

Welcome to Michigan

An Illuminating Guide to Get Through a Michigan Winter



Tips and Tricks for New Michigan Residents



Winter Terms

Winter terms that you should know now that you're living in Michigan

Blizzard

Winds of 35 mph or more with snow and blowing snow reducing visibility to less than a quarter mile for at least three hours.

Blizzard Warning

Issued for sustained or gusty winds of 35 mph or more, and falling or blowing snow creating visibilities at or below a quarter mile; these conditions should persist for at least three hours.

Blowing Snow

Wind-driven snow that reduces visibility and causes significant drifting. Blowing snow may be snow that is falling or loose snow on the ground picked up by the wind.

Freezing Rain

Liquid rain when the temperature near the surface is below freezing. This causes it to freeze onto surfaces, such as trees, cars, and roads, forming a coating or glaze of ice. Even small accumulations of ice can cause a significant hazard.

Lake-effect Snow

Snow showers that are created when cold, dry air passes over a large warmer lake, such as one of the Great Lakes, and picks up moisture and heat.

Lake Effect Snow Advisory

Issued when accumulation of lake effect snow will cause significant inconvenience.

Lake Effect Snow Squall

A local, intense, narrow band of moderate to heavy snow squall that can extend long distances inland. It may persist for many hours. It may also be accompanied by strong, gusty, surface winds and possibly lightening. Accumulations can be 6 inches or more in 12 hours.

Lake Effect Snow Warning

Issued when heavy lake snow is imminent or occurring.

Winter Terms

Sleet

Rain drops that freeze into ice pellets before reaching the ground. Sleet usually bounces when hitting a surface and does not stick to objects. However, it can accumulate like snow and cause a hazard to motorists.

Snow Squalls

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

Wind Chill

Not the actual temperature, but rather how wind and cold feel on exposed skin. As the wind increases, heat is carried away from the body at an accelerated rate, driving down the body temperature.

Wind Chill Advisory

Issued when wind chill temperatures are expected to be a significant inconvenience to life with prolonged exposure and, if caution is not exercised, could lead to hazardous exposure.

Wind Chill Warning

Issued when wind chill temperatures are expected to be hazardous to life within several minutes of exposure.

Winter Storm Outlook

Issued prior to a Winter Storm Watch. The Outlook is given when forecasters believe winter storm conditions are possible and are usually issued three to five days in advance of a winter storm.

Winter Storm Warning

Issued when hazardous winter weather in the form of heavy snow, heavy freezing rain, or heavy sleet is imminent or occurring. Winter Storm Warnings are usually issued 12 to 36 hours before the beginning of a winter storm.

Winter Weather Advisories

Issued for accumulations of snow, freezing rain, freezing drizzle, and sleet that will cause significant inconveniences and, if caution is not exercised, could lead to life-threatening situations.

Be Prepared

At home and in your car for winter. When preparing for a possible situation, think first about the basic needs for survival: water, food, air and warmth.

Here are basic emergency supply kits:

What to have at home:

Water, one gallon of water per person per day for at least three days, for drinking and sanitation.

Food, at least a three-day supply of non-perishable food.

Battery-powered or hand crank radio and a NOAA Weather Radio with tone alert and extra batteries for both.

Flashlight and extra batteries.

First aid kit.

Whistle to signal for help.

Dust mask, to help filter contaminated air and plastic sheeting, and duct tape to shelter-in-place.

Moist towelettes, garbage bags and plastic ties for personal sanitation.

Wrench or pliers to turn off utilities.

Can opener for food (if kit contains canned food).

Local maps.

Cell phone with chargers.

Additional items to consider:

Prescription medications and glasses

Infant Formula and diapers.

Pet food and extra water for your pet.

Important family documents such as copies of insurance policies, identification and bank account records in a waterproof, portable container.

Cash or traveler's checks and change.

Emergency reference material such as a first aid book or information from www.ready.gov.
Sleeping bag or warm blanket for each person.
Complete change of clothing including a long-sleeved shirt, long pants and sturdy shoes.

Household chlorine bleach and medicine dropper – When diluted nine parts water to one part bleach, bleach can be used as a disinfectant. Or in an emergency, you can use it to treat water by using 16 drops of regular household liquid bleach per gallon of water. Do not use scented or color-safe bleaches with added cleaner.

Fire extinguisher.

Matches in a waterproof container.

