ARMY GROUND RISK MANAGEMENT INFORMATION

Countermeasure

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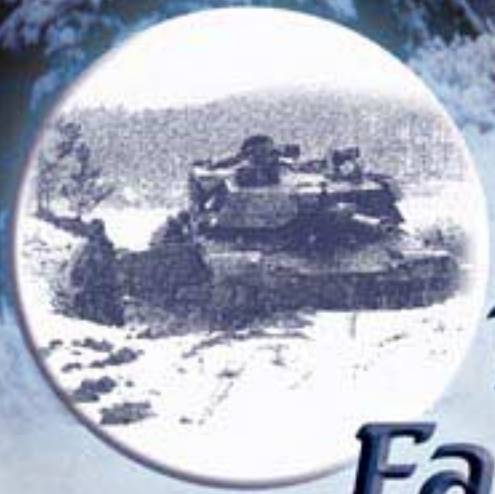

The Cold Hard Facts of Winter

ARMY GROUND RISK-MANAGEMENT INFORMATION
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CONTENTS

Cold Weather-Know the Threat
Cold weather injuries are always a threat in cold environments; however, they are also preventable. To ensure mission success, proper planning and training is essential.

Risk Management Procedures For Tactical Low-Water Crossing Sites
Unsuspecting soldiers crossing a dry creek bed can be caught completely off guard by a wall of water rumbling down the channel. Read how the III Corps and Fort Hood Commander implemented a tactical low-water crossing policy to enhance a safer training environment for soldiers.

Investigators' Forum
Two soldiers returned from a field training exercise to their soldier crew tent and started a commercial off-the-shelf heater to warm up. The soldiers then closed the tent while the heater was on and fell asleep. The soldiers never woke up.

Leaders Out Front Save Lives!

I'm Jim Simmons. For the past 27 years, I have sat where you are—in the field executing tough missions. I now wear the dual hats of Director of Army Safety and Commander, U.S. Army Safety Center.

I can sum up my safety philosophy in simple terms: ***Units that participate in tough, well-disciplined training with technically and tactically competent leaders present have significantly fewer accidents.***

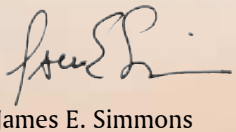
Safety is discipline. It is doing things right—every time! It's competent leaders being at the right place, at the right time to make sound decisions. And it's leaders who enforce discipline and standards. Flapping canvas, not wearing Kevlars and chin straps, inattention to uniforms—these are small items that clearly indicate indiscipline in the unit. Fail to do these things right, then pre-combat checks, pre-combat inspections and checklists are next.

Leaders must be technically qualified to lead their unit. The first guy going downrange for gunnery qualification should be the commander. One method of demonstrating your technical proficiency is to put your gunnery score up for others to emulate. It isn't enough to be technically proficient; you must also be tactically proficient. Your tactical competence must be reflected in two areas: your complete understanding of the unit's mission essential tasks list (METL) and how to do each of them correctly and proficiently, and of the battle space in which you will operate. Understand whom you are working with and how your support affects them. Does your fire support plan effectively support the scheme of maneuver?

Commanders and leaders must be on the front lines in the accident prevention battle. We have to be actively involved before the unit crosses the line of departure en route to the first objective, and our most state-of-the-art safety weapon is risk management. It's up to each of us to set the standard in our units. I will tell you that normally, generally and almost always—no one accomplishes the risk management standard (that is, an informed decision at the appropriate level) while sitting behind a desk doing e-mail. As leaders, our presence must be on the front lines. While there are a lot of folks to help integrate safety and risk management into operations—leaders guide the boat.

At the same time, we must also be skilled in using the talents and assets in our own organizations. If you cannot physically be present, make sure the Command Sergeant Major, S3, XO, or another principal staff member is out there to observe the training.

My message to you is ***don't stop training.*** Tough, realistic, disciplined training lessens casualties in combat. Effectively applying the 5-step risk management process and ensuring risk decisions are being made by leaders at the appropriate level will help us do the right training—and do it safely.



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COLD WEATHER
know the threat

If you don't know the threat, you really can't fight a battle well. The threat of cold weather is no exception; many generals have lost the battle of the cold. Napoleon learned this in 1812 when, during his retreat from Russia, he lost 250,000 soldiers as a result of the cold. In the Crimean War (1852-1856), 5,215 French soldiers succumbed to the cold—1,178 died. During the same war at the battle of Sevastepol, 2,800 British soldiers suffered horrible cold weather injuries—900 died.

Things didn't get much better early in the 20th century. During World War I, the British had 115,000 cases of all types of cold injuries. During the Dardanelles campaign, the British had 14,500 cold weather casualties. In World War II, the Germans failed to learn from Napoleon. On the Eastern Front between December 1941 and January 1942, 100,000 soldiers suffered frostbite—15,000 of those required amputations.

The U.S. Army has not been immune. During World War II, records show 46,000 cold injuries in the European theater from autumn 1944 to spring 1945. In the Korean War, it is estimated that nearly 10 percent of all wounds were cold injuries.

