



CHPPM-PAC

U.S. Army Center for Health Promotion and
Preventive Medicine-Pacific



COLD WEATHER INJURIES



OBJECTIVES



I. RISK FACTORS

- A. Environmental
- B. Mission Related
- C. Individual

II. COLD WEATHER INJURIES

- A. Chillblain
- B. Frostnip
- C. Frostbite
- D. Trenchfoot
- E. Hypothermia

III. PREVENTION & TREATMENT



MORE ENVIRONMENTAL FACTORS



- RAIN
- SNOW
- SLEET
- HUMIDITY



MISSION RELATED RISK FACTORS





INDIVIDUAL RISK FACTORS





INDIVIDUAL RISK FACTORS



**FOOD
WATER
SHELTER**

**CLOTHING
ILLNESS
CAMO PAINT**

PRIOR COLD INJURY



Chillblain



Chillblain is a nonfreezing cold injury.

- Symptoms:
- **Redness**
 - **Swelling**
 - **Hot to Touch**
 - **“Pins & Needles”**



Frostnip



Frostnip involves freezing of water of the skin surface.

- Symptoms:
- **Redness**
 - **Swelling**
 - **Usually 1st sign of frostbite**



Frostbite



Frostbite occurs when skin freezes (about 28F). Ice Crystals form & damages tissues.

Symptoms:

- Grey or waxy white skin
- Cold to touch
- Feels like wood

EXTREME FROSTBITE





Trenchfoot



Trenchfoot is a very serious nonfreezing cold injury which develops when the skin of the feet are exposed to *moisture* and cold for prolonged periods. (Warm climate too)

IF LEFT UNTREATED

**TRENCHFOOT CAN EVENTUALLY
REQUIRE *AMPUTATION*.**



Trenchfoot



Symptoms:

- **Itching**
- **Numbness**
- **Swollen**
- **Red, Blue, or Black Color**
- **Distinct “WATER LINE”**
- **Open Bleeding or Draining**



Hypothermia



Hypothermia is a conditions in which the deep-body temperature falls below 95F.

**Hypothermia is a
MEDICAL EMERGENCY**



Hypothermia



Symptoms:

- **Bizarre Behavior**
- **Irritability**
- **Confusion**
- **Appears to be Drunk**



HYPOTHERMIA TREATMENT



- 1. INITIATE CPR if necessary**
- 2. PREVENT Further Cold Exposure**
- 3. REMOVE Wet Clothing**
- 4. REWARM w/ Sleeping Bags, Blankets,
& Body-Body Contact**
- 5. HANDLE GENTLY during evacuation**



TRENCHFOOT & CHILLBLAIN TREATMENT



1. **PREVENT** Further Cold Exposure
2. **REMOVE** Wet Clothing
3. **WASH & DRY** injury **GENTLY**
4. **ELEVATE, COVER,** w/ loose warm clothing
5. **DO NOT** Massage, Pop Blisters, Or Expose to Direct Heat, Let Victim Walk



Frostbite & Frostnip Treatment



1. **PREVENT** Further Cold Exposure.
 2. **REMOVE** Wet Clothing.
 3. **REWARM GRADUALLY** by skin-skin contact.
 4. **EVACUATE**
 5. **DO NOT** Allow Injury to **REFREEZE**.
- DO NOT REWARM IF Injury Could
REFREEZE**

COLD INJURIES

- **DRESS IN LAYERS**
- **USE A BARRIER BETWEEN THE SLEEPING BAG & COT--PONCHO LINER, WOOL BLANKET**
- **EXERCISE YOUR BIG MUSCLES TO KEEP WARM**
- **AVOID STANDING DIRECTLY ON COLD GROUND**
- **EAT TO MAINTAIN ENERGY**

INCREASE RISKS

- FATIGUE
- INACTIVITY
- PREVIOUS COLD INJURY
- ALCOHOL USE
- TOBACCO USE
- MEDICATIONS
- NUTRITION



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- Tobacco Cessation
- Stress Management
- Anger Management
- Hot/Cold Weather Injuries
- Field Health & Hygiene
- Fatigue & Job Performance
- Men's Health Issues
- Women's Health Issues
- Exercise/Fitness & Injury Prevention
- Medical Effects of Alcohol and/or Tobacco
- CPR (Certified Instructor)