



# RISK MANAGEMENT

OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY



## SURVIVING THE COLD p. 4

CARBON MONOXIDE POISONING p. 6

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<https://safety.army.mil>



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**The U.S. Army Combat Readiness Center has developed multiple tools to provide leaders information on risk mitigation, all available at <https://safety.army.mil>, including the following:**

• **Army Readiness Assessment Program**

— a web-based tool that provides battalion or equivalent commanders with data on their formations' readiness posture by sampling unit safety climate and culture in five key areas: process auditing, reward systems, quality control, risk management, and command and control.

• **Army Risk Management Information System** — the central repository for all Army mishap data (Class A-D ground, on and off duty; Class A-E aviation). RMIS is designed to give leaders, safety officers and other personnel access to both current and archived mishap reports, with a goal of preventing similar incidents within their formations. Among other functionalities, users may search RMIS for specific mishaps by case number; conduct searches for a given timeframe or accident class; and obtain risk and hazard reports broken down by age, grade, equipment and additional variables. All data retrieved from RMIS is classified For Official Use Only and limited in use to accident prevention.

• **USACRC Lessons Learned** — one-page mishap investigation summaries produced for accident prevention purposes. Summaries contain information protected by DODI 6055.07 under safety privilege and are available only to CAC holders within the .mil network.

• **Ground Risk Assessment Tool** — a mission planning tool developed to augment the military decision-making process. Consisting of five integral parts, it assists users in identifying potential hazards and controls for specified ground missions or activities, both on and off duty.

• **Off-Duty Safety Awareness Presentation**

— a highly informative safety presentation containing statistics, contributing factors and other relevant information regarding off-duty mishaps. Developed for use at battalion level and below, the presentation comes complete with embedded videos and speaker notes that may be used as is or modified to reflect unit-specific mishap trends.

• **Preliminary Loss Reports** — short synopses of recent Army mishaps resulting in Soldier or civilian employee losses that alert commanders, leaders and safety professionals to circumstances affecting readiness. PLRs provide actionable knowledge and real-time information regarding accidental fatalities, both of which are critical in prevention through risk management.

• **Safety Campaigns** — a monthly focus on seasonal and non-seasonal risk management products and tools. Each monthly topic includes supporting videos, graphics and posters, articles and external links for additional resources.

• **Risk Management Magazine** — the official safety magazine of the U.S. Army, published online quarterly. In addition to the online version, the USACRC releases a weekly RM newsletter highlighting a variety of safety articles, posters and videos, seasonal safety campaigns and USACRC tools and programs.

• **Flightfax** — an aviation safety publication published online monthly. It provides leaders a snapshot of Army aviation hazards through analyses of mishaps within the last 30 to 60 days, near-term mishaps, aviation safety issues and historical context via a "blast from the past" feature.



# USACRC WEB-BASED TOOLS AND INITIATIVES



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**Mission Statement:**

*Meet the intent of the Army Strategy by enabling commanders, leaders and individual Soldiers to build readiness, modernize across the operational spectrum, empower and push processes to the lowest level of authority, and strengthen our alliances and partnerships through education in and application of risk management.*



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# **T**he Army Public Health Center reported there were 205 Army cold weather injuries in fiscal 2019 (October 2018 – March 2019), according to data from the Defense Health Agency’s Weather-Related Injury Repository. Are you prepared?



The typical individual who suffers a cold weather injury is usually male; E-4 or below with less than 18 months in service; about 20 years old; from a warm climate; uses tobacco, alcohol and/or medications; and neglects proper foot care. However, anyone can become a cold weather casualty. Training Circular 4-02.3 states every Soldier will protect against “cold injury in cold climates by wearing proper cold-weather clothing and frequently changing socks to keep feet dry, by careful handling of gasoline-type liquids and by avoiding contact between skin and cold metal.”

Cold weather injuries include hypothermia, frostbite, nonfreezing cold injuries (chilblains and immersion/trench foot), and injuries related to cold exposure (dehydration, sunburn, carbon monoxide poisoning, snow blindness, and slips, trips and falls). There are several factors that influence these injuries, including:

- A prior cold weather injury, which increases a Soldier’s risk to suffer another one; medical conditions such as anemia, diabetes, sickle cell disease, hypotension (low blood pressure) and any other disease of the blood vessels, which can decrease blood flow to the extremities; and some medications impair blood vessel constriction and the body’s ability to conserve heat. Soldiers should alert their leaders and battle buddies about prior cold weather injuries, medical conditions and medications that make them susceptible to a cold injury.
- Alcohol may make you feel warm, but it causes the skin’s blood vessels to dilate, resulting in an increase of heat loss. It also impairs judgment, making it difficult to detect a cold injury. Alcohol and caffeine increase urination and the risk of dehydration. Nicotine use (smoking or chewing) constricts the blood vessels, leading to less blood flow to the extremities (hands and feet) and increasing the risk of frostbite.
- Vigorous activity or exercise leads to sweating, wet clothing and heat loss. Remove or loosen clothing as needed to prevent sweating. A low heat production from underactivity can lower the body’s core

temperature. Exercise the large muscle groups, toes, feet, fingers and hands and continue to move.

- Cold weather clothing is designed to reduce heat loss to the environment and protect against hypothermia. Tight-fitting clothing reduces insulation, restricts movement and leads to heat loss. When dressing, consider these tips:
  - Multiple layers of clothing allow air to be trapped to provide insulation. This allows Soldiers to remove layers as needed based on their activity level and environmental conditions. The inner most layer that is in contact with the skin must have wicking properties, allowing water vapor to be transmitted to the outer layers for evaporation. Wet clothing will reduce the insulation provided by the layers of clothing. Choose clothing made of polypropylene, fleece, a Gore-Tex shell or other equivalent synthetic materials.
  - Protect the feet by keeping boots and socks clean and dry and change them out if they become wet.
  - Protect the hands by wearing gloves or mittens with the appropriate inserts/liners. Avoid contacting snow, fuel or bare metal with the hands. Mittens provide a greater protection from cold injuries but reduce dexterity.
  - Be sure to wear a cap. The head can account for up to 50 percent of the body’s total heat loss (TB MED 508).
  - Use the acronym COLD: Keep it **clean**; avoid **overheating**; wear clothing **loose** and in layers; and keep **dry**.

# SURVIVING IN THE COLD

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- Dehydration limits a Soldier's ability to sustain physical activity and their body's ability to balance heat production and loss. The cold may decrease sensitivity to thirst. When adding strenuous activity, this increases the risk of dehydration. Drink water or warm liquids for hydration and monitor the color of urine (a lighter color indicates good hydration).
- Inadequate nutrition can cause low blood sugar (hypoglycemia), impairing shivering and the body's ability to generate heat. It also limits a Soldier's ability to maintain physical activity. Do not skip meals.

## **Other injuries related to cold weather exposure, include:**

- Carbon monoxide poisoning is the result of being exposed to engine exhaust and stoves and heaters with inadequate ventilation in an enclosed space. Ensure tents have adequate ventilation and use only heaters that are approved for indoors. Do not remain in an idling vehicle for long periods and never sleep in an idling vehicle.
- Snow blindness is caused by not wearing eye protection when exposed to ultraviolet (UV) radiation. This type of injury is related to the intensity of the sun, not the air temperature. Snow blindness can degrade a Soldier's performance due to blurred vision, pain and a gritty feeling, tearing, and a headache. Snow blindness can be prevented with the use of sunglasses or goggles that block more than 90 percent of UV radiation.
- Sunburn will increase heat loss and make a Soldier more susceptible to hypothermia. Sunburn is related to the intensity of the sun and not the ambient temperature. Use an appropriate sunblock

## **DID YOU KNOW?**

**For more information on preventing cold weather injuries, see:**

- **TB MED 508, Prevention and Management of Cold Weather Injuries**, [https://armypubs.army.mil/epubs/DR\\_pubs/DR\\_a/pdf/web/tbmed508.pdf](https://armypubs.army.mil/epubs/DR_pubs/DR_a/pdf/web/tbmed508.pdf)
- **TC 21-3, Soldier's Handbook for Individual Operations and Survival in Cold Weather Areas**, [https://armypubs.army.mil/epubs/DR\\_pubs/DR\\_b/pdf/web/tc21\\_3.pdf](https://armypubs.army.mil/epubs/DR_pubs/DR_b/pdf/web/tc21_3.pdf)
- **TC 4-02.3, Field Hygiene and Sanitation**, [https://armypubs.army.mil/epubs/DR\\_pubs/DR\\_a/pdf/web/tc4\\_02x3.pdf](https://armypubs.army.mil/epubs/DR_pubs/DR_a/pdf/web/tc4_02x3.pdf)
- **The Army Public Health Center's Cold Weather Casualties and Injuries webpage**, <https://phc.amedd.army.mil/topics/discond/cip/Pages/Cold-Weather-Casualties-and-Injuries.aspx>

with at least a 15 sun protection factor (SPF), ensuring it blocks both UVA and UVB rays.

- Slips, trips and falls on ice and snow cause fractures, sprains and strains of the lower extremities, wrists and ankles. These can be prevented with the use of shoes with good traction.

