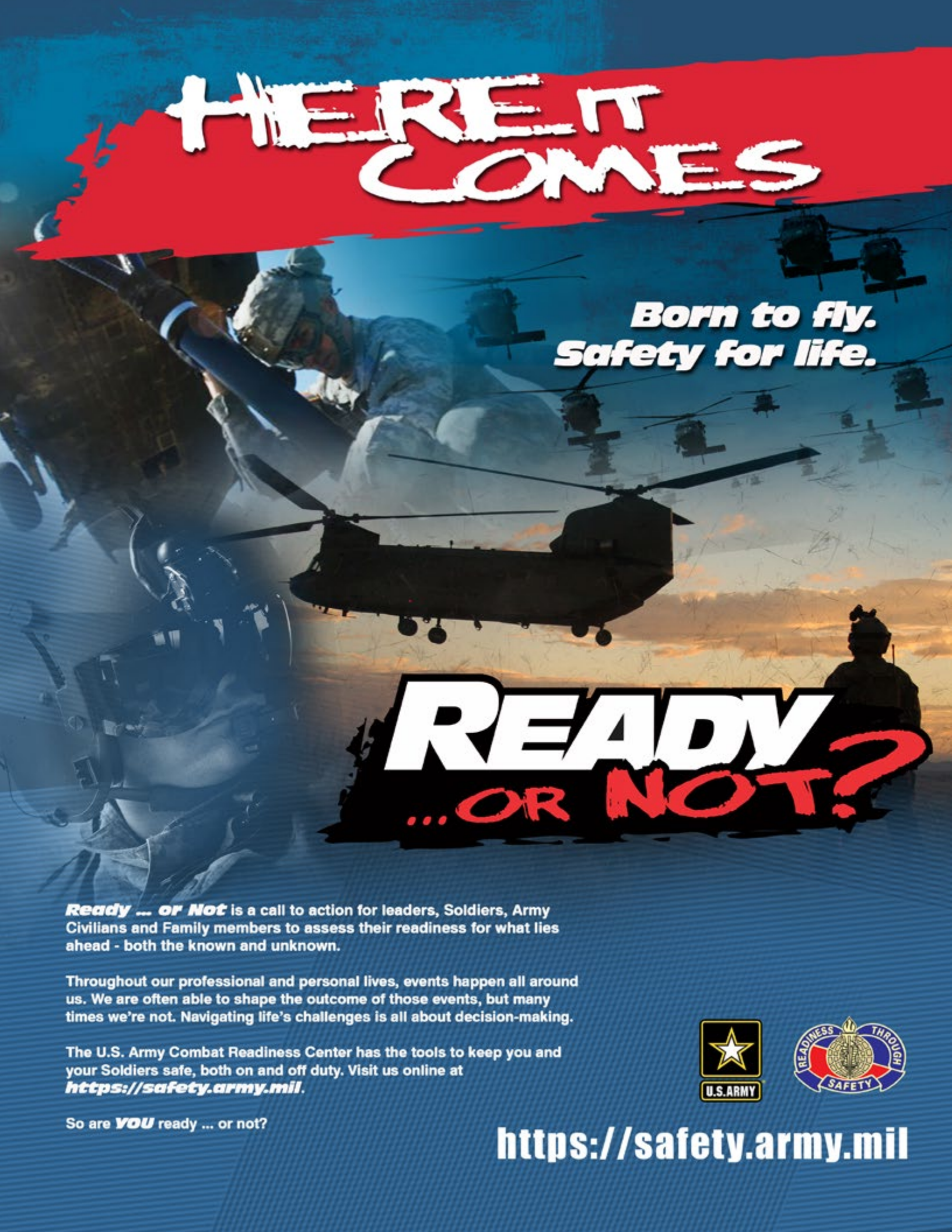
The "trustworthy" crew chief had left his Gerber multi-tool on the tail boom, right below the No. 5 driveshaft. I couldn't believe he had done such a careless and

unsafe act, knowing the aircraft was getting ready to fly a mission. I went back to the shop, grabbed my camera and took pictures of the hazard. I then confronted the crew chief and his squad leader with what I had found and showed them the pictures.

Both Soldiers were speechless because they knew the consequences if the tool had not been recovered. As corrective training, the crew chief was not allowed to work on an aircraft without his squad leader's supervision. Additionally, due to this incident and prior events, the battalion quality control NCOIC enforced standing operating procedures that all maintainers were not to use their personal tools while working on aircraft. This incident was a close call and could have been a catastrophic accident if the tool had not been found.

I remember our battalion commander always preached about the "CAV" acronym — Coordinate, Anticipate and Verify. This was an eye opener for me. Even an excellent Soldier makes mistakes. I learned a valuable lesson that day: You can trust your Soldiers, but as an NCO, you always need to Check And Verify (CAV). ■

"Fortunately, I had an NCO who taught me what right looks like and ensured I followed all safety practices while performing my duties."



Ready ... or Not **is a call to action for leaders, Soldiers, Army Civilians and Family members to assess their readiness for what lies ahead - both the known and unknown.**

Throughout our professional and personal lives, events happen all around us. We are often able to shape the outcome of those events, but many times we're not. Navigating life's challenges is all about decision-making.

The U.S. Army Combat Readiness Center has the tools to keep you and your Soldiers safe, both on and off duty. Visit us online at *https://safety.army.mil*.

So are *YOU* ready ... or not?

U.S.ARMY

READINESS THROUGH SAFETY

https://safety.army.mil

KNOWLEDGE
OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

Loud and Clear

BILL WILLIAMSON

We live in a noisy world. Combat military weaponry, personal and vehicle stereos, and high-powered machinery are just a few of the noises Soldiers are exposed to every day. Excessive noise disrupts sleep, produces stress, impairs communication and, in high enough doses, causes significant noise-induced hearing loss, or NIHL.

Roughly 25 percent of all American military veterans age 65 and older suffer hearing loss above and beyond the natural aging process. Much of the hearing loss these veterans suffered is largely due to preventable, noise-induced wear and tear on the auditory system that happened earlier in their lives.

Soldiers are required to have an audiogram conducted each year to monitor hearing loss. If the test reveals sufficient hearing loss, the medical staff attempts to educate the Soldier on hearing conservation to prevent further hearing loss. Often the education process is nothing more than the issuance of combat earplugs and a pamphlet that explains how to conserve your hearing. The Soldier may attempt to arrest the hearing loss for a few days, possibly even a couple of weeks. Eventually, though, some will fall back on their old ways until the next annual audiogram — at which time the cycle is repeated.

Numerous sources of noise in the environment have the potential to produce NIHL. Because shooting is so prevalent in our military culture, it poses the greatest risk to many Soldiers' hearing. Clinical reports chronicling hearing loss after exposure to shooting have been documented since the 1800s. Reported peak sound levels from weapons have ranged from 132 decibels for small-caliber rifles and pistols to more than 172 dB for high-power rifles and shotguns. But what does this decibel scale mean to the Soldier?

It is difficult to grasp how much acoustic energy is in a single gunshot. The acoustic energy in a single report from a high-powered rifle, pistol or shotgun is equivalent to almost 40 hours of continuous exposure at 90 dB adjusted. In other words, one bullet equals one week of hazardous occupational noise exposure according to the Occupational Safety and Health Administration and Department of Defense standards. Because shells are often packaged in boxes of 50, shooting an entire box without hearing protection is equivalent to working in a 90 dBA environment for a full year! A Soldier qualifying on a target range without hearing protection can produce an entire year's worth of hazardous occupational noise exposure in just a few minutes.

Currently, the only way to detect functional hearing loss is through routine hearing tests. Unfortunately, by the time functional hearing impairment

is detected, injury to the auditory system is usually at an advanced stage. Therefore, the key to hearing loss prevention is education.

