

Michigan Developmental
Disabilities Council

Emergency Preparedness

Winter Weather

Severe winter weather holds significant risks. Extreme temperatures, icy conditions, and power outages are examples of what you should be prepared for during winter months. This guide will help you be prepared in case a winter weather emergency occurs. It details what to do before, during, and after a winter storm.

Before a Storm

Prepare your home for winter. Periods of extreme cold cannot always be predicted far in advance, but weather forecasts can sometimes provide you with several days' notice. Listen to weather forecasts regularly, and check your emergency supplies whenever a period of extreme cold is predicted.

If you plan to use a fireplace or wood stove for emergency heating, have your chimney or flue inspected each year. Ask your local fire department to recommend an inspector, or you can find one in the yellow pages of your telephone directory under "chimney cleaning." Also, if you'll be using a fireplace, wood stove, or kerosene heater, install a smoke detector and a battery-operated carbon monoxide detector near the area to be heated. Test them monthly, and replace batteries twice a year.

Insulate any water lines that run along exterior walls so your water supply will be less likely to freeze. Weatherproof your home by adding weather-stripping, insulation, insulated doors and storm windows, or thermal-pane windows. If you have pets, bring them indoors. If you cannot bring them inside, provide adequate shelter to keep them warm and make sure they have access to unfrozen water.

Checklist

- Insulate walls and attic
- Caulk and weather-strip doors and windows
- Install storm windows or cover windows with plastic from the inside
- Insulate water lines
- Have chimney and flue inspected
- Install easy-to-read outdoor thermometer

Next: *Prepare your car for Winter* ➡

Prepare Your Car for Winter. Have the radiator system services every fall. Replace windshield-wiper fluid with a wintertime mixture that will not freeze. Replace any worn tires, and check the air pressure in the tires regularly. During winter, keep the gas tank near full to avoid ice in the tank and fuel lines. Also be sure to check your brakes, exhaust, heater, break fluid, oil, battery, and radiator.

Keep the following emergency supplies in your car during the winter: small battery powered radio, flashlight, windshield scraper, jumper cables, shovel, blanket and extra clothes, flares, bottled water and nonperishable foods, first aid kit, tow chain or rope, de-icer, extra antifreeze, tire repair kit and pump, and extra batteries.

Winter Weather Checklists

Stock up on emergency supplies for communication, food, safety, heating, and your car in case a storm hits.

Communication Checklist

Make sure you have at least one of the following in case there is a power failure:

- Battery-operated radio and extra batteries
- National Oceanic and Atmospheric Administration (NOAA) weather radio receiver (see www.nws.noaa.gov/nwr for more information)

Find out how your community warns the public about severe weather:

- Siren
- Radio
- TV

Listen to emergency broadcasts. Know what winter storm warning terms mean:

- Winter weather advisory: Expect winter weather conditions to cause inconvenience and hazards
- Frost/freeze warning: Expect below-freezing temperatures
- Winter storm watch: be alert; a storm is likely
- Winter storm warning: Take action; the storm is in or entering the area
- Blizzard warning: Seek shelter immediately. Snow and strong winds, near-zero visibility, deep snow drifts, and life-threatening wind chill are likely



Food and Safety Checklist

Have a week's worth of food and safety supplies. If you live far from other people, have more supplies on hand.

- Drinking water
- Canned/no-cook food (bread, crackers, dried fruits)
- Non-electric can opener
- Baby food and formula (if baby in the household)
- Prescription drugs and other medicine
- First-aid kit
- Rock-salt to melt ice on walkways
- Supply of cat litter or sand to add traction on walkways
- Flashlight and extra batteries
- Battery-powered lamps or lanterns (to prevent the risk of fire, avoid using candles.)

Water Checklist

Keep a water supply. Extreme cold can cause water pipes in your home to freeze and sometimes break.

