

ARMY GROUND RISK-MANAGEMENT PUBLICATION

# COUNTERMEASURE

VOL 20 NO 7

<http://safety.army.mil>

JULY 1999

200V  
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**DISTRIBUTION STATEMENT A**  
Approved for Public Release  
Distribution Unlimited

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ARMY GROUND RISK-MANAGEMENT PUBLICATION  
**COUNTERMEASURE**

**The Official Safety Magazine for  
 Army Ground Risk-Management**

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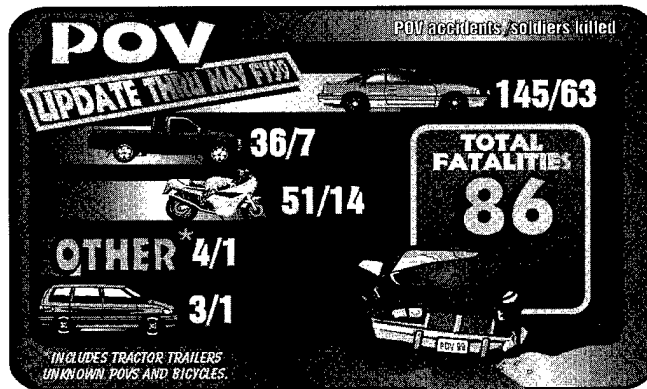
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Countermeasure is published monthly by the U.S. Army Safety Center, Fort Rucker, AL 36362-5363. Information is for accident prevention purposes only and is specifically prohibited for use for punitive purposes or matters of liability, litigation, or competition. Address questions about content to DSN 558-2688 (334-255-2688). To submit information for publication, use Fax 334-255-9528 (Ms. Paula Allman) or e-mail countermeasure@safety-emh1.army.mil Address questions about distribution to DSN 558-2062 (334-255-2062). Visit our website at <http://safety.army.mil>

*Gene M. LaCoste*  
 Gene M. LaCoste  
 Brigadier General, U.S. Army  
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# USASC CSM Speaks Out

## NCO Leadership

**Y**ou are the second most important person in the Army. Your soldiers are the first. Have you read the NCO creed lately? Do you understand it? It talks about professionalism, pride, competence, mission, welfare of soldiers, responsibility, respect, confidence, taking care of officers, loyalty, and personal courage. Today's NCOs do all of that and MORE—especially our senior NCOs. They have that tremendous common sense wisdom that comes from lots of experience. They do so much—they take care of our soldiers and families, they develop young soldiers to be NCOs, they train junior NCOs and make them tomorrow's 1SGs and CSMs, and they train, coach, and teach our junior officers.

Noncommissioned officers are the backbone of the Army. The NCO's responsibilities to soldiers are endless. Every minute of the day is crammed with something to do, check, inspect, train, plan, or enforce. But the biggest responsibility NCOs have is accomplishing the mission while keeping soldiers safe.

Safety and mission accomplishment are two integral parts of every soldier's life. Mission accomplishment requires that soldiers be properly trained, equipped with the right tools (which have been properly maintained), and informed, so they know what they are expected to do. Safety requires the same things. NCOs who maintain discipline and enforce standards save lives. Good, sound planning includes enforcing the standards—that means leading soldiers. NCOs—as a first-line supervisor, squad leader, platoon sergeant, section sergeant, or the NCOIC—must supervise soldiers and enforce the standard every time. If you don't, you have lowered the standard. Never forget your two most important duties: **Mission First, Safety Always!** ♦

—SGM Johnnie Forehand, U.S. Army Safety Center, DSN 558-3575 (334-255-3575)  
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# Director of Army Safety Shares Thoughts

**A**s the new Director of Army Safety and Commander of the U.S. Army Safety Center, I will be on the front lines with you in the Army's continuous battle against accidental losses. I look forward to working with each of you as we proactively seek means of making the Army a safer place for our soldiers and civilians to live and work. The following are some areas I believe we should carefully address in the near term.

Summer's fast-paced, high-energy activities are already in full swing—both on and off duty. Operational activities have intensified, especially field training; basic training has expanded; Reserve components are now accomplishing their annual unit training; and units are capitalizing on improved training opportunities and flying weather.

Off-duty POV accidents remain the number one killer of soldiers. While POV accidents account for the majority of our losses, they are not the only killers. Every summer, we lose soldiers due to all types of hazards: plunging into cool waters to momentarily escape the heat of the summer sun, heat exertion during training activities, and even insect bites. For example, one Fort Campbell soldier recently contracted ehrlichiosis disease from an infected tick. We need to ensure our soldiers are familiar with these lesser-known hazards and appropriate controls.

The best weapons in this battle to avoid injuries and deaths are your NCOs and risk

management. Make sure your NCOs get the word out on common and not-so-common summer hazards, so that your soldiers can, in turn, make informed, intelligent risk decisions. We must instill in all a keen sense of awareness of the tragic consequences of failing to effectively manage risks associated with both their on-and off-duty activities.

