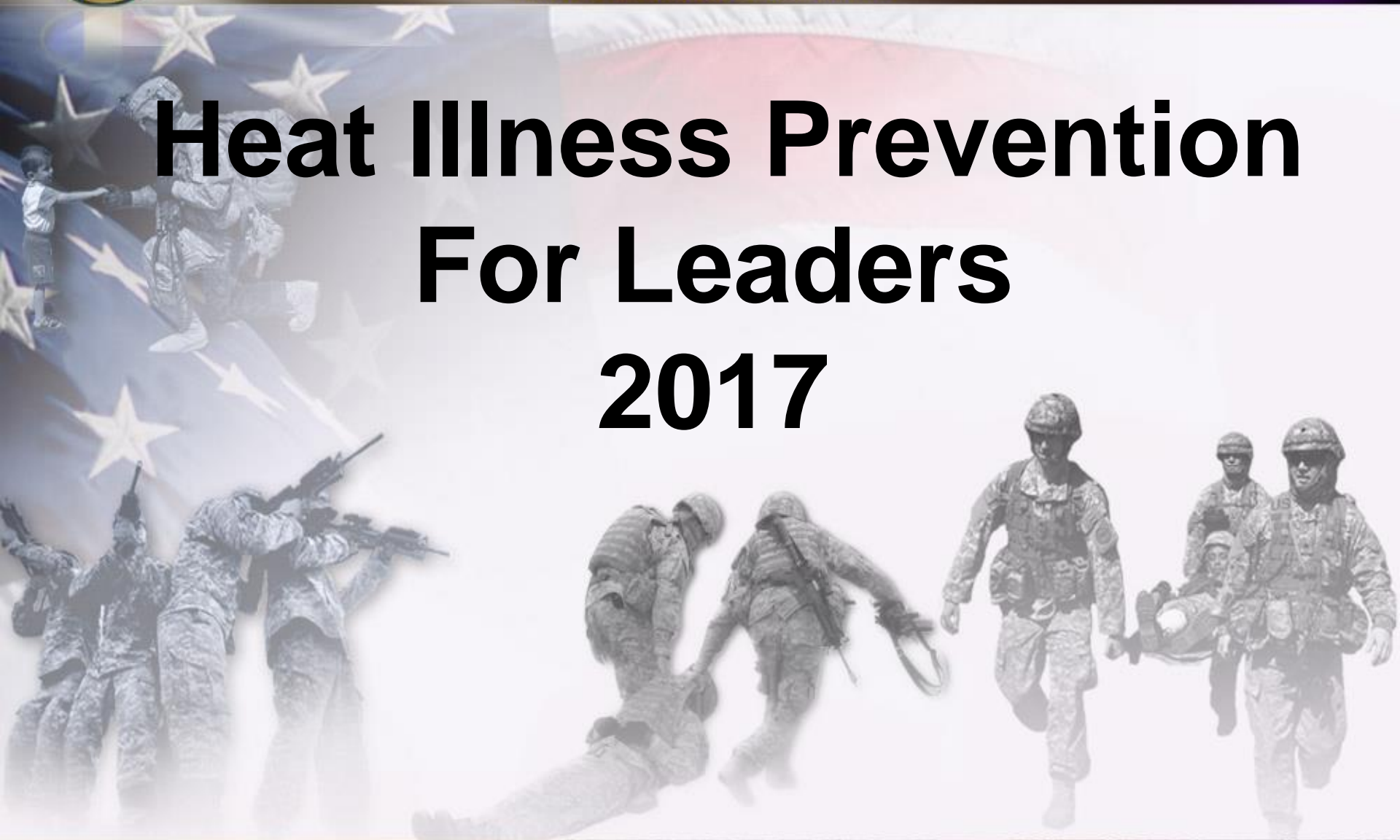





TRADOC

TRAINING AND DOCTRINE COMMAND

Heat Illness Prevention For Leaders 2017



Victory Starts Here!



It is a Command, leader, and individual responsibility. Training in prevention, recognition, and treatment of heat injuries impacts **READINESS**.

TRADOC Reg 350-29

Victory Starts Here!



Senior Leaders

- Ensure medical support and evacuation plans are tested at least annually per TRADOC Regulation 350-6, para 3-9.c.
- Establish coordination between the medical treatment facility and training organizations for assistance from environmental health.
- Report heat injuries IAW TRADOC Regulation 1-8, Operations and Reporting.
- Ensure appropriate hot weather protective items are available to Soldiers.