Leaders can assist Soldiers at risk for hearing loss by teaching them to avoid exposure to unwanted noise and how to become more sensible when exposing themselves to desired sounds. For example, leaders can recommend Soldiers avoid other noisy activities the day of and day before firing weapons or exposure to firing on a target range. Research has shown that rest periods interspersed with an otherwise hazardous exposure to noise can greatly reduce auditory damage.

In situations where noise cannot be eliminated, Soldiers should be advised to wear hearing protection. The most commonly used types of protection are earplugs or earmuffs, which come in a variety of styles and sizes. The advantages of earplugs include their small size, low cost and relative comfort. On the other hand, earmuffs fit over the ear, are heavier and more protective than earplugs, and are reusable. When properly cared for, earmuffs can also be considerably cheaper than disposable earplugs. However, a seal must be made between the earmuff cushion and the side of the head. Any break in the seal renders the earmuffs useless.

Most Soldiers will find foam earplugs the protection of choice because they are inexpensive, comfortable, disposable and commercially available. While each is effective and wearing both is often recommended, the most effective type of earplug or earmuff is the one that is actually used.

Although there is a lot of published information on NIHL, it is usually undetected until the damage is already done. While efforts have been made to reduce noises at their source, educating Soldiers on the importance of preserving hearing into their old age is the best method for conservation. Leaders can help Soldiers understand the importance of preserving their hearing for their golden years by becoming involved and taking precautionary steps to prevent NIHL. ■

When you notice a difference between loud sounds and quiet ones, your ears are perceiving changes in sound pressure level. Intensity (or volume) is measured in decibels. Zero dB is the softest sound that can be heard. Although pain is subjective, to the average person, levels above 125 dB are painful. To others, levels below 125 dB may be painful. Below are the decibel levels of a few sounds Soldiers might encounter.

Rustling leaves	20 dB
Quiet whisper (3 feet)	30 dB
Normal Conversation	60 dB
Automobile (25 feet)	80 dB
Motorcycle (30 feet)	88 dB
Subway (inside)	94 dB
Power mower (3 feet)	107 dB
Jet Plane (100 feet)	130 dB
.410 shotgun with 28-inch barrel	150.01 dB
12-gauge shotgun with 28-inch barrel	151.50 dB
20-gauge shotgun with 28-inch barrel	152.50 dB
.45 Colt	154.7 dB
.223/5.56, in 18-inch barrel	155.5 dB
.44 Special	155.9 dB
.308/7.62 in 24-inch barrel	156.2 dB
.45 ACP	157.0 dB
9 mm	159.8 dB
.357 Magnum	164.3 dB

Decibel Exposure Time Guidelines

The following are the accepted standards for permissible exposure to noise, according to the National Institute for Occupational Safety and Health and the Centers for Disease Control and Prevention. For every 3 dB over 85 dB, the permissible exposure time before possible damage can occur is cut in half.

CONTINUOUS DB	PERMISSIBLE EXPOSURE TIME
85 dB	8 hours
88 dB	4 hours
91 dB	2 hours
94 dB	1 hour
97 dB	30 minutes
100 dB	15 minutes
103 dB	7.5 minutes
106 dB	3.75 minutes (< 4 minutes)
109 dB	1.875 minutes (< 2 minutes)
112 dB	.9375 minutes (about 1 minute)
115 dB	.46875 minutes (about 30 seconds)

KNOWLEDGE
OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

Ignorance Isn't Bliss

STAFF SGT. ADAM JOHNSON
Aviation Center Logistics Command
Fort Rucker, Alabama

One of the bad things about off-roading is you never know when a good time might turn into a nightmare. If you've ever left the relative safety of the asphalt on two, three or four wheels, you know exactly what I am talking about. Here's how my good time went bad.

It was summertime in Savannah, Georgia, and I was riding ATVs with a friend in an undeveloped area of a subdivision. Typical of the South, it was really hot with no clouds or breeze and high humidity. Those conditions make it almost unbearable to wear personal protective equipment, so all I had on was shorts, a T-shirt and some sneakers I didn't mind getting muddy. I did have on my sand goggles because of the dust, but that was it — no helmet, pads or gloves.

The construction from Phase 1 of the subdivision had left huge mounds of dirt on the back side of the neighborhood, where Phase 2 was supposed to be built but never happened because of the housing crash. The area made for a great ATV riding track and everyone knew about it. There were trails everywhere in the area.

On this day we decided to climb one of the big hills. It was almost vertical on one side, probably about 75 degrees. The other side was less steep, like a road going through the mountains where you have to use a low gear to prevent from burning up your brakes. I chose to ride up the steep side. I wasn't worried because I'd already done it a few times in the past. I knew to shift my weight forward and how to react if I started rolling backward.

I was about halfway up the hill when the trouble began. Unbeknownst to me, someone had dug into the path, creating holes I couldn't see from the ground. As the front tires rode over the holes, it seemed like everything would be fine. However, when the back tires dropped into the holes, all of my forward momentum stopped.

So there I was, about 20 feet up, stuck on the side of this hill. I applied the front brakes like I'd done before and hung on as I tried to figure out how to get out of this situation. Suddenly, the center of gravity shifted and the front of my ATV started to slowly flip backward. Fortunately, I was able to jump off before the ATV landed on me as it tumbled to the bottom of the hill.

Pushing the limits of your ATV can have disastrous results. That's why ATV manufacturers, trainers and pretty much anyone else dealing with off-roading will tell you to make sure you always use your PPE. Sharp turns at high speeds, downhill rides and, like my accident, uphill climbs are the most common ATV crash scenarios. Uphill climbs are particularly dangerous because they come with the additional risk of the ATV tumbling onto its rider.

Uphill crashes are exceedingly common in two situations: when the ATV doesn't gain enough speed and inertia to go the whole length of the ramp or hill and stops halfway to the top, prompting the rider to throttle harder; and when the operator is improperly positioned in the seat. Of course, these two are often combined, making the risk of a crash even greater.

When losing speed uphill, there is, however, a split second which may mean the difference between crashing hard — possibly with the ATV on top of you — and making it back down safely. This is the moment when the rider should realize there is nothing more he or she can do, and throttling harder will only flip the quad. Passing that moment is extremely easy, so it's often only experienced or very lucky riders who manage to avoid crashing.

I was lucky I wasn't seriously injured that day. My close call gave me a new appreciation for PPE and riding safely. Since then, I ensure I wear all my PPE any time I go off-roading. You should too. Have fun out there and ride safe! ■

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.

Take a hands-on ATV ***RiderCourse*** and the free online E-Course. Visit ATVSafety.org or call 1-800-887-2887 to find the ATV ***RiderCourse*** nearest you.

KNOWLEDGE
OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

A Recipe for SD

COMPILED BY THE KNOWLEDGE STAFF

Low-risk missions continue to produce accidents. Whether these missions cause crewmembers to conduct less-detailed mission plans or become more relaxed in the cockpit with their peers, pilots must plan carefully and accurately, taking into consideration all possible hazards encountered from initial takeoff to final landing.

During a helicopter accident in the desert, a low-risk mission claimed several Soldiers' lives. One unit member referred to the mission as a "milk run," meaning it was supposed to be a simple flight from Point A to Point B. Of all the missions this unit was about to execute, this flight into the area of operations should have been the easiest they would encounter. Unfortunately, it proved to be more hazardous than originally planned.

So why did a seemingly low-risk flight turn bad? The crew onboard the aircraft appeared to be an adequate mix for this mission. However, a flaw in the risk assessment tool used by the unit allowed two pilots with very little recent night vision goggle flight experience to fly together at night over some of the most difficult terrain. The pilot in command had more than 200 NVG hours — although very few of those hours were in the months leading up to the accident. He had acquired less than a half-hour's training during environmental training in theater. The pilot was a new aviator and had fewer than 50 NVG hours.

When unit leadership paired this crew, the 1,000-hour PC appeared to be a good choice to crew with the inexperienced PI. After all, it was just a "low-risk milk run." Because of the low-risk mentality, the unit also front-loaded the more experienced instructor pilots into the first serials. This left the last serial with fewer experienced leaders.

