MISSOURI SAFE@WORK SAFER TOGETHER



COLD STRESS: HOW COLD IS TOO COLD?

What constitutes extreme cold and its effects can vary across different areas of the country. 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, hyperthyrodism, 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 extremeties to cool rapidly, increasing the risk of cold-induced illnesses and injuries.

Hypothermia occurs when body temperature drops to less than 95°F. This occurs when the body loses heat faster than it can produce heat. Signs and symptoms of hypothermia include feeling cold and uncontrollable shivering, exhaustion, cool and pale skin, slurred speech, confusion, and unsteady gait.

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 nose, fingers, toes, ears, and lips. Signs and symptoms of frostbite include redness, pain, white or grayish skin color, numbness, and even blisters.

Trench Foot or Immersion Foot is caused by prolonged exposure to wet and cold temperatures. Signs and symptoms of trench foot include red skin that turns pale and swollen, numbness, burning pain, leg cramps, and slow or absent pulse in foot.

ALL OF THE ABOVE ARE MEDICAL EMERGENCIES AND 911 SHOULD BE CALLED. REMOVE WET CLOTHING AND DRY THE PERSON IN A WARM ROOM OR SHELTER.

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PREVENTING COLD STRESS BY DRESSING PROPERLY:

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 body warmer
- Use a knit mask to cover the face and mouth
- Use insulated gloves (water resistant if necessary)
- Boots should be well insulated and waterproof

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

COMPANY: _____ **DATE:** _____

EMPLOYEE NAME: **EMPLOYEE SIGNATURE:**

LEARN MORE WAYS TO KEEP YOUR WORKPLACE SAFE.
VISIT safeatwork.mo.gov.

DEPARTMENT OF LABOR & INDUSTRIAL RELATIONS

If you have served on active duty in the Armed Forces of the United States and would like information about veterans' services and benefits, please complete the survey here: https://mvc.dps.mo.gov/MoVeteransInformation/Survey/DOLIR.

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