Fortunately, cold weather injuries are preventable. It is the responsibility of every Soldier to know the risk factors and use that information to mitigate an injury. They should also notify their leaders and battle buddies of any of these risk factors for a cold weather injury. In turn, leaders must know their Soldiers who are at an increased risk due to medical conditions, medications or a prior cold weather injury. ■

# GARAGE HAZARD

## Carbon Monoxide Poisoning

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**I**ndustrial Scientific reports that each year about 500 people in the United States die from carbon monoxide (CO) poisoning, and over 10,000 more seek medical treatment, despite the wealth of information about its risks. According to the Occupational Safety and Health Administration, one of the most common sources of CO exposure is the internal combustion engine. The risk of CO exposure is increased when operating a gasoline-powered engine in enclosed spaces, specifically attached garages.

Carbon monoxide poisoning has been studied since at least the 1920s, when ventilation concerns in major motor vehicle tunnels were examined (Parker, 2014). Since then, many states have enacted laws regarding CO detectors. As of 2018, 27 states and the District of Columbia have adopted varying statutes regarding CO detectors. Another 11 states have helped spread awareness on CO detectors through their building codes or the adoption of the International Residential Code (National Conference of State Legislatures, 2018).

Carbon monoxide is formed by the incomplete burning of any material containing carbon, such as natural gas, gasoline, kerosene, oil, propane and coal. Dangerous levels of CO can be produced from any fuel-burning appliance, including automobiles. When the gas builds

up in enclosed spaces, people who breathe it risk being poisoned.

With more than 274 million vehicles registered in the United States, now is not the time to become complacent with the inherent risks associated with the operation of fuel-burning automobiles (Statista, 2019). As cooler weather approaches, people may mistakenly begin to warm their cars in garages. It may be even more tempting now that remote car starters have become commonplace; however, this is never a good idea. A study by Iowa State University concluded that operating an engine in a closed building is extremely dangerous, even for short periods of time. It's so dangerous that the study concluded it should never be done. High concentrations of CO build very quickly and an individual "may collapse before they even

realize there is a problem" (Greiner, 1996). Furthermore, cold engines produce higher concentrations of CO and for longer periods of time.

For the first two minutes of operation, an automobile engine can produce CO concentrations at 80,000 parts per million (ppm) (Greiner, 1998). The risk is compounded when the vehicle is started in an attached garage. Air typically flows into the house from an attached garage, bringing with it any CO and exposing everyone inside to unsafe fumes (Greiner, 1998).

Is operating an engine with the garage door open acceptable? No, according to the same study, which found that CO concentrations in the garage were at 500 ppm with the garage door open after warming up a vehicle for only two minutes. Even with windows and doors open,

# ARDS: Awareness

**Table 1: Symptoms of Carbon Monoxide Poisoning**

Low to Moderate Levels	High Levels
Fatigue	Mental confusion
Shortness of breath	Vomiting
Nausea	Loss of muscular coordination
Dizziness	Loss of consciousness
	Death

one should never run any gasoline-powered engine, to include a power generator, inside a garage or other enclosed structure (Greiner, 1998).

The Centers for Disease Control and Prevention (CDC) recommends that every home have at least one working CO detector in the house. These detectors should be battery operated or have battery backups (2017). Since CO is slightly lighter than air, detectors should be placed higher than ground level.

Early signs of poisoning are difficult to detect, as CO is colorless, odorless, tasteless and non-irritating (Industrial Scientific, 2018). This “silent killer” strikes quickly, catching victims off guard. People who are sleeping or who have been drinking alcohol can die before ever having symptoms of CO poisoning (National Safety Council, 2019). For more on CO poisoning symptoms, see Table 1.

Carbon monoxide is dangerous because it binds to hemoglobin in the blood (carboxyhemoglobin) and prevents the blood from carrying enough oxygen. Non-reversible

physical damage can occur quickly when the body suffers any oxygen shortage (Industrial Scientific, 2018). Parts of the body that require a lot of oxygen, such as the heart and brain, are particularly susceptible to damage (OSHA, 2012).

High concentrations of CO kill in less than five minutes. It will take more time for the body to be affected by lower concentrations of CO, but the risk is still tremendous. How long a person is exposed, the concentration of CO and the activity level of the person breathing it will determine the effect on the body (Berg, 1984). For more on the toxic effects of CO, see Table 2 on page 8.

According to the CDC, if CO poisoning is suspected, the victim should immediately move into fresh

air and seek medical treatment (2017). The half-life of carboxyhemoglobin in fresh air is about four hours. Medical treatment includes the administration of oxygen. If there are large amounts of CO in the bloodstream, the oxygen may be administered via a hyperbaric chamber, a pressurized oxygen device that forces the CO from the body (Greiner, 1996).

Protect yourself and your family from the risks associated with automobiles and CO poisoning. Never leave a vehicle running in an enclosed or partially enclosed space. Open the garage door before starting your vehicle and immediately back out. Additionally, know the state requirements for CO detectors where you live, and install them to alert you to the silent killer.

**Table 2: Toxic effects of carbon monoxide**

Parts of carbon monoxide per million parts of air	Carbon monoxide in percent	Physiological effects
100	0.01%	Concentration allowable for an exposure of several hours
400 to 500	0.04%-0.05%	Concentration that can be inhaled for one hour without appreciate effect
600 to 700	0.06%-0.07%	Concentration causing a just appreciable effect after exposure of one hour
1,000 to 1,200	0.10%-0.12%	Concentration causing unpleasant but not dangerous effects after exposure of one hour
1,500 to 2,000	.15%-2%	Dangerous concentrations for exposure of one hour
4,000 and above	.4% and above	Concentrations that are fatal in exposure of less than one hour

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**Get the tools before  
the road gets rough.**



# Driver's Training Toolbox

<https://safety.army.mil>



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MORE SAFETY  
INFORMATION



**D**riving is a challenging task. Traffic, road construction, rain, kids making noise, the radio and ringing cellphones can all be very distracting. Couple that with wintry roads, black ice, snow and sleet and you've added a whole new element to driving. Toss in those four-wheel-drive owners who think they can still go 60 mph on these roads and the risks rise considerably. While you can't control the weather or other motorists, you can apply risk management to reduce your driving risks.

First, identify the hazards. Among those are things such as black ice, snow accumulation and other traffic, including snowplows and vehicles spreading sand or salt. Checking your local weather forecast and road conditions can help keep you on top of these hazards.

Second, assess the hazards. Examine each one in terms of its probability and severity should an accident happen. Consider historical lessons learned, experience levels and judgment. If you've had an accident driving on icy roads, you know the possible consequences. Ask yourself, "Is this trip necessary?"

The third and fourth steps — developing controls and making risk decisions, and implementing controls — can begin well before the first snow falls. One important part is winterizing your vehicle. Here's what you can do:

### **Windshield wipers**

One of the most overlooked parts of vehicle maintenance is replacing the windshield wiper blades. Automobile experts recommend these be changed annually because torn, cracked and dry-rotted blades can fail to keep your windshield clear when driving through rain, sleet or snow. Also, fill your windshield washer reservoir with a fluid designed for the cold temperatures. If needed, you can supplement your washer fluid with concentrates designed to keep your windows clear at extremely low temperatures. Keep an extra bottle of fluid in your vehicle so you won't run out in the middle of a trip.

### **Battery**

Check your battery and charging system. Overlooked batteries can lose power when temperatures drop, making it hard to start your vehicle.

### **Tires**

Tires are also a vital part of safe winter driving. Maintaining the best possible traction with the roadway is crucial in determining how well your vehicle rides, turns and stops. Make sure your tires have plenty of good, deep tread and are properly inflated. Remember, your tire pressure drops about 1 psi for every 9 degree drop in temperature. While you're at it, check your spare tire for proper inflation and ensure you locate your jack and the other equipment you'll need for changing tires.

**KEEP  
GOING  
in the  
SNOW**

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# **"TAKING YOUR TIME, MAINTAINING GOOD SITUATIONAL AWARENESS AND PLANNING FOR THE POSSIBLE HAZARDS ON THE ROAD WILL GREATLY IMPROVE YOUR CHANCES OF ARRIVING SAFELY AT YOUR DESTINATION THIS WINTER."**

## **Radiator**

Check your radiator to make sure it has the proper amount of coolant and has been properly serviced. It is important to have the radiator flushed and the coolant changed periodically. Your owner's manual will tell you when that needs to be done. Many antifreeze products are pre-mixed; if yours isn't, a 50-50 mix of coolant to water is normally appropriate. When in doubt, check your owner's manual.

## **Fuel**

Watch your fuel level, keeping your tank at least half full to reduce moisture buildup inside the fuel tank. Knowing you have enough fuel can give you peace of mind when stuck in traffic. Remember, as long as you have fuel, a properly maintained engine can idle indefinitely, keeping you warm inside your vehicle. Make sure you keep a window open slightly for proper ventilation.