What else did this low-risk flight have going against it? The crews in the flight had been waiting for days for a dust storm to subside. The night of the accident, dust hung in the air and weather conditions were at the absolute minimums for the mission profile. Add to that the fact the flight would be crossing a desolate area of desert with little or no vegetation or artificial light on the horizon to provide contrast between earth and sky. Incorporate those conditions with minimal NVG training in the low-contrast environment and you have a recipe for spatial disorientation, or SD.

Crewmembers of the other aircraft in the flight described bouts with SD. Nonrated crewmembers told stories of losing the horizon and having to look down at the ground to try to trace it back up to the horizon. They described episodes of SD that required them to bring their attention inside or close their eyes to fight it. Pilots described the horizon as one big green blob and one described it as purely an instrument flight. Yet a common theme prevailed: No one spoke up about the inability to see or SD.

What happened?

The flight was a formation of four aircraft, cruising at 120 knots and 650 feet above ground level. As the crew of Chalk 2 began to encounter SD and strayed to the left of formation, Chalk 3 followed. When Chalk 2 corrected back to the right, Chalk 3 continued its left turn, gradually increasing its bank angle and nose-down attitude until ground impact. Witnesses stated the aircraft made no sudden directional changes and appeared to fly into the ground. The board concluded the crew encountered SD and crashed.

Lessons learned

There are important

lessons to learn from this accident.

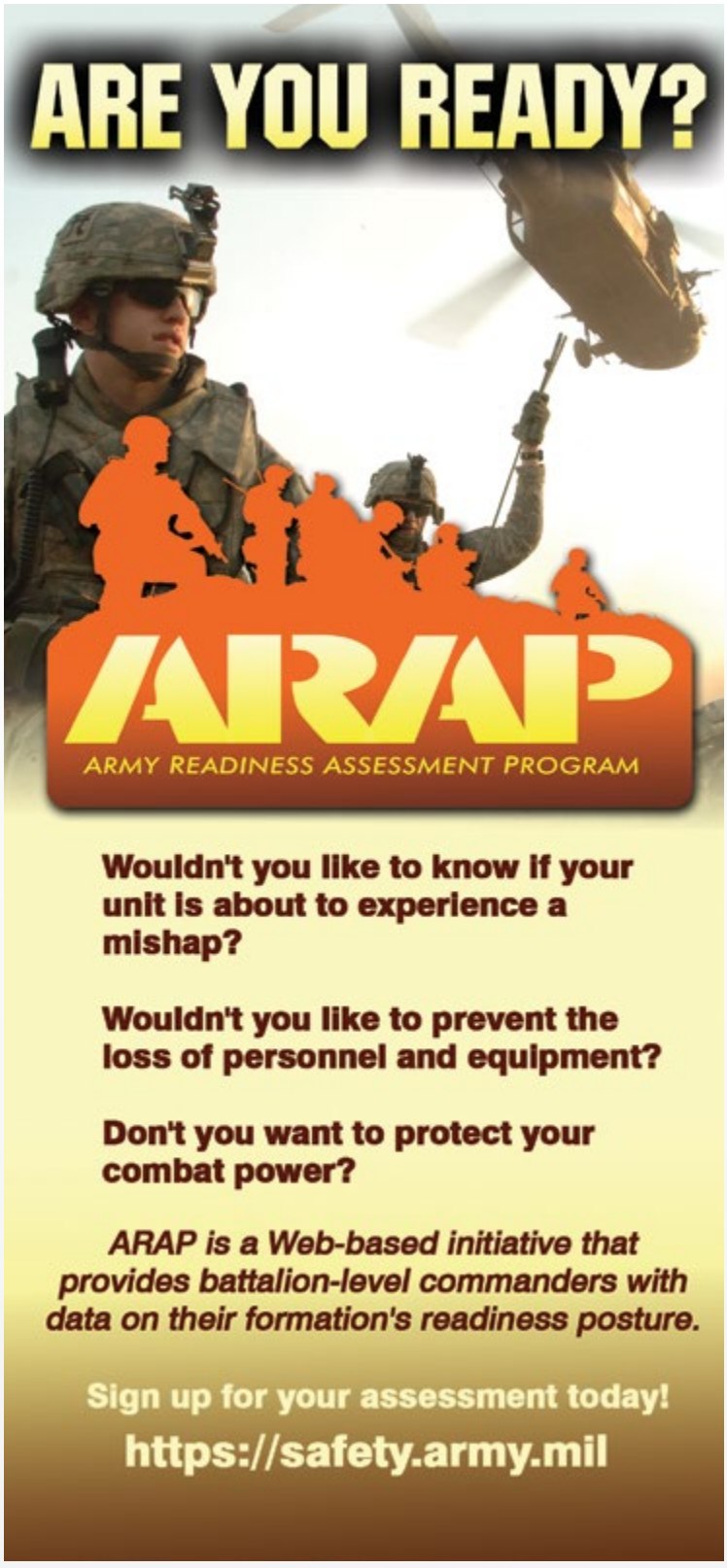
• Good crew mix. When planning for missions, it is a good idea to divide the experienced aviators among the flights and aircraft. When assigning crews, leaders and trainers should take into account pilot experience level — including the recency of that experience — for all the flight conditions that may be encountered.

• Risk assessment worksheet. Scrutinize risk assessment tools for comprehensiveness and accuracy. Several investigations have revealed flawed risk assessment tools, ranging from a lack of flight mode experience choices, to worksheets that can only equal low risk. On one automated worksheet, the only option that populated the overall risk block was a low risk. There were no other options in the formula for the cell.

• Crew coordination. There was a definite breakdown in crew coordination among the crews and between aircraft. Despite the fact crewmembers from each aircraft experienced SD or difficulty seeing the horizon, no one said anything until after the crash. Chalk 2's ability to recover from its SD can be attributed to the effective crew coordination that took place in that aircraft after the onset of SD.

How do we combat SD?

Training in the flight modes and environments in which we encounter SD is probably the best way. Use simulation devices to train for riskier situations, such as inadvertent instrument meteorological conditions, overwater operations and low-contrast desert environments. Use heads-up display devices to help maintain focus outside the aircraft. Conduct classroom training on the signs and symptoms of SD and provide information and techniques to overcome it if encountered. During the crew brief, discuss the actions to take should you lose situational awareness. Pilots should incorporate nonrated crewmembers into the plan. Lastly, all crew members should conduct positive and continuous crew coordination between crews and aircraft to prevent SD. Remember, SD can happen to anyone. ■



HERE IT COMES

Are you ready to crank?

READY ...OR NOT?

Ready ... or Not is a call to action for leaders, Soldiers, Army Civilians and Family members to assess their "readiness" for what lies ahead—the known as well as the unknown.

Throughout our professional and personal lives, events happen all around us. We are often able to shape the outcome of those events, but many times we're not. Navigating life's challenges is all about decision-making.

So are ***YOU*** ready ... or not?

U.S.ARMY

READINESS THROUGH SAFETY

https://safety.army.mil

KNOWLEDGE
OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

Shoot to Thrill

MICHAEL A. TULLEY
Command Safety Office
10th Mountain Division
Fort Drum, New York

So your 10-year-old comes to you and says, "Dad/Mom, I want to play paintball." How would you respond? I found myself in that exact situation a few years ago, and I'll admit my initial response wasn't the greatest. I'd experienced paintball several years earlier at a competitive pistol shooting event and really didn't care for it. I thought the paintball guns were frustratingly inaccurate, expensive and unsafe. However, my opinion was about to change.

My son kept bugging me about paintball and I eventually gave in to him. I read some things about the sport and learned a lot of new paintball-specific rules. I figured my son would probably want to quit the first time he got hit with one of those gelatin balls traveling at 300 feet per second. (Just for reference, 300 fps equals 200 mph.) Still, I went out and spent $200 for two starter packs that had everything we'd need to play paintball, or so I thought. The packs included a marker (also known as the paintball gun), mask, safety plug for the barrel and carbon dioxide (CO_2) bottle.

