**WINTER STORM SAFETY**

**About**

Each year, hundreds of Americans are injured or killed by exposure to cold, vehicle accidents on wintry roads, and fires caused by the improper use of heaters. Learn what to do to keep your loved ones safe during blizzards and other winter storms!

Take immediate precautions if you hear these words on the news:

* Winter Storm WARNING: Life-threatening, severe winter conditions have begun or will begin within 24 hours.
* Blizzard WARNING: Sustained winds or frequent gusts of 35 miles per hour or greater, plus considerable falling or blowing snow reducing visibility to less than a quarter mile, expected to prevail for three hours or longer.

More winter storm words to listen for: winter storm, snow, storm, blizzard, fire wood

**BEFORE**

Protecting your family

* Talk with your family about what to do if a winter storm watch or warning is issued. Discussing winter storms ahead of time helps reduce fear, particularly for young children.
* Have your vehicle winterized before the winter storm season to decrease your chance of being stranded in cold weather.
* Have a mechanic check your battery, antifreeze, wipers and windshield washer fluid, ignition system, thermostat, lights, flashing hazard lights, exhaust system, heater, brakes, defroster, and oil.
* Install good winter tires with adequate tread. All-weather radials are usually adequate but some jurisdictions require vehicles to be equipped with chains or snow tires with studs.
* Keep in your vehicle:
  + A windshield scraper and small broom –
  + A small sack of sand for generating traction under wheels and a set of tire chains or traction mats –
  + Matches in a waterproof container –
  + A brightly colored (preferably red) cloth to tie to the antenna –
  + An emergency supply kit, including warm clothing.
* Keep your vehicle’s gas tank full so you can leave right away in an emergency and to keep the fuel line from freezing.
* Keep a supply of non-clumping kitty litter to make walkways and steps less slippery.
* Service snow removal equipment before the winter storm season and maintain it in good working order.
* Keep handy a warm coat, gloves or mittens, hat, water-resistant boots, and extra blankets and warm clothing for each member of the household.

Protecting your pets & animals

* Bring your companion animals indoors. - Ensure that you have supplies for clean up for your companion animals, particularly if they are used to eliminating outdoors (large plastic bags, paper towels, and extra cat litter).
* Create a place where your other animals can be comfortable in severe winter weather: - Horses and livestock should have a shelter where they can be protected from wind, snow, ice, and rain. - Grazing animals should have access to a protected supply of food and non-frozen water.
* Be aware of the potential for flooding when snow and ice melt and be sure that your animals have access to high ground that is not impeded by fencing or other barriers. You may not be able to get to them in time to relocate them in the event of flooding. - Ensure that any outbuildings that house or shelter animals can withstand wind and heavy snow and ice- Install snow fences in rural areas to reduce drifting snow on roads and paths, which could block access to homes, barns, and animals' feed and water.

Protecting your home

* Learn how to protect pipes from freezing
* Make sure your home heating sources are installed according to local codes and permit requirements and are clean and in working order.
* Make sure your home is properly insulated. Caulk and weather-strip doors and windowsills to keep cold air out.
* Install storm windows or cover windows with plastic from the inside to provide an extra layer of insulation to keep cold air out.
* Consider buying emergency heating equipment, such as a wood- or coal-burning stove or an electric or kerosene heater. - Stoves must be properly vented and in good working order. Dispose of ashes safely. Keep a supply of wood or coal on hand. - Electric space heaters, either portable or fixed, must be certified by an independent testing laboratory. Plug a heater directly into the wall socket rather than using an extension cord and unplug it when it is not in use. - Use a kerosene heater only if permitted by law in your area; check with your local fire department. Use only the correct fuel for your unit. Properly ventilate the area. Refuel the unit outdoors only, and only when the unit is cool. Follow all of the manufacturer's instructions.
* Consider storing sufficient heating fuel. Regular fuel sources may be cut off. Be cautious of fire hazards when storing any type of fuel.
* If you have a fireplace, consider keeping a supply of firewood or coal. Be sure the fireplace is properly vented and in good working order and that you dispose of ashes safely.
* Consider installing a portable generator, following our safety tips to avoid home fires and carbon monoxide poisoning
* Consider purchasing flood insurance, if you live in a flood-prone area, to cover possible flood damage that may occur during the spring thaw. Homeowners' policies do not cover damage from floods. Ask your insurance agent about the National Flood Insurance Program (NFIP) if you are at risk. More information on NFIP is available at www.fema.gov/nfip.