As commanders, leaders, first-line supervisors, and NCOs, we each have a moral responsibility to devote time and attention to ensuring that this summer's activities are accident-free. Leadership, training, discipline, enforcing standards, and applying solid risk-management principles can help us accomplish this.

Stress to your soldiers the importance of avoiding complacency in dealing with summer's known hazards and being vigilant in identifying new hazards as missions and environmental conditions change. Your personal involvement in a summer safety campaign will make a difference: a single word of caution may save a life or prevent a serious injury.

I urge you to join us in waging an effective battle against these accidental losses that can seriously degrade our combat readiness. ♦

## Leaders Make A Difference!

—BG Gene M. LaCoste, Director of Army Safety



# Accident Review

## Safety Cannot Be Ignored

**T**ime and time again, we've heard the phrase, "Safety is no accident." This is a true statement. A person has to choose to be safe from the time he or she rises in the morning until they retire at night. This requires that we be aware of our situation at all times, especially when we operate Army motor vehicles (AMVs). The military has the most efficient equipment in the world, but also the most deadly to its operators when safety is ignored.

As soldiers, we each perform our slice of the Army mission day in and day out; therefore, we must not allow it to become routine. We must not allow the mission to become so familiar that we begin to ignore procedures and built-in safeguards intended to keep us safe. It is when we ignore proper procedures that disaster strikes suddenly and severely.

It is called complacency. Complacency is a feeling of quiet pleasure or security, often while unaware of potential danger. It can happen to anyone. Therefore, soldiers must make a conscience decision to perform every task with acute attention to detail – which means that we are aware of our environment with its probable hazards and that we take all precautions possible to reduce the risk. This is not just a good idea, it's our job.

### The Accident

Recently, there was an accident involving a high-mobility multipurpose wheeled vehicle (HMMWV) and commercial semi-tractor trailer truck. The HMMWV was hit by the semi-tractor while attempting to cross a busy, four-lane highway. The accident took place just before dark and according to witnesses

on the scene, the weather was dry, cold, and slightly overcast. The soldier driving the HMMWV had just finished washing the vehicle. He drove up to the intersection, to the stop sign, and proceeded across the south-bound lanes to get to the median in order to make a left turn into the



**Mission: Return to training area after washing vehicle**

### Hazards

- Heavy traffic on civilian roads
- Plastic windows on HMMWV may reduce visibility

### Results

- 1 Potential Fatality
- 1 Destroyed M998

### Controls

- Training to emphasize operations on civilian roads
- Unzip windows if visibility becomes impaired
- Wear helmet and seatbelts while in vehicle

north-bound lanes. The HMMWV never made it to the median. Just as it entered the inside lane, it was struck on the driver side by the semi-tractor which was moving at approximately 50 mph.

The HMMWV traveled sideways across the median for 161 feet and came to rest on the northbound shoulder of the highway pointing north. The semi-tractor continued across the median striking a privately owned vehicle (POV) before coming to rest in the northbound lanes also.

### Why?

The headlights of the on-coming traffic should have been easily seen by the driver of the HMMWV. Yet he continued across the roadway causing the collision with the semi. Why? We may never know. We do know that he was not wearing his seatbelt nor his Kevlar helmet. Why? I'll tell you why. It would have taken too much time to buckle the seatbelt and the Kevlar helmet was too much of an inconvenience, too cumbersome, too heavy. So not only were state, local, and military laws violated, but a soldier sustained life-threatening injuries. Injuries that may have been minimized by proper use of a seatbelt and a helmet.

The question must be asked: What is more important—saving a few seconds or saving a life? A little inconvenience or total disability? Yet many people choose the former by choosing not to wear a seatbelt or safety equipment.

What is the lesson learned? No one is invincible. No one is exempt. Safety is no accident; it must be integrated into every facet of our lives.

We must remain aware of potential danger around us at all times, especially when operating AMVs on major thoroughfares. The potential hazards should motivate us to do what it takes to be safe. So what will it take to cause you to think safety? Remember, think safety—good results. Ignore safety, well... you know. ♦

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# Fitting Your Kevlar Helmet

**H**ead injuries are the leading cause of death in ground vehicle accidents. They also lead the list of severe injuries that could have been prevented. One important preventive feature is to ensure your personnel armor system, ground troop (PASGT) helmet, a.k.a. the Kevlar, fits correctly. Correct sizing improves not only the fit, but the function of your helmet.

Determining the correct size helmet to issue is the responsibility of the Central Issue Facility (CIF) that services your unit or installation. The proper procedure for sizing the Kevlar includes obtaining three separate measurements of the head.