The instructions stated to never shoot someone with the marker set higher than 300 fps because serious injury or death could occur. You're probably wondering how you check the velocity of paintballs. Well, you can't, unless you have a chronograph, which measures the time an object passes between two sensors and calculates the speed in feet per second, miles per hour or whatever measurement standard it is programmed to clock. There are also radar chronographs, such as the kind law enforcement officers carry to look for speeders. While chronographs used to be really expensive, you can now pick up a good one for less than $100.

Being a conscientious father, I went into the garage and retrieved my shooting chronograph to measure just how fast those little paintballs were traveling out of the barrel. The first marker I shot was about 250 fps; the second one, however, was more than 320 fps — and that was right out of the box! I adjusted our markers to about 280 fps (±10 fps) so we could play the next morning.

When we sat down for dinner that night, my son started asking questions like, "Is it going to hurt?" Still trying to discourage him from getting involved in the game, I said, "Imagine your worst pain and multiply that by 10." My wife gave me that you-better-not-hurt-my-baby-or-I'll-kill-you look. I reassured her that the paintballs would sting a little, but wouldn't hurt that much.

The next morning, I told my son to put on a sweatshirt and long pants. I then asked him to call his mother at work and tell her he loved her before we went out to play. While this made him extremely nervous, it worked to my benefit because he paid a lot more attention to what I had to say as we walked out into the woods. I then explained the safety rules.

The rules were pretty simple. The mask was to stay on his face at all times when the barrel plugs were out. If he got hit anywhere, even the marker, he was out of the game. He was to then raise his marker into the air and put in the barrel plug. Once both barrel plugs were in, we would move to our patio, where we would take off the masks. In the event his mask fell off, he was to cover his face with both hands, drop to the ground and scream. That would signal me to stop shooting in his direction and run over to see what was happening. He agreed to everything I said and we went to separate corners of the wooded field, about 75 feet apart, and got ready to play.

I yelled the countdown and we started shooting at each other. With each hit he took, he yelled, "Ouch!" When we were through, I figured he would never ask to play again, but

"I felt like a failure because I thought I'd taught my son how to play safely. Yet, the first time he played without me, the safety rules went out the window."

I couldn't have been more wrong. He absolutely loved it and wanted to play more and more. For the first time in a long while, I saw a sparkle in his eyes. He could not stop talking about how much fun it was.

That day, I, too, developed a love for paintball because it helped build an even greater relationship with my son. My opinion of the game had changed. It was no longer a waste of time. From now on we would play safe, fair and often! For the next year, we continued to play in the wooded lot. Most of the time it was just the two of us; occasionally, though, some of the neighbors would join us.

One day, my son was invited to a paintball party with 15 other boys at a friend's house. My wife and I thought nothing of it, so she dropped him off in the morning and I was to pick him up later. When I drove up to his friend's house that afternoon, I noticed the boys were playing without shirts and had huge red welts, some bleeding, on their bodies. I asked my son what happened. He told me they didn't have a chronograph to set the velocity of the paintballs, so they set the markers by comparing the sounds. They then picked teams and played shirts versus skins.

I felt like a failure because I thought I'd taught my son how to play safely. Yet, the first time he played without me, the safety rules went out the window. Determined to prevent this from happening again, I came up with a plan. I had my son invite all the boys over to our place for a three-man tournament, at which I would give each member of the winning team a trophy.

When boys arrived, I explained the tournament rules and then the safety rules. After everyone said they understood, we used the chronograph to set the velocity of their markers to 290 fps before getting on the field. The first boy fired three shots over the chronograph at 340, 320 and 350 fps, so I adjusted it down to 280 ±10 fps. This went on until the last marker was set to a safe velocity.

The boys were curious as to why I was adjusting their markers. I explained that their protective equipment was designed to shield them from hits up to 300 fps. Anything over that could cause their mask lenses to break, leaving them vulnerable to eye injuries or worse. It was at that moment a light bulb went on in their heads. They realized that playing without properly calibrating their markers could be dangerous.

So how does this affect you? If your child wants to give paintball a try, there are some important things you should do before sending them out on their own. Take them to a professionally run paintball field for their first experience. There, referees will be on hand to explain and enforce the safety rules and remind players about the importance of wearing masks and using barrel plugs.

The well-run facility will have chronograph stations to ensure paintball velocities are within the safety limit of 300 fps or less. Also, the field is going to be clean, with well taken care of bunkers and very few obstacles to trip over. In addition, an adequate number of staff members will be available to ensure each group is properly supervised. It's a good way for parents to ensure their children are playing safely. ■

Author's note: When the 10th Mountain Division's commanding general instructed the Directorate of Family Morale, Welfare and Recreation to create a place on post for his Soldiers to play paintball, I was in the right position, garrison safety officer, to influence the integration of safety into the program from the start. The DFMWR program manager and I were sent to the Paintball Training Institute in Tennessee to become experts in all things paintball. From the inspection of paintball air tanks to the proper way to lay out a course, we learned it all.

Later, a spinoff program for family members was started, and the Youth Services Paintball Program came online with full support from the safety office. The program has developed into a great place to introduce 10- to 18-year-olds to paintball in a controlled, safe environment. And to think, it all started with a simple request from my son.

Paintball is fast, extreme and, most of all, fun. Like all sports, an informed player can help make the game safer. In fact, safety is one of the most important parts of the game. Here are some tips to help keep the game more safe and enjoyable.

1. Never fire your marker when you or anyone near you is not wearing proper paintball-approved eye protection.
2. Never remove your goggles in the field or in the elimination zone.
3. When you are eliminated, call "out" as loudly as possible, raise your hand and walk off the field. Do not remove your goggles until you are back at the safe zone.
4. Always wear eye protection; never wear anything but goggle/mask systems made especially for paintball.
5. When you are in the designated safe zone, or not on the playing field, make sure to have your barrel plug in your marker barrel.
6. Many markers will fire even after a CO2 or high-pressure system is removed from the gun, so always wear goggles when working on your marker — even when the air source is removed.
7. Do not alter your cylinder or valve in any way or try to remove the cylinder from the valve.
8. Since velocities have a tendency to fluctuate throughout the day, it is wise to chronograph your marker several times during play.
9. Always keep the safety in the safe position and, if your gun has a power feed, keep it in the OFF position when not playing the game or taking a break from play.
10. Don't stand in the open for too long during play.
11. Always reload your marker or catch your breath from behind a tree or bunker.
12. Markers should be stored uncharged and unloaded.
13. Markers should be transported uncharged and unloaded.
14. Do not shoot cars, homes or other items with painted or finished surfaces. The paintballs are nontoxic but can discolor or dissolve painted or finished surfaces.
15. Never shoot anything from the marker except water soluble paintballs.
16. Remove all power sources before disassembly of a paintball marker.
17. Never shoot at another person with the intent to cause injury or harm.
18. Pressurize your paintball devices only when you're ready to use them.
19. Don't handle, play with, load, use or shoot a paintball marker while under the influence of drugs or alcohol.
20. Observe all safety rules applicable to firearms when handling a paintball marker.

Editor's note: Tippmann Sports, a leading provider of paintball markers and gear, offers the information above to anyone interested in playing paintball. Neither the Army nor any of its components endorse Tippmann Sports. These tips are provided for information purposes only and do not constitute an endorsement of Tippmann Sports or its products or services.

Do You Like Us?

Stay Connected to Safety

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

YouTube Broadcast Yourself flickr vimeo twitter

Join the USACRC community on Facebook. Also, don't forget to connect with Army safety at the above sites.

Blue Ridge Bust-up

CHIEF WARRANT OFFICER 5 MICHAEL LARSON
704th Military Intelligence Brigade
Fort Meade, Maryland

What an awesome weekend it had been. I'd spent the last four days riding some of the best dirt roads and mud trails Tennessee had to offer at an annual motorcycle event. Being relatively new to taking my 2014 BMW R1200GS dual-sport off the hard ball, I was intent on learning new skills, meeting new friends and seeing some cool countryside. The weekend was a success and I tested my skills in mud, dirt and water crossings without dropping my GS once.