- Leave all water taps slightly open so they drip continuously during extreme cold
- Keep the indoor temperature warm
- Allow more heated air near pipes. Open kitchen cabinet doors under the kitchen sink
- If your pipes do freeze, do not thaw them with a torch. Thaw them slowly with warm air from an electric hair dryer
- If you cannot thaw your pipes or if they are broken, use bottled water or get water from a neighbor's home
- Have bottled water on hand
- In an emergency, snow can be melted for water. Bringing water to a rolling boil for one minute will kill most germs

Heating Checklist

Have at least one of the following heat sources in case the power goes out:

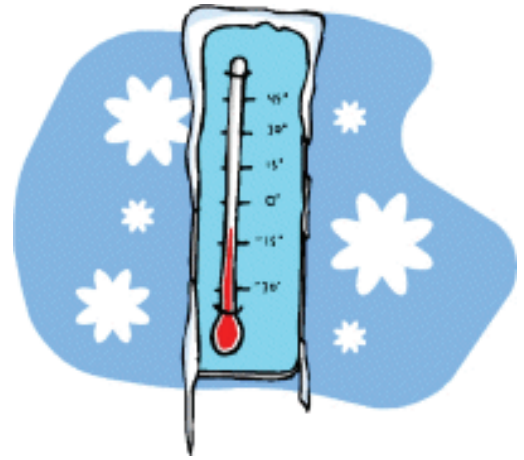
- Fireplace with plenty of dry firewood or gas log fireplace
- Portable space heaters or kerosene heaters*

*Check with your local fire department to make sure that kerosene heaters are legal in your area. Never place a space heater on top of furniture or near water. Use electric space heaters with automatic shut-off switches and non-glowing parts.

- Keep heat sources at least 3 feet away from furniture and drapes.
- Never leave children unattended near a space heater.
- Have the following safety equipment: chemical fire extinguisher, smoke alarm, carbon monoxide detector.
- Never use an electric generator indoors, inside the garage, or near the air intake of your home because of carbon monoxide poisoning.

Cooking and Lighting Checklist

- Never use charcoal grills or portable gas camp stoves indoors– the fumes are deadly
- Use battery-powered flashlights or lanterns
- Avoid using candles
- If you do use candles, never leave lit candles alone



Disability-Specific Supplies Checklist

Service animal and pet supplies:

- Food
- Extra water
- Medications
- Leash/harness

Special equipment supplies:

- Eating utensils
- Glasses
- Sanitary supplies
- Dressing devices
- Hearing devices
- Oxygen
- Walker/Cane
- Monitors
- If you use a wheelchair, have an extra battery.
- If you are deaf or have a hearing loss, consider getting a small portable battery-operated television set. Emergency broadcasts may give information in American Sign Language or open captioning

Other Tips

If you use self-administered medical treatments, keep in mind that traffic delays and severe weather can happen at any time. Be sure to have the equipment and temperature controlled fluids with you at home and when you are traveling.

If you have a cognitive disability, consider keeping a copy of any instructions or information you think you will need. Keep a copy of this information in supply kits for your home and car.

If you think you may need assistance during severe weather, form a network of people that you can call upon to help you during this time. Friends, family members, or co-workers can be part of this network. Make sure you have contact information for everyone in your network and that they have your contact information, medical information, and that they are aware of any special needs that you may have during severe weather. These are the people that will aid you during this time.



During a Storm

Be Safe Indoors.

Heat your home safely. If you plan to use a fireplace or space heater, be extremely careful. Follow the manufacturer's instructions and remember these safety tips:

- Use fireplace, wood stoves, or other combustion heaters only if they are properly vented to the outside and do not leak flue gas into the indoor space.
- Do not burn paper in a fireplace.
- Use only the type of fuel your heater is designed to use—don't substitute.
- Avoid using extension cords to plug in your space heater.

Cook safely. Never use a charcoal or gas grill indoors. Never use an electric generator indoors, inside the garage, or near the air intake of your home. Plug in appliances to the generator using individual heavy-duty, outdoor-rated cords. Do not use the generator or appliances if they are wet. Do not store gasoline indoors where fumes could ignite.

Light your home safely. If there is a power failure, use battery-powered flashlights or lanterns rather than candles, if possible. Never leave lit candles unattended.

Conserve heat. Avoid unnecessary opening of doors or windows. Close off unneeded rooms, and stuff towels or rags in cracks under doors. Close draperies or cover windows with blankets at night.