Feminine supplies and personal hygiene items.

Mess kits, paper cups, plates and plastic utensils, paper towels.

Paper and pencil.

Books, games, puzzles or other activities for kids.

Be Prepared

What To Have in Your Car:

Jumper cables to restart engine.

NOAA radio to listen to traffic reports and emergency messages.

Cat litter or sand for tire traction.

Shovel to scrape snow away from tires.

Ice scraper to clear windshield.

Warm clothes, gloves, a hat, sturdy boots, warm jacket and even a change of clothes.

Blankets to keep warm inside the vehicle.

Flashlights and extra batteries for increase visibility.

First aid kit; also pack necessary medications in case you are stuck on the road.

Food: Pack items containing protein such as nuts and energy bars.

Water: Bring enough for each person in your car and any pets.

Also consider...

Bring a fully charged cell phone if you have one with a list of emergency numbers (don't forget your phone charger).

Flares or reflective triangle.

Make sure your gas tank is full.

Baby formula and diapers if you have a small child.

If you find yourself stranded, be safe and stay in your car, put on your flashers, call for help and wait until it arrives.



Winterize Your Car

Tips from FEMA & California's Bureau of Automotive Repair

The battery and ignition system should be in top condition with clean battery terminals. Have your battery tested, especially if it's near the end of its warranty. Inspect the battery cables for corrosion, cracks and dirt.

Check and repair windshield wiper equipment; ensure proper washer fluid level. Replace dry and cracked wiper blades and top off the wiper fluid (**DO NOT USE WATER!**). Check them before the first storm of the season by turning them on and making sure they evenly wipe the windshield.

Ensure the thermostat and defroster work properly. You may want to have a professional inspect the entire heating system.

Check lights and flashing hazard lights for service-ability. Properly functioning lights are crucial for driving in winter fog. Test them to make sure they work, especially brake lights and turn signals.

Check for leaks and crimped pipes in the exhaust system repair or replace as necessary. Carbon monoxide is deadly and usually collects without warning.

Check brakes for wear and proper fluid levels. Have your brakes checked by a licensed adjuster.

Check oil for level and weight. Heavier oils congeal more at low temperatures and do not lubricate as well.

Consider changing your tires to snow tires.

Replace fuel and air filters. Keep water out of the system by using additives and maintaining a full tank of gas.



Winterize Your Car

Tips from FEMA & California's Bureau of Automotive Repair

Flush and refill the radiator according to the manufacturer's specifications. This service should include replacing the pressure cap and adding antifreeze if necessary. A quality repair shop has a tool that can check your car's antifreeze/coolant to make sure that it will provide adequate freeze protection.

Regularly check the air pressure in your tires (including the spare), and inspect them for signs of excessive wear. Uneven or excessive tread wear is an indication that it may be time for rotation or replacement.

Inspect the hoses and belts for cracks, soft spots or bulges. If you find a problem, have the hose or belt replaced.

Often ignored, your car's "**Check Engine**" or "**Malfunction Indicator**" light is the first sign of a problem. Have your car checked by a qualified technician if the light is on

Try to keep your **tank at least half full**, particularly when driving at night, in bad weather or long distances.

If you carry a **cell phone for emergencies**, make sure the battery is fully charged.



Dress For The Cold

Each year dozens of Americans die due to exposure to cold. Before you head out in this cold season, make sure you are dressed appropriately. Take the time to put on the proper clothes and footwear to keep yourself warm and dry. You don't want to be caught off guard if you are suddenly caught outside in brutal temperatures.

Wear Layers of loose-fitting, lightweight, warm clothing. Trapped air between the layers will insulate you. This also gives you the option of removing individual layers if you get too warm, so you can adjust to temperature changes.

Outer Garments, like coats, jackets, vests and snow pants, should all be tightly woven, water-repellent and hooded.

Wear a hat! You may have heard this before, but it's true: 40 to 50 percent of your body heat can be lost from your head. Make sure kids wear hats in the cold weather, too.

Cover your mouth to protect your lungs from extreme cold. You can use a scarf to do this.

Mittens, snug at the wrist, are better than gloves. They will keep your hands warmer.

Understand the hazards of wind chill, which combines the cooling effects of cold temperatures on exposed skin. As the wind increases, heat is carried away from a person's body at an accelerated rate, driving down body

temperature. Keep in mind the wind chill temperature before you head out.

