

# North Dakota State University

## Working in the Cold

### INTRODUCTION (Purpose and Intent)

This NDSU procedure provides guidelines for those individuals performing their job duties while working in the cold weather environment at all properties of the University. The intent is to establish proper safety procedures and practices, as well as to promote and provide for a safer environment for students, faculty and staff.

All members of the University community are governed by this procedure (students, staff, faculty).

### OVEREXPOSURE TO COLD

#### Frostbite:

- When body tissues may freeze when skin is exposed to extreme cold or touches a very cold object.
- The nose, ears, cheeks, fingers, and toes are at greatest risk.
- Worst cases can cause permanent tissue damage, loss of movement in affected parts, and possibly unconsciousness and death from heart failure.
- Damage may be greater if the body part is thawed, then refrozen.

#### Hypothermia:

- When exposure to cold may send body temperatures to dangerously low levels.
- It can occur in above-freezing temperatures when it's windy or you're exhausted or wearing wet clothes.
- Worst cases can lead to unconsciousness and death.

#### Factors That Increase The Risks Of Frostbite And Hypothermia Include:

- Age
- Overweight
- Smoking and drinking
- Certain medications, allergies, or poor circulation
- Victim's failure to recognize symptoms and take prompt action.

#### Reduce the Risk of Exposure to Extreme Cold

- Avoid bathing, smoking or drinking alcohol before going into cold conditions.
- Wear layers of loose, dry clothes. If possible, wear wool underneath and a waterproof layer on top.
- Always cover hands, feet, face, and head in the cold. An uncovered head can make the body lose up to 40% of its heat.
- Change or get dry immediately if clothes get wet.
- Keep moving while working in the cold. Take regular breaks in warm areas.

- Move to a warm area when you start to feel very cold or numb. Have a warm alcohol-free, caffeine-free drink.

## RECOGNIZE FROSTBITE AND HYPOTHERMIA SYMPTOMS

### **Frostbite Symptoms Include:**

- Feeling extremely cold, then numb with possible tingly, aching or brief pain.
- White or grayish yellow glossy skin, which may blister.
- Confusion, failing eyesight, and shock as condition progresses.

### **Hypothermia symptoms include:**

- Chills, shivering, numbness and sometimes pain in the extremities.
- Slurred speech, poor coordination, confusion, and drowsiness.

### **Respond Quickly and Correctly to Frostbite and Hypothermia Symptoms**

- Act immediately when symptoms develop to prevent serious problems.
- Move to a warm place.
- Replace frozen, wet, or tight clothes with warm clothes or blankets.
- Drink a warm beverage – without alcohol or caffeine.
- Get medical help after first aid treatment.

### **Take First Aid Actions For Frostbite:**

- Warm the frozen part immediately with blankets or warm (not hot) water.
- Avoid touching the frozen part; don't rub or hit it.
- Keep the frozen part away from hot stoves, heat lamps and hot water bottles.
- Don't break blisters
- Exercise the body part once it's warm – but don't walk on frostbitten feet.
- Take first aid actions for Hypothermia:
- Cover victim with blankets or lie next to share body heat.
- **DON'T** use hot baths, electric blankets, or hot water bottles.
- Keep the person awake
- Get emergency help immediately if the person loses consciousness.

### **When it's Cold, Be Constantly Alert to Health Hazards**