TRADOC Regulation 350-6, Enlisted Initial Entry Training Policies and Administration
<http://www.tradoc.army.mil/tpubs/regs/TR350-6.pdf>



Direct Leaders

- Utilize Field Sanitation Team members to monitor conditions of heat and advise on risk factors (TRADOC Regulation 350-6, para 3-15.d(2) & Appendix H-1).
- Make clothing and equipment preparation a “hot weather battle drill”; modify uniforms based on senior leader guidance and local conditions.
- Ensure potable water, ice, and supplemental snacks and beverages are available to Soldiers.
- Identify and mark prior hot weather injury and high risk Soldiers (e.g., 550 cords).



Direct Leaders (cont.)

Marking Soldiers with Prior Heat Illnesses



“550” Cords
Prior HW illness

Remember – Heat stress is cumulative. Soldiers who have been subjected to category (CAT) IV and/or CAT V conditions for 2-3 consecutive days are at increased risk for a heat illness on the subsequent day.



Prior HW illness

HW = Hot Weather
AR = Allergic Reaction



Direct Leaders (cont.)

- Plan for three gallons of water per day per Soldier just for drinking.
- Certain conditions justify the use of a carbohydrate-electrolyte beverage. These conditions include:
 - Continuous physical activity for periods beyond 3 hours
 - Poor nutritional intake or calories deficit of 1,000 or more per day
 - High sweat loss and inadequate electrolyte replacement
- Reevaluate the training mission if two or more heat illnesses occur at a given training site on the same day.

Commander's and Senior NCO's Guide to Risk Management of Heat Casualties

<http://www.tradoc.army.mil/surgeon/Pdf/Heat%20Risk%20Manual.pdf>



Direct Leaders (cont.)

- Monitor conditions of heat on the training site.
- Recommend modifications for scheduling, location, and uniform to senior leadership.
- Plan for alternate activities and locations for conditions of extreme heat.
- Be prepared to apply iced sheets in case of heat illness.
- Be prepared to treat and evacuate Soldiers with signs of heat illness.
- Ensure Soldiers drink sufficient but not excessive amounts of fluids and consume adequate calories.
- Ensure Soldiers maintain their supply of sunscreen and apply it daily.
- Develop and enforce work/rest cycles and sleep plans during extended training hours.
- Remind Soldiers to observe their buddies for signs of heat illness.



Basics of Heat Illness Risk

The Hazard

Exposure to high environmental temperature produces heat stress in the body. As the body attempts to compensate, physiological strain or **heat load** results.

This strain, usually in combination with other strains caused by work, dehydration, and fatigue may lead to exertional heat illness (EHI). Environmental conditions, namely air temperature, humidity, and air movement influence the heat equilibrium of the body and its physiologic adjustments.



Basics of Heat Illness Risk (cont.)

The Defense

The body rids itself of heat normally through the skin and by exhaled breath, constituting **heat relief**. Some heat is discharged by radiation from the skin, but the body relies mostly on evaporation of sweat from the skin to cool.

The adverse impact of high environmental temperature can be reduced by drinking enough water, wearing clothing properly, maintaining a high level of fitness, and resting after exposure to heat. These measures contribute to the body's normal mechanisms for relieving its heat load.



Basics of Heat Illness Risk (cont.)

Acclimatization

Most Soldiers' physiological responses to heat stress improve in 10-14 days of exposure to heat and regular strenuous exercise. Factors to consider in acclimatizing Soldiers are the wet bulb globe temperature (WBGT) index, work rates and duration, uniform and equipment, and Soldiers' physical and mental conditions.



Basics of Heat Illness Risk (cont.)

High heat category, especially on several sequential days
(measure WBGT when ambient temperature is over 75° F.)

Exertional level of training, especially on several sequential days (last 72 hours must be considered.)

Acclimatization

Time (length of heat exposure and recovery time)



Risk Factors

- Not acclimated
- Previous heat injury
- Poor fitness
- Overweight
- Inadequate training/preparation
- Inadequate nutrition
- Alcohol or nicotine use
- Diuretics (i.e., caffeine or energy drinks)
- Dehydration
- Extended heat exposure
- Lack of quality sleep
- Minor illness (cold) or injured
- Medication (prescribed or over-the-counter)
- Dietary supplements
- Skin disorder such as rash or sunburn
- Ethnicity and geographic origin
- Age (above 40)
- Discipline and morale
- Poor clothing and equipment



Assess the Hazards

Diuretics and Dietary Supplements

Diuretics. Caffeine and alcoholic beverages have diuretic (water excretion) properties, which may increase the risk of dehydration.

