



Environment, Health & Safety

FACILITIES PLANNING & MANAGEMENT
UNIVERSITY OF WISCONSIN-MADISON

UW-Madison Cold Injury Prevention Guidance for Outdoor Workers

Purpose: Provide supervisors practical guidance for protecting workers from cold injury.

Some UW-Madison employees may be required to work outdoors in cold environments for extended periods. Anyone working in a cold environment may be at risk of cold stress.

Symptoms of Cold Stress?

- Pain, numbness, tingling, stinging feeling in extremities,
- Severe shivering
- Excessive fatigue, drowsiness, irritability or euphoria
- Lack of coordination, confusion or disorientation
- Severe: shivering stops, may be unable to walk or stand, pupils become dilated, pulse and breathing become slowed, and loss of consciousness can occur.

Planning considerations for working in cold conditions:

- Train employees on cold stress hazards, symptoms and prevention.
- Stay hydrated; dehydration increases the susceptibility to cold injury
- Use the buddy system to monitor each other.
- Eye protection might be needed for protection from blowing snow and sunlight
- Workers in poor physical condition or increased age could be at an increased risk of cold injury.

What can be done for a person suffering from Cold Stress/Cold Injury?

- Call 911 immediately in an emergency; otherwise seek medical assistance as soon as possible.
- Move the person to a warm room or vehicle.
- Remove wet clothes and replace with dry clothes, cover the body (including the head and neck) with layers of blankets; and with a vapor barrier (e.g. tarp, garbage bag). Do **not** cover the face.
- If freezing of the tissue (frostbite) is suspected, do not try to rewarm by rubbing or applying water to the area. Loosely cover and protect the area from contact.
- Give warm sweetened drinks if the person is alert.



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Wind Chill Hazards and What To Do			
Wind Chill	Exposure Risk	Health Concerns	What to Do
0 to -9	Low risk	<ul style="list-style-type: none"> Slight increase in discomfort 	<ul style="list-style-type: none"> Dress warmly Stay dry
-10 to -24	Moderate risk	<ul style="list-style-type: none"> Uncomfortable Risk of hypothermia and frostbite if outside for long periods without adequate protection. 	<ul style="list-style-type: none"> Dress in layers of warm clothing, with an outer layer that is wind-resistant. Wear a hat, mittens or insulated gloves, a scarf and insulated, waterproof footwear. Stay dry. Implement a work/warming schedule of 20-30 minutes working, 15 minutes warming.
Greater than -25°F a "Stop Work" of non-emergency tasks is recommended			
-25 to -39	High Risk: exposed skin can freeze in 10 to 30 minutes	<ul style="list-style-type: none"> High risk of frostbite: Check face and extremities for numbness or whiteness. High risk of hypothermia if outside for long periods without adequate clothing or shelter from wind and cold. 	<ul style="list-style-type: none"> Dress in layers of warm clothing, with an outer layer that is wind-resistant Cover exposed skin Wear a hat, mittens or insulated gloves, a scarf, neck gaiter or face mask and insulated, waterproof footwear Stay dry. If emergency outdoor work is required: Implement a work/warming schedule of 10-15 minutes working, 15 minutes warming