



Severe Winter Weather

When severe winter weather is predicted on campus, such as heavy snowfall, high wind speeds, and extremely cold temperatures, it's important that you understand the hazards and take precautions to ensure your safety and the safety of your colleagues.

Cold stress

Cold weather is a potentially dangerous situation that can affect those who work outdoors. A cold work environment forces the body to work harder to maintain its core temperature of 98.6° Fahrenheit (F). Cold stress occurs from a drop in skin temperature and eventually internal body temperature, which can lead to injuries such as:

Immersion/Trench Foot: Wet feet lose heat 25 times faster than dry feet. Trench foot results from prolonged exposure to wet and cold conditions and can occur in temperatures as high as 60°F. Reddening skin, tingling, pain, swelling, leg cramps, numbness, and blisters may indicate trench foot.

Hypothermia: When the body uses up its stored energy and can no longer produce heat, hypothermia may occur. Shivering, exhaustion, confusion, fumbling hands, memory loss, slurred speech, and drowsiness are early symptoms.

Frostbite: This is an injury to the body caused by freezing. Redness or pain in the skin may indicate the beginning of frostbite, followed by a white or grayish-yellow skin area, skin that feels unusually firm or waxy, and/or numbness. Frostbite can occur in minutes in extremely cold temperatures.

Wind chill

The wind chill is the temperature your body feels based on the rate of heat loss from exposed skin caused by the effects of wind and cold. It is important to understand the effect wind has when paired with cold temperatures, as it can be life-threatening. For example, when the air temperature is 0°F, and the wind speed is 15mph, the wind chill temperature falls to -19°F. At this temperature, exposed skin can freeze in 30 minutes! Refer to the National Weather Service (NWS) [Wind Chill Chart](#) to learn more.

Questions?

Contact Northwestern Environmental Health & Safety at ehs@northwestern.edu or (847) 467-6342

Protect yourself from the cold

- ✓ Check the [weather forecast](#) regularly so you will know when to expect severe winter weather.
- ✓ Wear several layers of clothing for insulation, ensuring that your outer layer is wind and waterproof.
- ✓ Wear a hat; 40% of the body's heat can be lost when your head is exposed.
- ✓ Protect your skin; avoid touching cold metal surfaces with bare skin and use insulating material on equipment handles when the temperature drops below 30°F.
- ✓ Adjust your schedule to avoid being outside during the coldest part of the day.
- ✓ Take frequent breaks in warm, dry areas to allow your body to warm up.
- ✓ Avoid alcoholic drinks and stay hydrated by drinking plenty of water and warm beverages.
- ✓ Monitor yourself and your coworkers; look out for signs of cold stress such as shivering and difficulty speaking.

Slippery surfaces

Here at Northwestern, there have been 14 injuries in the past 5 years involving slips and falls on ice or snow, resulting in sprain, fracture, contusion, and concussion injuries. To prevent injuries, wear proper footwear, use handrails on stairs, and walk carefully by taking short steps and walking at a slow pace.

Remember to report all injuries on the Risk Management [website](#) or call 847.491.5582.

Safe winter driving

Road hazards increase during severe winter weather due to limited visibility, ice, and snow, which could result in a vehicle accident. Follow these safe driving tips:

- Plan your route before you drive, avoid taking unnecessary trips, and find the safest route (e.g., main, well-lit roads and intersections).
- Ensure your visibility is not blocked by clearing ice and snow off your windows before driving.
- Drive at a slow and safe speed and increase your following distance between other vehicles.

Learn more

For additional information, review the Occupational Safety and Health Administration's (OSHA's) [Winter Weather](#) and [Safe Winter Driving](#) guidelines and complete [Cold Stress in the Workplace](#) online training.