Try to stay dry and out of the wind. The windy weather will make you feel colder.

Wear waterproof, insulated boots to help avoid hypothermia or frostbite by keeping your feet warm and dry and to maintain your footing on ice and snow.

Get out of wet clothes immediately, and warm the core body temperature with a blanket or warm fluids like hot cider or soup.

Check on people who require special assistance such as elderly people living alone, people with disabilities and children - make sure they are dressed properly before venturing out into the cold.



Frostbite & Hypothermia

Frostbite is damage to body tissue caused by extreme cold. A wind chill of minus 20°F will cause frostbite in just 30 minutes. Frostbite causes a loss of feeling and a white or pale appearance in extremities, such as fingers, toes, ear lobes or the tip of the nose.

Hypothermia is a condition brought on when the body temperature drops to less than 95°F. It can kill. For those who survive, there are likely to be lasting kidney, liver, and pancreas problems. Warning signs include uncontrollable shivering, memory loss, disorientation, incoherence, slurred speech, drowsiness and apparent exhaustion.

The *American Red Cross* offers signs to recognize and advice on what to do for frostbite and hypothermia.

Signs of frostbite include:

Lack of feeling in 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°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.

Signals of hypothermia include:

Shivering, numbness, glassy stare.

Apathy, weakness, 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.
7. Do not warm the person too quickly, such as by immersing him or her in warm water. Rapid warming may cause dangerous heart arrhythmias.
8. Warm the core first, not the extremities. This is important because warming extremities first can cause shock.

Winter Pet Safety

More dogs are lost in the winter than any other season. The ASPCA recommends to make your pet wear their ID at all times.

Don't leave pets outdoors when the temperature drops. Dogs and cats are safer indoors, except when taken out for supervised exercise. Regardless of the season, shorthaired, very young or old dogs, and all cats should never be left outside without supervision. Short-coated dogs may feel more comfortable wearing a sweater during walks.

Pets who spend a lot of time outdoors need more food in the winter because keeping warm depletes energy. Routinely check your pet's water dish to make certain the water is fresh and unfrozen. Use plastic food and water bowls rather than metal; when the temperature is low, your pet's tongue can stick and freeze to metal.

The salt and other chemicals used to melt snow and ice can irritate the pads of your pet's feet and may be harmful if ingested. Wipe the feet with a damp towel before your pet licks them to remove snow packed between your pet's paws. Pet-friendly ice melts are available at many pet supply stores across the nation or online.

Warm engines in parked cars attract cats and small wildlife who may crawl up under the hood. To avoid injuring any hidden animals, bang on your car's hood to scare them away before starting your car.

Antifreeze is a deadly poison, but it has a sweet taste that can attract animals and children. Wipe up spills and store antifreeze (and all household chemicals) out of reach. Better yet, use antifreeze-coolant made with propylene glycol, which is less toxic in small amounts than traditional ethylene glycol antifreeze.

No matter what the temperature, wind chill can threaten a pet's life. A dog or cat is happiest and healthiest when kept indoors. If your dog spends significant time outdoors, however, he/she must be protected by a dry, draft-free doghouse that is large enough to allow the dog to sit and lie down comfortably, but small enough to hold in his/her body heat. The floor should be raised a few inches off the ground and using old blankets or pads for a bed is best. Hay or straw could be easily infested with disease, ticks, or fleas. Wood shavings can be used, however, **never use wood shavings with pregnant or newborn animals**; they could possibly carry a harmful bacteria to breeding and newborn animals.



Snow Shoveling Safety

Each year, snow shoveling leads to approximately 100 deaths.

Wear sturdy shoes with rugged soles to prevent slips and falls.

Warm up before shoveling by walking and stretching your arms and legs for a few minutes.

Never smoke while shoveling. Tobacco smoke constricts blood vessels just as cold air does; the combination could be dangerous.

If you become short of breath while shoveling, stop and rest. If you feel pain or tightness in your chest, become dizzy or faint, or start sweating heavily, stop immediately and call for help.

Have a partner monitor your progress, and share the workload. If you have a heart attack, your partner can call for help and, if trained, perform cardiopulmonary resuscitation (CPR) until help arrives.

Use a sturdy, lightweight shovel to push the snow out of the way. If you must lift the snow, take small scoops. A shovel full of dry snow can weigh about 4 pounds; wet snow can weigh significantly more.

