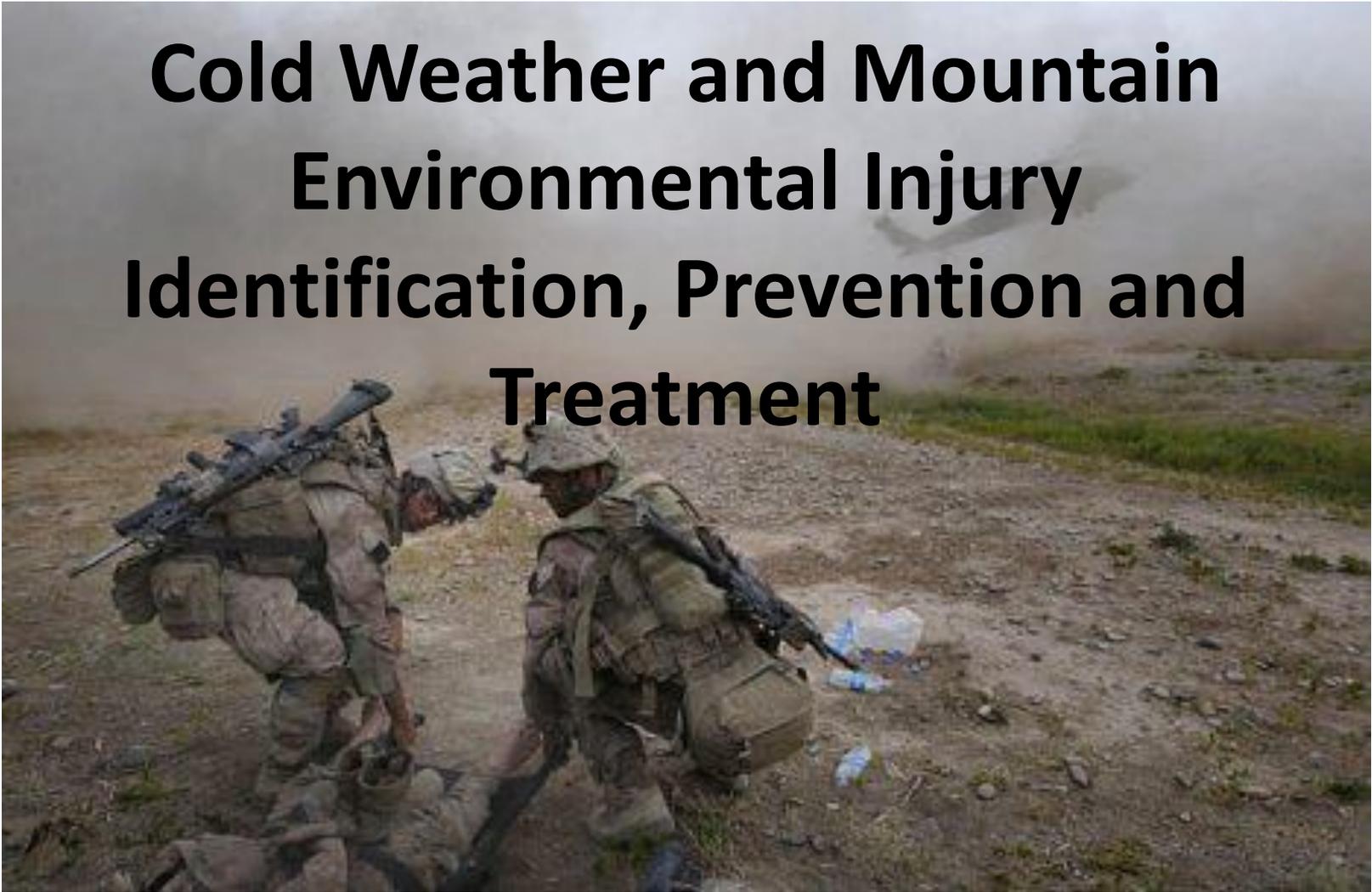




# Cold Weather and Mountain Environmental Injury Identification, Prevention and Treatment





# **Terminal Learning Objective**

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**Action: Protect yourself and your fellow Soldiers against common cold weather and mountain environmental injuries**

**Condition: You are a Soldier deployed to the field in conditions that range from 50° to -60° F. You are given the Extended Cold Weather Clothing System (ECWCS), other issued cold weather clothing items, the issued cold weather sleep system with insulating pad, access to a warming shelter and the requirement to protect yourself and your fellow Soldiers against environmental injuries.**

**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.**



# What is snow blindness?

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- Sunburn of the eyes (corneas)
- Signs and Symptoms:
  - eyes feel like there is sand in them
  - severe pain
  - pink or red eyes
  - extreme sensitivity to light





# Snow blindness Treatment and Prevention

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- **Treatment:**

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

- **Prevention:** Wear Sunglasses or tinted goggles that provide UV protection.



