

TOOLBOX SAFETY TALK

EXPLAIN THE DANGER

When exposed to cold temperatures, blood vessels in the skin, arms, and legs narrow. This helps vital organs stay warm, but decreases the blood flow to fingers and toes. Overexposure to cold puts people at risk for frostbite and hypothermia.

Wind Chill Increases Heat Loss

When the air temperature is -30°C ,

- with 16 km/h wind (a flag will be fully extended) skin can freeze in about a minute
- with 48 km/h wind skin can freeze in 30 seconds.

FROSTBITE

Overexposure to cold can cause freezing of your skin and underlying tissues. Damage to blood vessels and reduced blood flow can lead to gangrene.

Symptoms

- Feeling of “pins and needles”
- Pale skin and numbness
- Hard and stiff skin
- Change in skin colour: from white to blotchy and blue.

Frostbitten skin looks waxy and feels numb. Once tissue becomes hard, it’s a medical emergency

Treatment

- Protect them from the cold; seek medical aid.
- Warm the affected area with body heat—do not rub.
- Do not thaw hands and feet unless medical aid is too far away and there is no chance of refreezing. Body parts are better thawed at a hospital.

HYPOTHERMIA

Hypothermia occurs when a person’s core body temperature drops below 35°C and can quickly become life-threatening.

Moderate symptoms

- shivering, cold, pale and dry skin
- blue lips and fingers
- slow breathing and heart rate
- disorientation and confusion
- poor coordination

Severe symptoms

- unconsciousness
- heart slowdown to the point where pulse is irregular or hard to find
- no shivering
- no detectable breathing
- resembles death—assume the person is alive

Treatment

- Hypothermia can kill—get medical aid immediately.
- Carefully shelter the affected person from the cold. Sudden movement can upset heart rhythm.
- Keep the person awake.
- Remove wet clothing and wrap the person in warm covers.
- Apply direct body heat—rewarm neck, chest, abdomen, and groin, but not extremities.
- If conscious, give warm, sweet drinks.

PROTECTION AGAINST COLD INJURIES

Perform a hazard assessment and implement appropriate controls, such as:

- Wear several layers of clothing rather than one thick layer to capture air as an insulator.
- Wear synthetic fabrics next to the skin to “wick” away sweat.
- If conditions require, wear a waterproof or wind-resistant outer layer.
- Wear hats and hoods and in extreme cold, a balaclava (when wearing a hardhat ensure the hat is safely used with the thermal layer).
- Wear footwear and socks rated for cold weather.
- If clothing gets wet at 2°C or less, change into dry clothes immediately. Get checked for hypothermia.
- If you get hot while working, open your jacket but keep your hat and gloves on.
- Take warm, high-calorie drinks and food.
- Ensure that there is access to an environmentally control break area (such as a truck, trailer building with heat.)
- Use a work rest cycle to ensure excessive exposure is avoided.