Dietary Supplements. Recent incidents of Soldiers becoming ill from use of tainted dietary supplements have highlighted the potential danger of these products. Dietary supplements come in many forms; including tablets, capsules, powders, energy bars, and liquids. Many dietary supplements on the market are tainted and unsafe. The most commonly tainted dietary supplements are those intended for bodybuilding, weight loss, diabetes, and sexual enhancement.

Many people think supplements may be superior to natural foods, but in fact, most ingredients in supplements come from food sources, whereas others are synthetic. Dietary supplements cannot offset the unfavorable effects of poor food choices.



Assess the Hazards (cont.)

Drugs that Interfere with Heat Regulation

- Antihistamines (Benadryl, Atarax, Chlor-Trimeton)
- Decongestants (Sudafed)
- High Blood Pressure (diuretics, beta blockers)
- Psychiatric Drugs (tricyclic antidepressants, antipsychotics)





Assess the Hazards (cont.)

Work/Rest and Water Consumption Table

Applies to average sized, heat-acclimated Soldier wearing ACU, hot weather. (See TB MED 507 for further guidance.)

Easy Work	Moderate Work	Hard Work
<ul style="list-style-type: none"> • Weapon Maintenance • Walking Hard Surface at 2.5 mph, < 30 lb Load • Marksmanship Training • Drill and Ceremony • Manual of Arms 	<ul style="list-style-type: none"> • Walking Loose Sand at 2.5 mph, No Load • Walking Hard Surface at 3.5 mph, < 40 lb Load • Calisthenics • Patrolling • Individual Movement Techniques, i.e., Low Crawl or High Crawl • Defensive Position Construction 	<ul style="list-style-type: none"> • Walking Hard Surface at 3.5 mph, ≥ 40 lb Load • Walking Loose Sand at 2.5 mph with Load • Field Assaults

- The work/rest times and fluid replacement volumes will sustain performance and hydration for at least 4 hrs of work in the specified heat category. Fluid needs can vary based on individual differences (± ¼ qt/hr) and exposure to full sun or full shade (± ¼ qt/hr).

- NL = no limit to work time per hr.
- Rest = minimal physical activity (sitting or standing) accomplished in shade if possible.

- **CAUTION: Hourly fluid intake should not exceed 1½ qts.**

Daily fluid intake should not exceed 12 qts.

- If wearing body armor, add 5°F to WBGT index in humid climates.

- If doing Easy Work and wearing NBC (MOPP 4) clothing, add 10°F to WBGT index.

- If doing Moderate or Hard Work and wearing NBC (MOPP 4) clothing, add 20°F to WBGT index.

Heat Category	WBGT Index, F°	Easy Work		Moderate Work		Hard Work	
		Work/Rest (min)	Water Intake (qt/hr)	Work/Rest (min)	Water Intake (qt/hr)	Work/Rest (min)	Water Intake (qt/hr)
1	78° - 81.9°	NL	½	NL	¾	40/20 min	¾
2 (green)	82° - 84.9°	NL	½	50/10 min	¾	30/30 min	1
3 (yellow)	85° - 87.9°	NL	¾	40/20 min	¾	30/30 min	1
4 (red)	88° - 89.9°	NL	¾	30/30 min	¾	20/40 min	1
5 (black)	> 90°	50/10 min	1	20/40 min	1	10/50 min	1



For additional copies, contact: U.S. Army Public Health Command Health Information Operations Division at (800) 222-9698 or USAPHC - Health Information Operations@apg.amedd.army.mil. For electronic versions, see <http://chppm-www.apgea.army.mil/heat>. Distribution unlimited. Local reproduction is authorized. CP-033-0811



Assess the Hazards (cont.)

Continuous Work/Water Consumption Guide (without rest)

Acclimatized (after approx two weeks training) Wearing BDU, Hot Weather

It is assumed the trainees performing these continuous effort tasks have not had heat stress or dehydration prior to this activity and will have extended rest afterwards!