If you use a snow blower; keep in mind that pushing a snow blower though heavy, packed snow can present a health risk.

Inspect your snow shovel, if it's not in proper working form, replace it.

Lift with your leg muscles, not your back

If you experience chest or arm pain, stop immediately and go inside.



Prevent Plumbing Problems

Use foam padding sleeves or special insulating tape to guard your pipes (both hot and cold water) against freezing. Any exposed pipe or plumbing fixtures should be kept warm with space heaters from a safe distance.

Water pipes located next to an outside wall are often subjected to sub-freezing temperatures. Any plumbing located in a garage or any other unheated building is susceptible to low temperatures. Any exposed pipes should be wrapped or insulated.

Every few days, check out pipes in basements or little used areas of the house to make sure no ice or frost is accumulating or cracks developing. Seal all air leaks that may let an icy blast reach your pipes.

Pipes in cabinets (like under the sink) could be located against an outside wall. Even if these pipes have been insulated, you should consider leaving the cabinet doors open to allow the heat in the room to keep them from freezing.

Heat every room of your home, not just a few rooms. Allow warm air to circulate freely throughout your house.

If your house has a crawl space located under it, close all air vents located in the foundation wall. This will prevent the pipes in the crawl space from being exposed to the cold air.

Be sure to run water from every valve in your house at regular intervals throughout the winter. Run a little bit of water from each valve in the house regularly. Let the water trickle very slowly into the sink.

Disconnect your outdoor garden hoses before freezing temperatures arrive in the fall. Close the shut-off valve on the pipes which lead to your outdoor spigots. Drain any residual water from spigots or hoses. Don't leave hoses attached to outdoor faucets over the winter; roll up and store till spring.

If there are no valves to outside faucets, they may be protected by insulating them and then placing a plastic bag over them to protect the insulation.

Keep the water meter box lid closed to prevent the meter from freezing.

When temperatures drop below 10°F, be sure to leave the faucet that is furthest away from where the water enters your house on a slight drip over night to prevent frozen pipes.



Busted Pipes

What to do if your pipes freeze, burst or crack this winter

Turn off the water at the main shut-off valve so you don't have problems as the ice melts.

Leave the faucets on to relieve pressure as the ice melts.

Use the gentle heat setting of a blow dryer, light bulb or heat tape to thaw frozen pipes. However, **USE CAUTION**: If the pipe is already cracked from freezing, as the water thaws, it may begin to spray out, risking danger of electrocution if it sprays the appliance you are using for thawing.

DO NOT use any torches or open flames to thaw pipes.



Exercise Tips in Cold Weather

Exercising in the winter can be challenging and fun. Here are some safety tips to keep in mind

Start gradually to get into condition. As with any exercise program, you should start getting into condition several weeks before going on that winter sports vacation. Plan a shorter workout in the colder weather.

Dress in layers. Do not dress too warmly. Exercise generates a lot of heat. It is best to dress in layers that you can remove as you begin to sweat and then put back on as you cool down.

Protect your hands and feet. When you are out in the cold, your body sends blood to its core, which means you are more likely to get chilled hands and feet. Wear a thin pair of gloves under a heavier pair.

Cover your head. Always wear a hat or headband, and cover your neck since as much as 50% of your body's heat is lost through your head and neck.

Cover your mouth. Wearing a scarf or mask helps warm air before you breathe it.

Wear sunscreen. You can just as easily get sunburned in the winter as in the summer, especially if you are exercising in the snow or at high altitudes.

Exercise when the temperatures are the warmest. Try to get out mid-day when the temperatures are warmer and the sun is out.

Get accustomed to higher altitude. Give your body at least a day or two to adjust to the altitude before exerting yourself in activities

like hiking or skiing.

Stay hydrated. Remember to drink plenty of water before, during and after your workout. You can become just as dehydrated in the cold as you can in the heat.

Protect your eyes. Wear dark glasses or goggles if you are in an area where there is a risk of snow and ice glare.

Pay attention to wind direction. Head into the wind at the start of your workout so you have the wind at your back on the way home. At the end of your workout, you most likely will be sweaty, so the wind at your back means you will not be as chilled.

Know about frostbite and hypothermia. Be aware of the dangers of frostbite and hypothermia and know when it is time to get indoors.

Avoid alcohol. Alcohol increases heat loss, so you are more likely to get hypothermia. Alcohol also impairs your judgment, so you might not make the best decisions in a cold-weather emergency.



