

Summary Report for Individual Task
699-000-8015
Prevent Environmental Injuries
Status: Approved

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Destruction Notice: None

Foreign Disclosure: FD1 - This training product has been reviewed by the training developers in coordination with the Northern Warfare Training Center FT Wainwright AK foreign disclosure officer. This training product can be used to instruct international military students from all approved countries without restrictions.

Condition: In a field environment in temperatures that range from 50 to -60 F. You are given the Extended Cold Weather Clothing System (ECWCS), Modular Sleep System (MSS) with insulating pad, access to a warming shelter and the requirement to protect yourself and your fellow Soldiers against environmental injuries. Standard MOPP 4 conditions do not exist for this task. See the MOPP 4 statement for specific conditions.

Standard: Apply preventive medicine countermeasures to prevent environmental injuries. Identify the signs and symptoms of environmental injuries. Perform first aid for environmental injuries. Do not sustain an environmental injury during the course.

Special Condition: None

Safety Risk: Low

MOPP 4: N/A

Task Statements

Cue: None

DANGER
None

WARNING
None

CAUTION
None

Remarks: None

Notes: None

Performance Steps

1. Identify, treat and prevent snow blindness.

a. What is it? Snow blindness is sunburn of the eyes (corneas). Overexposure to the sun that causes this condition can occur in less than an hour, especially in a snow covered environment at altitude. Snow blindness can occur even when the sun is diffused by clouds. Symptoms include:

- (1) Eyes feel like there is sand in them.
- (2) Severe eye pain.
- (3) Pink or red eyes.
- (4) Extreme sensitivity to light.

b. Perform first aid for snow blindness:

- (1) Loosely bandage the eyes with sterile gauze. Wet the gauze with cold water to help with pain.
- (2) Do not allow any exposure to light.
- (3) Provide care for the individual over the next 24-48 hours as the individual is essentially blind.
- (4) Administer over the counter pain medications.

c. Prevention is simple – wear ultra violet (UV) protectant sunglasses or tinted goggles in a snow covered environment. Improvised slit glasses can be used in survival situations.

2. Identify, treat and prevent carbon monoxide poisoning.

a. What is it? Carbon monoxide (CO) poisoning occurs when individuals breathe fumes from improperly ventilated heat sources (vehicles, space heaters etc.). Carbon monoxide is an odorless gas that replaces oxygen in the blood stream. Red blood cells actually bind with carbon monoxide more readily than with oxygen. Because your body requires oxygen, you slowly die from asphyxiation. Even just a few hours of exposure, can result in death.

- (1) Initially symptoms include:
 - (2) Headache.
 - (3) Confusion.
 - (4) Tiredness.
 - (5) Excessive yawning.
- (6) In more severe cases symptoms include:
 - (a) Cherry red lips.
 - (b) Unconsciousness.
 - (c) Cardiac arrest.

b. Perform first aid for CO poisoning.

(1) Move the individual to fresh air OR remove the source of the carbon monoxide and ventilate the area.

(2) Administer 100% oxygen.

(3) If breathing and/or heart has stopped, begin rescue breathing/CPR.

(4) Evacuate to definitive care.

c. Prevention:

(1) Army approved heaters are the only heaters authorized for use in sleeping areas, living areas or administrative work areas occupied by personnel.

(2) Ventilate all tents/shelters when running a heater/stove.

(3) Operate stoves only when a licensed, fully dressed, alert fire guard, with an operational fire extinguisher (5lb minimum), is present.

(4) If you suspect a problem with the heater (i.e. soldiers are exhibiting the signs and symptoms of CO poisoning) shut the heater down and rectify the problem.

(5) DO NOT sleep in a running vehicle.

3. Identify, treat and prevent treat giardia.

a. Giardia and another related parasite, cryptosporidium are commonly found in backcountry and third world water sources. Nearly 2.5 million cases are diagnosed in the United States annually. When ingested, these parasites cause:

Note: generally takes 10 days to two weeks after ingestion for symptoms to appear.