The first measures the circumference of the head using a tape measure placed just above the eyebrows and above both ears. Secondly, head length is measured using calipers. Lastly, the head width is measured by using calipers. The soldier is then issued a helmet based on the largest of the three measurements.

### A properly fitted helmet will:

- Maintain at least ½-inch stand-off from your head in all directions. The helmet will be cooler and more comfortable to wear; more importantly, the protective capabilities are more effective.

- Be comfortable and remain stable on your head whether you are marching, running, or hitting the dirt.

- Be compatible with your weapons, equipment and clothing, even in the prone position.

The Kevlar is the best protective helmet in the world. However, if not properly sized, the helmet may not provide the protection that it was designed to provide.

Additional information can be obtained from the Natick Soldier Center web site: <http://www-sscom.army.mil> ♦

# First NCO Attends Safety Intern Class

The 1st Infantry Division, USAREUR, recently selected for the first time, a safety NCO to attend the Army Safety Program Risk Management Course. The following article honors SSG Alvaro Vargas, who not only participated in the intern safety training, but he was also selected for the Safety Intern Class 1999 Leadership Award.

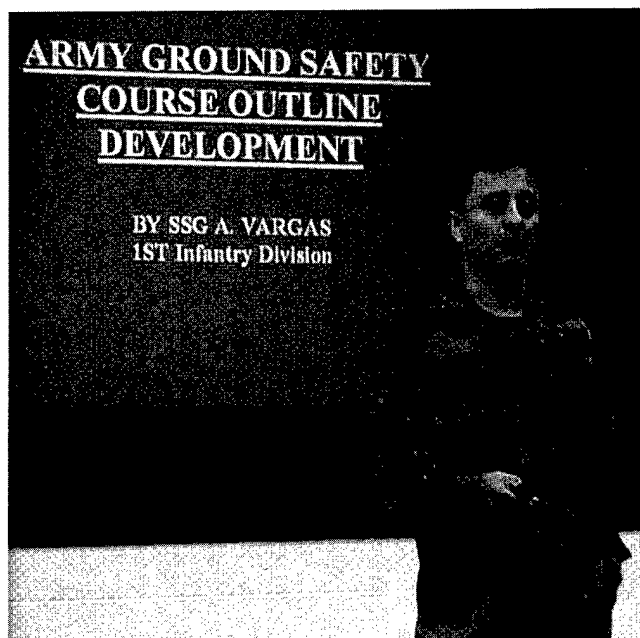
**S**taff Sergeant Alvaro Vargas was the first noncommissioned officer to attend the 17-week Phase I Intern Army Safety Training Program. It was SSG Vargas' dedication and commitment to the 1st Infantry Division (1st ID) Safety Program that led his commander, Major General David L. Grange, to select him for attendance to the safety training program at Fort Rucker, Alabama. The 1st ID is one example where the commander believes in and supports the safety program and rewards accomplishment. This is an excellent example where all levels of command are supporting a common goal – from the NCO to the commander.

SSG Vargas plans to use the training he received at the Army Safety Center to enhance his safety program at 1st ID. He indicated that his increased specialized safety knowledge will serve him well in his role as an advisor on risk management. "We need to push for more qualified and quality safety personnel to serve the commanders, whether they are enlisted, officers, or civilians. Standardized training programs and commitment to protecting the force are essential," Vargas said. He believes the NCO can serve a vital role in the Army Safety Program ensuring the protection of soldiers and Army equipment.

"Motivated NCOs in a supportive command environment can bring positive results to the Army," Vargas said. "I have benefited from my experience at the Army Safety Center."

However, the interns (our future safety specialists) have also benefited by integrating a soldier's view into the classroom. SSG Vargas shared his experiences and provided the safety interns examples of risk management as it is applied in a tactical environment.

SSG Vargas was also selected for this year's Safety Intern Class Leadership Award. The leadership award is in recognition for leadership excellence in each class. SSG Vargas provided direction for other students, boosted esprit de



corps, and enhanced group cohesion. His presence in the intern classes was a very positive one. In addition, SSG Vargas is also enrolled in the Texas A&M graduate degree program and plans to further his knowledge in safety technology.

One concept that SSG Vargas would like to see developed in the Army Safety Program is to implement a standardized or accredited ground safety program. He conducted research on the curriculum requirements and presented the results to the Army Safety Center. The Safety Center is currently utilizing the research for the development of a ground safety training program.

Our hats are off to SSG Vargas for his hard work and dedication to safety and also to MG Grange for supporting him and the Army Safety Program. We also encourage other NCOs to apply. HOOAH! ♦

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# Safety Is NCO Business

**A**s NCOs, our job is harder than most. We must see that our soldiers stay alive and uninjured while preparing for combat. We must train our new soldiers to follow correct procedures, retrain those who don't, and enforce the use of proper procedures in every task.

