

WINTER SAFETY-ACCIDENT PREVENTION ALERT

While the danger from winter weather varies across the county, nearly all Americans, regardless of where they live, are likely to face some type of severe winter weather at some point in their lives. Winter storms can range from a moderate snow over a few hours to a blizzard with blinding, wind-driven snow that lasts for several days. Many winter storms are accompanied by dangerously low temperatures and sometimes by strong winds, icing, sleet and freezing rain. one of the primary concerns is the winter weather's ability to knock out heat, powers and communications services to your home or office sometimes for days at a time. Heavy snowfall and extreme cold can immobilize an entire region.



The National Weather Service refers to winter storms as the “Deceptive Killers” because most deaths are indirectly related to the storm. Instead, people die in traffic accidents on icy roads and of hypothermia from prolonged exposure to cold. It is important to be prepared for winter weather before it sticks.

BEFORE WINTER STORMS AND EXTREME COLD:

To prepare for a winter storm you should add the following supplies to your emergency kit:

- Rock salt or more environmentally safe products to melt ice on walkways, Visit the environmental protection agency for a complete list of recommend products
- Sand or kitty litter to improve traction
- Snow shovels and other snow removal equipment
- Sufficient heating fuel. You may become isolated in your home and regular fuel sources may be cut off. Store a good supply of dry, seasoned wood for your fireplace or wood burning stove.
- Adequate clothing and blankets to keep you warm
- Make a family communication plan. Plan what your family will do in case of an emergency and how to get a hold of each other if the whole family is not together.
- Listen to your local news channels for critical information from the National Weather Center. Be alert to changing weather conditions
- Minimize travel. If travel is necessary, keep a disaster supplies kit in your vehicles.
- Bring pets/companion animals inside during winter weather. Move other animals or livestock to sheltered areas with non-frozen drinking water.

DURING WINTER STORMS AND EXTREME COLD:

- Stay indoors during the storm
- Walk Carefully on snowy, icy walkways
- Avoid over excretion when shoveling snow. Overexertion can bring on a heart attack—a major cause of death in the winter. If you must shovel snow, stretch before gong outside.
- Keep Dry. Change wet clothing frequently to prevent a loss of body heat
- Watch for signs of frostbite. These include loss of feeling and whole poor plate appearance in extremities such as fingers, toes, ear lobes, and the tip of the nose. IF symptoms are detected get medical help immediately.
- Watch for signs of hypothermia. These include uncontrollable shivering, memory loss, disorientation, incoherence, slurred speech, drowsiness and apparent exhaustion. If symptoms are detected get medical help immediately.
 - Drive only if it is absolutely necessary. If you must drive, travel in the day and do not travel alone. Stay on main roads and don't take short cuts.
 - Let someone know your destination, your route, and when you expect to arrive. If your car gets stuck along the way. Help can be sent along your predetermined route.
 - If the pipes freeze, remove any insulation or layers of newspapers and wrap pipes in rags, Completely open faucets and pour hot water over the pipes.
 - Maintain ventilation when using kerosene heaters to avoid build up of



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A major winter storm can be lethal. Preparing for cold weather conditions and responding to them effectively can reduce the dangers caused by winter storms. The following frequently asked questions will help workers understand how winter storms may affect their health and safety.



What are some different types of winter storms?

Blizzards: Winds of 35 mph or more with snow and blowing snow reducing visibility to less than ¼ mile for at least 3 hours.

Blowing Snow: Wind-driven snow that reduces visibility. Blowing snow may be falling snow and/or snow on the ground picked up by the wind.

Snow Squalls: Brief, intense snow showers accompanied by strong, gusty winds. Accumulation may be significant.

Snow Showers: Snow falling at varying intensities for brief periods of time. Some accumulation is possible.

Snow Flurries: Light snow falling for short durations with little or no accumulation.

Ice Storms: May include freezing rain or sleet.

What are public warnings for winter weather and what do they mean?

Winter storm watch: Be alert, a storm is likely.

Winter weather advisory: Winter weather conditions are expected to cause significant inconveniences and may be hazardous, especially to motorists.

Frost/freeze warning: Below freezing temperatures are expected and may cause damage to plants, crops, or fruit trees.

Winter storm warning: Take action, the storm is in or entering the area.

Blizzard warning: Snow and strong winds combined will produce blinding snow, near zero visibility, deep drifts, and life-threatening wind chill--seek refuge immediately.