# Improvised Slit Glasses





# What is carbon monoxide poisoning?

- **Odorless, colorless gas that replaces oxygen in the blood stream.**
- **Caused by poorly ventilated stoves/heaters**
- **Early Signs and Symptoms:**
  - **Headache, Confusion, Fatigue, Excessive yawning**
- **Severe Cases:**
  - **Cherry red lips, unconsciousness, cardiac arrest**



# CO Poisoning Treatment and Prevention

- **Treatment:**

- Move casualty to fresh air OR remove the source of CO and ventilate the shelter.
- Administer oxygen.
- Begin rescue breathing/CPR if breathing and/or heart has stopped.
- Evacuate to definitive care.

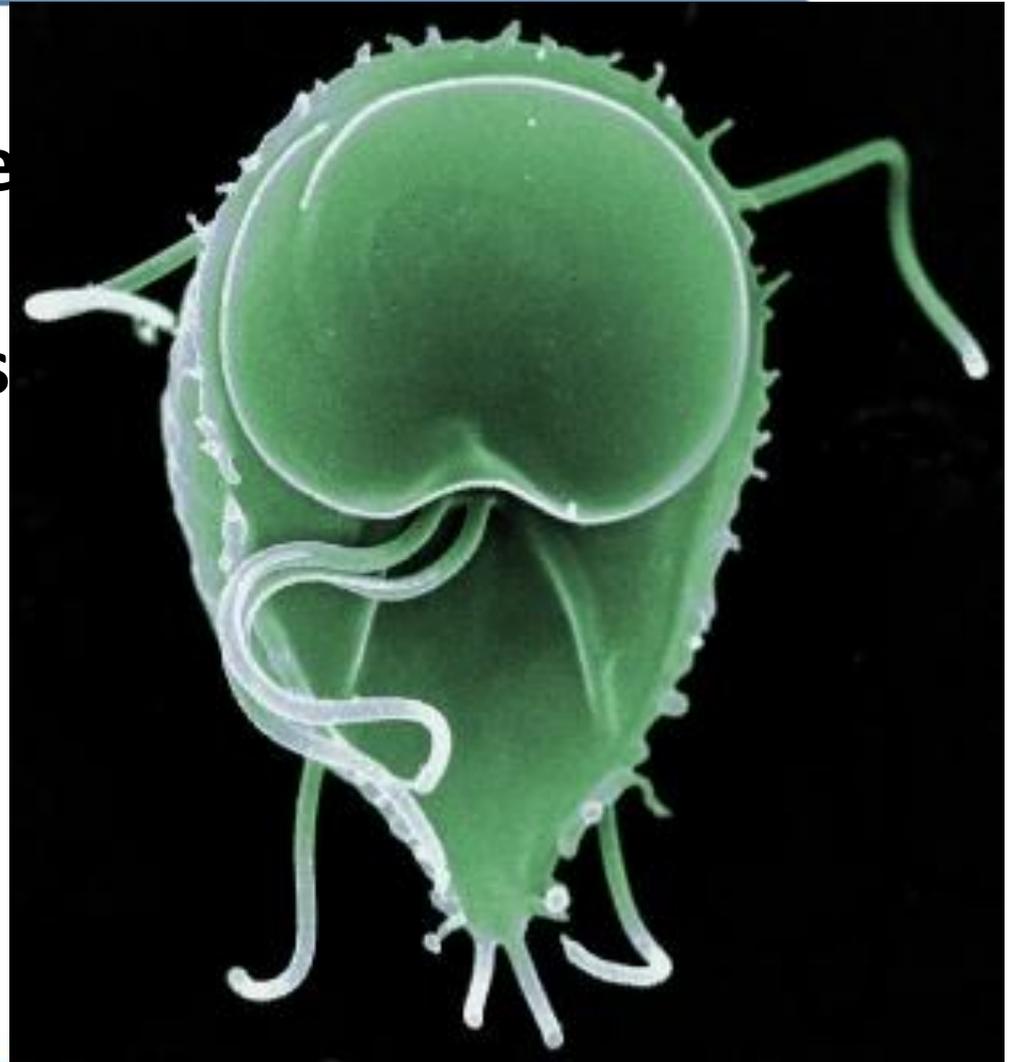
- **Prevention:**

- Use only Army approved heaters.
- Ventilate shelters when running a heater/stove.
- Operators fully licensed.
- Shut the heater down if you suspect a problem.
- **DO NOT sleep in a running vehicle.**