Every day in a garrison or field environment, we hone our soldiering skills to a fine point. We take inexperienced soldiers and transform them into highly-skilled crewmembers. As we train, we teach correct procedures and relentlessly enforce their use. We are constantly aware that such things as boredom, routine training, and laziness can lead soldiers to take shortcuts that could result in accidents.

Our business is to keep soldiers alive, intact, and able to fight. Only through positive action can we do this. Too many times, we let safety become a late Friday afternoon class that takes 10 minutes to present. Why? Because it's a requirement. We must look at reality. Accidents will continue as long as NCOs consider safety as one more required class to teach during mandatory training time. We need to take the time to convey to our soldiers realistic hazards that are potentially harmful or fatal.

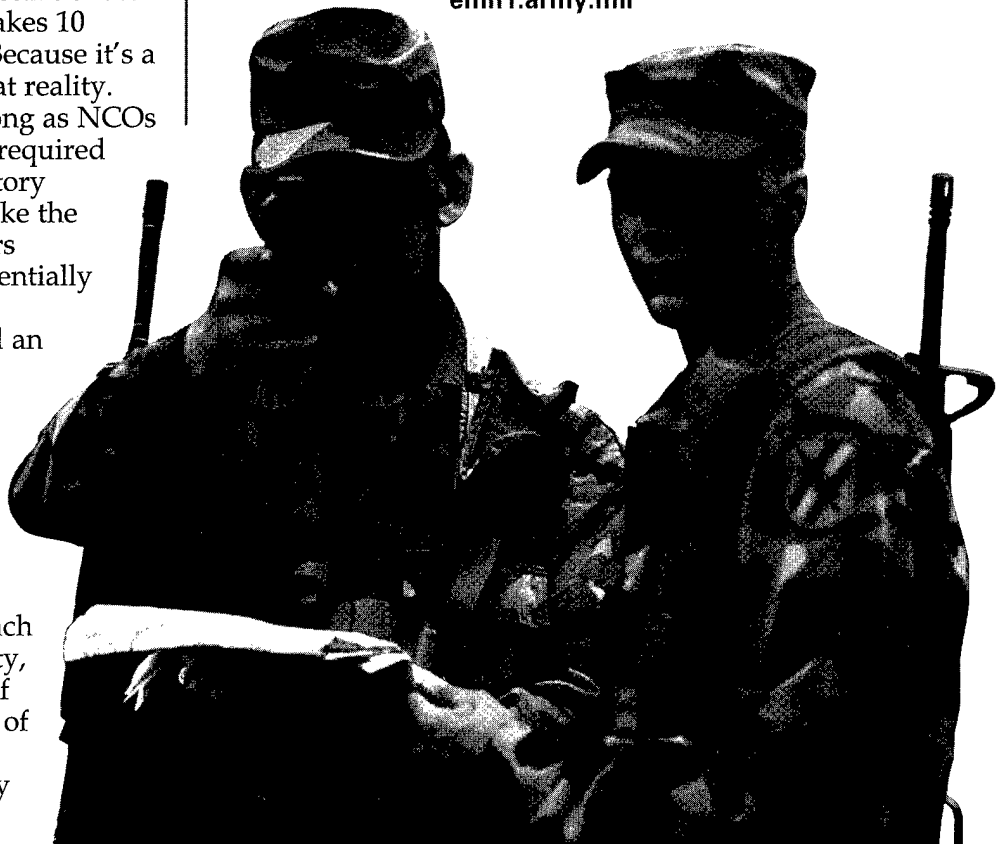
Everyone has experienced an unfortunate situation at one time or another that may have resulted in loss of life or serious injury of another soldier, friend, or relative. As unfortunate as they may be, use them as a foundation for future prevention measures and teach our most valuable commodity, the soldier, the importance of safe, precautionary methods of performing our duties.

NCOs must address safety daily in a no-compromise

manner, teach soldiers to perform to standard, and check and correct any deficiencies found. All NCOs must accept that it is our job to supervise soldiers to safely accomplish our mission. We have a responsibility to the stripes we wear. If a soldier sees an NCO who doesn't perform to standard, whose fault is it if that soldier has an accident? The NCO stands responsible.

Safety is not a careless turn of events. It is hard work, dedication, performance to standard, and a sincere belief that accidents don't just happen but are caused by things that are allowed to continue uncorrected. We NCOs must take charge, because safety is NCO business. ♦

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# Fluid Replacement

**T**he Nutrition Information Center at the New York Hospital-Cornell Medical Center and the International Bottled Water Association conducted a survey of 3,003 Americans last year which revealed that consumers are drinking nearly eight daily servings of hydrating beverages (water, milk, juice, decaffeinated soft drinks) per day.