Heat Category	WBGT Index, (F°)	Easy Work		Moderate Work		Hard Work	
		Work (min)	Water Intake (Qt/h)	Work (min)	Water Intake (Qt/h)	Work (min)	Water Intake (Qt/h)
1	78-81.9	No Limit (NL)	½	NL	¾	70	1
2 (Green)	82-84.9	NL	½	150	1	65	1 ¼
3 (Yellow)	85-87.9	NL	¾	100	1	55	1 ¼
4 (Red)	88-89.9	NL	¾	80	1 ¼	50	1 ¼
5 (Black)	> 90	180	1	70	1 ½	45	1 ½

- NL can sustain work for at least 4 hours in the specified heat category.
- Fluid needs can vary based on individual differences (plus or minus ¼ qt/hr) and exposure to full sun or full shade (plus or minus ¼ qt/hr)



Types of Heat Injuries

- Heat Stroke *
- Heat Injuries
 - Rhabdomyolysis
 - Exertional Hyponatremia *
- Heat Exhaustion
- Heat Cramps
- Even mild heat illness and dehydration can degrade performance
 - Losing 4% of body weight (BW) degrades physical performance by 50%
 - 4% BW loss is possible in less than 2 hours
 - Every 1% of BW increases core temp 18-40°F

* Medical emergency



Heat Stroke

Cause

• Caused by exposure to high temperatures or dressed in protective over garments, causing the body temperature to rise. Caused by a failure of the body's cooling mechanism, including a decrease in the body's ability to produce sweat. A medical emergency, evacuate immediately.

Symptoms

• Weakness, dizziness, confusion, headaches, seizures, nausea, stomach pains or cramps, and respiration and pulse may be rapid and weak. Unconsciousness and collapse may occur suddenly. The casualty may stop sweating.

First-Aid

- **COOL** and **CALL!!**
 - Strip (modesty)
 - Rapid cool (iced sheets)
 - Call for evacuation
- Continue cooling during transport
- Maintain same person to observe for mental status changes or for worsening condition.

Prevention

- Track Wet Bulb Globe Temp
- Track hydration of Soldiers
- Fluid replacement/ work/ rest guidelines
- Keep urine lemonade color (light yellow)
- All unit leaders must be familiar with heat injury prevention and recognition
- Know the Soldiers who are high risk
- Ensure water points accessible/ utilized



Heat Stroke (cont.)

Iced sheets should be immediately applied anytime a Soldier has a change in their mental status in association with an environmental heat exposure or if accompanied by signs and symptoms of heat illness

- Optimum use of iced sheets involves covering as much exposed skin as possible; also cover the top of the head.
- Iced sheets should be re-iced and re-applied whenever the iced sheets become warm.
- Evacuate any Soldier who requires cooling with iced sheets to the nearest emergency room via Emergency Medical Service (EMS).
- **Cooling should be continued until EMS arrives. Do not delay or disrupt cooling in order to measure temperature.**
- Discontinue iced sheets if the casualty is shivering
- Maintain privacy
 - Move uninvolved personnel away from treatment site
 - Use female cadre and female medics when available
 - Have the female battle buddy serve as a “chaperone”
 - If there are privacy concerns, not removing the undershirt is acceptable



Heat Stroke (cont.)

Assessment

Perform Mental Status Check

- What is your name?
- What month is it? What year is it?
- Where are you?
- What were you doing before you became ill?

*** Anyone who experiences changes in mental status, including loss of consciousness, as a result of exertion during warm weather will be **assumed to be a heat stroke victim** until determined otherwise by medical authority.

Mental status changes of heat illness are more important than the Soldier's temperature when deciding on the treatment of heat illnesses.



Heat Injury Rhabdomyolysis

Cause

Heat injury where there is severe exercise-induced muscle pain.

Overexertion can cause rhabdomyolysis where there is a breakdown of muscle fibers resulting in the release of muscle fiber contents into the bloodstream.

Symptoms

Abnormal urine color (dark, red, or tea colored); muscle pain, stiffness, or weakness; fatigue; nausea or vomiting; and confusion

Note: Heat injury is a form of heat exhaustion which involves damage to an internal organ (i.e., liver, kidneys, stomach, etc.) or damage to a muscle but doesn't produce the clinical signs/symptoms of heat stroke.

First-Aid

- Loosen uniform and remove head gear.
- Place in the shade and have casualty drink no more than 1.5 quarts of water over 1 hour.
- Evacuate if symptoms worsen or do not improve after 30 minutes of rest and rehydration.
- All heat casualties require constant monitoring.