## **In case of emergency**

There are some useful items I recommend you keep in your trunk, including a blanket or two, snow shovel, some cat litter or sand for traction, fire extinguisher, an old pair of boots, jumper cables, proper-fitting tire chains, flares and a first aid kit. And, of course, you'll need a snow brush and ice scraper to clear off your windows, mirrors, headlights and brake lights.

This will help you to better see and be seen by others. Warming up your car before driving is also a good idea. This allows your oil and coolant to reach operating temperature and your heater to warm up and clear your windows.

## **On the road**

Everyone knows hurrying increases the risk of an accident, so allow yourself extra time to get to your destination. When driving in snowy conditions,

allow extra stopping distance when approaching intersections. Start braking early just in case you begin sliding on the snow or ice. On primary and secondary roads, increase your following distance to allow ample stopping time in poor weather.

You can use your vehicle's transmission to help maintain control. By downshifting a manual or automatic transmission, you can use your engine's braking power to help slow you. Some newer automatic transmissions offer a second gate for the shift lever that allows you to upshift or downshift through the gears as desired.

Don't panic if you go into a skid. If your vehicle has an antilock braking system (ABS), brake firmly and steer in the direction you want to go. If you don't have ABS, steer into the skid and avoid braking. A good tip to remember is to always look in the direction where you want your car to go.

Drive with low-beam headlights and, if possible, stay in the right-hand lane. Should you become stranded or stuck in snowy conditions, don't panic. If blizzard conditions make it hard to see or you're unable to shovel out of the snow, remain in your vehicle. Stay as warm as possible and limit your exposure to the wintry conditions.

Turn on your flashers or set up flares. Run the car in 10-minute intervals to provide heat while conserving fuel. Make sure your tailpipe is free of snow and open a window slightly on the downwind side of your vehicle to prevent the buildup of carbon monoxide. Use your blanket to help stay warm, but avoid falling asleep or staying in the same position for too long. Also, monitor yourself and other passengers for frostbite and hypothermia.

## **One last thing**

The final step of risk management is to evaluate how well your control measures worked. Did you arrive at your destination without an accident? If you did have problems, ask yourself what you could have done differently and make that a part of your controls in the future.

Taking your time, maintaining good situational awareness and planning for the possible hazards on the road will greatly improve your chances of arriving safely at your destination this winter. And by the way, keep an eye out for those overconfident drivers who flew by you earlier. Chances are you'll see them again a few miles up the road — in the ditch. ■



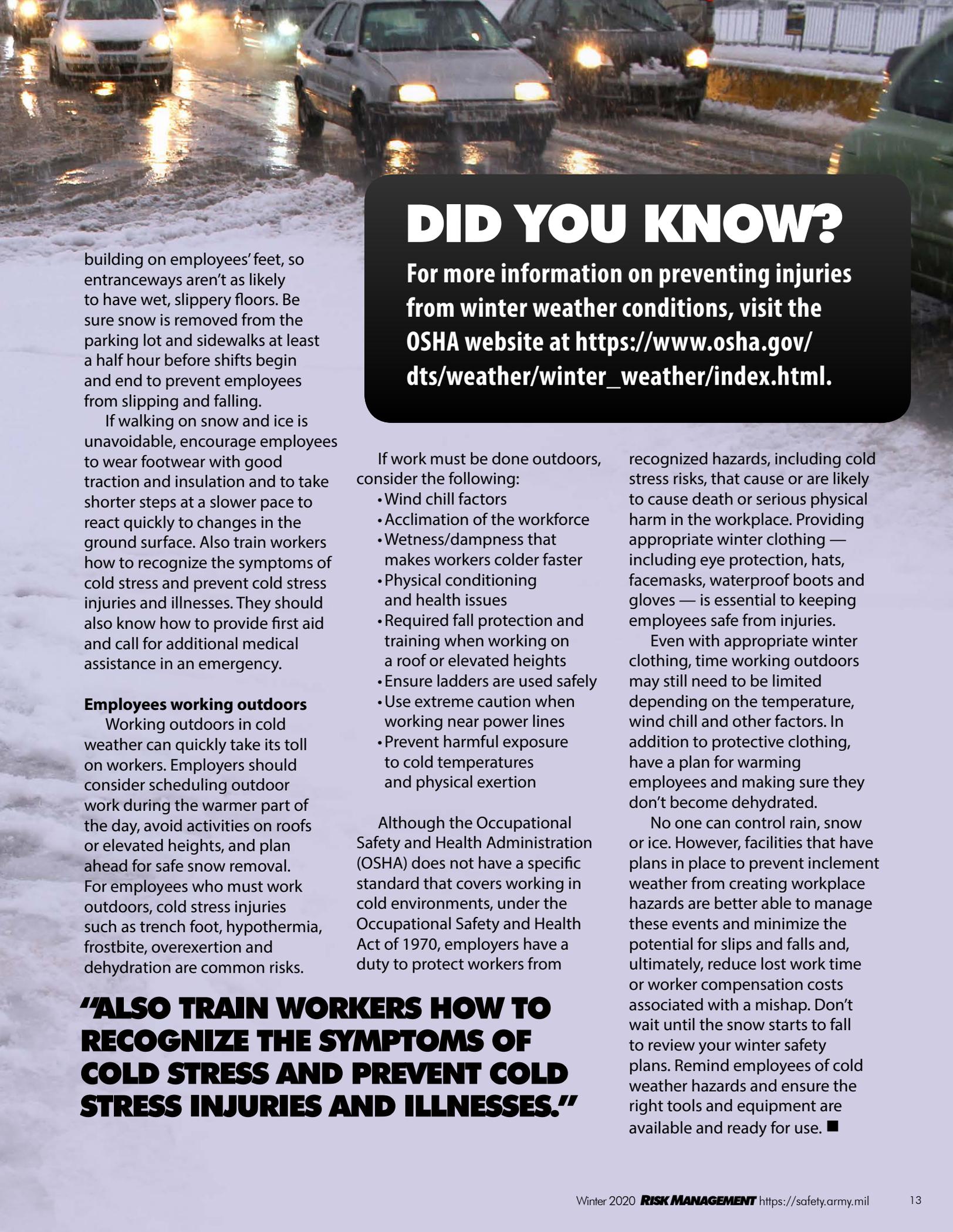
**P**lanning for winter weather at the workplace includes more than just having a bag of rock salt on hand or hanging a poster in the employee break room. Taking a look around your facility (inside and outside) will help you identify the winter hazards you will need to mitigate.

#### **Parking lots and sidewalks**

Parking lots and sidewalks share a common hazard: They can be incredibly slippery in the snow, especially when it hides a layer of ice underneath. Keeping outdoor areas clear of snow and ice in the winter can be a challenge, so having a well-established plan is crucial. An added advantage of keeping parking lots and sidewalks clear is that less snowmelt will be brought inside the

# **MANAGING WINTER WORKPLACE HAZARDS**

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building on employees' feet, so entranceways aren't as likely to have wet, slippery floors. Be sure snow is removed from the parking lot and sidewalks at least a half hour before shifts begin and end to prevent employees from slipping and falling.

If walking on snow and ice is unavoidable, encourage employees to wear footwear with good traction and insulation and to take shorter steps at a slower pace to react quickly to changes in the ground surface. Also train workers how to recognize the symptoms of cold stress and prevent cold stress injuries and illnesses. They should also know how to provide first aid and call for additional medical assistance in an emergency.

### **Employees working outdoors**

Working outdoors in cold weather can quickly take its toll on workers. Employers should consider scheduling outdoor work during the warmer part of the day, avoid activities on roofs or elevated heights, and plan ahead for safe snow removal. For employees who must work outdoors, cold stress injuries such as trench foot, hypothermia, frostbite, overexertion and dehydration are common risks.

**“ALSO TRAIN WORKERS HOW TO RECOGNIZE THE SYMPTOMS OF COLD STRESS AND PREVENT COLD STRESS INJURIES AND ILLNESSES.”**

## **DID YOU KNOW?**

**For more information on preventing injuries from winter weather conditions, visit the OSHA website at [https://www.osha.gov/dts/weather/winter\\_weather/index.html](https://www.osha.gov/dts/weather/winter_weather/index.html).**

If work must be done outdoors, consider the following:

