



## **COLD STRESS**

Workers who are exposed to extreme cold or work in cold environments may be at risk of cold stress. Extremely cold or wet weather is a dangerous situation that can cause occupational illness and injuries such as hypothermia, frostbite, and trench foot.

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### **HYPOTHERMIA**

A condition in which the body uses up its stored energy and can no longer produce heat. Often occurs after prolonged exposure to cold temperature.

#### **Early Symptoms**

- Shivering
- Fatigue
- Loss of coordination
- Confusion and disorientation

#### **Late Symptoms**

- No shivering
- Blue skin
- Dilated pupils
- Slowed pulse and breathing
- Loss of consciousness

#### **Hypothermia First Aid:**

- Call 911 immediately.
  - Move the victim into a warm room or shelter.
  - Remove wet clothing.
  - Warm the center of their body first—chest, neck, head, and groin. Use skin-to-skin contact under loose, dry layers of blankets, clothing, or towels.
  - If conscious, warm nonalcoholic beverages may help increase the body temperature.
  - Once temperature has increased keep them dry and wrapped in a warm blanket, including the head and neck.
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### **FROSTBITE**

An injury to the body that is caused by freezing, which most often affects the nose, ears, cheeks, chin, fingers, and or toes.

#### **Symptoms**

- Reduced blood flow to hands and feet
- Numbness
- Aching
- Tingling or stinging
- Bluish or pale, waxy skin

#### **Frostbite First Aid:**

- Get into a warm room as soon as possible.
- Unless necessary, do not walk on frostbitten feet or toes.
- Immerse the affected area in warm (not hot) water, or warm the affected area using body heat. Do not use a heating pad, fireplace, or radiator for warming.
- Do not massage the frostbitten area; doing so may cause more damage.

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## TRENCH FOOT

An injury of the feet resulting from prolonged exposure to wet and cold conditions that can occur at temperatures as high as 60 °F if the feet are constantly wet.

### Symptoms

- Reddening of the skin
- Numbness or tingling
- Leg cramps
- Swelling
- Blisters or ulcers
- Bleeding under the skin
- Gangrene (foot may turn dark purple, blue, or gray)

### Trench Foot First Aid:

- Remove wet socks/boots and air dry feet in a warm area.
- Avoid walking on feet and get medical attention.

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## COLD STRESS PREVENTION

- Know the symptoms of cold stress and monitor yourself and co-workers.
- Drink warm beverages during work if working in cold conditions.
- Wear appropriate clothing.
  - Wear several layers of loose clothing for insulation.
  - Insulated jacket, gloves, winter hat, and boots.
- Protect the ears, face, hands and feet in extremely cold or wet weather.
- Carry extra socks, gloves, hats, jacket, blankets, a change of clothes and a thermos of hot liquid.
- Be aware that some clothing may restrict movement resulting in a hazardous situation.
- Move into warm locations during breaks; limit the amount of time outside.
- Include chemical hot packs in your first aid kit.
- Avoid touching cold metal surfaces with bare skin.
- If possible use an engineering control such as a heater to warm the work area.