What kinds of injuries are associated with winter storms?

According to National Weather Service about 70 percent of injuries during winter storms result from vehicle accidents, and about 25 percent of injuries result from being caught out in the storm.

Some of the hazards associated with working in winter storms include:

- ✦ Driving accidents due to slippery roadways
- ✦ Carbon monoxide poisoning
- ✦ Slips and falls due to slippery walkways
- ✦ Hypothermia and frostbite due to the cold weather exposure
- ✦ Being struck by falling objects such as icicles, tree limbs, and utility poles
- ✦ Electrocutation due to downed power lines or downed objects in contact with power lines
- ✦ Falls from heights (e.g. falls from roof or skylights while removing snow)
- ✦ Roof collapse under weight of snow (or melting snow if drains are clogged)
- ✦ Burns from fires caused by energized line contact or equipment failure
- ✦ Exhaustion from working extended shifts

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What is wind chill?

Wind chill is an estimation of how cold it feels outside when the effects of temperature and wind speed are combined. Unprotected portions of the body, such as the face or hands, can chill rapidly and should be protected as much as possible from the cold wind. A 10 mile per hour wind combined with a 30°F temperature can have the same chilling effect on the body as a temperature of 21°F in a calm atmosphere. The Weather Service issues this information as the wind chill index.

What is frostbite?

Frostbite is a severe reaction to cold exposure that causes freezing in the deep layers of skin and tissue. Frostbite can cause permanent damage. It is recognizable by a loss of feeling and a waxy-white or pale appearance in fingers, toes, nose, or ear lobes.

What is hypothermia?

Hypothermia occurs when the body temperature drops to less than 95°F. Symptoms of hypothermia include uncontrollable shivering, slow speech, memory lapses, frequent stumbling, drowsiness, and exhaustion.

What can be done to avoid frostbite and hypothermia?

- ✦ Recognize the environmental and workplace conditions that lead to potential cold-induced illnesses and injuries.
- ✦ Learn the signs and symptoms of cold-induced illnesses/injuries and what to do to help those who are affected.
- ✦ Train the workforce about cold-induced illnesses and injuries.
- ✦ Select proper clothing for cold, wet, and windy conditions.
- ✦ Layer clothing to adjust to changing environmental temperatures. Wear a hat and gloves, in addition to underwear that will keep water away from the skin (polypropylene).
- ✦ Take frequent short breaks in warm dry shelters to allow the body to warm up.
- ✦ Perform work during the warmest part of the day.
- ✦ Avoid exhaustion or fatigue because energy is needed to keep muscles warm.
- ✦ Use the buddy system (work in pairs).
- ✦ Drink warm, sweet beverages (sugar water, sports-type drinks). Avoid drinks with caffeine (coffee, tea, or hot chocolate) or alcohol.
- ✦ Eat warm, high-calorie foods like pasta dishes.

Who is at increased risk of frostbite and hypothermia?

Victims of hypothermia are often (1) elderly people with inadequate food, clothing, or heating; (2) babies sleeping in cold bedrooms; (3) people who remain outdoors for long periods - the homeless, hikers, hunters, etc.; and (4) people who drink alcohol or use illicit drugs. Victims may also include people with predisposing health conditions such as cardiovascular disease, diabetes, and hypertension, people that take certain medication (check with your healthcare provider and ask if any medicines you are taking affect you while working in cold environments), and people in poor physical condition or who have a poor diet.

How do I treat a person with frostbite or hypothermia?

If frostbite or hypothermia is suspected, begin warming the person slowly and seek immediate medical assistance. Warm the person's trunk first. Use your own body heat to help. Arms and legs should be warmed last because stimulation of the limbs can drive cold blood toward the heart and lead to heart failure. Put person in dry clothing and wrap their entire body in a blanket. Never give a frostbite or hypothermia victim something with caffeine in it (like coffee or tea) or alcohol. Caffeine, a stimulant, can cause the heart to beat faster and hasten the effects the cold has on the body. Alcohol, a depressant, can slow the heart and also hasten the ill effects of cold body temperatures.

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How do I walk safely on snow and ice?

Walking on snow or ice is especially treacherous and wearing proper footwear is essential. A pair of well insulated boots with good rubber treads is a must for walking during or after a winter storm. Keeping a pair of rubber over-shoes with good treads which fit over your street shoes is a good idea during the winter months.