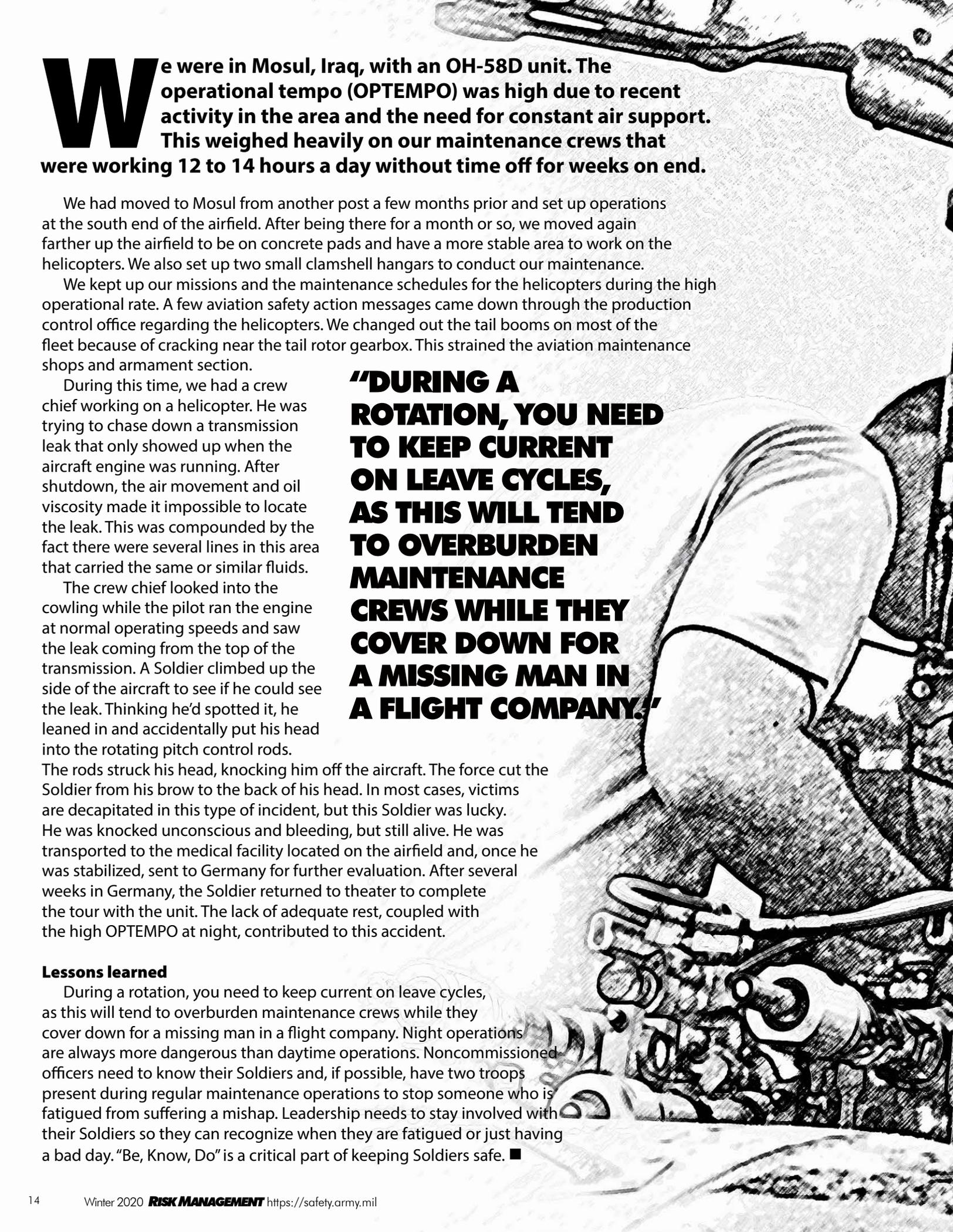
- Wind chill factors
- Acclimation of the workforce
- Wetness/dampness that makes workers colder faster
- Physical conditioning and health issues
- Required fall protection and training when working on a roof or elevated heights
- Ensure ladders are used safely
- Use extreme caution when working near power lines
- Prevent harmful exposure to cold temperatures and physical exertion

Although the Occupational Safety and Health Administration (OSHA) does not have a specific standard that covers working in cold environments, under the Occupational Safety and Health Act of 1970, employers have a duty to protect workers from

recognized hazards, including cold stress risks, that cause or are likely to cause death or serious physical harm in the workplace. Providing appropriate winter clothing — including eye protection, hats, facemasks, waterproof boots and gloves — is essential to keeping employees safe from injuries.

Even with appropriate winter clothing, time working outdoors may still need to be limited depending on the temperature, wind chill and other factors. In addition to protective clothing, have a plan for warming employees and making sure they don't become dehydrated.

No one can control rain, snow or ice. However, facilities that have plans in place to prevent inclement weather from creating workplace hazards are better able to manage these events and minimize the potential for slips and falls and, ultimately, reduce lost work time or worker compensation costs associated with a mishap. Don't wait until the snow starts to fall to review your winter safety plans. Remind employees of cold weather hazards and ensure the right tools and equipment are available and ready for use. ■



**W**e were in Mosul, Iraq, with an OH-58D unit. The operational tempo (OPTEMPO) was high due to recent activity in the area and the need for constant air support. This weighed heavily on our maintenance crews that were working 12 to 14 hours a day without time off for weeks on end.

We had moved to Mosul from another post a few months prior and set up operations at the south end of the airfield. After being there for a month or so, we moved again farther up the airfield to be on concrete pads and have a more stable area to work on the helicopters. We also set up two small clamshell hangars to conduct our maintenance.

We kept up our missions and the maintenance schedules for the helicopters during the high operational rate. A few aviation safety action messages came down through the production control office regarding the helicopters. We changed out the tail booms on most of the fleet because of cracking near the tail rotor gearbox. This strained the aviation maintenance shops and armament section.

During this time, we had a crew chief working on a helicopter. He was trying to chase down a transmission leak that only showed up when the aircraft engine was running. After shutdown, the air movement and oil viscosity made it impossible to locate the leak. This was compounded by the fact there were several lines in this area that carried the same or similar fluids.

The crew chief looked into the cowlings while the pilot ran the engine at normal operating speeds and saw the leak coming from the top of the transmission. A Soldier climbed up the side of the aircraft to see if he could see the leak. Thinking he'd spotted it, he leaned in and accidentally put his head into the rotating pitch control rods.

The rods struck his head, knocking him off the aircraft. The force cut the Soldier from his brow to the back of his head. In most cases, victims are decapitated in this type of incident, but this Soldier was lucky. He was knocked unconscious and bleeding, but still alive. He was transported to the medical facility located on the airfield and, once he was stabilized, sent to Germany for further evaluation. After several weeks in Germany, the Soldier returned to theater to complete the tour with the unit. The lack of adequate rest, coupled with the high OPTEMPO at night, contributed to this accident.

### **Lessons learned**

During a rotation, you need to keep current on leave cycles, as this will tend to overburden maintenance crews while they cover down for a missing man in a flight company. Night operations are always more dangerous than daytime operations. Noncommissioned officers need to know their Soldiers and, if possible, have two troops present during regular maintenance operations to stop someone who is fatigued from suffering a mishap. Leadership needs to stay involved with their Soldiers so they can recognize when they are fatigued or just having a bad day. "Be, Know, Do" is a critical part of keeping Soldiers safe. ■

**“DURING A ROTATION, YOU NEED TO KEEP CURRENT ON LEAVE CYCLES, AS THIS WILL TEND TO OVERBURDEN MAINTENANCE CREWS WHILE THEY COVER DOWN FOR A MISSING MAN IN A FLIGHT COMPANY.”**



# FIGHTING FATIGUE

**MICHAEL DAHLE**  
2nd Brigade Combat Team, 101st Airborne  
Fort Campbell, Kentucky

**S**ome consider a properly maintained and safely operated Army combat vehicle (ACV) or Army motor vehicle (AMV) the Army's first line of defense. Getting to the fight with all the necessary equipment is critical. If Soldiers don't have a way to travel, the unit is less capable of achieving its mission, putting forces on the front line at risk. Cold weather can add another layer of complexity to already challenging conditions for vehicle crews — especially in theater — so it's vital leaders and Soldiers focus on preventive maintenance checks and services (PMCS) to keep their equipment fully mission capable and safe on the road.

When performing maintenance checks, it is imperative operators or crews follow maintenance standards published in the PMCS tables of the -10 technical manuals. The preventive maintenance checks guidelines listed in TMs help identify potential failures of subcomponents that can cause a main system to fail and result in damage to equipment and injury or death to personnel. Improperly inspected equipment can fail and degrade the unit's readiness.

First-line supervisors are vital in establishing and maintaining effective PMCS programs and ensuring their Soldiers drive in accordance with published standards. Attention to detail is important for leaders and Soldiers throughout the year, but driving in wintry conditions can be particularly dangerous. Using properly maintained equipment and following safe driving practices can help prevent mishaps and save lives, so be prepared to beat the cold.

#### **Tips for maintaining and driving ACVs and AMVs during winter include:**

- Perform PMCS before, during and after vehicle operations.
- Ensure windshield wipers are serviceable and the rubber lip is not torn.
- Check the windshield washer fluid reservoir regularly and refill as necessary. Debris from winter roads can be especially grimy.
- Ensure the vehicle battery is fully charged and in good condition.
- Check the lights to make sure all are operating properly. Brush off snow from all headlights and taillights so the vehicle is more visible to other drivers.
- Check tires and chains and train your crews how to install snow chains. Inspect tires regularly, checking tread depth and tire pressure.
- When planning for operations in adverse weather conditions, add additional time to travel.
- Check road conditions along the entire route and know the difference between conditions. Road conditions might start out as GREEN or AMBER but be RED farther along.
- Take it slow! You'll need additional time and stopping distance on icy roads. Drivers should adjust the following distance between their vehicle and the vehicle in front of them on ice-covered surfaces.
- Apply your brakes early to allow enough time for stopping. If your vehicle is equipped with anti-lock brakes, simply press the pedal down and hold it. In vehicles without anti-lock brakes, gently pump the pedal to bring the vehicle to a stop without skidding.
- Stay alert. Other drivers may fail to use their headlights, reduce their speed or adhere to other appropriate rules of the road.