When the rally ended, I said goodbye to my friends and started my trek north toward Baltimore. I had a lot of time and wasn't in a hurry, so I decided to take the long way back and follow the Blue Ridge Parkway as much as I could. The vistas and views throughout the Blue Ridge Mountains, though not as stark as those of the Alps in Europe, have a beauty all their own. I quickly fell into a rhythm while following the snake-like twists and turns of the parkway and was happy with my progress toward home.

Early the next day, I departed the hotel and was looking for an entrance back to the parkway. It was 36 F outside, but I wasn't worried. I had a heated jacket and grips, so I was quite warm. About 20 minutes later, I was in motorcycle heaven — twisty roads and beautiful views.

"This accident reminded me I must always be aware of my limitations, surroundings and time of year I am riding."

Unfortunately, the day's riding would soon be cut short.

As I negotiated a sweeping right-hand turn, my motorcycle lost traction on some gravel and sand that was spread out across the road. I subsequently low-sided, followed by a high-side, and was thrown from my motorcycle. I slid on the pavement behind my bike for about 40 feet before coming to a rest on the side of the road. After mentally checking my body for injury, I picked up my motorcycle and took a few minutes to assess my situation. My windscreen had broken off of the mounts and my left-side handlebar was bent about 1 inch lower than it should have been. My front forks were twisted, not bent, and my pannier and crash bar were ground down a bit from the slide.

Fortunately, I was wearing all of my personal protective equipment, including motorcycle pants, jacket, helmet, gloves and boots, and suffered no apparent injuries other than a sprained thumb. My BMW Rallye 3 suit, BMW GS boots, gloves and BMW System 6 helmet did exactly as they were supposed to do. Had I not been wearing all my gear, I'm certain my injuries would have been sufficient enough to at least warrant a hospital stay.

After assessing the drivability

of my motorcycle, I slowly made my way to the nearest town with cellular service, which was about 5½ miles away, and notified the state police and my insurance company. Luckily, I was able to drive my motorcycle the remaining 400 miles home.

I'd ridden more than 50,000 miles over a 30-year period and had never had an accident. Looking back, I believe I failed to properly assess the status of the country roads on which I was riding as well as how the fatigue from riding all weekend had affected me. I did not think there would be gravel and sand on the road and certainly didn't think I was physically and mentally handicapped. But, as an after effect of the winter runoff and my fatigue, that is exactly what was there and what I failed to notice.

This accident reminded me I must always be aware of my limitations, surroundings and time of year I am riding. Had I done so before I started my trip home, I would have assessed my physical and mental conditions, as well as the road conditions, beforehand, not after. Ride safe and remember ATGATT — All the Gear, All the Time! ■

HERE IT COMES

Ride Safe, Ride Long!

READY ...OR NOT?

Ready ... or Not **is a call to action for leaders, Soldiers, Army Civilians and Family members to assess their readiness for what lies ahead - both the known and unknown.**

The U.S. Army Combat Readiness Center has the tools to keep you and your Soldiers safe, both on and off duty. Visit us online at *https://safety.army.mil*.

So are *YOU* ready ... or not?

U.S. ARMY

READINESS THROUGH SAFETY

https://safety.army.mil

Don't Assume Anything

CHIEF WARRANT OFFICER 4 STEVEN T. SUND

It was a typical early summer day at Abu Hammad Air Base, Egypt, located in the Nile Delta northeast of Cairo. I was assigned as an AH-64A maintenance test pilot and adviser to the Apache Technical Assistance Field Team. Despite the challenges of English as a second language for my Egyptian counterparts, I thought I had a good handle on how the local pilots expressed themselves. I thought wrong.

One of the Egyptian MTPs approached me with a question as I finished meeting with the maintenance squadron commander. He'd been working on a post-phase aircraft for a few days and had progressed to track and balance of the rotor system.

"I am hearing a 'voice' from the rotor blades," he said.

"So, what did I learn from this incident? More than anything, I learned not to assume anything and to ask questions."

"Would you fly it with me?"

Thinking the problem was related to an anti-erosion tape issue, I said I would fly with him and we proceeded to the aircraft. After pre-flight, he opted to take the front seat to practice running the aircraft vibration analysis kit. I climbed in the back and we progressed through a standard run-up, with everything appearing to operate normally.

After taking our ground and hover measurements, we were cleared for takeoff but elected to remain in the traffic pattern. That wasn't a huge issue at this location since it was originally a Soviet airbase with a 10,000-foot runway. I did not notice anything unusual as we took the measurements at the various airspeeds until I attempted to accelerate to 140 knots for the final measurement. As I approached 100 percent torque, I heard a sound like machine-gun fire coming from the left engine.

Over the din, I heard my front-seater say, "This is the 'voice' I was telling you about. What is it?"

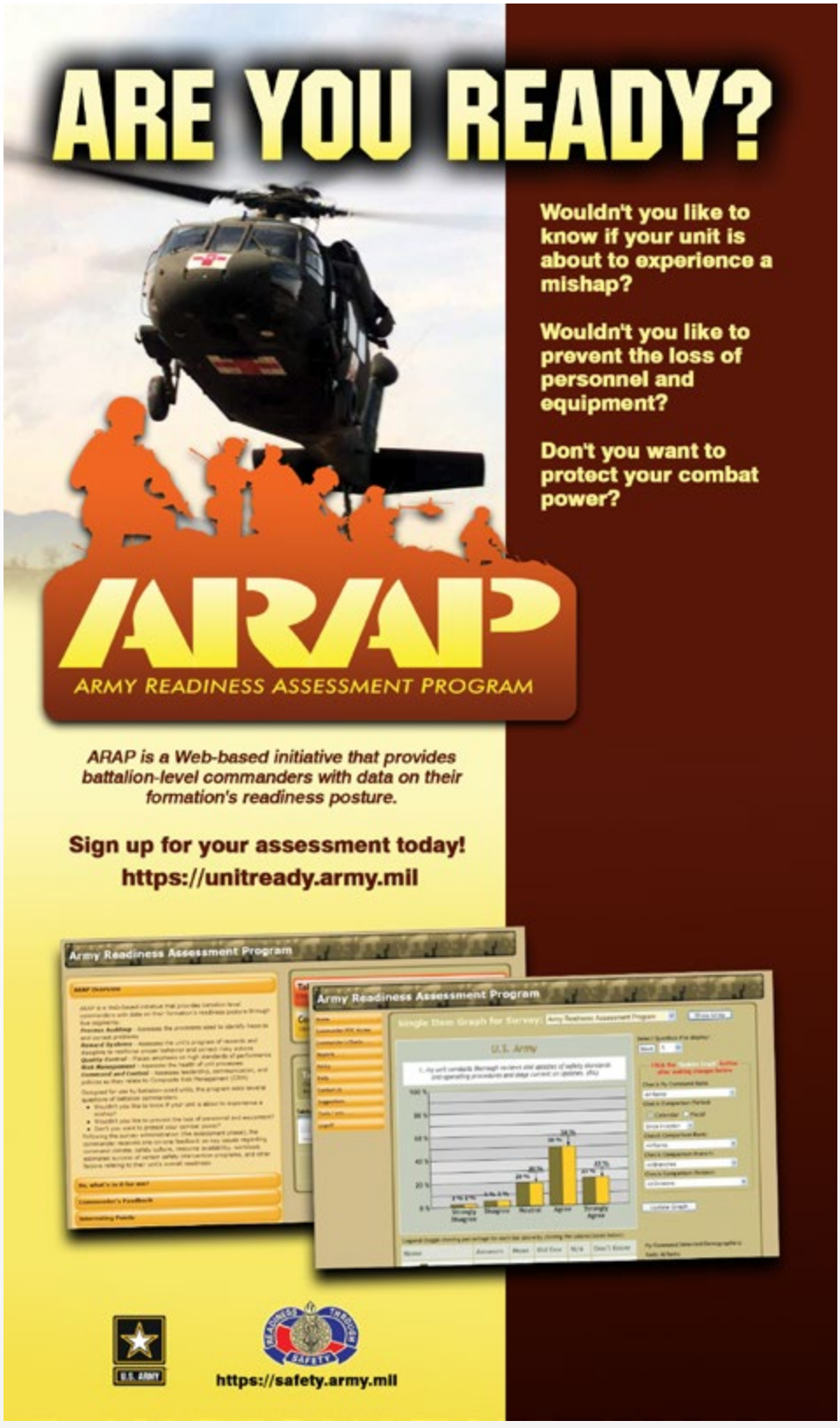
I reduced power and, as the torque decreased through about 85 percent, the banging stopped. I croaked out, "Compressor stall," and made a slow turn to a base leg to set up for landing. Still a bit shaken and hesitant to make any large power changes, I decided to make a roll-on landing — not a huge challenge on a 10,000-foot runway. We landed without incident and

returned to the maintenance hangar without further problems.