The good news is that we learned valuable lessons from those incidents. Today we have better equipment and training; cold injuries, even during initial deployment to places like Bosnia and Kosovo, are rare indeed. However, they will stay rare only if you know the threat.

That's when a leader's job of protecting soldiers gets tougher. Leaders must watch for early signs of cold stress in their soldiers. The most dangerous of these threats are shown in the chart on page 6.

Plan for the cold

The most important thing is planning for the cold. Make sure you have accurate weather information for the area and time of the mission. Be particularly aware of rain, snow, and winds (wet conditions and windchill greatly increase chance of injury). Ensure soldiers have appropriate cold weather clothing. If the tactical situation permits, use covered vehicles for troop transport. Have warming tents or areas available if possible. Have warm food and drinks on hand.

Wear the right clothes the right way

The most important individual preventive measure is the proper wearing of cold weather clothing and boots. Some soldiers think wearing every article of cold weather clothing issued is the way to go. Wrong! This can cause overheating and dehydration, or restrict circulation in the extremities which can increase the risk of frostbite. All cold weather clothing should be worn loose and in layers. This allows for insulation by air trapped between the layers. Socks should be changed frequently and boots rotated.

Proper wear of boots is important. You don't wear jungle boots in the snow, and you shouldn't wear intermediate cold weather boots (Gore-Tex™ lined, like Matterhorn™ boots) indoors and out, year round. Wet or damp boots need to be dried with warm air

whenever possible. If boots are removed at night and moisture in them freezes, it can be just like sticking your feet in ice cubes the next day—a perfect set-up for a cold injury.

It is important to keep clothing clean and dry. Dirt, oil, or water can increase the rate of heat loss by reducing the insulation ability of the clothes. It is also important to keep the clothing repaired—a broken zipper cannot keep the cold out. Headgear is extremely important; the body can lose large amounts of heat through the head.

It is important to protect the hands and fingers by wearing proper gloves. Nomex™ aviator gloves may be light and flexible and look cool, but they are designed to protect from fires, not extreme cold, and will do little to protect your hands when they are wet. Unless specifically authorized, they should not be worn.

Other contributing factors and prevention techniques

By knowing some of the other factors that contribute to or prevent cold injury, you can further protect yourself.

Previous cold injuries. Soldiers with previous cold injuries are more susceptible to another one. These soldiers must be identified, and first-line supervisors should monitor them closely.

Tobacco. Nicotine, regardless if it comes from a cigarette, snuff, pipe, or cigar causes blood vessels to constrict. This is particularly dangerous in the hands and feet and can lead to, or worsen, a cold injury.

Alcohol & caffeine. These can lead to increased urination, and subsequent dehydration.

Meals. If you skip meals, the first thing the body does is to slow the metabolism. Slower metabolism means less heat production and increased chance of cold injury.

Activity. Huddling up and not moving is the wrong thing to do. The more you move, the more heat you produce. Decreased activity decreases the time it takes to get an injury.

Buddy system. The buddy system is a great way to help prevent injuries if soldiers are trained to know what to look for.

Self-checks. A simple self-check is to pinch the fingernail and watch how fast the blood returns to your finger. The slower the return, the higher the potential for a cold injury to the fingers or toes.

Other information. More information on cold injuries can be found in FM 21-10 and FM 21-11; GTA 5-8-12 (this is a good pocket guide for soldiers); Technical Note NO. 92-2, *Sustaining Health and Performance in the Cold: Environmental Medicine Guidance for Cold-Weather Operations*, published by the U.S. Army Research Institute of Environmental Medicine; and FM 21-76, *Survival*.

Prevention is key

All cold weather injuries are preventable! Prevention is the responsibility of leaders at all levels, as well as the individual soldier. We have learned the lessons of unpreparedness from soldiers who have gone before us. Cold injuries are always a threat in cold environments; however, only by proper planning and training for cold weather operations can we beat it.

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COLD WEATHER Injuries Chart

Dehydration ❖

Cause
- Depletion of body fluids.

Symptoms
- Dizziness.
- Weakness.
- Blurred vision.

First Aid
- Replace lost water. Water should be sipped, not gulped.
- Get medical treatment.

Chilblain ❖❖

Cause
- Repeated exposure of bare skin for prolonged periods to temperatures from 20°to 60°F (for those not acclimated to cold weather).

Symptoms
- Swollen, red skin (or darkening of the skin in dark-skinned soldiers).
- Tender, hot skin, usually accompanied by itching.

First Aid
- Warm affected area with direct body heat.
- Do not massage or rub affected areas.
- Do not wet the area or rub it with snow or ice.
- Do not expose affected area to open fire, stove, or any other intense heat source.

Immersion Foot (Trench Foot) ❖❖❖

Cause
- Prolonged exposure of feet to wet conditions at temperatures between 32°and 60°F. Inactivity and damp socks and boots (or tightly laced boots that impair circulation) speed onset and severity.