Leaders need to be cognizant of the importance of PMCS and know it is a force multiplier. Poor PMCS can adversely affect Soldier morale and safety. Today's Army is composed of highly motivated Soldiers that are committed to doing the right thing. When given guidance, proper resources and unyielding supervision, Soldiers can and will perform proper PMCS. ■





# WINTER PMCS FOR MISSION SUCCESS

## **GROUND DIVISION**

Directorate of Assessments and Prevention  
U.S. Army Combat Readiness Center  
Fort Rucker, Alabama

## **DID YOU KNOW?**

Did you know that Army Regulation 750-1, Army Materiel Maintenance, states that operator or crew PMCS are the foundation of the Army's maintenance program? Having a strong, solid foundation enables the development of a long-lasting maintenance structure as well as safe posture of personnel.

# **D**on't shop around for weather. We've all heard it. I took it to heart, but recently I learned the importance of backing up my legal weather brief with outside sources.

My company was deemed the Crashworthy External Fuel System (CEFS) company in the battalion, and we had started mounting the wings and tanks for training purposes. No one was using the CEFS to extend the range of a flight beyond our standard unfitted capability, and this was beginning to bother one of our senior pilots. He had planned a few long-haul flights that got canceled at the last minute due to weather. His goal was to fly from Fort Riley, Kansas (KFRI), to Sioux Falls, South Dakota (KFSD), at the very edge of our "local" flying area. I, being a very green pilot in command, decided I would gladly take the long flight to help accrue PC hours.

On the day of our flight, we received the official weather brief from our Air Force briefers. There wasn't a single red flag (or amber, for that matter). It was all green across the board — albeit a little

chilly in South Dakota. I didn't even think to consult other weather sources. If the official forecast is questionable, obviously I'll confirm with an outside source. However, when it's forecasted to be clear skies for the duration of the mission, I like to assume the weather briefers can at least get that right. Of course, we all know what it means to assume.

Fast forward a few hours and we're about 20 minutes south of KFSD. We had been tuning up Automated Surface Observing Systems (ASOS) and Automated Terminal Information Services (ATIS) for airports along our route of flight. Everything seemed to be as forecasted. Then, as we are approaching our destination, I saw a wall of clouds forming in the distance. This was a serious wall of clouds. We were now in range to tune up KFSD's ATIS. No ceiling, light winds. I thought my eyes were fooling me. Those

storm clouds must be farther away than they appeared. Wrong!

We landed, closed out our flight plan, and headed inside to pay for fuel and call for a weather update. I checked the radar on my phone. A snowstorm was fast approaching. I remember my PI saying, "I guess this is why nobody ever flies to South Dakota." By the time I got on the phone with Fort Riley weather, it was starting to get dark outside, and sunset wasn't for another hour. I began to catastrophize.

I wondered how much a hotel stay for five people was going to cost in Sioux Falls. But weather said we were good to go — legal visual flight rules (VFR) conditions all the way back to Riley if we could get off the ground before the storm was upon us. They were predicting 200-foot ceilings moving in with and behind the storm. I deliberated with the entire crew and called my mission briefer. This was my first major decision as a PC. Did I cancel our return flight right then and risk being socked in by the low ceilings behind the storm? Or did we try to beat out the storm?

# DON'T SHO

**CHIEF WARRANT OFFICER 2 DAN CLAPP**  
3-1 Assault Helicopter Battalion, 1st Combat Aviation Brigade  
Fort Riley, Kansas

I decided not to cancel just yet. I knew if we did the storm would slow down, giving us plenty of time to take off and we would have squandered it. We would proceed as if we were going to take off immediately after refueling was complete. We wouldn't rush or push the VFR envelope; but we weren't simply going to wait either.

My PI called to file the flight plan while our crew chiefs and I went back out to the helicopter. About half way there, I felt the first snowflake. We could see the clouds descending on the airfield. In another minute, it was like a blizzard. Snow was blowing sideways, and we could barely see the hangars on the other side of the runway. Getting ready to fly quickly became tying down blades and throwing on all the covers. At least

we didn't waste a chance at getting out. With freezing hands and faces, we buttoned up the bird and hurried back to the shelter of the FBO.

This seemed as good a time as any to grab the keys to the courtesy car and head into Sioux Falls for dinner. We wouldn't be going anywhere anytime soon — at least not if the cloud cover was anything near what we had just been briefed in our weather update. As we pulled out of the airport, five grown men crammed into a Ford Fiesta, we began to see sunlight from behind the storm clouds. In a matter of 30 minutes, the weather went from cloudless skies to a dark winter squall and was now beginning to clear up again.

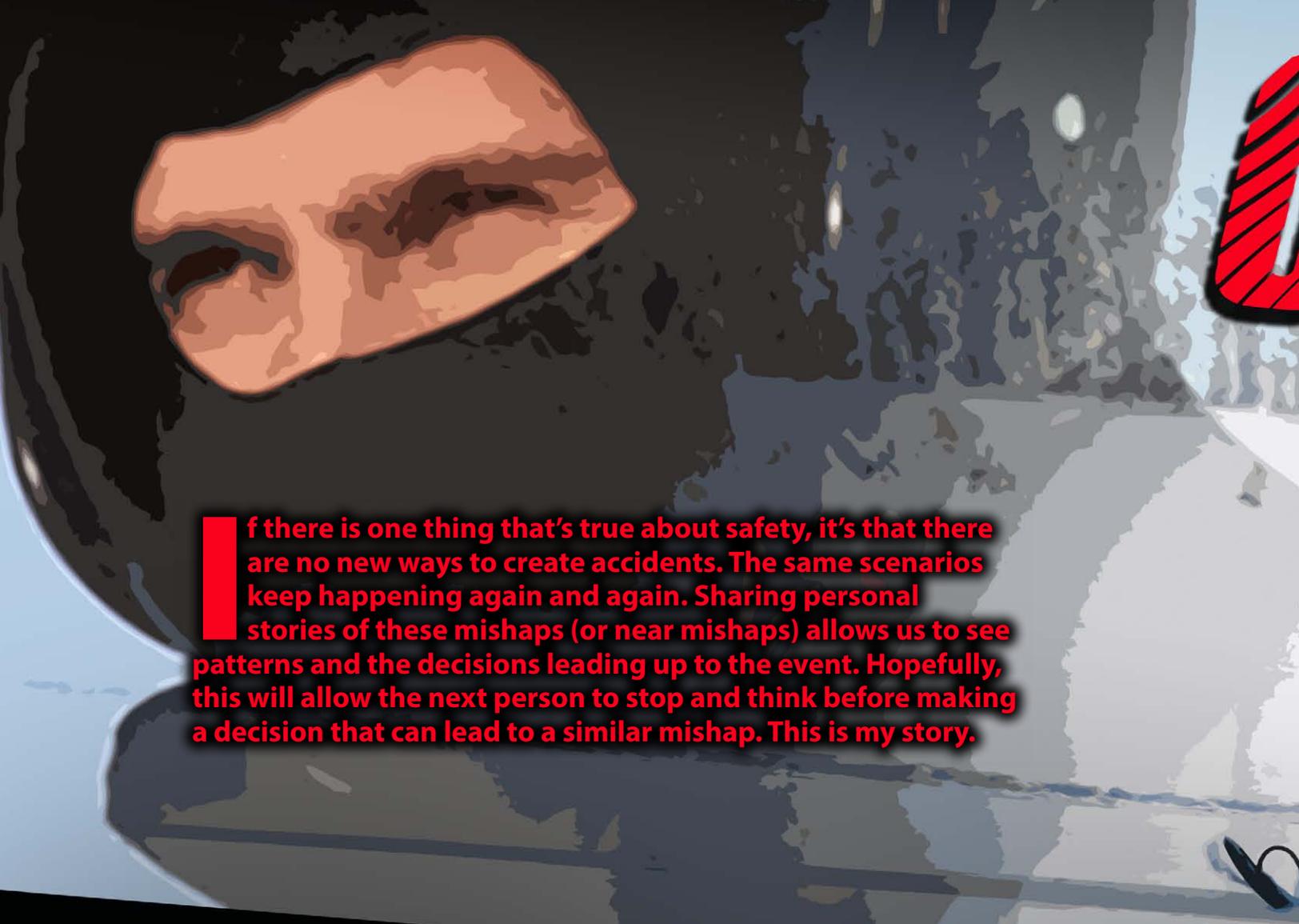
By the time we made it to our dinner locale downtown, we could see every star in the sky. So

much for those forecasted 200-foot ceilings coming in behind the front. After dinner, our return flight was uneventful and straight forward. Luckily, we avoided any dangerous situations. Unfortunately, we also seemed to avoid any accurate weather briefs that day.