Lessons learned

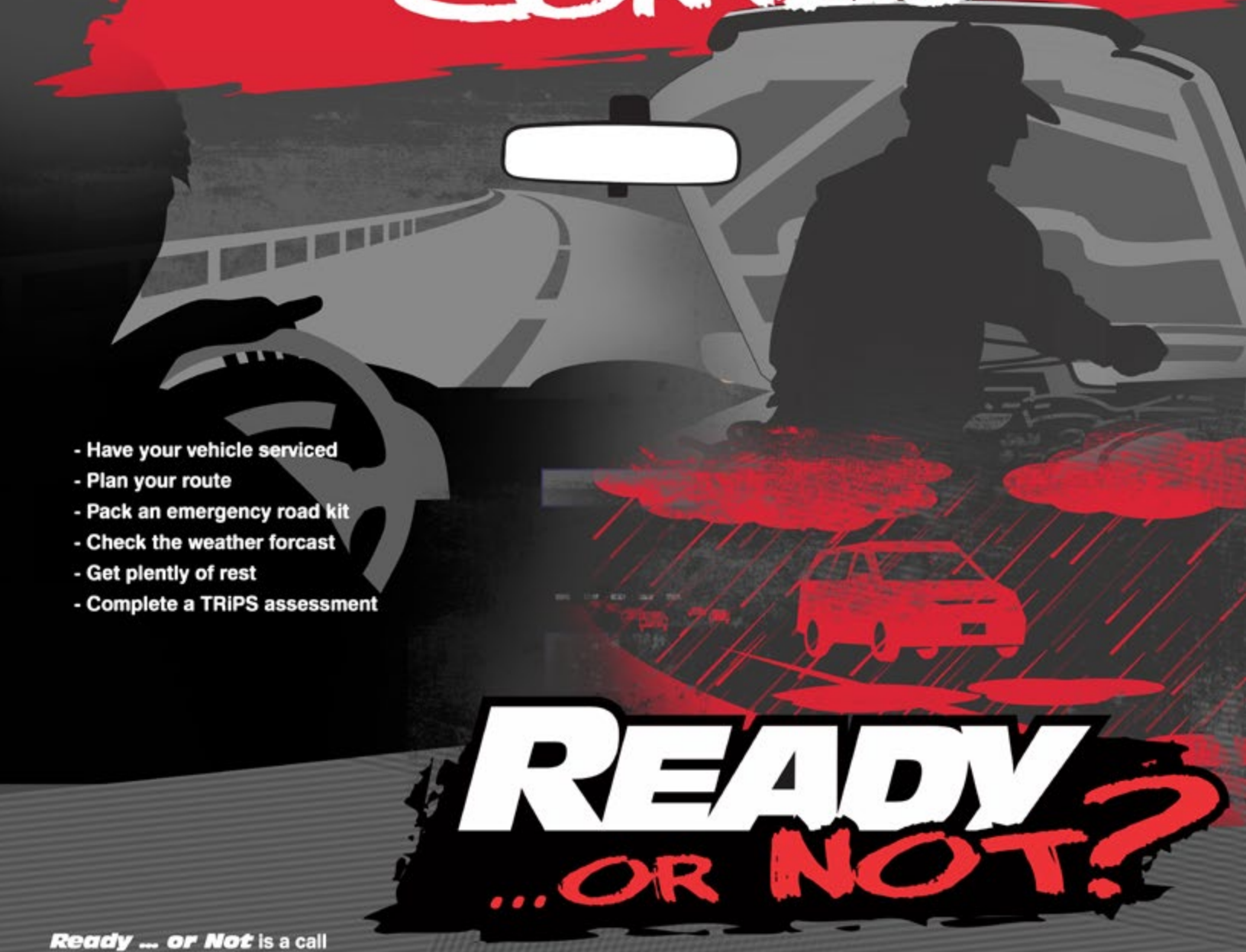
So, what did I learn from this incident? More than anything, I learned not to assume anything and to ask questions. Training Circular 1-238, Aircrew Training Manual for Attack Helicopter, AH-64A, paragraph 6-3b, Crew Coordination Basic Qualities, states the following for accomplishing pre-mission planning and rehearsals: "Pre-mission planning includes all preparatory tasks associated with planning the mission. These tasks include planning for VFR, IFR and terrain flight. They also include assigning crewmember responsibilities and conducting all required briefings and briefbacks. Pre-mission rehearsal involves the crews collectively visualizing and discussing expected and potentially unexpected events for the entire mission. Through this process, all crewmembers think through contingencies and actions for difficult segments or unusual events associated with the mission and develop strategies to cope with those contingencies."

Had I asked specific questions about the nature of the "voice" he'd heard and the other indications he'd noted, I'd probably been able to decipher the problem before we ever got into the aircraft. At the very least, it would have prepared me for the possibility of what actually occurred. ■



HERE IT COMES

Are you ready to hit the road?



- Have your vehicle serviced
- Plan your route
- Pack an emergency road kit
- Check the weather forcast
- Get plenty of rest
- Complete a TRiPS assessment

READY ...OR NOT?

Ready ... or Not is a call to action for leaders, Soldiers, Army Civilians and Family members to assess their "readiness" for what lies ahead—the known as well as the unknown.

Throughout our professional and personal lives, events happen all around us. We are often able to shape the outcome of those events, but many times we're not. Navigating life's challenges is all about decision-making.

So are ***YOU*** ready ... or not?

U.S. ARMY

READINESS THROUGH SAFETY

TRiPS TRAVEL RISK PLANNING SYSTEM

https://safety.army.mil

KNOWLEDGE
OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

Need a Lift?

CHIEF WARRANT OFFICER 2 WARREN "BENNY" EZELL
A Company, 1-244th Assault Helicopter Battalion
Louisiana Army National Guard
Baton Rouge, Louisiana

Like many Soldiers, I purchased my "deployment gift" while on rotation — a new suspension lift for my 4x4. I'd installed several of these on some of my previous vehicles, as well as for some friends, so doing my own maintenance wasn't foreign to me. Still, I know that all the experience in the world won't save you if you fail to incorporate safety into the job.

I started by doing my research on the project and gathering all of the appropriate tools I'd need to install the lift kit. I also doubled-checked the weight of my vehicle and compared it to the ratings of the floor jack and jack stands I would be using. Since our driveway had a significant incline and wasn't safe for this type of work, I'd be doing the installation in my mother-in-law's garage. The only problem was I wouldn't be able to close the garage door because my truck was just a little too long. This put some pressure on me to get the job done as quickly as possible.

I started by raising the truck on the jack stands. I felt that everything was secure, but then I recalled the words of my old motor sergeant: "Specialist, you better rock that thing back and forth before you crawl under it." I chuckled to myself and rocked the truck back and forth and side to side. Knowing with certainty that the truck was secure, I got to work.