Fireplace Use & Care

The United States Fire Administration encourages you to practice the following fire safety steps to keep those home fires safely burning

Keep Fireplaces and Wood Stoves Clean:

Have your chimney or wood stove inspected and cleaned annually by a certified specialist.

Clear the area around the heart of debris, decorations and flammable materials.

Leave glass doors open while burning a fire. Leaving the doors open ensures that the fire receives enough air to ensure complete combustion and keeps creosote from building up in the chimney.

Close glass doors when the fire is out to keep air from the chimney opening from getting into the room. Most glass fireplace doors have a metal mesh screen that should be closed when the glass doors are open. The screen helps keep embers from getting out.

Always use a metal mesh screen with fireplaces that do not have a glass fireplace door.

Install stovepipe thermometers to help monitor flue temperatures.

Keep air inlets on wood stoves open, and never restrict air supply to fireplaces. Otherwise, you may cause creosote buildup that could lead to a chimney fire.

Use fire-resistant materials on walls around wood stoves.

Protect the Outside of Your Home:

Stack firewood outdoors at least **30 feet away** from your home.

Keep the roof clear of leaves, pines needles and other debris.

Cover the chimney with a mesh screen spark arrester. **Remove branches** hanging above the chimney, flues or vents.

Safely Burn Fuels:

Never use flammable liquids to start a fire.

Use only seasoned hardwood. Soft moist wood accelerates creosote buildup.

Build small fires that burn completely and produce less smoke.

Never burn cardboard boxes, trash, or debris in your fireplace or wood stove.

When building a fire, **place logs at the rear of the fireplace** on an adequate supporting grate.

Never leave a fire in the fireplace unattended.

Extinguish the fire before going to bed or leaving the house.

Soak hot ashes in water, and place them in a metal container outside your home.

Protect the Inside of Your Home:

Install smoke alarms on every level of your home and inside and outside of sleeping areas.

Test them monthly and change the batteries at least once a year. Consider installing the now long-life smoke alarms.

Provide proper venting systems for all heating equipment.

Extend all vent pipes at least 3 feet above the roof

Winter Heating Bill

Tips to help you save on your winter heating bill

Caulk or weather-strip windows and doors to prevent heat loss.

Install a programmable thermostat to automatically drop to a lower temperature at night and at times when you are away from your house.

Seal air leaks, especially from heated space to the attic and from outside to the basement. Tape a sheet of aluminum foil (shiny side out) to the wall behind radiators; this will help make them more efficient.

Insulate your attic, walls, basement (ceiling if your basement is unheated, walls and floor if it's heated) and crawl space.

Move chairs and beds away from exterior walls. These are usually the coldest walls in the house, and make sure warm-air registers are not blocked by furniture, carpeting or drapes.

Install aerating, low-flow faucets and showerheads to save hot water.

Lower the thermostat on the water heater. Factory setting may be higher than necessary. A setting of 120°F provides comfortable hot water for most uses and can save on water heating costs.

Insulate pipes or ducts in the basement leading from both your heating furnace/boiler and your hot water heater.

Do an annual tune-up of your heating system.

Clean and replace filters on furnace once a month or as needed to permit better air flow through the house.

Clean warm-air registers, baseboard heaters and radiators.

Keep the damper closed when your fireplace is not on use to keep warm air in.

Keep the draperies and shades on windows open during the day to allow the sunlight to enter your home.

Place heat-resistant radiator reflectors between exterior walls and the radiator.

During the heating season, keep the draperies and shades on your south-facing windows open during the day to allow the sunlight to enter your home and closed at night to reduce the chill you may feel from cold windows.

Select energy-efficient products when you buy new heating/cooling equipment. Your contractor should be able to give you energy fact sheets for different types, models and designs to help you.

You can use a heavy-duty, clear plastic sheet on a frame or tape clear plastic film to the inside of your window frames during the cold winter months. Remember, the plastic must be sealed tightly to the frame to help reduce infiltration.

Install tight-fitting, insulating window shades on windows that feel drafty after weatherizing.

Install exterior or interior storm windows; they can reduce heat loss through the windows by 25% to 50%.