Monitor body temperature. Infants less than one year should never sleep in a cold room. Provide warm clothing for infants and maintain a warm indoor temperature. If you are over 65 years of age, check the temperature in your home often during extremely cold weather. Check on elderly friends and neighbors frequently to ensure their homes are heated.

Eat and drink wisely. Eating well-balanced meals will help you stay warmer. Do not drink alcoholic or caffeinated beverages— they cause your body to lose heat more rapidly. Instead, drink warm, sweet beverages or broth to maintain your body temperature. If you have any dietary restrictions, ask your doctor.

Be Safe Outdoors. When weather is extremely cold, and especially if there are high winds, try to stay indoors. Make any trips outside as short as possible.

Dress warmly and stay dry. Adults and children should wear a hat, a scarf or knit mask to cover face and mouth, sleeves that are snug at the wrist, mittens, water resistant coats and boots, and several layers of loose-fitting clothing. Be sure the outer layer of your clothing is tightly woven and preferably wind resistant. Wool, silk, or polypropylene inner layers of clothing will hold more body heat than cotton. Stay dry— wet clothing chills the body rapidly. Excess perspiration will increase heat loss, so remove extra layers whenever you feel too warm.

Staying safe outdoors continued 

Avoid Frostbite and Hypothermia

When exposed to cold temperatures, your body begins to lose heat faster than it can be produced. Prolonged exposure to cold will eventually use up your body's stored energy. This results in hypothermia, or abnormally low body temperature. Hypothermia affects the brain, making the victim unable to think clearly or move well. This makes hypothermia particularly dangerous because a person may not know it is happening. Hypothermia is most likely at very cold temperatures, but it can occur even at cool temperatures (above 40 degrees Fahrenheit) if a person becomes chilled from rain, sweat, or submersion in cold water.

Watch for signs of hypothermia. These include uncontrollable shivering, memory loss, disorientation, incoherence, slurred speech, drowsiness, and apparent exhaustion. If symptoms of hypothermia are detected, get the victim to a warm location and remove wet clothing. Put the person in dry clothing and wrap their entire body in a blanket. Warm the center of the body first. Give them warm, non-alcoholic or non-caffeinated beverages if they are conscious. Seek medical help as soon as possible.

Frostbite is an injury to the body that is caused by freezing. Frostbite causes a loss of feeling and color in affected areas. It most often affects the nose, ears, cheeks, chin, fingers, or toes. Frostbite can permanently damage the body, and severe cases can lead to amputation. Symptoms of frostbite include a white or grayish-yellow skin area, skin that feels unusually firm or waxy, and numbness. A victim is often unaware of frostbite until someone else points it out because the frozen tissues are numb. If a victim's temperature is below 95 degrees Fahrenheit, seek medical care immediately. Also follow these tips:

- Get into a warm room as soon as possible.
- Unless absolutely necessary, do not walk on frostbitten feet or toes. This increases the damage.
- Immerse the affected area in warm—not hot—water.
- Warm the affected area using body heat (the heat of an armpit can be used to warm frostbitten fingers)
- Do not rub the frostbitten area with snow or massage it at all. This will cause more damage.
- Do not use a heating pad, heat lamp, or the heat of a stove, fireplace, or radiator for warming. Affected areas are numb and can be easily burned.

Avoid exertion. Cold weather puts an extra strain on the heart. If you have heart disease or high blood pressure, follow your doctor's advice about shoveling snow or performing other hard work in the cold. Otherwise, if you have to do heavy outdoor chores, dress warmly and work slowly. Remember, your body is already working hard just to stay warm, so don't overdo it.



Staying safe outdoors continued ➡

Understand wind chill. This is the temperature your body feels when the air temperature is combined with the wind speed. As the speed of the wind increases, it can carry heat away from your body much more quickly. When there are high winds, serious weather-related health problems are more likely, even when temperatures are only cool. Use extra caution outdoors when there is a high wind chill.

Avoid ice. Walking on ice is extremely dangerous. Many cold-weather injuries result from falls on ice-covered sidewalks, steps, driveways and porches. Keep your steps and walkways as free of ice as possible by using rock salt or another chemical de-icing compound. Sand may also be used on walkways to reduce the risk of slipping.

