

# COLD WEATHER SAFETY



AgHealth  
Central States  
Center for Agricultural  
Safety and Health

University of Nebraska  
Medical Center

## COLD RELATED HEALTH ISSUES

### FROSTBITE

Frostbite happens when skin tissue freezes, resulting in cell damage. It is caused by cold temperatures and low windchill. Fingers, toes, cheeks, nose, and ears are commonly affected.

#### SYMPTOMS:

- Uncomfortable sensations of coldness
- Tingling, stinging or aching feeling
- Numbness
- The area looks white and is cold to the touch in the beginning, then feels warm and has redness and swelling.

#### FIRST AID TREATMENT

- Move victim to warm area
- Treat affected areas with warm water (102°-110°F)
- Avoid rubbing frostbitten areas
- Do not rewarm affected areas if there is a chance of refreezing
- Get medical assistance as soon as possible

### TRENCH FOOT

Trench foot is vascular damage that happens when there is long, continuous exposure to wet and cold environments, or immersion in water/another liquid.

#### SYMPTOMS:

- Tingling and/or itching sensation
- Pain
- Swelling
- Blisters
- Bleeding
- Tissue death/gangrene

#### FIRST AID TREATMENT

- Move victim to warm area
- Treat affected areas with warm water (102°-110°F) or warm packs
- Get medical assistance as soon as possible

## GET IN TOUCH

402-552-3394

[go.unmc.edu/cs-cash/cs-cash-contact](http://go.unmc.edu/cs-cash/cs-cash-contact)

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## GENERAL HYPOTHERMIA

General hypothermia is the loss of body heat with prolonged exposure to the cold. This can be accelerated when a person is wet because of sweat or working in a wet environment. Hypothermia is commonly associated with very cold temperatures, but most cases of hypothermia develop in air temperatures between 30° and 50°F.

### INITIAL SYMPTOMS:

- Uncontrollable shivering
- Feeling of cold
- Confusion
- Carelessness
- Disorientation

### FIRST AID TREATMENT

- Move victim to warm, dry area
- Remove wet clothing
- Apply warm blankets for insulation
- Offer warm non-alcoholic and caffeine-free drinks
- Get medical assistance as soon as possible

## PREVENTION

### WORKERS CAN

- Wear proper protective clothing.
  - Wear at least 3 layers:
    - Outer layer to break the wind
    - Middle layer of wool, down, or synthetic pile to absorb sweat
    - Inner layer of cotton or synthetic weave to allow ventilation
  - Have a change of clothing available
  - Keep their head, hands, and fingers covered with hats and gloves
  - Wear shoes that protect against cold and wet
  - Avoid wearing dirty or greasy clothes
- Recognize symptoms of cold-related health problems
- Learn first aid treatment for cold-related health problems

### LAYER CLOTHES

wind break

sweat absorption

ventilation

### EMPLOYERS CAN

- Provide on-site sources of heat (air jets, radiant heaters, etc.)
- Provided a heated shelter for workers who experience prolonged cold exposure
- Shield work areas from wind
- Use thermal insulating material on handles of equipment when temperatures are below 30°F
- Allow workers to set their own pace and take breaks as needed
- Shift activities indoor when possible

## RESOURCES



UMASH Cold  
Stress Toolkit



NIOSH Cold  
Stress Resources



OSHA Cold  
Stress Guide