COLD HEALTH AND SAFETY
MICHIGAN WINTER WEATHER

This fact sheet explains some of the health risks associated with cold weather and ways you can protect yourself and your family. Read on to learn about hypothermia, frostbite, carbon monoxide poisoning and falls.

Health Risks of Cold Weather

Hypothermia is a sickness that can happen when your body loses heat faster than it can produce it. Your body temperature drops so low that your body loses the ability to function. People are at risk of hypothermia in very cold weather or even in cool weather if their skin is wet from water or sweating.

Signs of hypothermia include shivering, slurred speech, confusion, fumbling hands, sleepiness and unconsciousness. Babies look bright red or have very cold skin. They may seem lifeless or very sleepy.

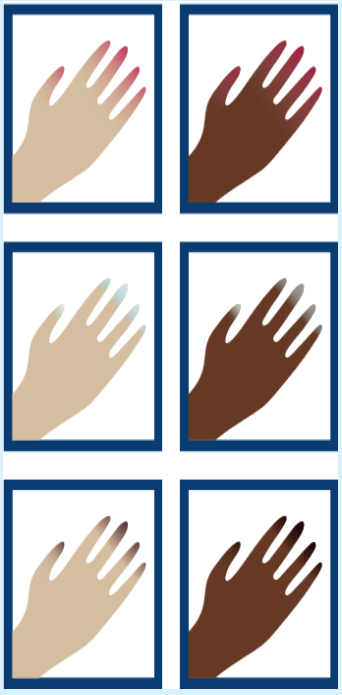
Frostbite is a type of injury that is caused when skin freezes because it is exposed to extremely cold temperatures. Frostbite can cause permanent damage to the body. In severe cases, the skin tissue may be so damaged that the affected body part needs to be removed (amputated).

Stages of Frostbite

Frostnip: Mild frostbite. Skin may appear red and feel cold or numb.

Superficial Frostbite: Affected areas feel warm and tingly. Red skin turns whiter or paler.

Deep Frostbite: Skin turns white or bluish gray. Affected area will not sense cold and may feel painful. Joints and muscles may no longer function.



Note: Changes in color of affected area may be difficult to see on darker skin.

Prevent Hypothermia and Frostbite

Wear a hat or headband that covers your ears.

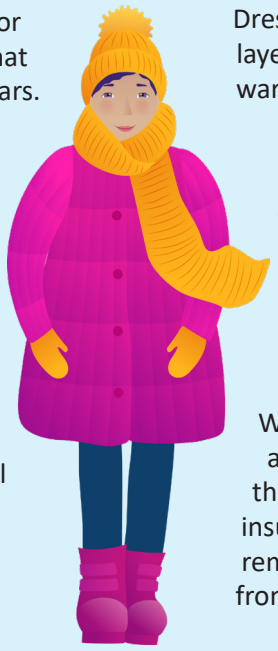
Dress in several layers of loose, warm clothing.

Limit your time outdoors.

Wear mittens with liners instead of gloves.

Avoid alcohol and drugs.

Wear socks and liners that provide insulation and remove sweat from your skin.



Who is most at risk for hypothermia and frostbite?

- People with poor blood circulation.
- People who are not dressed warmly enough.
- Older adults, especially those who do not have adequate food, clothing or heating.
- Babies sleeping in cold rooms.
- People who stay outdoors for long periods of time.
- People using drugs or alcohol.

Carbon Monoxide Poisoning

During winter power outages, people are more likely to use gasoline-powered generators, charcoal grills and kerosene and propane heaters or stoves inside without proper ventilation. These items produce carbon monoxide (also called CO) and using them inside leads to increased risk of carbon monoxide poisoning.[1]

Carbon monoxide is an odorless, colorless gas that blocks your body from taking in oxygen. Around 430 deaths from unintentional carbon monoxide poisonings occur per year in the United States.[2]

For more information on carbon monoxide poisoning, refer to the MDHHS webpage, Carbon Monoxide.

Risk of Falls

People are at increased risk of falling during cold weather. Some studies have found that over fifty percent of winter storm-related injuries were from slipping or falling on snow or ice.[3, 4]

Read on to learn about how to keep your family safe!

How can I protect myself?

Stay safe indoors

Prevent carbon monoxide poisoning

- ✓ **Do** install battery-operated or battery back-up carbon monoxide detectors near every sleeping area in your home. Check or replace the battery each spring and fall.
- ✓ **Do** have your furnace inspected every year.
- ✓ **Do** use generators outside, more than 20 feet away from your home, doors, and windows.
- ⃠ **Do not** use a generator, charcoal grill, camp stove or other gasoline or charcoal-burning device inside your home, basement, garage or near a window.
- ⃠ **Do not** use kerosene or propane heaters or stoves inside your home.
- ⃠ **Do not** run a car or truck inside a garage attached to your house, even if you leave the door open.
- ⃠ **Do not** heat your house with a gas oven or burn anything in a stove or fireplace that is not properly vented. Have your chimney cleaned and inspected regularly.

Seek medical attention right away if you suspect carbon monoxide poisoning and are feeling dizzy, light-headed or nauseated! Go outside and get fresh air at once. Call 911 or go to the nearest emergency room as quickly as possible if you suspect carbon monoxide poisoning.

Stay Safe Indoors

Make sure babies stay warm:

- Never let infants sleep in a very cold room.
- Dress babies in warmer layered clothing like footed pajamas, one-piece wearable blankets, or sleep sacks.
- Do not use loose blankets in the baby's crib to reduce the risks of sudden infant death syndrome. Learn more: Providing care for babies to sleep safely.
- If you can't keep your home warm, make temporary arrangements to stay elsewhere.