Symptoms
- Cold, numb feet may progress to hot with shooting pains.
- Swelling, redness, and bleeding.

First Aid
- If you suspect trench foot, ***get medical help immediately.***
- Rewarm feet by exposing them to warm air.
- Evacuate victim to a medical facility.
- Do not massage, rub, moisten, or expose affected area to extreme heat.

Frostbite ❖❖❖❖

Cause
- Freezing of tissue, normally due to exposure below 32°F. Parts most often affected include fingers, toes, ears, and other facial parts.
- Exposure to bare skin on metal, extremely cool POL, wind chill, and tight clothing–particularly boots–can make the problem worse.

Symptoms
- Numbness in affected area.
- Tingling, blistered, swollen, or tender areas.
- Pale, yellowish, waxy-looking skin (grayish in dark-skinned soldiers).
- Frozen tissue that feels wooden to the touch.

First Aid
- ***Frostbite is a medical emergency! Consult medical personnel immediately and evacuate the victim as soon as possible. If not treated properly, frostbite can lead to gangrene and amputation.***
- Start first-aid immediately. Warm affected area with direct body heat.
- Do not thaw frozen areas if treatment will be delayed.
- Do not massage or rub affected areas.
- Do not wet the area or rub it with snow or ice.
- Do not expose affected area to open fire, stove, or any other intense heat source.

Hypothermia ❖❖❖❖❖

Cause
- Prolonged cold exposure and body-heat loss. May occur at temperatures well above freezing, especially when a person is immersed in water.

Symptoms
- Lack of shivering.
- Drowsiness, mental slowness, lack of coordination. Can progress to unconsciousness, irregular heartbeat and death.

First Aid
- ***This is the most serious cold exposure medical emergency and can lead to death! Get the soldier to a medical facility as soon as possible.***
- ***Never assume someone is dead; victims with temperatures as low as 82°F have been revived. In extreme cases, the pulse and breathing can be so low as to be nearly undetectable.***
- Strip off wet clothing and wrap victim in blankets or a sleeping bag.
- Place another person in sleeping bag as an additional heat source.

Cold Weather: Enemy of Youth & Inexperience

As leaders, you should expect intuitively that your younger, less experienced soldiers would be most susceptible to cold-weather injuries. The hard numbers, however, are startling. A soldier in the rank of private through specialist is more than two-and-a-half times as likely as a noncommissioned officer and eight times as likely as an officer or warrant officer to get hurt by the cold. What do you do to reduce the risk of your junior soldiers being sidelined by frostbite or other cold injuries?

First, and most important: Train them to standard in prevention, recognition, and first-aid for frostbite, hypothermia, chilblain, and trench foot. As leaders, we must then enforce the standards. Make sure your soldiers have the proper clothing and equipment suitable for the environmental conditions.

The extended cold weather clothing system (ECWCS) is for soldiers who must operate in extreme cold. While most soldiers may never experience such extreme conditions, combat-arms troops soon learn that the cold is a relentless enemy.

When properly worn, the ECWCS provides excellent cold-weather protection. But field soldiers must wear the full system. Each layer works together to form the whole system. The clothing is made of light, thin fabrics that are waterproof, yet breathe, while keeping heat in and wind out. The layering sequence for extreme conditions is as follows: polypropylene undershirt and long johns, polyester fiberpile shirt and bib overalls (buffalo shirt and bibs), Gore-Tex™ parka and pants, vapor barrier boots, and leather palm mittens.

Avoid wearing the battle dress uniform (BDU) between the ECWCS's jacket, pants, and long underwear. While layering is important, BDUs trap moisture that is wicked away from the body by the polypropylene underwear, instead of letting it escape through the breathable Gore-Tex™ material in the jacket and pants.

Secondly, don't defeat that protection by wearing clothing the wrong way. The long underwear is intended for wear next to the skin. Standard cotton underwear and wool long johns keep sweat in contact with the skin, and shouldn't be worn with the ECWCS.

Wearing their BDUs between their polypropylene and Gore-Tex™ is a common mistake that soldiers make. The polypro wicks moisture away, but it is then trapped by the BDUs, making the Gore-Tex™ less effective.

Finally, the vapor-barrier "VB" boots will keep your feet warm—sometimes too warm. Because perspiration will build up in the boots and leave you vulnerable to cold injury when you become inactive for a time, you must change your socks often. Be sure to wear the Army-issue wool socks because cotton socks retain moisture.

One of the biggest mistakes junior soldiers make, however, is overdressing for high activity. Depending on the temperature, soldiers should wear as little cold-weather gear as possible before heavy activity.

Inspect your soldiers' equipment regularly for serviceability and cleanliness. Monitor soldiers for signs of cold-weather injury, and use the buddy system to have soldiers check each other. Insist that soldiers remain hydrated and report signs of injury immediately. Make it clear to them that "toughing it out" is foolish and far from being heroic.

The extra time you take preparing your junior soldiers for the cold will reduce injuries and pay off in increased unit readiness.

NCOs Lead the Way...Safely!