I followed along with the instructions on my tablet and everything was going great on the left side. However, when I moved over to the right side, I discovered the lower ball joint was wearing out. I figured I'd work on that problem once I changed the suspension, which went quickly after a friend stopped by to help.

Once the suspension was complete, my buddy left and I began to address the worn-out ball joint. After some quick research on the lower ball joint removal and installation process, I went to an auto parts store to get what I needed to finish the job. The guys at the store were kind enough to loan me a ball joint press. I removed the ball joint quickly, but installing the new part with the press attached didn't give me the clearance I needed to clear the clamp with the concrete floor. I would have to adjust the jack stands to a new height to make room for the C-frame press.

During the process of lifting and adjusting the jack stands, I ran into another problem — they wouldn't be tall enough unless extended all the way. I wasn't comfortable with this, but I found a way around it by putting the stands on the cross tubes that ran to the front of the transmission. The tubes were thick, round and fit perfectly in the notch of the jack stands. I lifted one side and then the other. It was time now to check my clearance to see if my adjustments would work with the C-frame.

I reached for my tools and the clamp, but once again my motor sergeant's voice popped into my head. So, I rocked the truck back and forth, ensuring everything was secure. As I knelt next to the truck to start working, I realized I didn't rock the truck side to side, so I grabbed the step rails and pushed.

The truck immediately slipped off one of the jack stands and came crashing to the garage floor. I jumped back and just stared at my truck leaning over on its side, the lower control arm now resting on the busted concrete. My wife and mother-in-law rushed out of the house to see what had happened. Fortunately, I wasn't injured and there wasn't any damage to my truck or jack stands. Only my ego — and the concrete floor — was bruised.

Working with jacks and

jack stands can be dangerous if you fail to incorporate safety. Here are some do's and don'ts for whenever you're performing maintenance underneath your vehicle:

Do

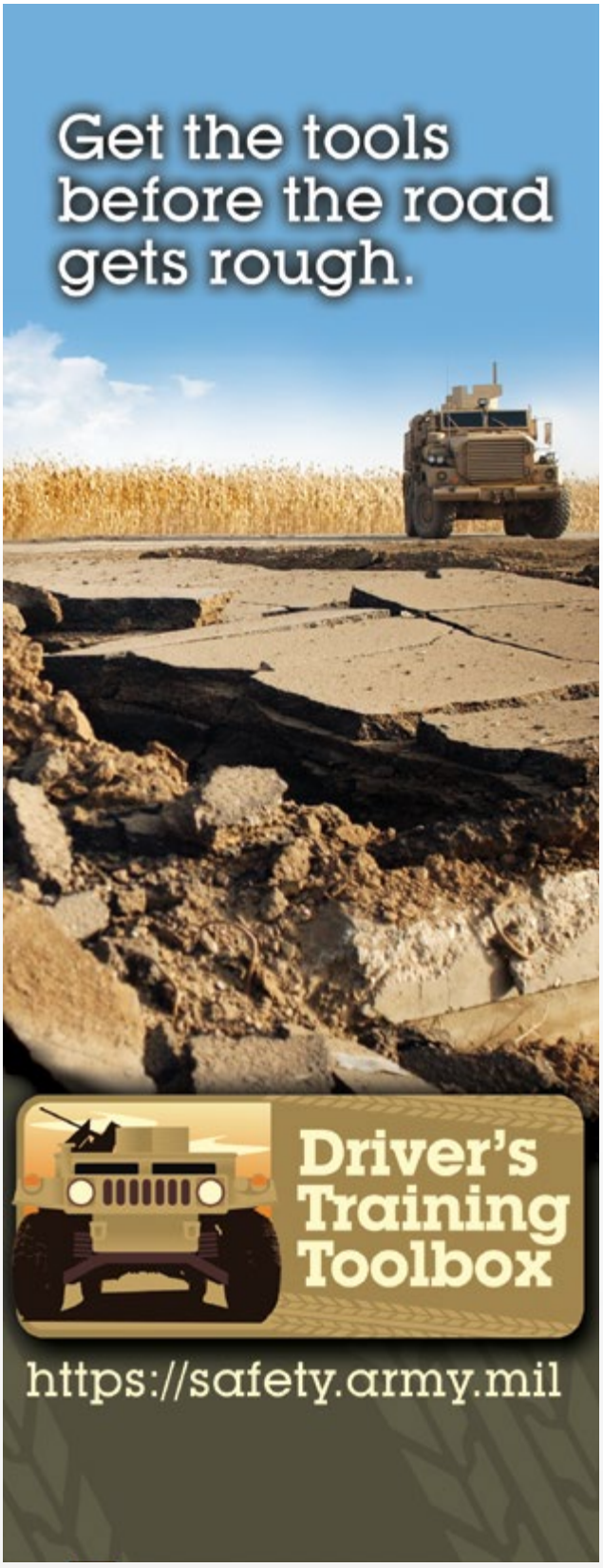
- Do place the jack under the part of the vehicle near the floor jack.
- Do find the proper place to position the jack for your particular vehicle; check your owner's manual. If you don't have a manual, ask the service department at your dealership to show you the proper placement. If your manual isn't comprehensive or lacks jack placement information, try to place the jack so it touches either the vehicle's frame or the big bar that supports the front wheel suspension.
- Do rock the vehicle back and forth and side to side to ensure it is resting securely on the jack stands. Then remove the floor jack. If it moves at all, reevaluate the situation.
- Do choose a flat, smooth, concrete surface. Asphalt can be troublesome, especially in the warmer season because the jack stands can sink into the softer surface with a ton or more bearing down on them. Dirt is the worst possible choice.

Don't

- Don't get under the vehicle before checking the stability of the jack stands.
- Don't use wood or other materials between the jack stands and the vehicle frame for extra height. They can slip out or break while you're under the car.
- Don't use the floor jack only without jack stands. The rubber seals could fail causing the vehicle to come crashing down.
- Don't jack up a vehicle without blocking the wheels after securing them on the jack stand; do not rely on the parking brake or the park gear position either. ■

FYI

For more information on jack safety, visit the http://www.military.com/off-duty/autos/how-to-use-a-jack.html.



KNOWLEDGE
OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

Biking Basics

GEORGE WYATT
Installation Safety Office
Fort Campbell, Kentucky

The bicycle has come a long way since its early days. Today's frames are stronger, yet lighter, and the wheels and tires are more durable. What hasn't changed is the need for cyclists to obey the rules of the road.

Despite what some may think, there is no special exemption to the law just because you're on a bicycle. In fact, many accidents occur because a cyclist failed to stop at a stop sign, did not signal at an intersection or ran through a red traffic light. Just as cyclists expect motorists to abide by traffic laws, they, too, expect you to follow them.

Where you ride in the lane is also important. Riding just right of the center of the lane gives you a better profile for visibility to other vehicle operators. It also keeps you away from parked vehicles on city streets, which can be an extreme hazard if someone opens a door in your path. Riding just right of the center of the lane also allows you to better maneuver to avoid potholes and other imperfections in the road and will keep you away from ditches, curbs and parked cars. Assertively maintaining your position just right of center lane will force drivers to pass properly while giving you a margin of safety from those who don't.

Riding your bicycle against traffic may give you a sense of security in that you can see oncoming vehicles. However, motorists don't expect you to be there, and it may be difficult to react to you, especially if you're on a two-lane road and the motorist must deal with you plus oncoming vehicle traffic. When you ride on the wrong side of the road, you approach intersections at angles and positions other motorists are not accustomed to seeing, which means they may not act or react as you anticipate. In some states, it's also illegal to ride against traffic, so check the bicycling laws in your area.

Riding on sidewalks may be legal in your area; however, it is not considered a best practice method of bike riding. Riding on the sidewalk introduces a new hazard — the pedestrian. In most cases, pedestrians don't expect to see a cyclist riding on a sidewalk and may have difficulty reacting. And like riding against the flow of traffic, when you intercept a road intersection from a sidewalk, you do so at angles and positions that motorists are not used to seeing. If it is safe to ride on sidewalks because the density of pedestrian traffic is low, at least consider stopping at each road intersection to make sure it is clear before proceeding. If vehicle traffic is heavy, seriously consider walking your bike through the crosswalk.