- ✦ When walking on an icy or snow-covered walkway, take short steps and walk at a slower pace so you can react quickly to a change in traction.
- ✦ When walking on a sidewalk which has not been cleared and you must walk in the street, walk *against* the traffic and as close to the curb as you can.
- ✦ Be on the lookout for vehicles which may have lost traction and are slipping towards you. Be aware that approaching vehicles may not be able to stop at crosswalks or traffic signals.
- ✦ At night, wear bright clothing or reflective gear, as dark clothing will make it difficult for motorists to see you.

During the daytime, wear sunglasses to help you see better and avoid hazards.

What hazards are associated with repairing downed or damaged power lines?

The work activities involved with repairing downed or damaged lines entail many of the activities involved in installing and removing overhead lines and in general maintenance on overhead lines. The crucial difference is that in emergency conditions, such as winter storms, there are unknown hazards and the potential for changing hazards as work progresses. Under these conditions workers must be extra vigilant and cautious.

Potential hazards include:

- ✦ Electrocutation by contacting downed energized lines, or contacting objects, such as broken tree limbs, in contact with fallen lines.
- ✦ Falls from heights.
- ✦ Being struck or crushed by falling poles, towers or parts thereof, tree limbs, ice accumulation on lines, towers and poles.
- ✦ Being injured in vehicular accidents when responding to an emergency situation.
- ✦ Burns from fires caused by energized line contact or equipment failure.

What protective measures should be utilized when working on or around downed or damaged power lines?

Stay well clear of any downed or damaged power lines. Establish a safe distance from the lines and report the incident to the responsible authority. Only properly-trained electrical utility workers should handle damaged power lines.

Electrical utility workers should first assess the hazards present in order to minimize the chances of exacerbating the situation. Ideally the lines involved should be de-energized, but this may not be possible in all situations.

When working on downed or damaged power lines, electrical workers should utilize proper electrical safety work practices and personal protective equipment, as usual. However, as mentioned previously, extra caution should be exercised when working in winter storms, due to the adverse conditions present.

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What hazards exist during removal of downed trees during a winter storm, and what safety precautions should be taken?

Clearing downed trees is a critical job during a winter storm. When winter storms occur, downed trees can block public roads and damage power lines. Emergency crews are often sent out to clear downed trees during a winter storm.

Potential hazards include:

- ✦ Electrocutation by contacting downed energized lines or contacting broken tree limbs in contact with fallen lines.
- ✦ Falls from trees.
- ✦ Being struck or crushed by falling tree limbs or ice.
- ✦ Being injured by emergency equipment such as chain saws and chippers.

Proper PPE including gloves, chaps, foot protection, eye protection, fall protection, hearing protection and head protection should be worn by workers using chainsaws and chippers to clear downed trees.

Only appropriate power equipment that is built to be used outdoors and in wet conditions should be used. All saws, chippers, and other tools should be used properly and according to their intended application. It is important that all equipment is well-maintained and functioning correctly in order for use. In addition, all equipment should have proper guarding, working controls, and other safety features as installed by the manufacturer.

What safety precautions can I take if I must drive in a winter storm?

Inspect the vehicle to ensure the following systems are operating properly:

- ✦ *Brakes:* Brakes should provide even and balanced braking. Also check that brake fluid is at the proper level.
- ✦ *Cooling System:* Ensure a proper mixture of 50/50 antifreeze and water in the cooling system at the proper level.
- ✦ *Electrical System:* Check that battery is fully charged and that connections are clean. Check that the alternator belt is in good condition with proper tension.
- ✦ *Engine:* Inspect all engine systems.
- ✦ *Exhaust System:* Check exhaust for leaks and that all clamps and hangers are snug.
- ✦ *Tires:* Check for proper tread depth and no signs of damage or uneven wear. Check for proper tire inflation.
- ✦ *Oil:* Check that oil is at proper level.

Visibility Systems: Inspect all exterior lights, defrosters (windshield and rear window), and wipers. Install winter windshield wipers.

Also carry an emergency kit in the vehicle with the following items:

- ✦ Blankets/sleeping bags
- ✦ Cellular telephone or two-way radio
- ✦ Windshield scraper
- ✦ Snow brush
- ✦ Flashlight with fresh/extra batteries
- ✦ Extra winter clothes
- ✦ Shovel
- ✦ Tow chain
- ✦ Matches
- ✦ Traction aids (bag of sand or cat litter)
- ✦ Emergency flares
- ✦ Jumper cables
- ✦ Snacks
- ✦ Water