Prevention

- Track Wet Bulb Globe Temp
- Track hydration of Soldiers
- Fluid replacement/ work/ rest guidelines
- Keep urine lemonade color (light yellow)
- All unit leaders must be familiar with heat injury prevention and recognition
- Know the Soldiers who are high risk
- Ensure water points accessible/ utilized



Heat Injury Exertional Hyponatremia

Cause

Occurs when the level of sodium (salt) in blood is abnormally low. **Too much water** during exertional activities causes sodium in the body to become diluted. This condition can be mistaken for heat stroke. **Treat as a medical emergency and evacuate immediately.**

Symptoms

- Mental status change
- Repeated vomiting
- History of large amounts of water consumption
- Poor food intake
- Abdomen distended/bloated
- Clear urine

First-Aid

- Don't give more water or IV. If awake, allow casualty to consume salty food/snacks
- Evacuate immediately
- All heat casualties require constant monitoring

Prevention

- Avoid over-hydration: Enforce water consumption guides (1 qt/hr of work-rest, 1.5 qt/hr of continuous work, max 12 qts per day).
- Provide adequate time to eat meals and drink.
- Table salt may be added to food when the heat category is high. Salt tablets are **not** recommended.
- Spot checks by Cadre, Senior NCOs, and Drill Instructors
- Enforce battle buddy checks.



Heat Injury Exertional Hyponatremia (cont.)

Recognize Exertional Hyponatremia

Important questions to ask Soldiers displaying signs of heat illness:

- 1 - How much have you drank today?
- 2 - How often are you urinating?
- 3 - What color is your urine?
- 4 - What/how much did you eat today?

Risk factors for hyponatremia include:

- Excessive amount of fluid intake (compared to guidelines)
- Urinating more than every 1-2 hours
- Clear colored urine
- Poor eating/decreased consumption of meals

**Exertional hyponatremia is a medical emergency.
Evacuate immediately if you suspect a Soldier has exertional hyponatremia.**



Heat Exhaustion

Cause

Loss of body fluids through sweating without adequate fluid replacement. Can occur in fit Soldiers involved in physical exertion in any hot environment.

Symptoms

Excessive sweating with pale, moist, cool skin; headache; weakness; dizziness; loss of appetite; cramping; and nausea (with or without vomiting).

First-Aid

- Loosen uniform and remove head gear.
- Place in the shade and have casualty drink no more than 1.5 quarts of water over 1 hour.
- Evacuate if symptoms worsen or do not improve after 30 minutes of rest and rehydration.
- All heat casualties require constant monitoring.

Prevention

- Track Wet Bulb Globe Temp
- Track hydration of Soldiers
- Fluid replacement/work/rest guidelines
- Keep urine lemonade color (light yellow)
- All unit leaders must be familiar with heat injury prevention and recognition
- Know the Soldiers who are high risk
- Ensure water points are accessible and utilized.



Heat Cramps

Cause

Caused by an imbalance of electrolytes in the body as a result of excessive sweating. This condition causes the casualty to experience cramping in the arms, legs, and abdomen and to sweat excessively, with or without thirst.

Symptoms

Abnormal urine color (dark, red, or tea colored); muscle pain, stiffness, or weakness; fatigue; nausea or vomiting; and confusion

* Do **not** start intravenous fluids (this should be done by appropriate medical personnel).

First-Aid

- Loosen uniform and remove head gear.
- Place in the shade and have casualty drink no more than 1.5 quarts of water over 1 hour.*
- Evacuate if symptoms worsen or do not improve after 30 minutes of rest and rehydration.
- All heat casualties require constant monitoring.

Prevention

- Track Wet Bulb Globe Temp
- Track hydration of Soldiers
- Fluid replacement/work/rest guidelines
- Keep urine lemonade color (light yellow)
- All unit leaders must be familiar with heat injury prevention and recognition
- Know the Soldiers who are high risk
- Ensure water points accessible/utilized



Summary of Heat Casualties Treatment

Heat Stroke versus Heat Exhaustion Management

HEAT STROKE

- If Soldier's brain isn't working correctly then **COOL** and **CALL!!**
 - Strip (modesty)
 - Rapid cool (ice sheets)
 - Call for evacuation
- Continue cooling during transport
- Maintain same person to observe for mental status changes or for worsening condition

HEAT EXHAUSTION

- Rest Soldier in shade
- Loosen uniform and remove head gear
- Have Soldier drink no more than 1.5 quarts of water over 1 hour
- Evacuate if no improvement in 30 minutes, or if Soldier's condition worsens
- Maintain same person to observe for mental status changes or for worsening condition



Heat Injury Assessment

Remember "M.A.D.E. in the Shade

- **MOVE** victim to cool location (i.e., shade, air conditioning in vehicle, building)
- **ASSESS** victim to determine type of exertional heat illness (EHI)
 - Signs/symptoms
 - Hydration (550 cord) to check for hyponatremia/overhydration
 - Risk level (red beads or risk factors)
 - Mental status (for heat stroke)
 - Designate single person to continue monitoring. It is critical that a specific person is assigned to STAY with victim and continuously monitor all changes including mental status. Even the slightest changes that can occur in minutes may not be noticed if different personnel are checking victim. These slight changes can be critical in ensuring the best outcome for the victim.
- **DECIDE** and take proper management approach
 - Heat Stroke: begin rapid cooling, evacuate immediately
 - Hyponatremia: evacuate immediately
 - Heat Exhaustion: rest in shade, rehydrate
- **EVALUATE** other Soldiers and adjust training as necessary



Treatment (Cont.)