(1) Intense diarrhea.

(2) Nausea.

(3) Weakness.

(4) Loss of appetite.

b. Perform first aid for giardia. If you suspect giardia, contact medical personnel for evaluation.

Note: Diagnosis and treatment must be determined by qualified medical personnel. Antibiotics are used to treat the illness.

c. Prevention:

(1) Use a treatment method for questionable water sources.

(a) Bring water to a rolling boil – this will kill all waterborne pathogens OR

(b) Use a commercial off the shelf water purification device (not a filter) – refer to the manufacturers instructions.

(2) Refer to FM 21-10 Field Hygiene and Sanitation for additional guidance on water purification methods.

4. Identify, treat and prevent constipation.

Note: docs may prescribe an enema or in extreme cases manual removal/surgery may be required.

a. Constipation is infrequent and/or difficult movement of the bowels. Some individuals are reluctant to relieve themselves in cold or less than ideal conditions. Cold weather, wind and poorly constructed or maintained latrines create less than ideal conditions for heeding nature's call. This can all lead to constipation, an embarrassing and potentially serious and debilitating condition.

b. Perform first aid for constipation: Take a stool softener provided by medics.

c. Prevention:

(1) Use the latrine when you need to. You lose heat maintaining the temperature of your stool.

(2) Hydrate and eat properly.

(3) Provide a sheltered latrine area for Soldiers to utilize.

5. Identify, treat and prevent heat exhaustion.

a. What is heat exhaustion? Dehydration leads to heat exhaustion. Heat exhaustion is a volume problem – you do not have enough water in your system. Symptoms include:

(1) Increased heart rate.

(2) Increased respiratory rate.

(3) Headache.

(4) Dizziness.

(5) Nausea and vomiting.

(6) Thirst.

(7) Fatigue.

(8) Profuse sweating, cool clammy skin.

b. Perform first aid for heat exhaustion.

Note: It will take 1 hour to replace 1 liter of fluid in a casualty who is resting.

(1) Change the environment from hot to cool. Place casualty in a shady spot; pour water on the head and fan the casualty.

(2) Hydrate – oral rehydration salts (ORS) are very effective in replacing lost fluids especially in a cold weather environment where it may be difficult to administer IV fluids and/or administer intravenous fluid.

(3) Rest.

(4) Contact a medic for further evaluation/evacuation.

c. Prevent heat exhaustion.

- (1) Hydrate. Drink .5 to 1 liter with each meal. Drink .25 liters of water for every 20 minutes of strenuous exercise.
- (2) Avoid overdressing for cold weather activities.
- (3) Monitor your urine output – it should be clear and you should have to urinate often.
- (4) Avoid diuretics – coffee, soft drinks.

6. Identify, treat and prevent heat stroke (hyperthermia).

a. What is heat stroke? Heat stroke is the opposite of hypothermia – body core temperature is elevated above 104° F. Onset of heat stroke can be sudden (less than 30 minutes). Like hypothermia, it is a medical emergency that must be dealt with immediately. Symptoms include:

- (1) Altered level of consciousness.
- (2) Increased heart rate.
- (3) Increased respiratory rate.
- (4) Hot, red skin. Skin may be wet.
- (5) Loss of coordination.
- (6) Seizures.

b. Perform first aid for heat stroke

- (1) Remove clothing that retains heat.
- (2) Keep the patient wet while you fan the body.
- (3) Apply ice packs under the armpits and in the groin area.
- (4) Massage arms and legs.
- (5) If possible, have the casualty hydrate; if not administer IV fluid.
- (6) DO NOT under any circumstance provide drugs (OTC or otherwise).
- (7) Evacuate to definitive care immediately.

c. Prevention measures are the same as for heat exhaustion.