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Silent Killer Claims Two Lives

A two-man fuel handler team deployed to the field in support of maneuver units in preparation for an upcoming force-on-force exercise. Although the plan called for the team to support from the main unit area in garrison, the participants decided to stay in the field to avoid traveling back and forth from the rear. Little did they know that it would be the last time they would see the garrison area. Regrettably, during the night both soldiers from the team died when they were overcome by carbon monoxide.

What happened?

The fuel handler team was to support the refueling mission for the three-day field exercise. The daily mission consisted of traveling to different locations to refuel the maneuver forces' vehicles. They had conducted these refueling operations since the exercise had started. The team decided to stay at the unit maintenance collection point (UMCP) where the majority of assets to support the operation were located. They set up their soldier crew tent (SCT) in the area and prepared for their upcoming missions.

On the day prior to the accident, the team had supported maneuver units throughout the morning, which allowed them to get some rest during the afternoon. As part of their set-up, they used a commercial off-the-shelf space heater to warm-up since temperatures during the day and night were below 40 degrees.

The afternoon continued without incident and included a visit from the platoon leader to inform them of their upcoming mission that evening. The platoon leader noticed the heater and commented on its use. The UMCP officer in charge (OIC) and a senior non-commissioned officer (NCO) were both aware that the team was operating an off-the-shelf space heater.

The team departed during the afternoon to support the maneuver units, and because of various missions did not return back to the UMCP until early in the morning.

The next morning, members of the UMCP required fuel for their vehicles. After some unsuccessful attempts to wake up the soldiers, the UMCP members decided to fuel the vehicles on their own. One of the soldiers noticed a peculiar smell while he was around the tent and later commented to his supervisor about it.

The supervisor recognized that the smell coming out of the tent was indicative of propane gas and decided to go back and check on the soldiers. When they entered the tent, they noticed that the two soldiers were unresponsive. It is suspected that the soldiers entered their tent and started their space heater to warm up from the chilling temperatures, and then closed their tent completely to include the vent flaps. The soldiers fell asleep with the heater on and the carbon monoxide buildup from the heater caused the soldiers' death.

Why did it happen?

Although not approved for use by Soldier Support Command, there were many of these commercial off-the-shelf heaters that were purchased by the unit for their soldiers to use. It was a generally accepted practice to take these heaters to the field to warm up. During various field exercises, the heaters had been used to warm up the headquarters

Mission: Bivouac During an FTX

Hazards	Controls
• Unvented exhaust fumes from a portable radiant space heater	• Operate only with adequate ventilation • Operate only with a fire guard and while soldiers are not sleeping • Operation only by trained and licensed operators • Refuel only outside of tentage and after the unit has cooled (also applicable to the new Space Heater, Small) • Use of carbon monoxide detectors
• Tent not ventilated LAW-10	

tents. Because the headquarters tents had these heaters available, it was believed by the unit personnel that these heaters were authorized for use in the field.

The lack of a training plan on the safe operation, maintenance, and hazards posed by these heaters contributed significantly to this tragic event. Additionally, the requirement to license soldiers on the use of space heaters was not enforced.

One of the fatalities was an NCO and a senior member of the team. Although he had been warned by his immediate supervisor of the dangers involved in the use of propane heaters, he did not follow the warnings on the heater, as well as on the tent. The heater specifically warns that it is not intended for use inside tents and that when in use, it must have adequate ventilation. Also, the SCT has a warning requiring the vent flaps to be open when heaters are in use. Because a heater was in operation inside the tent, the local SOP required the appointment of a fireguard, something that did not take place.

The investigation revealed a failure by the UMCP leadership to ensure that all personnel in their area of responsibility were following the unit's tactical SOP. The OIC and senior NCO of the UMCP were both aware that the team had set up in their area and that they were operating a commercial off-the-shelf heater. The UMCP leadership neither enforced the standards as specified in the tactical SOP in reference to the use of heaters, nor controlled personnel in their area.

Finally, the unit leadership did not ensure an adequate risk assessment was made. There were indicators that a dangerous situation—carbon monoxide poisoning—could occur with the use of off-the-shelf heaters in small spaces like the SCT; however, these dangers were not identified.

Alternative heaters were not proposed to warm up soldiers, although they were available. The failure to identify the risks involved in this operation, to establish control measures, and to monitor the implementation of these controls— by all levels of the unit leadership— allowed the silent killer, carbon monoxide, to take two soldiers' lives.

Countermeasures

- Train and license soldiers on the use of space heaters. Ensure soldiers understand the hazards involved in the use of heaters, specifically carbon monoxide poisoning.
- Make use of the risk management process at all levels of command. Establish control measures and ensure they are enforced.
- Supervise your soldiers.

POC: Ground Systems and Accident Investigation Division, DSN 558-3562 (334-255-3562)

RESULT - 2 FATALITIES

Risk Management Procedures

Soldiers at Fort Hood, Texas, have heard the old saying "If you don't like the weather, wait a half hour and it'll change." In fact, through personal experiences, many Fort Hood soldiers have become firm believers in that saying. The frequently changing climatic conditions in central Texas require a constant eye to the sky and an ear to the weather alerts being transmitted to the units.