Five Ways the Body Loses Heat

Five ways your body loses heat are radiation, conduction, convection and evaporation. These occur in two ways

1. **Radiation** is heat loss from the body when the ambient temperature is cold.
2. **Evaporation** happens two ways. The first is through **sweating**. Perspiration evaporates to remove excess heat.
3. The second way **evaporation** occurs is as we **breath normally**. Air is heated as it enters the lungs and is exhaled with a very small amount of moisture content.
4. **Conduction** is heat loss when a person has direct contact with a cooler object, such as cold water.
5. **Convection** is a process of conduction when the person or object is in motion. Wind chill is an example of the effects of air convection; the wind chill table gives a reading of the amount of heat lost to the environment relative to a still air temperature.

Why are these ways important to keep in mind during the winter season?

It is important to recognize the balance between the body's fluid status and fluid and heat loss. As body moisture is lost, the overall circulating volume of fluids is reduced, which can lead to dehydration. This decrease in fluid level makes the body more susceptible to hypothermia and other cold injuries.

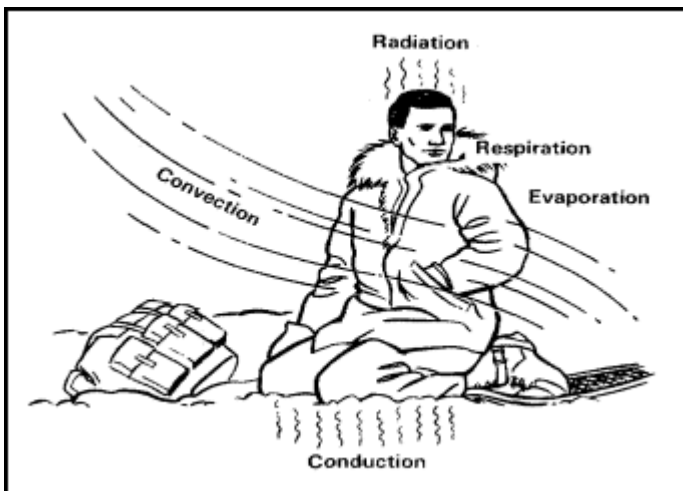
What is one way the body loses heat the most that people don't think about?

Many people are not aware that infants and older adults are especially vulnerable to body heat loss.

Infants less than 1 year old should never sleep in a cold room because:

- Infants lose body heat more easily than adults.
- Unlike adults, infants can't make enough body heat by shivering. Provide warm clothing for infants, and try to maintain a warm indoor temperature.

Older adults often make less body heat because of slower metabolism and less physical activity. If you are 65 or older, check the temperature in your home often during severely cold weather. Also, check on elderly friends and neighbors frequently to ensure their homes are adequately heated.



What is Wind Chill?

Wind chill temperature is how cold people and animals feel when outside. As wind increases, it makes it FEEL colder. If the temperature is 0°F and the wind is blowing at 15 mph, the wind chill is -19°F. Here are some commonly asked questions about wind chill:

What's the difference between "wind chill factor" and "wind chill temperature?"

These terms are almost the same. The wind chill factor describes what happens to a body when it is cold and windy outside. As wind increases, heat is carried away from the body at a faster rate, driving down both skin temperature and eventually the internal body temperature. Wind chill temperature is a unit of measurement to describe the wind chill factor. Wind chill temperature is a measure of the combined cooling effect of wind and temperature.

Is it possible to get frostbite if the temperature is above freezing but the wind chill is below freezing?