One would think that this is pretty good news; however, according to this survey, Americans are also consuming approximately five servings of caffeine or alcohol-containing beverages per day as well. These beverages counter the benefits of the hydrating process and

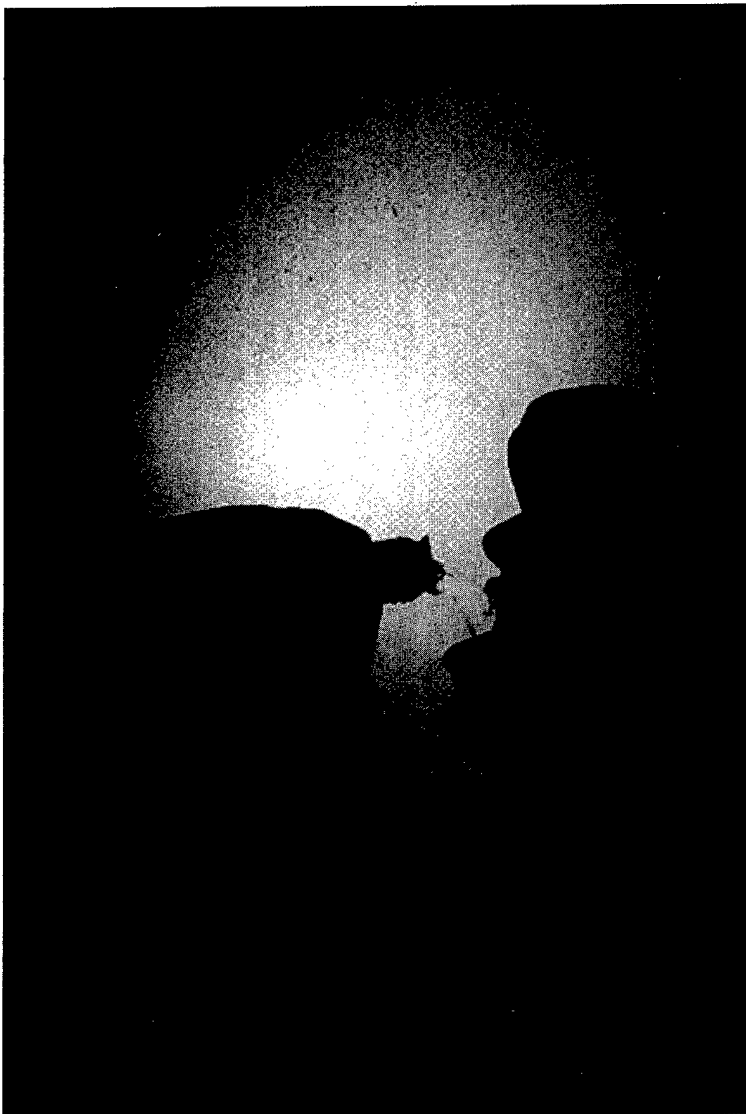
actually cause us to lose or eliminate water.

The bottom line is that Americans, on the average, are getting only about one-third of the hydrating benefits actually needed to function optimally. One can appreciate these findings even more if you add jump boots, a battle dress uniform, rucksack, helmet, and a weapon and then place that person in an environment where heat is the major medical threat. Or you add three to five hours of mandatory physical fitness training per week at their home station and include various other physically demanding activities not typically performed by the general population. It doesn't sound too good now.

Yesterday morning as I was getting out of my car, I noticed that the person who had parked in the space next to me was fumbling with a large bag of what he told me was coffee and related supplies. He said it was his day to supply the coffee for his office and that he'd better not be late. I laughed and we joked a bit more about the importance of maintaining a proper, congenial office environment. "Save the hostilities and direct those toward the enemy," I said. We laughed a bit more and he hurried off to deliver the goods.

We, who wear the green suit, readily admit that coffee is the beverage of choice for the average "baby-boomer" soldier as the soft drink is probably the beverage of choice for our younger "Generation X" soldier. But do we realize that caffeine (either from coffee or cola) not only promotes dehydration, but it can affect one's blood pressure, circulation, digestion, kidneys, and most other body processes?

The survey mentioned above further revealed that two-thirds of the respondents said they were aware of the recommendation to consume eight 8-ounce glasses of water per day, but half of them admitted to only consuming around four. In fact, the average American consumes only 4.6 servings of water a day, with only 20 percent of all



Americans consuming the recommended eight 8-ounce glasses per day as directed by the medical community. An alarming 9 percent polled for this survey said that they drink no water at all. Forty-seven percent reported that they did not know that the human body loses as much water when asleep as when awake and 10 percent reported that they usually wait until they feel thirsty before they consume some type of liquid.