Rapidly changing conditions can kick up roaring high winds, where only minutes earlier there were calm winds or drastically lower warm temperatures. This can cause sweating soldiers to become cold, or turn dry-as-a-bone creek beds into raging streams within minutes of a flash flood's arrival. All these weather-related challenges dictate that leaders and soldiers apply standard Army risk management procedures to ensure mission success—despite the weather.

The unique phenomenon at Fort Hood is that it does not have to rain in the immediate local area for the many creeks and streams to rise and flood. It can rain away from the installation, 15 miles or more upstream from the local creeks and streams, and cause flash flooding on the installation. This phenomenon presents a false sense of security regarding weather conditions to units training on the installation. Unsuspecting soldiers crossing a dry creek bed can be caught completely by surprise by a wall of water rumbling down the channel.

Following several incidents in late fall at flooded tactical low-water crossings, the III Corps and Fort Hood Commander implemented an updated tactical low water crossing policy to enhance the safety of soldiers. A hardworking team consisting of III Corps G3, Training, Range Control, Safety Office, Corps Engineer, and a construction unit from the 62d Engineer Battalion (13th COSCOM) worked together on the project. Once the team developed the concept, design, and plans, the soldiers from the engineer unit went to work to construct numerous barriers at designated tactical low-water crossing sites.

The engineers surveyed 110 tactical low-water crossing sites on the Fort Hood reservation. Each site was risk assessed to categorize it as either an "authorized," "seasonal," or "unauthorized" site. The construction phase took approximately three months to complete.

After emplacing thousands of tons of rocks and concrete, and expending thousands of man-hours, Fort Hood now has 18 "authorized" and 6 "seasonal" tactical crossing sites. These sites have movable barriers in place that are used to positively control access to the crossing sites. Additionally, the engineers constructed permanent barriers at almost 50 "unauthorized" crossing sites. These unauthorized crossing sites are closed and blocked to prevent unit crossings at any time. Over 100 jersey barriers and dragon teeth barriers were constructed and emplaced to control access to the 110 crossing sites.

The updated Fort Hood command policy identifies the 18 authorized and 6 seasonal tactical low-water crossings that units can use. The command policy provides specific procedures for closing the authorized tactical low-water crossing sites when adverse weather is forecasted.

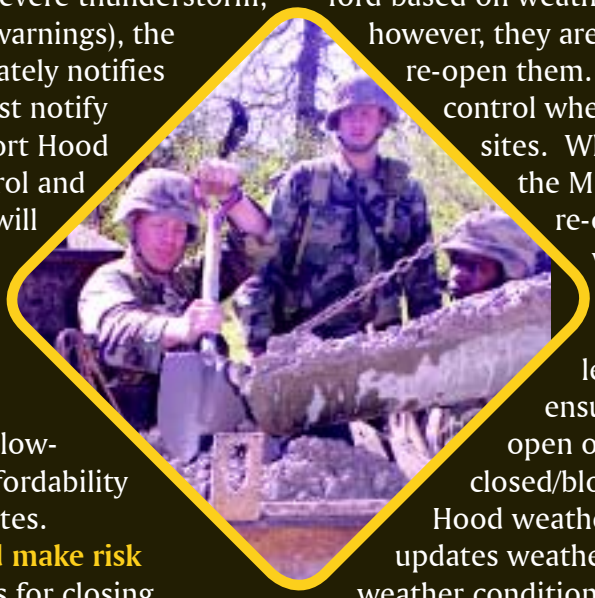
The Fort Hood operations center notifies every major subordinate command (MSC) on post daily of the current Fort Hood Stream and Creek Condition Status, whether status is red, amber, or green. Definitions of

s for Tactical Low-Water Crossing Sites

red, amber, and green are outlined in the policy. The notification contains the status of each crossing site by grid coordinate and site number. Units training in the field can also receive crossing site update status by contacting range control.

The great work of the team and the resulting Fort Hood policy exemplifies the Army's standard five-step risk management process outlined in FM 100-14, *Risk Management:*

• **Identify the hazards.** In the event of a severe weather warning (severe thunderstorm, flash flood, or heavy rain warnings), the operations center immediately notifies the MSCs, who in turn must notify the units training in the Fort Hood training area. Range control and the provost marshal (PM) will also be notified. Range control notifies units on the ranges.



• **Assess the hazard.** Range control and PM dispatch teams to tactical low-water crossings to assess fordability or the need to close the sites.

• **Develop controls and make risk decision.** Specific controls for closing tactical crossing sites are predetermined and outlined in the policy. Range control makes the recommendation to the Assistant Chief of Staff, G3, to close the sites and/or how many tactical crossing sites should be closed based on weather and safety conditions. The G3 makes the final decision to close crossing sites based on input from range control and PM.

