

# Cold Stress Injuries

When working in a cold environment, body heat can quickly dissipate, which can cause cold stress and an increased risk for cold stress injuries and illness:

**Hypothermia** happens when your body reaches an internal temperature of 35°C or lower, which occurs when your body can't produce heat as quickly as you're losing it.

## Moderate symptoms

- Out of control or violent shivering
- Blue, fingers, and toes
- Slow breathing and heart rate
- Disorientation and confusion
- Poor coordination

## Severe symptoms

- Unconsciousness
- Irregular or hard to find pulse
- No detectable breathing
- Unresponsive, dilated pupils
- No shivering or movement

## Prevention

- Stay hydrated and make sure you've eaten enough
- Wear wool or wool blends
- Layer loose clothing
- Avoid drinking alcohol or caffeine
- If possible, frequently go to a warmer place to warm up



**Trench foot** can happen if feet are in a cold and wet environment for more than 10 hours. Trench foot is a non-freezing injury, so if the temperature is 16°C or lower, workers in damp and wet environments are at risk.

## Symptoms

- Tingling, itching, numbness, heaviness in the feet
- Pale, clammy, and white or ashy-looking skin
- Discoloration and swelling
- Red appearance, extreme pain, blisters, open sores, and increased sensitivity

Trench foot happens in stages, so it looks and feels different depending on how much it has progressed.



## Prevention

- If feet get wet or damp, change socks and shoes immediately
- Wear shoes that fit well
- Keep feet clean and dry
- Wear moisture-wicking, not overly tight socks
- Do not sleep with socks on

**Frostbite** is the freezing of skin and underlying tissue.

When the temperature is under 0°C, exposed and uncovered skin is at risk, especially in windy or wet conditions. Frostbite is most common on the extremities.

## Symptoms

- Numbness
- Tingling
- Mild pain after rewarming
- Cold, hard, waxy-looking skin
- Joint stiffness
- Blistering after rewarming

Mild frostbite is known as "frotnip" and can usually be treated at home.

If more severe, or if fluid-filled blisters appear, it should be treated by a medical professional.



## Prevention

- Wear at least three layers of loose, dry, warm, and moisture-wicking clothes
- Wear waterproof, insulated boots and mittens (not gloves)
- Wear a warm, weatherproof hat that covers your ears
- Immediately move to a warmer area if you feel numbness and tingling

## Chilblains

Chilblains is a condition that causes inflamed swollen patches and blistering on the hands and feet. It's caused by exposure to damp air that's cold, but not freezing.

## Symptoms

- Small, itchy patches of skin
- Sores or blistering
- Swelling
- Discolouration
- Pain

Chilblains can often be treated at home, but frostbite blisters can easily be mistaken for them. If you were in below-freezing or windy conditions, if the blisters don't heal quickly on their own, or if the sores look infected, you should see a doctor.



## Prevention

- Wear mittens in cold, wet weather
- Keep extremities warm and dry
- Wear moisture-wicking, not overly tight socks
- Maintain a comfortable, warm temperature in your home and place of work.