So why should we care about the rehydration (fluid replacement) habits of the average American citizen? One reason is that our military is merely a microcosm of the larger society we call the United States of America. And one of the behaviors that Army leaders first attempt to modify is the frequency young soldiers rehydrate themselves while performing physical activity. Nowadays you won't hear a drill sergeant say, "Down your canteen. Turn it upside down and let me see that it's empty!" We now know that it is possible to drink too much water. And

its effect can be just as detrimental as drinking too little water. Forced hydration, to that extreme, is a thing of the past. However, depending on the heat category and the workload, you will still see drill sergeants stop a group of young recruits and require them to drink 1/2 to 1 full quart of water per hour.

So how do we, as soldiers and leaders, promote safe, effective means of maintaining proper hydration at work and during recreation activities? The first step is to understand hydration or better yet, dehydration.

### Dehydration - What is it?

Dehydration is an abnormal depletion of body fluid. Loss of water through such processes as sweating, breathing, or the elimination of body waste, must be replaced. Therefore, it is essential that particular attention be given to how we meet our daily water needs.

Dehydration never happens rapidly. It is a process that occurs over time and is the major contributor to heat illness.

## Fluid Replacement Guidelines for Warm-Weather Training (Average Acclimated Soldier Wearing BDU, Hot-Weather)

		Easy Work		Moderate Work		Hard Work	
Heat Category	WBGT Index °F	Work/Rest*	Water Per Hour	Work/Rest*	Water Per Hour	Work/Rest*	Water Per Hour
1	78-81.9	No limit	½ qt	No limit	¾ qt	40/20 min	¾ qt
2 (Green)	82-84.9	No limit	½ qt	50/10 min	¾ qt	30/30 min	1 qt
3 (Yellow)	85-87.9	No limit	¾ qt	40/20 min	¾ qt	30/30 min	1 qt
4 (Red)	88-89.9	No limit	¾ qt	30/30 min	¾ qt	20/40 min	1 qt
5 (Black)	> 90	50/10 min	1 qt	20/40 min	1 qt	10/50 min	1 qt

\*Rest means minimal physical activity (sitting or standing) and should be accomplished in the shade if possible.

Note 1: The work/rest times and fluid replacement volumes will sustain performance and hydration for at least 4 hours of work in the specified heat category. Individual water needs will vary ± ¼ quart per hour.

Note 2: CAUTION: Hourly fluid intake should not exceed 1½ quarts. Daily fluid intake should not exceed 12 quarts.

Note 3: Wearing body armor adds 5°F to WBGT Index.

Note 4: MOPP gear adds 10°F to WBGT Index.

### Examples:

Easy Work	Moderate Work	Hard Work
<ul style="list-style-type: none"> <li>● Walking hard surface at 2.5 mph, &lt; 30-pound load</li> <li>● Weapon maintenance</li> <li>● Manual of arms</li> <li>● Marksmanship training</li> <li>● Drill and ceremony</li> </ul>	<ul style="list-style-type: none"> <li>● Walking hard surface at 3.5 mph, &lt; 40-pound load</li> <li>● Walking loose sand at 2.5 mph, no load</li> <li>● Calisthenics</li> <li>● Patrolling</li> <li>● Individual movement techniques; i.e., low crawl, high crawl</li> <li>● Defensive position construction</li> <li>● Field assaults</li> </ul>	<ul style="list-style-type: none"> <li>● Walking hard surface at 3.5 mph, ≥ 40-pound load</li> <li>● Walking loose sand at 2.5 mph with load</li> </ul>

Note: Soldiers who are overweight, dieting, or past heat casualties are more prone to heat injuries. As a result, their activities must be closely monitored.  
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Acute or mild dehydration (equivalent to 2-3 percent of one's body weight) can reduce physical capacity and heat tolerance. As dehydration progresses, one's physical capacity further degrades with cognitive function and the body's ability to regulate heat (i.e., sweating) becomes seriously compromised. If this dehydration process continues and reaches 5-6 percent of body weight, total body functioning is affected.

### **Your Body Needs Water**

A water loss of merely 1 percent of body weight (1.8 pounds for a 180-pound soldier) could raise the body's core temperature and increase the risk of heat exhaustion and stroke. As body temperature rises, muscles fatigue sooner and exercise performance declines by 20 to 50 percent. And remember this is only mild dehydration!

It is not uncommon for soldiers and leaders to voluntarily dehydrate themselves, often boasting that they have trained their bodies to go all day without water. This is simply not true. Other soldiers may, upon arriving in a hot environment, ration or limit their water intake thinking that this will hasten acclimatization. In fact, soldiers should consume large quantities of water, moderate their work/rest schedules, and consume adequate rations to replace depleted salt due to sweating. Water losses in hot environments can reach 15 liters per day per soldier!