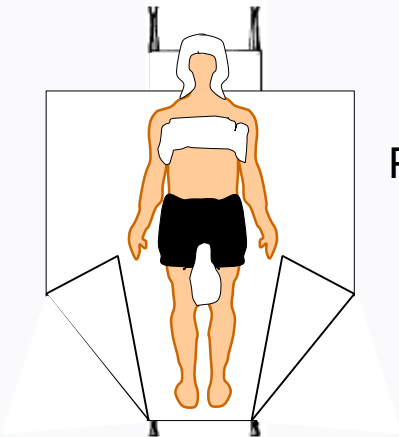
Ice Sheets

- Medical treatment for a life-threatening condition
- Provide ice sheets in accordance with risk assessment and local guidance
- Optimum use of ice sheets involves covering as much exposed skin as possible
- Maintain privacy
 - Move uninvolved personnel away from treatment site
 - Utilize female cadre and female medics when available
 - Have the female battle buddy serve as a “chaperone”
 - If there are privacy concerns, not removing the undershirt is acceptable
- Appropriately document response and care in Serious Incident Report (SIR)



Treatment (Cont.)

- Prepare iced sheets by placing ordinary bed sheets in iced water.
 - Keep iced water ready in Igloo^(R)-type ice chests.
 - Have sheet readily available, either soaking in iced water or in re-sealable plastic bags.
 - Cover as much exposed skin as possible with the ice cold sheets.
 - Also cover the top of the head.
 - When sheets warm up, put them back into cooler and then reapply.
 - When needed, immerse sheet in iced water and ensure it is saturated; this should be done as Soldier's outer clothing is being removed.



Placement of
Iced Sheets

The mental status changes of heat illness are more important than the Soldier's temperature when deciding on the treatment of heat illnesses.



Treatment (Cont.)

Commercial Ice Packs and Ice Sheets

- Treats individuals suffering from suspected heat-related injury/illness such as heat stroke or heat exhaustion
- Combines widely used conduction and evaporative cooling protocols into a single, self-contained, cost effective, and easy to use system
- Eliminates maintenance and replacement costs associated with mold, mildew, or environmental contamination of regular sheets
- Lightweight characteristics allows for easy transport in remote locations





Develop Controls

Proper Nutrition Measures

- A proper nutrition plan is essential for eating and hydrating before, during, and after physical training to assist in mitigating and/or reducing heat illnesses.
- Pre-activity: Always eat prior to any physical activity.
 - Eat snacks or small meals 2-4 hours before exercise.
 - Drink water (32-48 ounces) approximately 2-3 hours prior to exercise. Drink another 4 to 8 ounces of water right before starting activity
 - For early morning exercise workouts: drink 8-16 ounces of sports beverage; eat fruit, toast, or other light snacks.
- During activity:
 - Drink water, as needed, for physical activity less than an hour.
 - Consume 10-20 grams of carbohydrates (e.g., fruit, gel, energy bars, etc.) at the 20-minute mark for physical activity 60 minutes or more.



Develop Controls (cont.)

Deliberate Risk Assessment Worksheet Heat Illness Prevention

- Department of Defense (DD) Form 2977
- Should be filled out completely prior to each training event
- Should be developed specifically for each training site
- Should not be a template document use to “check” the block”
- Include factors from the example as an additional objective measure of risk

