



MISSISSIPPI STATE UNIVERSITY™
MS AGRICULTURAL AND FORESTRY
EXPERIMENT STATION

MAFES DAWG TRACKS

Cold stress in Mississippi? Yes. While heat is the predominant weather enemy to our bodies around here, cold stress can unexpectedly sneak up on us. It does not have to be icy and snow on the ground to become a victim. Cold stress can occur well above freezing temperatures, especially in windy conditions which causes the cold air temperature to feel even colder.

What is Cold Stress?

Cold stress occurs by driving down the skin temperature, and eventually the internal body temperature. When the body is unable to warm itself, serious cold-related illnesses and injuries may occur, permanent tissue damage or death may result.

Types of cold stress include:

- **Trench foot** is a non-freezing injury of the feet caused by prolonged exposure to wet and cold conditions. It can occur in temperatures as high as 60°F if feet are constantly wet. Injury occurs because wet feet lose heat 25-times faster than dry feet. Symptoms include - reddening skin, tingling, pain, swelling, leg cramps, numbness, and blisters.
- **Frostbite** is caused by the freezing of the skin and tissues. It can cause permanent damage to the body, and in severe cases can lead to amputation. Symptoms include - reddened skin develops gray/white patches in the fingers, toes, nose, or ear lobes; tingling, aching, a loss of feeling, firm/hard, and blisters may occur in the affected areas. If frostbite occurs, DO NOT rub the affected area, because rubbing causes damage to the skin and tissue. DO NOT try to re-warm the frostbitten area before getting medical help. If a frostbitten area is rewarmed and gets frozen again, more tissue damage will occur.

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- **Hypothermia** occurs when the normal body temperature (98.6°F) drops to less than 95°F. This can even occur at cool temperatures (above 40°F) if a person becomes chilled from rain, or even body sweat. An important mild symptom of hypothermia is uncontrollable shivering, which should not be ignored. Although shivering indicates that the body is losing heat, it also helps the body to rewarm itself. Moderate to severe symptoms - loss of coordination, confusion, slurred speech, heart rate/breathing slow, unconsciousness and possibly death.

An Ounce of Prevention is Worth a Pound of Cure

- ✓ Provide radiant heaters for workers to use during work and heated, sheltered break areas.
- ✓ Use heavy machinery, vehicles or other barriers to give workers cover from wind when working in open, outdoor areas.
- ✓ Schedule outdoor work during the warmest parts of the day.
- ✓ Eat healthy, high-calorie and high-carb foods such as pasta, and drink warm, sweet beverages.
- ✓ Stay active while working and keep moving to generate heat.
- ✓ Most importantly, dress properly ...
 - Wear layers of loose-fitting clothing. Layers provide better insulation. Tight clothing reduces blood circulation. Warm blood needs to be circulated to the extremities, so loose is better.
 - A hat reduces the amount of body heat that escapes from your head and keeps your whole body warmer.
 - Insulated gloves will help protect the hands and insulated /waterproof boots to protect the feet.

Sources:

https://www.osha.gov/dts/weather/winter_weather
<https://safetyskills.com/recognizing-preventing-cold-stress/>