### **Other Ways to Meet Your Daily Water Needs**

- Don't wait until you are thirsty to consume water. In hot environments, thirst is not stimulated until the body has lost two or more cups of total body water. Therefore, if a soldier is only drinking water when he feels thirsty, he is operating at close to a 2 percent dehydrated state at all times.
- Drink plenty of water throughout the day, whether at work or play. Keeping a conveniently placed water bottle on one's desk, on the sideline, or in the gym bag will encourage water consumption.
- Drink decaffeinated beverages, especially in hot environments. Caffeine is a diuretic and causes more frequent

urination. Avoid or limit alcoholic beverages as well.

- Don't underestimate the amount of water lost through exercise or strenuous activities. A good rule of thumb is to drink 16 ounces of water for every pound of body weight you lose through those activities. Remember that you must also consume water during these activities as well.

- Start and end the day with a serving of water. The body loses water during sleep. So before heading off to morning PT, it's a great idea to consume at least 8 ounces of water. Drink another seven servings of water throughout the day. Remember that your requirements for water will increase with your activity level.

- Soldiers with fever due to illness or immunization may be more susceptible to heat stress. Ensure that medical supervision is provided and that adequate water consumption is afforded.

- Consume cool water instead of ice-cold or warm fluids/water. Cool water is absorbed much more quickly than ice-cold water and it also has more of a cooling effect on the body than warm to hot liquids (i.e., coffee, tea).

### **Bottom Line**

Rehydration is the key to preventing heat-related illness or injuries. The body's thermoregulation system operates in a very narrow range of temperatures. Mild dehydration can raise the core temperature enough to affect the body's ability to dissipate heat. Simply replacing lost fluids in a manner that is consistent with workload and existing heat categories can minimize or eliminate the effects of this health threat.

Today's soldiers are constantly making beverage choices based on habit and/or tradition. Choosing the correct beverage is just as important as the frequency of consumption. The next time you reach for your second cup of morning coffee, think about its effects on your body. Then, instead of pouring a cup of Joe, pour a cup of water. You'll thank me. ♦

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# From The Troops

## The Kevlar Helmet: Wear It and Live!

**E**ver wonder about the need for wearing a Kevlar helmet in the field? After all, what can happen if it's not worn in a peace-time training environment? Do you think a tree might fall on you? This is exactly what happened during a field training exercise.

A One Station Unit Training (OSUT) company moved into a bivouac site to establish fighting positions and erect two-man tents.

Prior to the start of the field exercise, unit cadre had conducted a thorough safety briefing of known hazards, plus monitored weather broadcasts for updates on local conditions.

Two soldiers were tasked to erect an individual tent using their shelter halves. The

weather was calm. Both soldiers were facing away from a large pine tree, when suddenly the wind gusted to over 13 knots. Without warning, an upper section of a 14-inch diameter pine tree snapped and fell onto the soldiers. A drill sergeant interviewed later said he heard the tree snap, but there was no time to take evasive action.

One soldier was temporarily dazed after being struck by the tree's branches but otherwise was not hurt. The other soldier sustained potential life-threatening injuries including a fractured skull, fractures to both shins, broken left ankle, lacerated liver, and fractures to

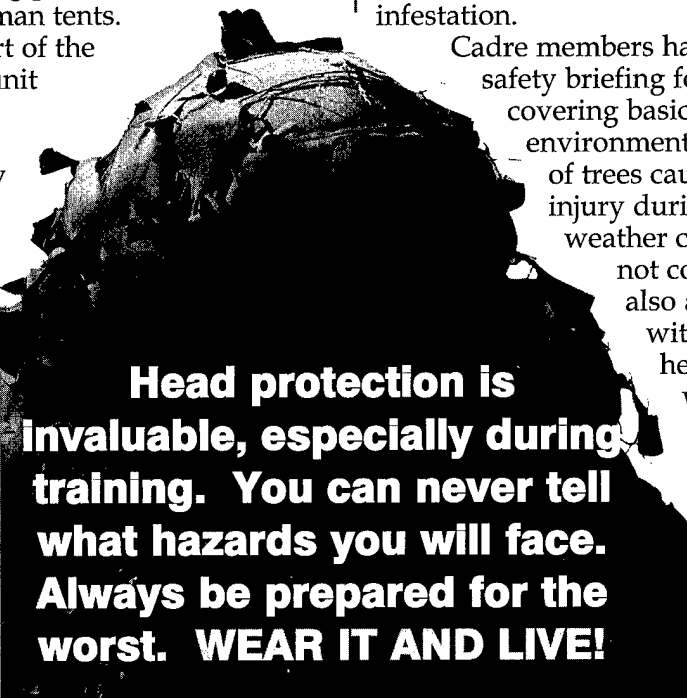
the upper vertebrae and neck. Cardiopulmonary resuscitation (CPR) was performed and the soldiers were evacuated for treatment.

Investigation at the accident site showed the fallen tree did not have tell-tale indicators that it was rotten; e.g., brown leaves and stripped bark. The tree's outer wood was healthy-looking and solid. However, the inner core area was soft and weakened by insect infestation.