DELIBERATE RISK ASSESSMENT WORKSHEET					
1. MISSION/TASK DESCRIPTION Zero Confirmation Range				2. DATE (DDMMYYYY) 02/12/2014	
3. PREPARED BY					
a. Name (Last, First, Middle Initial)		b. Rank/Grade		c. Duty Title/Position Platoon Leader	
d. Unit		e. Work Email		f. Telephone (DDN/Commercial) (Include Area Code)	
g. UIC/ICN (as required)		h. Training Support/Action Plan or OPORD (as required)		i. Signature of Preparer [Signature]	
Five steps of Risk Management: (1) Identify the hazards (2) Assess the hazards (3) Develop controls & make decisions (4) Implement controls (5) Supervise and evaluate (Step numbers not equal to numbered items on form)					
4. SUBTASK/SUBSTEP OF MISSION/TASK	5. HAZARD	6. INITIAL RISK LEVEL	7. CONTROL	8. HOW TO IMPLEMENT/WHO WILL IMPLEMENT	9. RESIDUAL RISK LEVEL
	Hot Weather Injuries	3	Ensure all soldiers are hydrating throughout the day. When time allows soldier may remove JOTV to cool down. Monitor all soldiers.	How: Monitor soldiers hydrate Who: OIC, NCOIC, and all soldiers	1
	LTCC	3	Range personnel will conduct an initial sweep of the range to clear the training area. While training all safeties will scan the area.	How: Conduct a sweep of Range Who: OIC and NCOIC	1
	Soldier Injuries Caused by Vehicles	3	All running vehicles will be occupied. Any vehicle moving in a troop area will be ground guided. Parked vehicles will be secured.	How: Monitor vehicle movement Who: TCs and Drivers	1
	Vehicle Accidents	3	Brief speeds and areas of travel when operating a vehicle. Check Driver Licenses.	How: Conduct safety brief Who: OIC and NCOIC	1
	Damaged/Degraded Roads	3	Vehicles will travel reduce speed upon sight of a damaged/degraded road.	How: TCs/Drivers scan roadway Who: TCs and Drivers	1
Additional entries for items 5 through 9 are provided on page 2.					
10. OVERALL RESIDUAL RISK LEVEL (All controls implemented): <input type="checkbox"/> EXTREMELY HIGH <input type="checkbox"/> HIGH <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> LOW					
11. OVERALL SUPERVISION PLAN AND RECOMMENDED COURSE OF ACTION A convoy brief will be utilized to notify all drivers of potential hazards and plan if such a hazard should occur. While driving to the Range TCs will monitor the status of the vehicle and notify the convoy commander of any issues that take place. While at the vehicle a safety brief will be conducted. Safeties will be assigned for the operation of the range and a element, consisting of two soldiers, translator, and a vehicle, will set up a TCP to prevent vehicle from entering the surface danger zone while the range is in operation. The surface danger zone will also be cleared of any locals to prevent any injuries to the locals living in the area. Safeties will monitor all fires while the range is in operation. The medic will be prepared with a vehicle to transport any injured soldier should the situation arise.					
12. APPROVAL OR DISAPPROVAL OF MISSION OR TASK <input type="checkbox"/> APPROVE <input type="checkbox"/> DISAPPROVE					
a. Name (Last, First, Middle Initial)		b. Rank/Grade		c. Duty Title/Position [Signature]	
d. Signature of Approval Authority					
e. Additional Guidance:					

DD FORM 2977, JAN 2014

Page 1 of ...3... Pages
Adobe Professional X

Risk Management is never complete. It is a continuing cycle.

Victory Starts Here!



Develop Controls (cont.)

Arm Immersion Cooling System (AICS)