• **Implement controls.** The operations center will contact all MSCs and inform them of the closures. MSCs will inform their subordinate units of the closures, and then report back to the operations center when all their units have been notified. Notices of closures are also announced on Fort Hood television and disseminated through public affairs channels.

Upon closure decision, the PM dispatches MPs to physically close and block all identified crossing sites. Official numbered crossing sites are equipped with gates, water level markers with instructions, and "Stream Crossing Closed" signs. PM reports completion of crossing site closures to the operations center.

When crossing sites are closed, units requiring to cross creeks and streams can use a number of identified hard stand low-water crossing sites/bridges. Units are authorized to close crossing sites which are unsafe to ford based on weather and safety conditions; however, they are not authorized to re-open them. Units must notify range control whenever they close crossing sites. When weather clears, only the MPs are authorized to re-open crossing sites that were closed.

• **Supervise and evaluate.** MPs and leaders are charged with ensuring that soldiers do not open or make an end run around closed/blocked crossing sites. Fort Hood weather station continuously updates weather reports in case changing weather conditions require additional crossing sites to be closed, upgraded controls are needed, or crossing sites can be reopened to support realistic tactical training.

In order for soldiers/units to become familiar with the provisions of the updated policy, the III Corps Safety Office prepared a safety briefing that covers local low-water crossing operations. The briefing is being presented to every soldier who trains on Fort Hood, as directed by the installation commander. The end result is a safer training environment for soldiers, without diminishing the necessary value of realistic training.

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Ensuring Risk Management Effectiveness

We have previously discussed steps one through four of the risk management process. This article will discuss the fifth and final step—*supervising and evaluating controls*.

Supervision is nothing more than monitoring and enforcing the execution of control actions. There are a number of monitoring methods including commander and leader presence, pre-combat inspections and checks, situation reports, spot checks, and back briefs. Effective monitoring should answer the following questions:

- **Are the right people/units performing the actions?**
- **Are they doing it at the right time and place?**
- **Are they using the right procedures/ equipment?**
- **Are their actions properly coordinated with the people/units providing support and/or being supported?**

If, at any time, the answer to any of the above questions is "no," enforce the control by taking action that will get things back on track.

Evaluation should be done while the mission is being executed, as well as after the action is complete. During execution, unforeseen hazards will be encountered. Commanders and leaders are paid to recognize changing conditions and the hazards associated with them—then do something about them. They should share information about these hazards by monitoring actions and cross talking. They can mutually decide on changes to controls or develop new ones, and execute them if they are consistent with the higher commander's intent and guidance. If not, they can at least paint the picture for a decision by the higher commander.

In preparation for the after action review (AAR), the effectiveness of each control in reducing the risk of the targeted hazard should be determined. If a control was not effective, determine why and what to do the next time this hazard is identified. For example: change the control, change how the control is implemented or supervised, or develop a different control. This information, as well as an overall assessment of the unit's risk management performance, should be presented during the AAR. A chart for providing this feedback is presented below.

Risk Management Assessment Success Criteria

	Sustain	Improve
Identified the most important hazards.		
• Available facts for each METT-T factor gathered and considered?		
• Hazards (enemy and accident) most likely to result in loss of combat power identified?		
Assessed risk level of each hazard.		
• Valid method/tool used to assess initial risk level?		
Developed appropriate control options and determined residual risk.		
• Each control addressed hazard reason(s)?		
• Residual risk level realistic for each hazard?		
• Valid method/tool used to determine the residual risk level for each COA?		
• Residual risk level for each COA entered on decision matrix?		
Made risk decision for selected COA.		
• Valid procedure/guidance used for determining risk decision authority?		
Hazards and controls clearly communicated to responsible unit/leadership.		
• Controls integrated into appropriate paragraphs and graphics of the OPORD/FRAGO and rehearsals?		
Implemented and enforced controls.		
• Effective methods used to supervise / enforce controls?		

**Excerpt from *"Brigade and Battalion Commander and Staff Risk Management Booklet"*

Taking action on the results of the AAR is the beginning of the next mission. It is also the beginning of the risk management process. Since both end with a beginning, they are continuous processes. Commanders and leaders cannot simply check a block and assume risk management is complete when the order is issued: the process never stops.

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Accident Classification Change

Effective 1 Oct 01, Army accident classifications, as defined in AR 385-40 (Dec 94), paragraph 2-2, will be changed as follows:

- *Class A:* No change.
- *Class B:* No change to property damage. For personal injury, the number of persons hospitalized in the same accident is reduced from five personnel to three or more.
- *Class C:* No change to personal injury. Property damage changes to $20K to less than $200K (increases the lower threshold from $10K to $20K).
- *Class D:* No change to personal injury. Property damage changes to $2K to less than $20K (increases the upper threshold from $10K to $20K).

All other requirements of AR 385-40 remain in effect until a revised document is published in late FY02. Contact your local safety office or your Major Army Command (MACOM) safety office for supplementary requirements in your organization.

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Oops, We Gooted!

In the March 2001 article, "Civilian Safety Record," we incorrectly labeled one of the major types of job-related injuries as substance abuse. It should have been labeled substance exposure.