Don't shop around for a legal weather brief. Army Regulation 95-1 tells us weather information will be obtained from a U.S. military weather source. But there's nothing that says we can't double-check that — even if you're briefed clear, blue and 22. With all of the resources out there like Foreflight, 1-800-WX-BRIEF, Accuweather, etc., literally at our fingertips, there's no reason to not do it. ■



# OP AROUND



**If there is one thing that's true about safety, it's that there are no new ways to create accidents. The same scenarios keep happening again and again. Sharing personal stories of these mishaps (or near mishaps) allows us to see patterns and the decisions leading up to the event. Hopefully, this will allow the next person to stop and think before making a decision that can lead to a similar mishap. This is my story.**

Growing up, I loved snowmobiling. I especially enjoyed the adventure and speed. When I joined the Army, though, I had to put snowmobiling on hold. Eight years later, I completed active duty and joined the Army National Guard. I made new friends and colleagues in the Guard, one of which was Jim, who liked to ride and rebuild snowmobiles.

I'd wanted to get back into snowmobiling, so Jim suggested I go up to northern Wisconsin with him after drill in December. I was looking forward to this trip because all of my previous snowmobiling had been in southern Minnesota on frozen lakes and open fields. When drill weekend came, I was all set to go. Unfortunately, Jim said he could not meet me in Wisconsin until Tuesday. That meant I'd be snowmobiling alone until he arrived.

I drove up to Wisconsin and checked in to my hotel. There was six inches of fresh snow on the ground, so I was eager to go snowmobiling. After I unpacked, I unloaded my snowmobile and took it for a spin on the trails. I made sure I didn't go too far since I wasn't familiar with the area. I figured I would explore more come daylight.

The next day I got up early and went riding. My

new sled was running great and, man, it was fast. I must have put 100 miles on it riding those trails. I was feeling confident in my snowmobiling abilities and thought I now knew everything about these trails. That night there was a full moon out and temps were in the 20s, a perfect time to go riding. Jim was coming up the next day and we would ride together then, but I didn't want to wait, so I headed out again.

About two hours into my ride, I noticed a new trail. I could tell the groomer had been through there so it must be a good one to ride. I wasn't disappointed, as the trail was pretty straight with a lot of trees. As I admired the cabins along the trail, the trees suddenly disappeared and I found myself in an open area. I figured I was now on a plowed field because the terrain was getting rough. I decided to press on to a hill up ahead and take a break. The hill would also give me a better view of the area.

When I reached the top of the hill, I was hit with a sinking feeling as I started putting the pieces together. The hill was really a little island in the Chippewa Flowage, a 15,300-acre impoundment created to augment downstream water flow, and what I thought

# DOWN THE ICE

**CHIEF WARRANT OFFICER 4 KIP KNUDSON**  
Headquarters and Supply Company, 834th Aviation Support Battalion  
Minnesota Army National Guard  
St. Paul, Minnesota

**"I MADE SOME PRETTY POOR CHOICES THAT NIGHT THAT PUT ME IN A LIFE-THREATENING POSITION."**

had been a plowed field was actually broken ice. I also noticed wolf tracks in the snow. Wolves are common in the northern woods of Minnesota, Wisconsin and Michigan, so I was in a bad spot thanks to my overconfidence and sense of invulnerability.

I figured I had two choices: I could stay on the island and hope someone found me before I was taken out by hypothermia or the wolves, or I could try to go back the way I came and risk falling through the ice and drowning. I knew my sled was fast enough to skip over the water should the ice break, so I cracked the throttled and hung on. Just before the shore, my sled broke through the ice and began to spray water. I continued to hold the throttle wide open and finally made it ashore. Once safe, I thanked God and asked Him to forgive me for my stupidity.

I made some pretty poor choices that night that put me in a life-threatening position. First, I failed to learn about the hazards in the area. I should have talked with some other riders who were familiar with

the trails before heading out. Second, I rode at night — alone! That was just plain stupid. Third, I didn't tell anyone where I was going. Had I not returned, no one would have known where to even begin looking for me. This incident happened before everyone had cellphones, so I wasn't even able to call for help. Fourth, I didn't have an emergency kit with me. Flares, a fire starter, food, knives, blankets, etc., all would have come in handy had I been forced to stay on that island. Finally, I failed to do proper risk management. Doing so would have surely helped me realize what a huge mistake I was making by heading out that night.

I learned some important lessons from this adventure, the most important being that there is no substitute for risk management. No one expects you to stay locked inside your house out of fear that something bad may happen to you. Get out and explore the outdoors. Create some new adventures and enjoy life — just do it safely. ■



# **FISHING for TROUBLE**

**I**n my 10 years with the Arkansas Army National Guard and eight years as a law enforcement officer, I have encountered numerous hazards and situations that did not turn out how I planned. Fortunately, they've never led to a serious mishap, which I credit to my heightened situational awareness I have at work. Most of my near misses happen off-duty, when we tend to let our guard down. This story is a good example.

**CHIEF WARRANT OFFICER 2 JOHN T. JONES**  
Headquarters and Headquarters Battery, 142nd Field Artillery Brigade  
Arkansas Army National Guard  
Fayetteville, Arkansas

# "I WAS ABLE TO KEEP THE WATER FROM FILLING MY WADERS AND DRAGGING ME UNDER."

Let's face it — relaxation is important. Since winter is here, I think it's necessary to address the fly fisherman out there. At home in Arkansas, winter is the prime time for catching monster brown trout on the White River. With it, however, comes some hazards such as high water flows and cold temperatures.

A few years ago, I drove over to Mountain Home, Arkansas, for a weekend of fishing. I did not take my drift boat because the Army Corp of Engineers posted the generation schedule online, which indicated prime wading conditions. As any tailwater fisherman will attest, you never know 100 percent what the generation is going to be. As you've probably guessed by now, the conditions were not perfect to wade fish. But I drove two hours and was determined to get some time on the water.

It was a perfect day for fishing.

The weather was below freezing and the sky was overcast. I had sufficient layering, but I did not have my studs in my boots because I usually spend most of my days in a drift boat during the winter months, chasing that illusive unicorn with 8-inch flies. I also did not have my wading staff.

I was fishing around Buffalo Shoals since I was wanting to swing my two-handed fly rod. The water was swift and the rocks were slick. As always during the winter, I wore my wading jacket. It is built to inflate with air if you fall in while you're wading. It also keeps water from filling up your waders, which is extremely dangerous in swift conditions, especially in the winter months.

I was out on the shoals, doing my best to fight the water. I'd cast, step, cast, step. Then it happened; I

stepped into a hole. Before I knew it, I was floating down the White River. Luckily, my jacket did its job and kept me afloat. I was able to keep the water from filling my waders and dragging me under. Once I got to the bank, I gathered what gear I could salvage and started the mile walk back to my truck. Getting out of the water was only half the battle, however. That walk was miserably cold.

Sometimes when we do things often, we forget the dangers. If I would have worn another jacket, there is a good chance I would have drowned that day. I wasn't prepared for those conditions. Even if I had the studs in my boots and wading staff, I probably should have just canceled the trip. I was lucky. We talk about personal protective equipment for a reason. It was created to save your life. ■

## DON'T DIE OUT THERE

**The combination of moving water, slippery surfaces and icy temperatures is dangerous. Hypothermia is the biggest risk, but drowning is right up there too. Keep in mind the following tips to ensure you survive your winter fly-fishing adventures:**

- Always tell someone where you're going and when you expect to return. Offer as many details as possible.
- Prepare for the worst. Bring backup clothes and a fire-starting kit in case you take a spill or your waders leak.
- Dress much, much more warmly than you think you should. Even on sunny, relatively warm days, you will cool down fast when standing near — and especially — in a river, despite neoprene waders. Wear heavy fleece pants and jackets and avoid jeans and other cotton pants or undergarments. Cotton absorbs moisture and won't insulate when wet. Combine a breathable raincoat over a down vest or jacket. A heavy wool or fleece cap is also a good idea.
- Keeping your fingers warm is the biggest challenge. Use thick fleece fingerless gloves with mitten tops you can pull over your exposed digits when you don't need dexterity. Yes, you can cast and reel line with mittens.
- Use a wading staff. Even if you never consider one in summer, a staff is vital in winter, when boulders ice up and banks are especially slippery. Remember, in winter a slip and fall into icy water can spell disaster.
- Bring a thermos of hot coffee, tea or hot chocolate. After a few hours in the cold, it's easier to warm up from the inside out than from the outside in.

**Source: Montana Fish, Wildlife and Parks**

# Roadr

**W**hile I was attending the Aviation Maintenance Technician Course as a part of my Warrant Officer Basic Course at Fort Eustis, Virginia, my wife and 2-year-old daughter came for a visit. This weekend allowed us to spend some quality family time together, but it was also memorable for a very ugly and scary event that happened on the roadway.

We'd spent the day playing and relaxing on the shore of Virginia Beach and were now heading back to the Newport News area on the Hampton Roads Beltway. If you are familiar with the area, you know you have to travel through the Hampton Roads Bridge-Tunnel under the Chesapeake Bay. On this night, the westbound lane on the Fort Monroe side of the tunnel was under construction, so traffic was almost at a standstill — much to the dismay of my wife, who is a little claustrophobic and didn't like the idea of being stuck in a tunnel.