Right before a blizzard / winter storm

If you do nothing else:

* Listen to local area radio, NOAA radio or TV stations for the latest information and updates.
* Be prepared to evacuate if you lose power or heat and know your routes and destinations. Find a local emergency shelter.
* Check emergency kit and replenish any items missing or in short supply, especially medications and medical supplies. Keep it nearby.
* Be sure you have ample heating fuel.
* If you have alternative heating sources, such as fireplaces, wood- or coal-burning stoves, or space heaters, be sure they are clean and in working order.
* Bring your companion animals inside and ensure that your horses and livestock have blankets if appropriate and unimpeded access to shelter, food, and non-frozen water.

**DURING**

Staying Safe During a Winter Storm or Blizzard

* Stay indoors and wear warm clothes. Layers of loose-fitting, lightweight, warm clothing will keep you warmer than a bulky sweater. If you feel too warm, remove layers to avoid sweating; if you feel chilled, add layers.
* Listen to a local station on battery-powered radio or television or to NOAA Weather Radio for updated emergency information.
* Bring your companion animals inside before the storm begins.
* Move other animals to sheltered areas with a supply of non-frozen water. Most animal deaths in winter storms are caused by dehydration.
* Eat regularly. Food provides the body with energy for producing its own heat.
* Keep the body replenished with fluids to prevent dehydration. Drink liquids such as warm broth or juice. Avoid caffeine and alcohol. Caffeine, a stimulant, accelerates the symptoms of hypothermia. Alcohol, such as brandy, is a depressant and hastens the effects of cold on the body. Alcohol also slows circulation and can make you less aware of the effects of cold. Both caffeine and alcohol can cause dehydration.
* Conserve fuel. Winter storms can last for several days, placing great demand on electric, gas, and other fuel distribution systems (fuel oil, propane, etc.). Lower the thermostat to 65° F (18° C) during the day and to 55° F (13° C) at night. Close off unused rooms, and stuff towels or rags in cracks under the doors. Cover the windows at night.
* Check on relatives, neighbors, and friends, particularly if they are elderly or if they live alone.

Staying Safe Outside

* If you must go outside, protect yourself from winter storm hazards:
* Wear layered clothing, mittens or gloves, and a hat. Outer garments should be tightly woven and water repellent. Mittens or gloves and a hat will prevent the loss of body heat.
* Cover your mouth to protect your lungs from severely cold air. Avoid taking deep breaths; minimize talking.
* Watch for signs of hypothermia and frostbite.
* Keep dry. Change wet clothing frequently to prevent a loss of body heat. Wet clothing loses much of its insulating value and transmits heat rapidly away from the body.
* Stretch before you go out. If you go out to shovel snow, do a few stretching exercises to warm up your body. This will reduce your chances of muscle injury.
* Avoid overexertion, such as shoveling heavy snow, pushing a vehicle, or walking in deep snow. The strain from the cold and the hard labor may cause a heart attack. Sweating could lead to a chill and hypothermia.
* Walk carefully on snowy, icy sidewalks. Slips and falls occur frequently in winter weather, resulting in painful and sometimes disabling injuries.
* If you must go out during a winter storm, use public transportation if possible. About 70 percent of winter deaths related to ice and snow occur in automobiles.

Driving in Winter Conditions

* Check your vehicle emergency supplies kit and replenish it if necessary.
* Bring enough of the following for each person:
  + Blankets or sleeping bags
  + Rain gear, extra sets of dry clothing, mittens, socks, and wool hats
  + Newspapers for insulation
  + Plastic bags for sanitation
  + Canned fruit, nuts, and high energy snacks (Include a non-electric can opener if necessary)
  + Warm broth in a thermos and several bottles of water
  + Keep a cell phone or two-way radio with you. Make sure the battery is charged.
  + Plan to travel during daylight and, if possible, take at least one other person with you.
* Let someone know your destination, your route, and when you expect to arrive. If your vehicle gets stuck along the way, help can be sent along your predetermined route.
* Before leaving, listen to weather reports for your area and the areas you will be passing through, or call the state highway patrol for the latest road conditions.
* Be on the lookout for sleet, freezing rain, freezing drizzle, and dense fog, which can make driving very hazardous

