



TOOLBOX TALK: COLD STRESS

How Cold is Too Cold?

What constitutes extreme cold and its effects can vary across different areas of the country. In regions that are not used to winter weather, near freezing temperatures are considered “extreme cold.” A cold environment forces the body to work harder to maintain its temperature. Whenever temperatures drop below normal and wind speed increases, heat leaves your body more rapidly.

IDENTIFYING AND PREVENTING COLD STRESS

Cold stress occurs by driving down the skin temperature and eventually the internal body temperature (core temperature). This may lead to serious health problems, including tissue damage and possibly death.

Some of the risk factors that contribute to cold stress are:

- Wetness/dampness
- Dressing improperly
- Exhaustion
- Predisposing health conditions such as hypertension, hypothyroidism, and diabetes
- Poor physical conditioning

HOW DOES THE BODY REACT TO COLD CONDITIONS?

In a cold environment, most of the body’s energy is used to keep the internal core temperature warm. Over time, the body will begin to shift blood flow from the extremities (hands, feet, arms, and legs) and outer skin to the core (chest and abdomen). This shift allows the exposed skin and the extremities to cool rapidly, increasing the risk of cold induced illnesses and injuries.

COMMON COLD INDUCED ILLNESSES & INJURIES

Hypothermia occurs when body heat is lost faster than it can be replaced and the normal body temperature (98.6°F) drops to less than 95°F. Hypothermia occurs most often at very cold temperatures. It can also occur at temperatures above 40°F if a person becomes chilled from rain, sweat, or submersion in cold water.

Frostbite is an injury to the body that is caused by the freezing of skin and underlying tissues. The lower the temperature, the more quickly frostbite will occur. Frostbite typically affects the extremities, particularly the feet and hands. Amputation may be required in severe cases.

Trench Foot or Immersion Foot is caused by prolonged exposure to wet and cold temperatures. It can occur at temperatures as high as 60°F if the feet are constantly wet. Non-freezing injury occurs because wet feet lose heat 25-times faster than dry feet. To prevent heat loss, the body constricts the blood vessels to shut down circulation in the feet. The skin tissue begins to die because of a lack of oxygen and nutrients, and the buildup of toxic products.

Keep reading for cold stress prevention tips.

PREVENTING COLD STRESS

Wear at least three layers of loose-fitting clothing:

- An inner layer of wool, silk or synthetic to keep moisture away from the body
 - A middle layer of wool or synthetic to provide insulation even when wet
 - An outer protection layer that allows some ventilation to prevent overheating
- Cover your head with a hat and hood to help keep your whole body warmer
 - Use a knit mask to cover the face and mouth
 - Use insulated gloves to protect the hand (water resistant if necessary)
 - Wear insulated and waterproof boots

I understand the information presented and the importance of taking steps to prevent cold stress.

COMPANY: _____

DATE: _____

EMPLOYEE NAME: _____

EMPLOYEE SIGNATURE: _____

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