



Cold Weather

Health Impacts of Exposure to Cold Weather and Extreme Cold

Exposure to cold temperatures can cause frostbite, hypothermia and death. Anyone exposed to cold weather conditions can experience cold-related injuries. Temperatures above freezing can cause injuries. Risk of cold-related injuries varies with duration of exposure to cold; other environmental conditions (precipitation, damp, wind); inadequate winter clothing; individual health status; chronic conditions; age; medications and substance use.

Hypothermia

Hypothermia occurs when the body loses heat faster than it can produce it. Hypothermia is a severe medical emergency. Hypothermia can occur in temperatures as warm as 60° F.

Warning signs of hypothermia: confusion, shivering, sleepiness, stiff muscles; difficulty speaking, loss of coordination

First aid for hypothermia: **Call 911. Get medical attention immediately. Delay can be fatal.** Go to a warm room. Remove wet clothing. Keep dry. Warm the center of the body first, using blankets or skin-to-skin contact with another person or animal. Do not apply direct heat. Do not massage the body. If unconscious, check for pulse, and provide CPR if necessary.

Frostbite

Frostbite happens when the body protects vital organs by reducing circulation to the extremities. Any exposed or inadequately protected skin can be affected by frostbite.

Warning signs of frostbite: redness or pain in the skin; white or greyish-yellow skin; skin that feels unusually firm or waxy. Skin may itch, burn or feel numb.

First aid for frostbite: Get indoors as quickly as possible. Don't rub or massage cold body parts. Put cold hands in armpits or hold onto another person or animal. Get in a warm bath or wrap in a moist, warm towel. Don't get too close to a hot stove or heating pad; you may not feel the heat and burn yourself. Do not walk on feet with frostbite.

Prevention of Cold-Related Injuries

- Limit time outdoors during extreme cold
- Dress in several layers of loose-fitting clothing
- Keep dry
- Cover all exposed skin—cover your mouth with a scarf to protect your lungs
- Consume hot food and warm beverages
- Limit alcohol, nicotine, caffeine and street drug consumption

Cold and Extreme Cold Warnings, Alerts and Watches

In October 2024, the National Weather Service updated Cold Weather Advisories to the following categories:

Extreme Cold Warning: Take Action! Dangerously cold air temperatures or wind chill are expected or occurring. Avoid going outside. Conditions could lead to frostbite or hypothermia.

Extreme Cold Watch: Be Prepared. Dangerously cold air temperatures or wind chill are possible. Plan to avoid being outside during the coldest parts of the day.

Cold Weather Advisory: Be Aware. Seasonally cold air temperatures or wind chill values are expected or occurring. Dress appropriately. Cover exposed skin when outdoors.



Public Health Cold Weather Sheltering Recommendations

Service providers and agencies should follow National Weather Service forecasts to support public health and safety.

When temperatures are sub-freezing (32° F or less), everyone should have easy, no-barrier access to shelters or warming centers and be encouraged to seek shelter designed for human habitation. The majority of cold-related injuries occur with exposure to weather conditions below 32° F. Spokane Transit Authority and other community partners may offer free rides to warming shelters or centers when the temperature is 32° degrees or below (subject to change).

If an Extreme Cold Warning is issued, no one should sleep or spend an extended period of time outdoors. All persons should have access to shelters or warming centers. Short exposure to temperatures near or below 0° F is life threatening. The highest rates of hypothermia occur during extremely cold weather.

Vulnerable Populations

Groups less able to regulate body temperature or maintain circulation include infants and young children; people over 60 years of age; people with disabilities or limited mobility; people with diabetes, peripheral neuropathy, and diseases affecting the blood vessels; people who use substances, including alcohol, that modify their ability to feel the effects of cold or respond to cold conditions.

Groups who are exposed to dangerous cold weather include people experiencing homelessness; people living in housing without adequate insulation; people living indoors without adequate heat, food or clothing; people who spend long periods of time outdoors for work or recreation.

Infants sleeping in cold rooms are vulnerable to hypothermia. Signs of hypothermia in infants are bright red, cold skin and very low energy.

Related Winter Storm Hazards

The risk of house fires increases when power outages during cold weather lead to greater use of candles and fireplaces. Carbon monoxide poisoning can occur if gas stoves, kerosene heaters, gas generators, or propane heaters are used indoors, near open windows, or near occupied tents. Place generators at least 20 feet away from doors, windows and vents. Smoke detectors and carbon monoxide detectors save lives. Free detectors may be available through a local fire department. Rental units are required to install smoke detectors.

Resources

Spokane Regional Health District *Extreme Cold*
National Weather Service *Winter*
National Weather Service *Cold Weather Safety*
Centers for Disease Control and Prevention
Winter Weather: Before, During, and After
Ready.gov *Winter Weather*

Ready.gov *Be Prepared for a Winter Storm* (PDF)
National Health Care for the Homeless Council
Severe Weather Survival Tips
American Red Cross *Winter Storm Safety*
safety tips and checklist; multiple languages
Washington State Department of Health *Cold Weather*
winter storm flyers; multiple languages

Sources

Winter Weather: Before, During, and After. Centers for Disease Control and Prevention. Updated February 7, 2024. <https://www.cdc.gov/winter-weather/about/Preventing-Hypothermia>. Centers for Disease Control and Prevention. Updated February 7, 2024. <https://www.cdc.gov/winter-weather/prevention/index.html>
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BC Centre for Disease Control. Public Health Recommendations to Reduce the Impacts of Exposure to Winter Weather on People Experiencing Homelessness in British Columbia. Provincial Health Services Authority. December 2023. Accessed November 8, 2024. http://www.bccdc.ca/resource-gallery/Documents/Guidelines%20and%20Forms/Guidelines%20and%20Manuals/Health-Environment/Recommendations_Exposure_Winter_Weather_People_Experiencing_Homelessness.pdf
Use a Generator Safely. Centers for Disease Control and Prevention. Updated February 8, 2024. Accessed November 20, 2024. <https://www.cdc.gov/natural-disasters/psa-toolkit/use-a-generator-safely.html>