Make sure older adults stay warm:

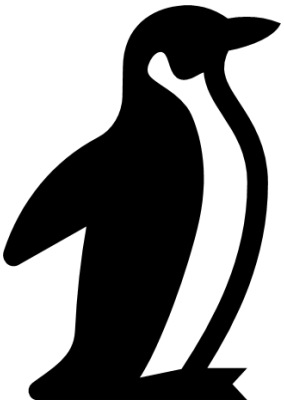
- Check on elderly friends and neighbors often to make sure their homes are heated properly.
- If you are over 65 years old, check your home temperature often during cold weather, as you may not notice a drop in temperature. Older adults can experience more health problems caused by cold exposure.

More indoor tips:

- Keep an emergency water supply on hand.
- Eat well-balanced meals and avoid alcoholic or caffeinated drinks to stay warmer.
- Insulate your home. You can either install storm windows or cover windows with plastic from inside to keep cold air out.

Stay Safe Outdoors

Prevent outdoor winter falls:



- Walk like a penguin (slowly and take short steps)! Keep feet about shoulder-width apart when walking on icy or snow-covered areas.
- Shovel and keep ice from forming on driveways, walkways and sidewalks.
- Wear slip-resistant shoes with good rubber treads.
- Carry a cell phone or let someone know you are going outside. If you slip and can't get up, you will have a way to call for help or know someone will look for you.

More outdoor tips:

- Dress warmly and stay dry.
- Know the signs of hypothermia and frostbite.
- Stay off the ice.
- Avoid over-exerting yourself in the cold.

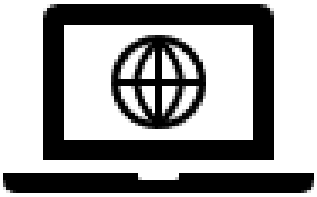
If you have heart disease or high blood pressure:

- Follow your doctor's advice about shoveling snow or other hard work in the cold.

Find more information on winter weather preparedness at bit.ly/MiReady-WinterPrep and the Centers for Disease Control and Prevention's webpage, bit.ly/Winter-Storm-Safety.

Stay Informed

The National Weather Service (NWS) issues winter weather watches, warnings and advisories.



A **Watch** gives advance notice that hazardous winter weather is *possible* and the public should get *prepared* in case it occurs in their area. An **Advisory** tells the public to *expect* winter weather events and conditions, and to be *cautious* and ready to act. A **Warning** alerts the public to *expect* hazardous winter weather, threatening to life and/or property and everyone should *take action*. Watches, Warnings and Advisories are issued by different Weather Forecast Offices (WFO) based on local criteria and personnel decisions. Michigan WFOs include: Detroit/Pontiac, Grand Rapids, Gaylord, Marquette and Northern Indiana.

Get alerts!

- Sign up for your local Emergency Notification System such as CodeBlue for weather warnings.
- Pay attention to weather reports when it is cold or if a cold emergency is declared.
- Many phone weather apps also provide NWS winter weather alert information.

Explore Michigan Data!

- Visit the MiTracking Program site and select the "**Explore Data**" button for Michigan data on carbon monoxide poisonings.
  - For CO poisoning data, select the "Health" category and "Carbon Monoxide Poisoning" content area.
- Visit the Michigan Climate and Health Adaptation Program (MICHAP) to find more about how extreme cold and other climate effects can impact human health.

Additional Tips for People without Proper Heating

- Check out MDHHS Heat & Utilities if your heating or electric service has been or will be shut off.
- Check out MDHHS Energy & Weatherization if you need help paying for energy and weatherization costs.
- Text/call Michigan 211 or contact your local health department to locate shelters and other assistance in your area.

For more information on energy assistance, refer to the Michigan Public Service Commission (MPSC) Energy Assistance and Shutoff Protection Guide.

Other Resources

- MDHHS, CO Poisoning Fact Sheet.
- MDHHS, Housing and Homelessness.
- MDHHS, Michigan Prepares Winter Weather.
- CDC, Preventing Hypothermia.
- CDC, Preventing Frostbite.
- CDC, Preparing for a Winter Storm.
- CDC, Carbon Monoxide Poisoning Basics.
- CDC, What to Do to Protect Yourself During a Power Outage.
- MI Ready, Winter Weather Emergency Preparedness.
- MI Ready, Extreme Cold.

References

1. CDC, National Center for Environmental Health. 2017. Carbon monoxide (CO) Poisoning Fact Sheet. Retrieved October 23, 2020, from https://www.cdc.gov/carbon-monoxide/factsheets/co-poisoning-fact-sheet.html.
2. Xu, Jiaquan. 2014. QuickStats: Average Annual Number of Deaths and Death Rates from Unintentional, Non–Fire-Related Carbon Monoxide Poisoning, by Sex and Age Group — United States, 1999–2010. Morbidity and Mortality Weekly Report. Retrieved November 11, 2020, from https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6303a6.htm?s_cid=mm6303a6_e.
3. Hartling L, Pickett W, Brison RJ. The injury experience observed in two emergency departments in Kingston, Ontario during "ice storm 98." Can J Public Health. 1999;90(2):95–98.
4. Piercefield E, Wendling T, Archer P, et al. Winter storm-related injuries in Oklahoma, January 2007. JSafety Res. 2011;42(1):27–32.

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