7. Identify, treat and prevent hyponatremia (water intoxication).

a. Hyponatremia is also known as water intoxication. This results from an excess intake of water (there are other forms of this illness caused by different mechanisms). The excess water in the system causes an imbalance in electrolytes. The symptoms mimic dehydration, heat exhaustion and heat stroke making it very difficult to diagnose. Symptoms include:

- (1) Headache.
- (2) Weakness.
- (3) Dizziness.
- (4) Nausea.
- (5) Sweaty skin.
- (6) Clear, copious urine output.
- (7) Lack of thirst.
- (8) Sloshing sounds in the stomach.
- (9) Altered level of consciousness in severe cases (requires evacuation).

WARNING

If treated as for heat exhaustion, serious brain injury or death can occur.

b. Perform first aid for hyponatremia.

- (1) Move to a shaded area and rest.
- (2) DO NOT allow casualty to drink.
- (3) Slowly allow casualty to eat (preferably salty) food.
- (4) Contact medic for evaluation and evacuation.

c. Prevention:

- (1) Follow sensible hydration and dietary guidelines.
- (2) DO NOT drink large quantities of water in a short period of time.
- (3) DO NOT force subordinates to drink large quantities of water in a short period of time.

(Asterisks indicates a leader performance step.)

Evaluation Guidance: You will be tested on your knowledge of cold weather and mountain environmental injuries during a final written examination Cold Weather Leaders Course (CWLC) only; see training schedule for date/time of exam). You must score a 70% on the written exam in order to receive a GO. If you fail the written exam, you will be given a second exam after re-training has been conducted. If you fail this second examination, you will be dismissed from the course. In addition, you are expected to practice countermeasures that will prevent you from sustaining an environmental injury. If

you sustain an environmental injury you will be dismissed from the course (at the discretion of the Commandant).

Evaluation Preparation: Setup: Provide the Soldier with all items listed in the conditions statement. Ensure all the required equipment and components to conduct the evaluation are present and functional prior to initiating the evaluation.

PERFORMANCE MEASURES	GO	NO-GO	N/A
1. Identified, treated and prevented snow blindness.			
2. Identified, treated and prevented carbon monoxide poisoning.			
3. Identified, treated and prevented giardia.			
4. Identified, treated and prevented constipation.			
5. Identified, treated and prevented heat exhaustion.			
6. Identified, treated and prevented heat stroke (hyperthermia).			
7. Identified, treated and prevented hyponatremia (water intoxication).			

Supporting Reference(s):

Step Number	Reference ID	Reference Name	Required	Primary
	ATTP 3-97.11	Cold Region Operations	Yes	Yes

Environment: Environmental protection is not just the law but the right thing to do. It is a continual process and starts with deliberate planning. Always be alert to ways to protect our environment during training and missions. In doing so, you will contribute to the sustainment of our training resources while protecting people and the environment from harmful effects. Refer to FM 3-34.5 Environmental Considerations and GTA 05-08-002 ENVIRONMENTAL-RELATED RISK ASSESSMENT.

Safety: In a training environment, leaders must perform a risk assessment in accordance with ATP 5-19, Risk Management. Leaders will complete the current Deliberate Risk Assessment Worksheet in accordance with the TRADOC Safety Officer during the planning and completion of each task and sub-task by assessing mission, enemy, terrain and weather, troops and support available-time available and civil considerations, (METT-TC). Note: During MOPP training, leaders must ensure personnel are monitored for potential heat injury. Local policies and procedures must be followed during times of increased heat category in order to avoid heat related injury. Consider the MOPP work/rest cycles and water replacement guidelines IAW FM 3-11.4, Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical (NBC) Protection, FM 3-11.5, Multiservice Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Decontamination. For classroom training discuss emergency procedures in case of fire or natural disaster.

Prerequisite Individual Tasks : None

Supporting Individual Tasks : None

Supported Individual Tasks : None

Supported Collective Tasks : None

ICTL Data :

ICTL Title	Personnel Type	MOS Data
Cold Regions	Any	