If You Become Stranded

* Stay in the vehicle and wait for help. Do not leave the vehicle to search for assistance unless help is visible within 100 yards (91 meters). You can quickly become disoriented and confused in blowing snow.
* Display a trouble sign to indicate you need help. Hang a brightly colored cloth (preferably red) on the radio antenna and raise the hood after snow stops falling.
* Run the engine occasionally to keep warm. Turn on the engine for about 10 minutes each hour (or five minutes every half hour). Running the engine for only short periods reduces the risk of carbon monoxide poisoning and conserves fuel. Use the heater while the engine is running. Keep the exhaust pipe clear of snow, and slightly open a downwind window for ventilation.
* Leave the overhead light on when the engine is running so that you can be seen.
* Do light exercises to keep up circulation. Clap your hands and move your arms and legs occasionally. Try not to stay in one position for too long.
* If more than one person is in the vehicle, take turns sleeping. If you are not awakened periodically to increase body temperature and circulation, you can freeze to death.
* Huddle together for warmth. Use newspapers, maps, and even the removable floor mats for added insulation. Layering items will help trap more body heat.
* Watch for signs of frostbite and hypothermia. Severe cold can cause numbness, making you unaware of possible danger.
* Drink fluids to avoid dehydration, which can make you more susceptible to the ill effects of cold and to heart attacks.
* Avoid overexertion. Cold weather puts an added strain on the heart. Shoveling snow or pushing a vehicle can bring on a heart attack or make other medical conditions worse.

**AFTER**

After a Winter Storm

* Continue listening to local news or a NOAA Weather Radio for updated information and instructions. Access to some parts of the community may be limited or roads may be blocked.
* Help people who require special assistance—infants, elderly people, those without transportation, large families who may need additional help in an emergency situation, people with disabilities, and the people who care for them.
* Avoid driving and other travel until conditions have improved.
* Avoid overexertion. Heart attacks from shoveling heavy snow are a leading cause of death during the winter.
* Check on your animals and ensure that their access to food and water is unimpeded by drifted snow, ice, or other obstacles.
* If you are using a portable generator, take precautions against carbon monoxide poisoning, electrocution and fire.
* Identifying & Treating Frostbite and Hypothermia
* Frostbite and hypothermia are cold-related emergencies that may quickly become life or limb threatening.

Take these steps to avoid frostbite and hypothermia:

* Be aware of the wind chill. Dress appropriately and avoid staying in the cold too long. Wear a hat and gloves when appropriate with layers of clothing. Avoid unnecessary exposure of any part of the body to the cold.
* Drink plenty of warm fluids or warm water but avoid caffeine and alcohol. Stay active to maintain body heat.
* Take frequent breaks from the cold.
* Get out of the cold immediately if the signals of hypothermia or frostbite appear.

Frostbite

* Frostbite is the freezing of a specific body part such as fingers, toes, the nose or earlobes.
* Signs of frostbite:
* Lack of feeling in the affected area
* Skin that appears waxy, is cold to the touch, or is discolored (flushed, white or gray, yellow or blue)

What to do for frostbite:

1. Move the person to a warm place

2. Handle the area gently; never rub the affected area

3. Warm gently by soaking the affected area in warm water (100–105 degrees F) until it appears red and feels warm

4. Loosely bandage the area with dry, sterile dressings

5. If the person’s fingers or toes are frostbitten, place dry, sterile gauze between them to keep them separated

6. Avoid breaking any blisters

7. Do not allow the affected area to refreeze

8. Seek professional medical care as soon as possible

Hypothermia

Hypothermia is the cooling of the body caused by the failure of the body’s warming system. The goals of first aid are to restore normal body temperature and to care for any conditions while waiting for EMS personnel.

Signs of hypothermia:

* Shivering
* Numbness or weakness
* Glassy stare
* Apathy or impaired judgment
* Loss of consciousness

What to do for hypothermia:

1. CALL 9-1-1 or the local emergency number

2. Gently move the person to a warm place

3. Monitor breathing and circulation

4. Give rescue breathing and CPR if needed

5. Remove any wet clothing and dry the person

6. Warm the person slowly by wrapping in blankets or by putting dry clothing on the person.

* Hot water bottles and chemical hot packs may be used when first wrapped in a towel or blanket before applying. Do not warm the person too quickly, such as by immersing him or her in warm water.
* Warm the core first (trunk, abdomen), not the extremities (hands, feet).

Recovering After a Winter Storm

Once you are physically safe, take time to ensure your family’s emotional and financial well-being.