Cadre members had performed a safety briefing for the soldiers covering basic safety in a field environment, but the thought of trees causing personal injury during changing weather conditions was

not considered. They also agreed that without the Kevlar helmet the soldier was wearing, the severe blow to the head would surely have proven fatal.

Training area risk assessment and accident risk controls should address



**Head protection is invaluable, especially during training. You can never tell what hazards you will face. Always be prepared for the worst. WEAR IT AND LIVE!**

environmental hazards appropriate to the local area—like tree and limb fall hazards. Forestry or other staff should routinely inspect bivouac, tactical or high-use training sites to identify suspect trees and take necessary action to prevent tree falls during windy conditions.

This incident confirms the importance of wearing the Kevlar helmet at all times in a field environment. And the good news is the soldier is likely to recover without a permanent disability. ♦

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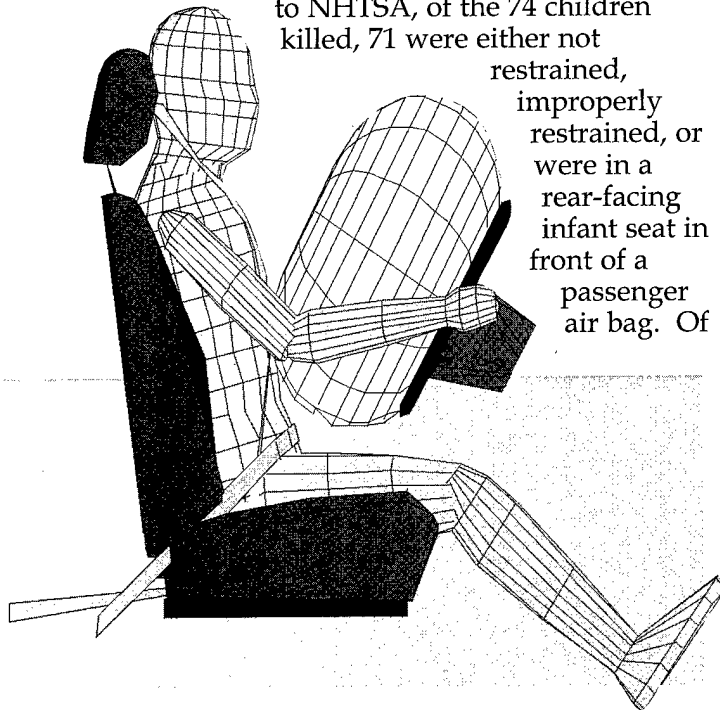
# The ABCs of Air Bags

**W**hile most soldiers already know that by regulation they are required to wear seatbelts whenever they are in a moving vehicle, on post or off. But do you know anything about your car's air bag?

Since 1987, there have been more than 3.3 million air bag deployments. According to the National Highway Traffic Safety Administration (NHTSA), air bags have saved the lives of more than 4,100 people who otherwise may have died in vehicle crashes. Air bags save lives, but they work best when drivers and passengers properly secure themselves by lap and shoulder belts, and move their seats as far back as possible.

Since 1990, 58 adults and 74 children have reportedly died in crashes as a result of air bag injuries. According to NHTSA, of the 74 children killed, 71 were either not

restrained, improperly restrained, or were in a rear-facing infant seat in front of a passenger air bag. Of



the adults who died, most were not buckled up and many were sitting too close to the air bag when it deployed.

Soldiers, DOD civilians, and their families can benefit from the use of air bags and virtually eliminate the risks by following the ABCs of air bag safety:

**A**lways slide the seat back as far as possible and sit back. Your seat should be in the upright position. Many people believe the closer you are to the steering wheel, the better control you have over the vehicle. The steering wheel itself is the primary cause of injury in a crash involving drivers sitting too close to the wheel. It is important to sit back as far as possible from the steering wheel whether or not the vehicle is equipped with air bags. That is why short-stature individuals are among the more than 4,100 people whose lives have been saved by air bags.

**B**uckle everyone in the vehicle. It is the driver's responsibility to ensure everyone is buckled up. NHTSA estimates that the combination of an air bag plus a lap/shoulder belt reduces the risk of serious head injury by 75 percent, compared with a 38 percent reduction for belts alone.

**C**hildren 12 and under should ride properly restrained in the back seat.

Bottom line: The air bag provides the protection it was designed for, but only when used with seatbelts. Additional information can be obtained from the NHTSA web site: <http://www.nhtsa.dot.gov/airbags>. ♦

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**The one fact that is common to all who died is NOT their height, weight, sex, or age. Rather, it is the fact that they were too close to the air bag when it started to deploy. For some, this occurred because they were sitting too close to the air bag. More often, this occurred because they were not restrained by seatbelts or child safety seats and were thrown forward during pre-crash braking.**