In the July 2001 article, "Improper PLF High on Error List," we incorrectly labeled improper exit as 5% on the cause factor pie chart. Improper exit was a cause factor in 14% of the tactical parachuting accidents for FY 2000. We regret these errors.

M-16 Blank Adapter Works As Designed

We have received several inquiries regarding the article, "No Brass, No Ammo, Sergeant" from our June issue. Although not mentioned in the article, the weapon involved did have a blank adapter affixed. Contrary to what many of us might believe, the design of the M-16 blank adapter causes it to break apart when a soldier inadvertently fires live ammo with the blank adapter mounted on the weapon. This design prevents injury to the soldier and damage to the weapon. The blank adapter in this accident worked as designed, the first round fired blew it off the weapon. Consequently, the second round fired killed the soldier.

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If You Aren't Wearing a Seatbelt...

What's Holding You Back?

Research shows there is less chance of death and injury to the occupants of a car involved in an accident if: (1) the occupants remain in the car (a person is 25 times more likely to be killed if thrown out of the car), and (2) they are kept from bouncing around inside the car. The restraint system—a seatbelt and shoulder harness—is designed to do both of these. Restraint systems do their job so well that they save thousands of lives and injuries each year. And even more deaths could be prevented if every person would just use them!

Although some people are thrown clear in a crash and luckily walk away with little more than a few scratches, these are exceptional cases. Accident statistics show that thousands of deaths and serious injuries occur because unrestrained occupants are thrown out of their vehicles. Some of these people are killed or injured on impact with the ground or some other obstacle. Others are dragged or run over by another vehicle. Some are run over or crushed by their own car. In all but extreme cases, restraint systems could prevent these injuries.

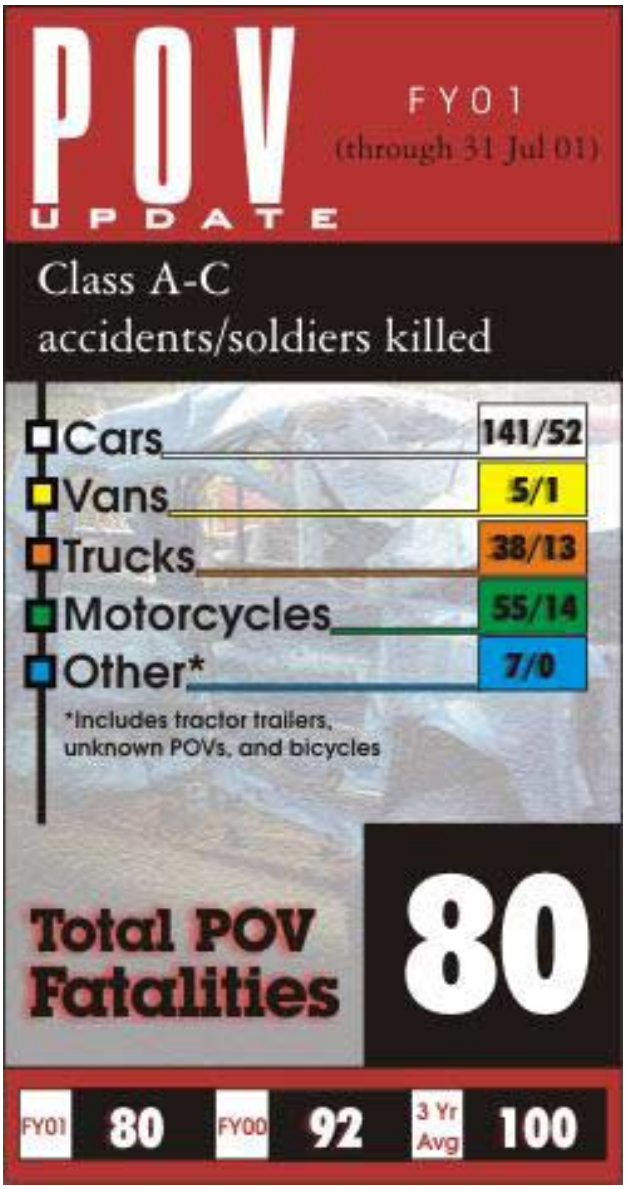
Other facts point out the need to use the restraint system when driving locally, as well as on the highway. Statistics show that about 75 percent of all vehicle accidents happen within 25 miles of the occupants' homes. Of course, this does not mean you are safer driving along a highway than when driving locally. What these statistics point out is that most daily driving is done near one's home; so, three times as many accidents occur locally as in remote areas. In 80 percent of those local accidents that produce deaths or injuries, the impact speeds are less than 40 mph. This means high speeds are not needed for deaths and injuries to occur. Since accidents are more likely near the driver's home, it is just as important to use the restraint system when driving around town as it is on the highway. The only way to gain full benefit from restraint systems is to make a habit of using them on every trip.