The Department of Transportation had placed numerous signs several miles prior warning that the left-lane traffic had to merge right. It was frustrating watching motorists remain in the left lane until the last possible minute and then force their way over to the right. After being stuck in traffic for more than two hours, my common courtesy and military bearing was starting to wane as more and more drivers continued to jump in front of everyone else.

It was finally our turn to ease past the log jam when a pickup truck driver tried to force his way ahead of us. To put it mildly, I wasn't having any of it. I continued to position our SUV to ensure I maintained our place in line while the pickup driver kept trying to cut ahead. Eventually, it got to the point that our vehicles were going to make contact if I didn't relent, so I backed off. Here's where it got scary.

The pickup driver got out of this truck, blocking both lanes of traffic on a major highway, and started ranting like a madman. Of course, I wasn't backing off in expressing my opinion of him and his driving abilities. He then reached into his truck to grab something and made his way over to my window, still yelling and causing quite a scene. I rolled up my window to protect my family and was about to step out of the SUV when I realized he had a gun in his right hand.



# rageous!

**CHIEF WARRANT OFFICER 4 ROBERT J. JONSON**  
B Company, 127th Aviation Support Battalion  
Fort Bliss, Texas

#!&%\$!

#!&%\$!

**“AT FIRST I THOUGHT, ‘IS THIS GUY KIDDING? HE’S COMING AT ME WITH A GUN IN FRONT OF ALL OF THIS TRAFFIC AND CONSTRUCTION WORKERS — AND WITH MY FAMILY IN THE VEHICLE?’”**

At first I thought, “Is this guy kidding? He’s coming at me with a gun in front of all of this traffic and construction workers — and with my family in the vehicle?” It seemed so surreal, like something you’d see in a movie. He continued to approach, so I secured the doors and grabbed my cellphone from the console. The man then proceeded to pound on my window and windshield in protest. I told him he’d better leave because I was calling the police. After a few minutes he got the point and drove off. We stayed behind the driver until he exited the interstate at the next off ramp. The police told me they would try to track him down, but I never got a return

phone call from them, so I suspect he got away.

This event served as a wake-up call regarding how I handle my frustration toward others while on the road. Although I can’t control another driver’s behavior, I can control my own. After all, how you react to a driver’s actions determines what happens next. It’s best to just back off and remain calm. Like the Chinese proverb says: “If you are patient in one moment of anger, you will escape a hundred days of sorrow.” ■



**W**hether it's a convoy operation or a trip with your family, it's always a good idea to perform a map or route reconnaissance. You'll have the advantage of locating rest stops, places to fill up or, just maybe, possible road hazards. I didn't do that during a winter ride from my home in Colorado Springs, Colorado, to Woodland Park, and it literally proved to be my downfall.

# Hooky Hoops

**CHIEF WARRANT OFFICER 2 ROGER KOSS**  
66th Military Intelligence Company, 3rd Squadron,  
3rd Armored Cavalry Regiment  
Fort Hood, Texas

I opened my garage and rolled out my bike into a beautiful winter day, the snow around me capped by a dazzling blue sky. I looked over my bike, making sure I checked my lights, tire pressure and fuel just as I had been taught in my Motorcycle Safety Foundation training. I put on all the required personal protective equipment, to include a full-face helmet and a thick canvas riding jacket, and headed on my way.

My route would take me through Colorado Springs on Powers Boulevard and then onto Highway 24. There, I would exit and drive through Manitou Springs before getting back onto Highway 24, heading toward Woodland Park.

The ride through Colorado Springs was uneventful until I reached the onramp for Highway 24. As in many other cities that experience heavy snow, crews spread a mixture of rock salt and gravel to help improve road conditions. When the ice and snow melts, the city sends out street sweepers

to push the remaining gravel to the side of the road. Sometimes they don't quite get it all.

I started onto the on-ramp for Highway 24. It included a series of curves that went first to the right, then to the left and back to the right before merging onto the highway. I maneuvered into the curves the way I was taught in my MSF training — entering the first curve on the outside (away from the curve and near the line dividing the lanes) then cutting inside on the right and outside on the left curve — as I prepared to merge onto the highway. Unfortunately, it didn't quite work out as planned.

As I leaned into the final curve, I noticed some gravel directly in my path. I tried to straighten up the bike and ride through it, but I didn't have enough time. The rear tire suddenly slipped out from under me, sending my bike and me sliding down the pavement. Instead of being on top of the bike, however, I was on the bottom, cushioning the



slide with my body! As I slid, I stuck out my right arm to keep my helmet from hitting the pavement.

I was fortunate not to suffer a serious injury. My battle scars amounted to a section of road rash about the size of a quarter on my right elbow, along with some minor road rash on my right leg. Sticking out my right arm had saved my helmet from hitting the road, and I only suffered a very sore shoulder. Still, things could have been a lot worse, and I was grateful I wore my PPE that day.

Looking back, while I did a lot of things right that day, I made an assumption that later proved wrong. Because the roads were typically cleared of gravel, I let my guard down. I didn't completely plan for all of the potential hazards in my environment. I assumed the roads would be cleared of gravel because they normally were. In my case, a route reconnaissance, at a minimum, would have helped me identify potential hazards and improved my

**“I SLID, I STUCK OUT MY RIGHT ARM TO KEEP MY HELMET FROM HITTING THE PAVEMENT. ”**

situational awareness. The good news is that although my bike and I took a good beating, I walked away from this one with a lesson learned. Thanks to my PPE, I am still able to go out and enjoy the road.

Take a few minutes to learn from my mistake. Plan for the hazards on your route before you hit the road. In the process, leave yourself a little extra margin for life's little surprises. ■

# UNMANNED ~~=~~ EXPENDABLE

- ✓ **Conduct deliberate mission planning and reassess as mission dictates**
- ✓ **Secure proper mission approval and update as risk elements change**

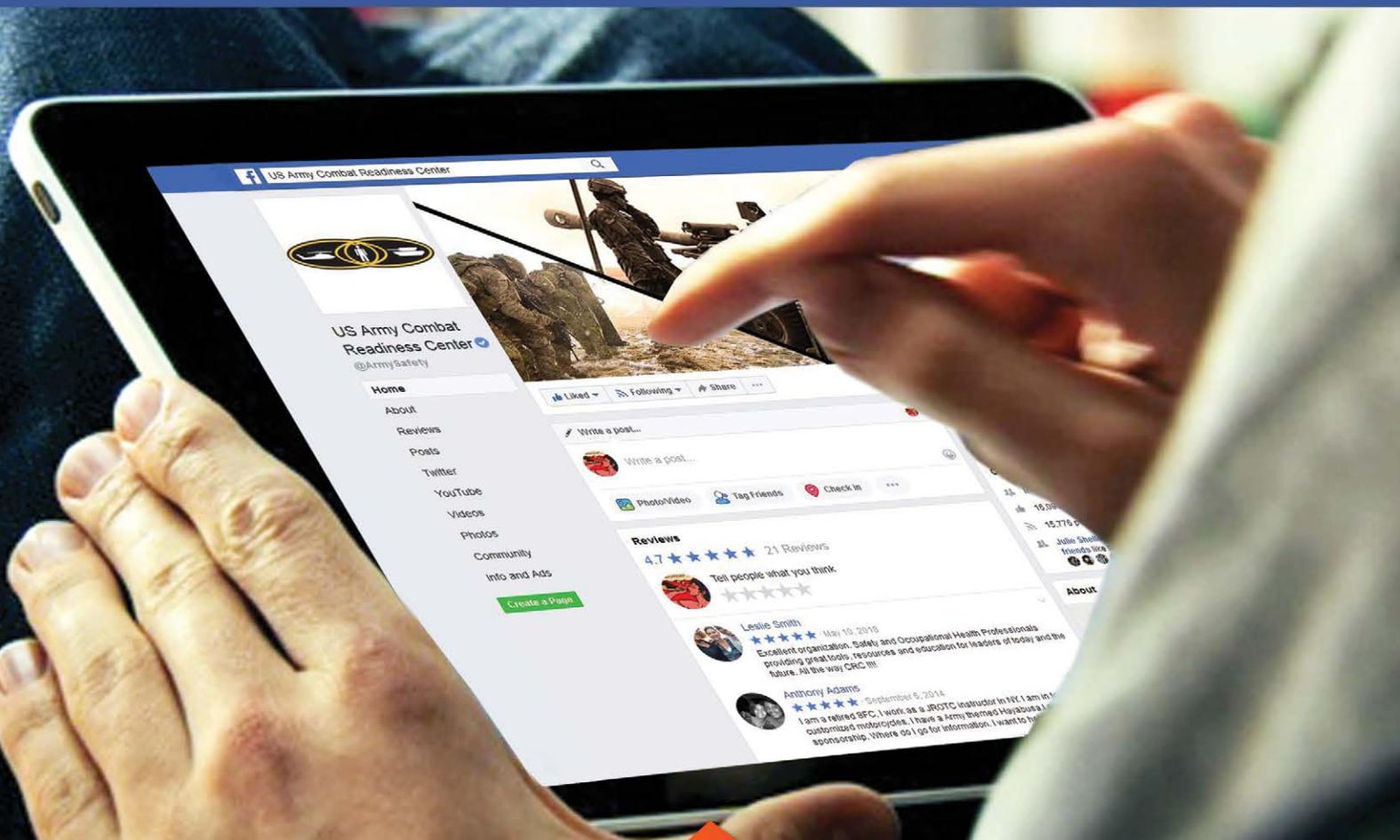
- ✓ **Know your equipment**
- ✓ **Stay in the fight, follow your checklist**



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# SELECT FISCAL 2020 MISHAP SUMMARIES

## ON-DUTY FATAL MISHAPS

### AVIATION

■ A 28-year-old Chief Warrant Officer 2, 30-year-old Chief Warrant Officer 2 and 28-year-old Sergeant, all assigned to the Minnesota Army National Guard, died in an aircraft mishap 5 December 2019 near St. Cloud, Minnesota, at 1620 local. The crewmembers were conducting a maintenance test flight when they sent a mayday call shortly after takeoff. Local authorities found the aircraft at the crash site.