Extremity immersion in cold water is an effective body cooling method

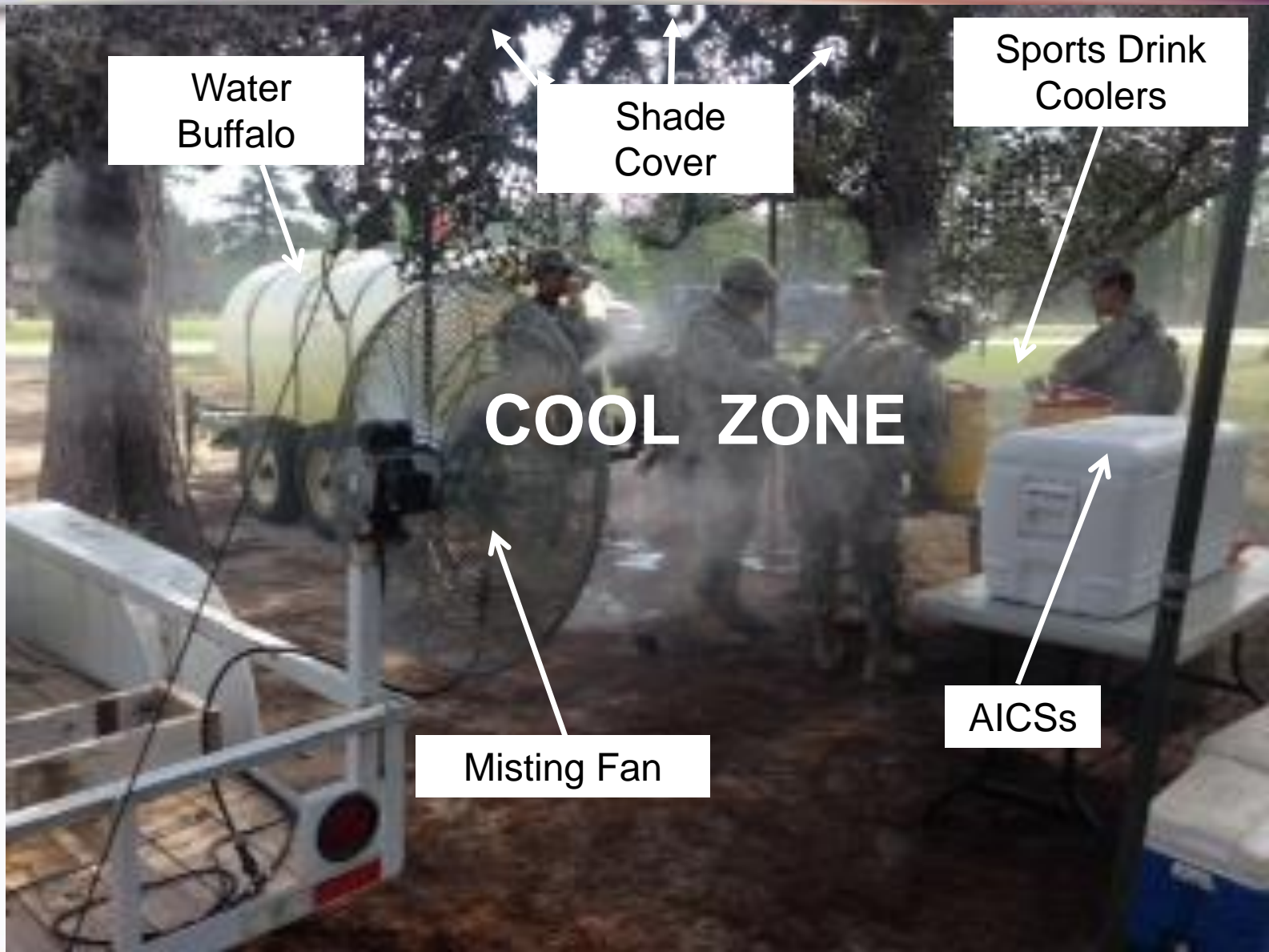
Water Temperature (Degrees)	Immersion Time (Minutes)
>80°F	Replace Water
71-80°F	12-15
55-70°F	8-12
45-54°F	5-8
35-44°F	3-5



Victory Starts Here!



Develop Controls (cont.)





Heat Illness Incident Reporting

- Report heat illness incidents (i.e., heat exhaustion, stroke, injury, or hyponatremia)
- Coordinate with Military Treatment Facility (MTF) and Safety Office (i.e., DA Form 285-AB, Accident Report) to ensure accurate and complete reporting of the case, if medical intervention is required, or there is a loss of duty time.
- Complete accurately and prompt (within 72 hours) to document the nature, magnitude, and distribution of health threats.
- MTF (Preventive Medicine Staff) will use the Disease Reportable System Internet (DRSi) that will generate a Reportable Medical Events System (RMES) report.
- RMES is used for the collection and timely reporting of information on cases of selected medical events and environmental injuries.
- Preventive Medicine Staff will collect heat incident data from MTF sections or civilian treatment facilities: patient administration, emergency room, ambulance, disposition sheets, and other recordable lists to collect and enter reportable events.



Resources

Army Regulation 40-25, Nutrition Standards and Education

http://www.apd.army.mil/epubs/DR_pubs/DR_a/pdf/web/AR40-25_WEB_Final.pdf

TRADOC REG 350-29, Prevention of Heat and Cold Casualties

<http://www.tradoc.army.mil/tpubs/regs/tr350-29.pdf>

TRADOC REG 350-6, Enlisted Initial Entry Training Policies and Administration

<http://www.tradoc.army.mil/tpubs/regs/tr350-6.pdf>

Army Safety Center <https://safety.army.mil/HOME.aspx>

Army Techniques Publication (ATP) 5-19, Risk Management

http://www.apd.army.mil/epubs/DR_pubs/DR_a/pdf/web/atp5_19.pdf

Army Public Health Center (APHC) Heat Injury Training Products

<http://phc.amedd.army.mil/topics/discond/hipss/Pages/HeatInjuryPrevention.aspx>

Commander's, Senior NCO's and Instructor's Guide to Risk Management of Heat Casualties

<http://www.tradoc.army.mil/surgeon/Pdf/Heat%20Risk%20Manual.pdf>