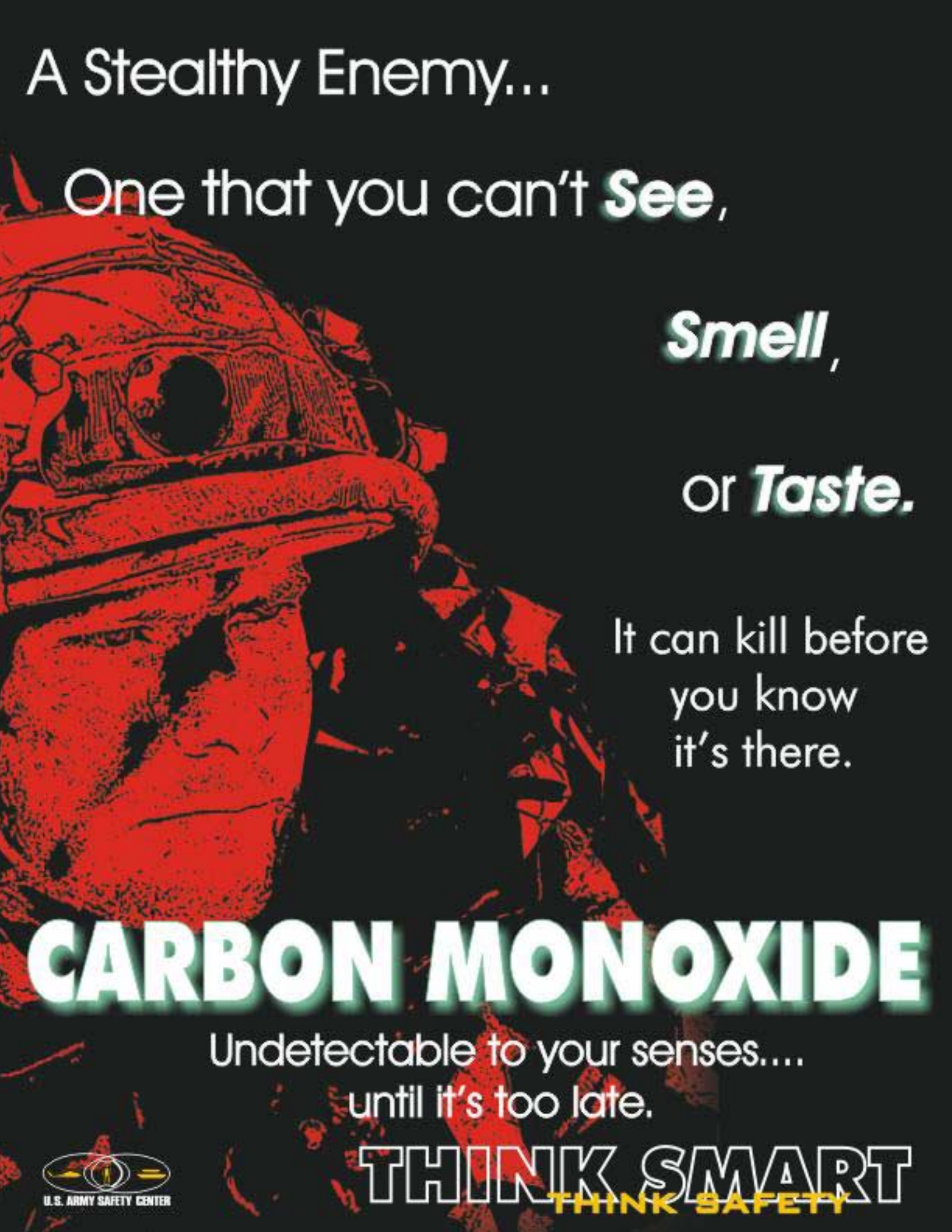
Now we come to a common argument against using restraint systems: "I don't like the idea of being buckled up and trapped if the car should catch fire or go into water."

In only about 1 percent of all accidents does either of these conditions occur. But even if the car catches fire or goes into water, the first requirement for escape is to be conscious. Any impact that produces fire or dumps a car into water is going to be a severe one. Without the use of restraint systems, occupants are going to be thrown around inside the vehicle. The chance of being knocked unconscious is a real one.

Over a lifetime, a person has more than a 50/50 chance of being injured in a car accident. There are many things that can be done to reduce that risk. Driving defensively and cautiously, not driving while under the influence of alcohol and drugs, and keeping your car in peak condition are three important steps. None of these, however, will guarantee that a person will not have an accident.

Good drivers have accidents too. Sometimes they are hit by poor drivers or those under the influence of drugs and / or alcohol, and sometimes because they make a mistake. Nobody is immune to accidents and no one can control all of the factors involved in a traffic accident. But there is a simple and effective way of cutting the risk of being injured by more than half—**Wear Seatbelts!** What's holding you back?




A Stealthy Enemy...
One that you can't See,
Smell,
or Taste.
It can kill before you know it's there.
CARBON MONOXIDE
Undetectable to your senses....
until it's too late.
THINK SMART
U.S. ARMY SAFETY CENTER
THINK SAFETY