Listening to music on your phone or iPod is also a bad idea when you're on a bike, and it's prohibited on Army installations when riding on or adjacent to roadways. Your sense of hearing is important when you're riding. Even on a parallel bike route, if you don't see a bad situation developing, you might be able to hear it if you're alert and if your hearing is not obscured by portable listening devices. Remember that intersections, side-street accesses and driveways are not normally protected on parallel bike routes, so you must remain alert and be able to see and hear your environment.

Younger riders

Motorists should always anticipate children on bicycles near schools and in residential areas. The speed

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.

"Riding just right of the center of the lane gives you a better profile for visibility to other vehicle operators."

limits are usually slow in these areas to reduce the risk of vehicle and pedestrian/bicyclist conflicts. Children can be unpredictable when riding, so it's the driver's responsibility to remain alert and avoid accidents.

Parents can also help prevent accidents by teaching their children the rules of the road as soon as they start riding bikes. The state driver's manual is a good place to start. Understanding the fundamentals of driving will help keep children safer on their bikes and might even make them better drivers when they're older. Be proactive in answering the child's questions when they don't understand the technical jargon of the driver's manual. As their bike-riding skills develop, so should their knowledge of the rules of the road.

Off-road biking

Off-road biking is a popular sport and, in most cases, eliminates the conflict between riders and motor vehicles. But it isn't free of hazards. It is important for the novice off-roader to take it slow and easy on trails and bike routes until they've gained some experience at negotiating rough terrain. Experienced off-roaders may have a tendency to occasionally push beyond their own or their bike's limits and take a spill as a result. Avoid overdoing it in areas where even a small mistake could send you and your bike sailing into a ditch, ravine, tree or boulder or even off a cliff.

Pedestrians also enjoy walking or jogging on off-road trails. Be cautious and courteous of others along the route to avoid mishaps. Also, be aware that you're probably in wild animal, reptile and insect country. They may not have a high tolerance for sharing their turf with you. Respect all wildlife and give them a wide berth.

Protective equipment

On military installations, all bike riders, regardless of age, are required to wear a Consumer Product Safety Commission-approved bike helmet. Some installations also require riders to wear a reflective belt diagonally across the body. Although state and local laws regarding helmets differ, it makes good sense to always wear one. A helmet can mean the difference between surviving and dying in an accident. Ensure your helmet meets or exceeds the impact standards of the American National Standards Institute or Snell Memorial Foundation.

As a cyclist, you should also go out of your way to be visible. Bright clothing (reflective at night) says a lot about your seriousness in sharing the road safely. Your bright or reflective shirt should be long sleeved so others can see your hand signals.

If you bicycle at night, a headlight is another important safety feature and, in some states, a requirement. Self-generating light systems are not the best option. While they shine bright when you are riding with some speed, they dim when riding slowly and go out when you stop. Consider purchasing a battery-powered light system at your local bike shop, preferably one with a tail light.

Bicycle riding is an activity that's fun for the whole family. When done correctly, it's also safe. Make sure you follow the rules of the road whenever taking your Schwinn for a spin. ■

FYI

For more information about bicycle helmets and state laws, visit the Bicycle Helmet Safety Institute website at http://www.helmets.org/index.htm

HERE IT COMES

are you ready for the ride?

When riding on an Army installation:

- During hours of darkness or reduced visibility, bicycles must be equipped with an operable headlight or taillight.
- Riders must wear a reflective upper garment.
- Riders must wear a Consumer Product Safety Commission-approved helmet.
- Wearing headphones, earphones or other listening devices is prohibited.
- Yield to traffic when appropriate.
- Go with the traffic flow.
- Obey all traffic laws.
- Look before turning.

READY ...OR NOT?

Ready ... or Not **is a call to action for leaders, Soldiers, Army Civilians and Family members to assess their "readiness" for what lies ahead—the known as well as the unknown.**

Throughout our professional and personal lives, events happen all around us. We are often able to shape the outcome of those events, but many times we're not. Navigating life's challenges is all about decision-making.

So are *YOU* ready ... or not?

U.S.ARMY
ARMY STRONG.

READINESS THROUGH SAFETY
https://safety.army.mil

KNOWLEDGE
OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

Poor Choices

CHIEF WARRANT OFFICER 2 TIMOTHY GAUDET
15th Military Intelligence Battalion (Aerial Exploitation)
116th Military Intelligence Brigade
Fort Hood, Texas

Author's note: The following event happened during the initial fielding of a Shadow platoon. This accident could have been prevented if members of the crew had performed their duties at the expected level and if proper crew coordination was utilized.

The Shadow platoon conducted their initial training from January to May and, due to the entire platoon being straight from advanced individual training, the experience level was minimal at best. This was a Monday through Friday event for the duration of the training period, and we were being trained by civilian contractors. The accident happened because of an error that was made during the time when maintenance crews assemble the aircraft and prep it for preflight.

The day started as normal as most days did during this time we spent in the field. Upon arrival at the site, the maintenance crew split off to assemble and prep the first aircraft for flight. The operators split off to conduct their power-up procedures. Initially, everything started out normal with no hiccups. Then, some childish behavior, followed by a lack of crew coordination, started at the walk-around of the aircraft and carried through the preflight and into launch.

During the walk-around, the aircraft operator, payload operator and crew chief decided they would have fun with this flight and change some of the words they used during the preflight checks and engine run-up procedures. Once the preflight started, the AO would make his calls to the CE and use different lingo for things like "Clear for Total Sticks" and others along those lines. You can use your imagination to figure out some of the words that were used in place of "clear" and "sticks."

Unfortunately, no one who had a radio did anything to stop this, which is where the lack of crew coordination came into play. During a step where you check all of the surfaces of the aircraft, there was a slight failure of the aileron, but it wasn't addressed because of the goofing around. This came back to bite everyone in the end.

They continued to cut up throughout the entire preflight checks and engine start-up and run-up procedures. When it was time for the AC to launch, the PO called the CE. Instead of using the correct lingo of, "Countdown 5,4,3,2,1, launch, launch, launch," the PO said, "5,4,3,2,1, blastoff," and the CE launched the AC.

Immediately upon launch, the right aileron failed, causing an uncontrolled flight which ultimately led to the AC crashing at the end of the runway. Needless to say, when the playback made its way through the investigation board process and the audio was heard, it didn't turn out well for many people.

The biggest lesson learned here is we should always follow proper procedures and avoid goofing around during important modes of flight or preparing for flight. Simple items that could have been seen if everyone was being serious could have prevented this Shadow from crashing because they would have noticed the anomaly during the preflight checks of the aileron. The lack of crew coordination comes from no one stepping in during the entire process and making those individuals stop and perform the steps to standard.

There is obviously a time to be serious and a time to goof around. Anything dealing with important phases of flight certainly isn't the time to not follow procedures. ■

Do You

Like

Us?

Stay Connected to Safety

Check out the U.S. Army Combat Readiness 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 USACRC community on Facebook. Also, don't forget to connect with Army safety at these sites:

YouTube Broadcast Yourself™ flickr™ twitter

HERE IT COMES

are you ready for the heat?

- Implement work/rest cycles
- Hydrate properly to replace fluids lost through sweating
- Eat well-balanced and regular meals
- Avoid using salt tablets unless directed by a doctor
- Wear loose, lightweight clothing to encourage heat release

READY ...OR NOT?

Ready ... or Not **is a call to action for leaders, Soldiers, Army Civilians and Family members to assess their "readiness" for what lies ahead—the known as well as the unknown.**

Throughout our professional and personal lives, events happen all around us. We are often able to shape the outcome of those events, but many times we're not. Navigating life's challenges is all about decision-making.

So are *YOU* ready ... or not?

U.S.ARMY

ARMY STRONG.

READINESS THROUGH SAFETY

https://safety.army.mil