Be cautious about travel.

- Listen for radio or television reports of travel advisories
- Do not travel in low visibility conditions
- Avoid traveling on ice-covered roads, overpasses, and bridges if at all possible
- If you must travel, bring a cell phone and let someone know your destination and when you expect to arrive
- Check and restock the winter emergency supplies in your car before you leave
- Never pour water on your windshield to remove ice or snow; shattering may occur
- Don't rely on a car to provide sufficient heat; the car may break down



What to do if you get stranded:

Staying in your vehicle when stranded is often the safest choice if winter storms create poor visibility or if roadways are ice covered. These steps will increase your safety when stranded:

- Tie a brightly colored cloth to the antenna as a signal to rescuers and raise the hood of the car if it is not snowing
- Move anything you need from the trunk into the passenger area
- Wrap your entire body, including your head, in extra clothing, blankets, or newspapers
- Stay awake. You will be less vulnerable to cold-related health problems
- Run the motor and heater for about 10 minutes per hour, opening one window slightly to let in air. Make sure that snow is not blocking the exhaust pipe to avoid carbon monoxide poisoning
- As you sit, keep your arms and legs moving to improve circulation
- Do not eat unmelted snow— this will lower your body temperature
- Huddle with other people for warmth

Staying Safe During Power Outages

Food Safety

If the power is out for less than 2 hours, then the food in your refrigerator or freezer will be safe to consume. While the power is out, keep the refrigerator and freezer doors closed as much as possible. If the power is out for longer than 2 hours, follow these guidelines:

- A freezer that is half full will hold food safely for up to 24 hours. A full freezer will hold food safely for 48 hours.
- For the refrigerated section, pack milk, other dairy products, fish, meat, eggs, and spoilable leftovers into a cooler surrounded by ice. Inexpensive Styrofoam coolers are fine for this purpose.
- Use a food thermometer to check the temperature of your food right before you cook or eat it. Throw away any food that has a temperature of more than 40 degrees Fahrenheit.

Safe Drinking Water

When power goes out, water purification systems may not be functioning fully. Safe water for drinking, cooking, and personal hygiene includes bottled, boiled, or treated water. Here are some general rules concerning water for drinking, cooking, and personal hygiene:

- Do not use contaminated water to wash dishes, brush your teeth, wash and prepare food, wash your hands, make ice, or make baby formula.
- If you use bottled water, be sure it came from a safe source. If you aren't sure, you should boil it or treat it before you use it.
- Boiling water, when practical, is the preferred way to kill harmful bacteria. Bring water to a rolling boil for 1 minute.
- When you cannot boil water, you can treat water with chlorine tablets, iodine tablets, or unscented household chlorine bleach. Follow directions for tablets. For bleach, add 1/8 teaspoon of bleach per gallon of water if the water is clear. For cloudy water, add 1/4 teaspoon of bleach per gallon. Mix solution thoroughly and let it stand for about 30 minutes before using.

Preventing Carbon Monoxide Poisoning

When power outages occur during winter storms, the use of alternative sources of fuel or electricity for heating, cooling, or cooking can cause carbon monoxide poisoning to build up in homes, garages, or campers. The most common symptoms of carbon monoxide poisoning are headache, dizziness, weakness, nausea, vomiting, chest pain, and confusion. To prevent poisoning, never use a gas range or oven to heat a home. Never leave a motor running in a vehicle parked in an enclosed or partially enclosed space, like a garage. Never use a charcoal grill, hibachi, lantern, or portable camping stove inside a home or camper. Never run a generator inside a basement or enclosed structure. Never run a motor vehicle, generator, or any gasoline-powered engine outside an open window, door, or vent where exhaust can vent into an enclosed area.

More Resources

For more information on winter storms, visit www.nws.noaa.gov/om/brochures/winterstorm.pdf or <http://www.nws.noaa.gov/om/winter/>

The spring snowmelt flood potential will be issued in February and March and can be found at www.weather.gov.

This guide was written with information from <http://www.bt.cdc.gov/disasters/winter/>.

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