# What is Giardia?

- **Waterborne parasite**
- **Signs and Symptoms**
  - **intense diarrhea**
  - **nausea**
  - **weakness**
  - **loss of appetite**





# **Giardia Treatment and Prevention?**

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- **Treatment: If you suspect Giardia contact medical personnel.**
- **Prevention:**
  - **Use a treatment method for all questionable water sources**
  - **Bring water to a rolling boil OR**
  - **Use a water purification device.**
  - **Refer to FM 21-10 for guidance on water purification methods on a larger scale.**



# Squad Stove and Water Purifier

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# Identify, Treat and Prevent Constipation

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- Infrequent and/or difficult movement of bowels.
- Treatment: Stool softeners, manual removal, surgery
- Prevention:
  - Void when you need to go.
  - Hydrate and eat properly.
  - Provide a sheltered latrine for Soldiers.





# What is Heat Exhaustion?



- Early volume shock from dehydration.
- Signs and Symptoms
  - Increased heart rate
  - Increased respiratory rate
  - Headache
  - Dizziness
  - Nausea and vomiting
  - Thirst
  - Fatigue
  - Profuse sweating, cool clammy skin



# Heat Exhaustion Treatment and Prevention

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- **Treatment:**

- Place casualty in a shady spot; pour water on the head and fan the casualty.
- Hydrate and/or administer IV fluid.
- Rest and contact a medic for further evaluation/ evacuation.

- **Prevention:**

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



# What is Heat Stroke?

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Body core temperature is over 104° F.

Also known as hyperthermia; this is a medical emergency.

## Signs and Symptoms

- Altered level of consciousness.
- Increased heart rate.
- Increased respiratory rate.
- Hot, red skin. Skin may be wet.
- Loss of coordination.
- Seizures.



# Heat Stroke Treatment and Prevention

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## Treatment:

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

**Prevention: Same measures as for heat exhaustion.**



# **What is Hyponatremia?**

**Imbalance of electrolytes from drinking too much water. Also known as water intoxication.**

## **Signs and Symptoms**

- Headache.**
- Weakness.**
- Dizziness.**
- Nausea.**
- Sweaty skin.**
- Clear, copious urine output.**
- Lack of thirst.**
- Sloshing sounds in the stomach.**
- Altered level of consciousness in severe cases (requires evacuation).**



# Hyponatremia Treatment and Prevention

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## Treatment:

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

## Prevention:

- Follow sensible hydration and dietary guidelines.
- DO NOT drink large quantities of water.
- DO NOT force subordinates to drink large quantities of water.



# Field Sanitation

## Personal Hygiene

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**Hand washing facility- Hot water poured out of an ammunition can to wash hands after latrine use. Alcohol based hand sanitizer dries skin and takes on ambient air temperature.**

**Bathing can be accomplished with a hot water wash cloth. Face, armpits, feet and groin.**

**Teeth must be brushed daily**



# Field Sanitation

## Personal Hygiene

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**Change socks daily. Socks can be washed in an ammunition can and hung on dry lines in the tent.**

**Wicking layer should be changed at least twice weekly. Dry rub and allow to air dry in tent.**



# Field Sanitation

## Latrine

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**Located downwind, away from food storage and snow gathering areas. Construct a windbreak of ponchos.**

**MRE box with double trash bags for solid waste. Backhaul with trash after resupply. Bury if able, burning as last option**

**Central urination area- NOT BY TENTS**

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# Field Sanitation

## Water Procurement

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**Water from streams and lakes is easier than melting snow and ice but still must be purified prior to consumption.**

- **Boiling**
- **Iodine tablets**
- **Mechanical water PURIFIER**



# Field Sanitation Water Procurement

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## Snow melting-

- Designated area to gather snow.
- Transport in clean trashbag.
- Time and energy intensive.
- Strain out the “floaties”
- Boil before use



# Field Sanitation Food

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**Store food away from POL and Latrine facilities.**

**Sanitize all cooking sets prior to use.**



# Field Sanitation Waste Disposal

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**Consolidate trash to be backhauled after resupply.**

**Temporary storage away from snow collection and living areas.**

**Guard against animal scavenging.**

**Burn as last option**



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# Questions?



# Terminal Learning Objective

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