### ACV

■ A 21-year-old Private First Class, 22-year-old Corporal and 42-year-old Sergeant First Class assigned to Fort Stewart, Georgia, died in an Army combat vehicle mishap 20 October

2019 on the installation at 0258 local. The Soldiers were traveling in an M2A3 Bradley Fighting Vehicle when it rolled over into a water crossing. The vehicle inverted, fell approximately 15 feet and submerged to its tracks. Three other Soldiers suffered non-fatal injuries.

■ A 20-year-old Private First Class assigned to Fort Hood, Texas, died in an Army combat vehicle mishap 6 November 2019 at Camp Humphreys, Korea, at 1432 local. The Soldier was driving an M2A3 Bradley Fighting Vehicle when it rolled over during a road test. He was airlifted to a local hospital, where he later died. Four other Soldiers suffered non-fatal injuries.

### AMV

■ A Specialist assigned to Huntsville, Texas, died in an Army motor vehicle mishap 12 November 2019 in Walker County, Texas, at 1620 local. The Soldier was driving an M1165 up-armored HMMWV southbound on a highway when it overturned. He and the truck commander were reportedly ejected from the vehicle. Both Soldiers were transported to a local hospital, where the driver later died. The truck commander suffered non-fatal injuries.

## OFF-DUTY FATAL MISHAPS

### PMV-4

■ A Specialist assigned to Schofield Barracks, Hawaii, died in a PMV-4 mishap 27 October 2019 in Mililani, Hawaii, at 0445 local. The Soldier was riding as a passenger in a vehicle when the designated driver reportedly fell asleep behind the wheel. The vehicle struck a median and flipped multiple times. The Soldier was pronounced dead at a local hospital. The driver and another passenger suffered non-fatal injuries.

■ A 20-year-old Specialist assigned to Darien, Illinois, died in a PMV-4 mishap 15 November 2019 in Van Buren, Arkansas, at 0511 local. The Soldier was operating his vehicle when he fell asleep behind the wheel and struck a guardrail. He reportedly woke up, overcorrected the vehicle and struck a tree in the median. The Soldier was pronounced dead at the scene.

■ A 20-year-old Private First Class assigned to Winder, Georgia, died in

a PMV-4 mishap 22 November 2019 in Walton County, Georgia, at 0904 local. The Soldier was operating her PMV-4 when she ran off the edge of the roadway, overcorrected and drove into another lane, broadsiding a vehicle. The Soldier's vehicle was subsequently T-boned on the passenger side by another vehicle in oncoming traffic. The Soldier was transported to a local hospital, where she was pronounced dead.

■ A 19-year-old Private First Class assigned to Fort Riley, Kansas, died in a PMV-4 mishap 15 December 2019 in Texhoma, Texas, at 0515 local. The Soldier was attempting to pass a semi-truck when he collided with an oncoming vehicle. He was pronounced dead at the scene. The civilian passenger in the other vehicle also died, and the driver suffered non-fatal injuries.

■ A 23-year-old Specialist assigned to Fort Campbell, Kentucky, died in

a PMV-4 mishap 19 December 2019 in Unicoi County, Tennessee, at 1924 local. The Soldier was reportedly driving in the westbound lane when he collided head-on with a vehicle traveling in the wrong direction. The Soldier, his 1-year-old son and the civilian driver of the other vehicle were pronounced dead at the scene.

■ A 20-year-old Private Second Class assigned to Fort Drum, New York, died in a PMV-4 mishap 20 December 2019 in Jackson, Tennessee, at 1030 local. The Soldier was driving his vehicle through a construction zone on the interstate when he struck the rear of a slow-moving 18-wheeler. The Soldier was transported to a local hospital, where he was pronounced dead. The Soldier's spouse, who was a passenger in the vehicle, died at the scene.

■ A Private First Class assigned to Joint Base Lewis-McChord, Washington, died in a PMV-4 mishap 30 December 2019 in Spotsylvania County, Virginia,



# 1<sup>ST</sup> QUARTER FY20 ARMY MILITARY MISHAP FATALITIES

**TOTAL YTD: 25**

as of 31 Dec 2019



Category	FY19 EOY	1QTR FY20
Army Vehicle	15	5
Aviation	2	5
Fire	0	0
Personnel Injury Other	27	2
Private Motor Vehicle	65	12
Weapons & Explosives	6	1
<b>Total</b>	<b>115</b>	<b>25</b>

at 2300 local. The Soldier was a passenger in a private motor vehicle that left the roadway and struck a tree. The civilian driver survived, but the Soldier was pronounced dead at the scene.

## PMV-2

■ A 19-year-old Private First Class assigned to Fort Eustis, Virginia, died in a PMV-2 mishap 16 October 2019 in Newport News, Virginia. Emergency medical technicians performed CPR on the Soldier at the scene before he was transported to a local hospital for surgery. He later died from his injuries. Authorities reported speed and reckless riding contributed to the mishap. The Soldier had completed the Motorcycle Safety Foundation's Basic RiderCourse and was wearing personal protective equipment.

■ A 33-year-old Sergeant assigned to Fort Sam Houston, Texas, died in a PMV-2 mishap 23 October 2019 in Houston, Texas. The Soldier was operating his motorcycle when he lost control, hit the road median, entered oncoming traffic and was struck by a vehicle. Paramedics found the Soldier unresponsive and transported him to a local hospital, where he was pronounced dead. The Soldier had completed the Motorcycle Safety Foundation's Basic RiderCourse I and II.

■ A First Lieutenant assigned to Schofield Barracks, Hawaii, died in a PMV-2 mishap 25 October 2019 in Honolulu, Hawaii, at 0030 local. The Soldier was operating his motorcycle when he lost control and crashed into a pillar. He had completed the Motorcycle Safety Foundation's Basic RiderCourse I.

■ A 26-year-old Staff Sergeant assigned to Tampa, Florida, died in a PMV-2 mishap 9 November 2019 in Glade County, Florida, at 1545 local. The Soldier was operating a motorcycle in a group of four riders when he attempted to make a U-turn in the left lane. One of the civilian riders sped up to catch the Soldier and they collided. Both riders died at the scene. The Soldier had completed all Army-required motorcycle training, but was not wearing any personal protective equipment other than boots.

## PEDESTRIAN

■ A 19-year-old Private First Class assigned to Fort Bliss, Texas, died in a pedestrian mishap 5 October 2019 in El Paso, Texas, at 0340 local. The Soldier was attempting to cross an interstate highway on foot when he was struck by several vehicles.

■ A Staff Sergeant assigned to Fort Riley, Kansas, died in a pedestrian mishap 27 October 2019 in Junction City, Kansas, at 0100 local. The Soldier was towing a vehicle when he stopped on the side of the road. Upon exiting his vehicle, he was struck by oncoming traffic. The Soldier was evacuated to a local hospital, where he was later removed from life support.

## FALL

■ A 24-year-old Sergeant assigned to Fort Bragg, North Carolina, died in

a fall mishap 31 October 2019 on the installation. The Soldier was running on the fourth floor of the barracks when he fell over the balcony head first. He was reportedly under the influence of alcohol. Once emergency services personnel arrived, they immediately began patient care. The Soldier died en route to the hospital.

## POW

■ A Sergeant assigned to Fort Carson, Colorado, died in a privately owned weapon mishap 27 October 2019 in Colorado Springs, Colorado, at 1830 local. The Soldier was struck by a chambered round discharged from a weapon other Soldiers were handling.

## TRAINING

■ A 29-year-old Sergeant assigned to Evansville, Indiana, died in a training-related mishap 7 December 2019 in North Vernon, Indiana, at 1815 local. The Soldier was found unresponsive in a shower trailer. The on-site medic and another Soldier performed hands-only CPR as emergency personnel were dispatched to the scene. The Soldier was transported to a local hospital, where he was pronounced dead on arrival. The coroner's preliminary report determined the cause of death to be asphyxia due to carbon monoxide inhalation.



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