

COLD STRESS – HELP YOUR EMPLOYEES AVOID HYPOTHERMIA & FROSTBITE

Exposure to cold can lead to a number of health problems, including frostbite, hypothermia, and even death. Cold stress can affect anyone who works outdoors in cold temperatures, such as snow cleanup crews, landscapers, construction workers, police officers and firefighters, transit workers, recreational workers, and others.

Workers are at an increased risk for cold stress if they have a predisposing health condition such as cardiovascular disease, diabetes, or high blood pressure; take certain medications that might have a greater effect in cold weather; or are in poor physical condition.

Tips to Protect Workers in Cold Environments

- Recognize the environmental and workplace conditions that may be dangerous.
- Learn the signs and symptoms of cold-induced illnesses and injuries and what to do to help those affected.
- Train workers about cold-induced illnesses and injuries.
- Encourage workers to wear proper clothing for cold, wet and windy conditions, including layers that can be adjusted to changing conditions.
- Be sure workers in extreme conditions take frequent short breaks in warm dry shelters to allow their bodies to warm up.
- Try to schedule work for the warmest part of the day.
- Avoid exhaustion or fatigue because energy is needed to keep muscles warm.
- Use the buddy system - work in pairs so that one worker can recognize danger signs.
- Drink warm, sweet beverages (sugar water, sports-type drinks) and avoid drinks with caffeine (coffee, tea, sodas or hot chocolate) or alcohol.
- Eat warm, high-calorie foods such as hot pasta dishes.
- Remember, workers face increased risks when they take certain medications, are in poor physical condition or suffer from illnesses such as diabetes, hypertension or cardiovascular disease.



There are several types of cold stress:

Hypothermia

Hypothermia is severely reduced core body temperature. Hypothermia occurs most often at very cold temperatures but can develop even at temperatures above 40 degrees Fahrenheit if a worker is chilled from rain, sweat or cold water. When a worker is exposed to severe cold, the person may lose heat faster than can be produced by the body's normal mechanism. *Hypothermia is a medical emergency!*

Symptoms of hypothermia:

- Shivering;
- Exhaustion;
- Reduced mental alertness and confusion;
- Fumbling hands
- Memory loss;
- Slurred speech or drowsiness;
- Loss of consciousness in severe cases.

Frostbite

Frostbite occurs when the skin is exposed to extreme cold for a prolonged time and actually freezes. Frostbite usually affects the extremities, including the fingers, hands, toes, feet, ears, and nose. Frostbite can lead to permanent nerve damage. In severe cases, amputation may be necessary.

Symptoms of frostbite:

- White or grayish-yellow color patches on reddened skin;
- Unusually firm or waxy skin;
- Numbness, tingling, aching;
- Blisters may occur in severe cases.

Trench foot

Trench foot is a common cold stress injury. It occurs in the feet after extended exposure to cold and wet conditions.

Symptoms of trench foot:

- Redness;
- Edema (swelling of the foot);
- Tingling or itching;
- Burning;
- Severe pain; and
- Blistering in severe cases.

Sources: NIOSH <https://www.cdc.gov/niosh/topics/coldstress/recommendations.html>
OSHA https://www.osha.gov/as/opa/cold_weather_prep.html