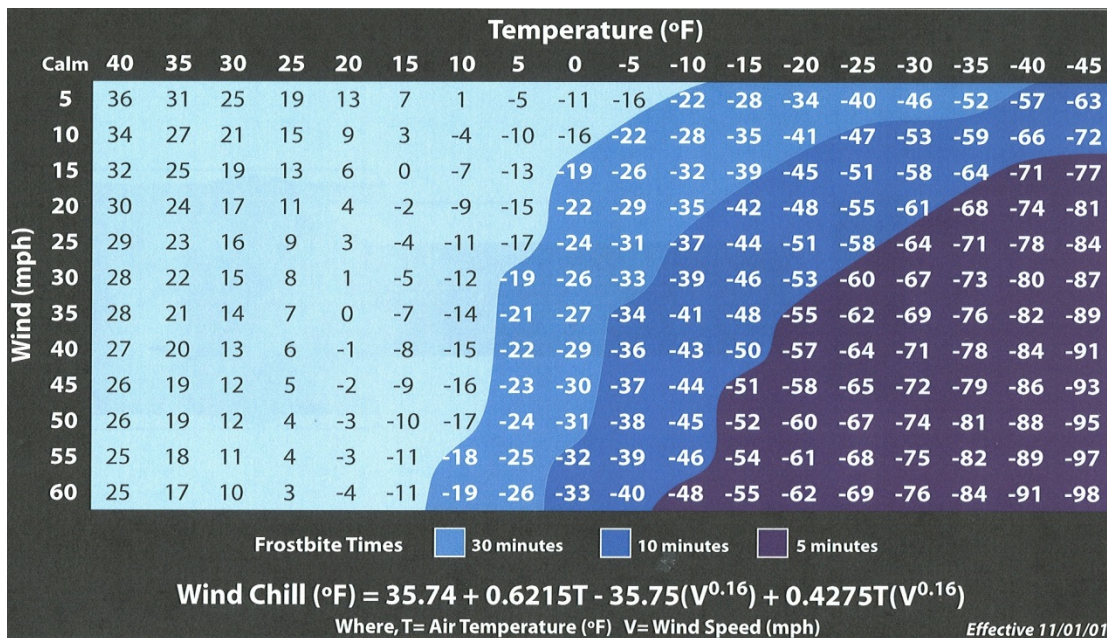
Yes. Wind chill can bring the temperature to below freezing for humans and animals.

How can I find out what the wind chill temperature is before I go outside?

Using the chart below, match the air temperature with the current wind speed to determine the wind chill temperature. Note: The chart calculates wind speed at an average height of 5 feet and assumes no impact from the sun.

The wind chill factor affects humans and animals. Does it impact anything else?

The only effect wind chill has on inanimate objects, such as car radiators and water pipes, is to shorten the amount of time for the object to cool. The inanimate object will not cool below the actual air temperature. For example, if the temperature is -5°F and the wind chill is -31°F, then your car's radiator temperature will be no lower than the air temperature of -5°F.



If You Fall Through The Ice

Here are some safety tips to keep in mind if you find yourself in the dangerous situation of falling through the ice:

What should you do?

First, try not to panic. This is easier said than done, unless you have worked out a survival plan in advance. Read through these steps so you can be prepared.

Don't remove your winter clothing. Heavy clothes won't drag you down, but instead can trap air to provide warmth and flotation. This is especially true with a snowmobile suit.

Turn towards the direction you came. That's probably the strongest ice.

Place your hands and arms on the unbroken surface. This is where a pair of nails, sharpened screwdrivers or ice picks come in handy in providing the extra traction you need to pull yourself up onto the ice.

Kick your feet and dig your ice picks (if you have them) to work your way back onto the solid ice. If your clothes have trapped a lot of water, you may have to lift yourself partially out of the water on your elbows to let the water drain before starting forward.



Lie flat on the ice once you are out, and roll away from the hole to keep your weight spread out. This may help prevent you from breaking through again.

Get to a warm, dry, sheltered area, and re-warm yourself immediately. In moderate to severe cases of cold water hypothermia, you must seek medical attention. Cold blood trapped in your extremities can come rushing back to your heart after you begin to re-warm. The shock of the chilled blood may cause ventricular fibrillation leading to a heart attack and death.

What to do if you see someone fall in
Act quickly and call 911 for help immediately. Make sure properly trained and equipped rescue personnel are alerted.

Do NOT go out onto the ice. Often would-be rescuers become victims themselves.

Reach, throw and or row. Extend a branch, pole or ladder to the victim. Throw them a buoyant object, like a life-ring. If a boat is nearby, push that out towards them.



Trapped in Your Car

Here are some guidelines on what to do if you find yourself
Trapped in your car during a blizzard:

Pull off the road, set hazard lights to flashing, and hang a distress flag from the radio aerial or window. Remain in your vehicle: Rescuers are most likely to find you there.

Exercise to maintain body heat but don't overexert.

Huddle with other passengers, and use your coat for a blanket.

In extreme cold, **use road maps, seat covers, floor mats, newspapers or extra clothing for covering** - anything to provide additional insulation and warmth.

Turn on the inside dome light so rescue teams can see you at night, but be careful not to run the battery down. In remote areas, spread a large cloth over the snow to attract the attention of rescue lanes.

DO NOT LEAVE THE VEHICLE. Your vehicle is your best source of heat and protection from the elements during an emergency.

Only set out on foot if you see a building close by where you know you can take shelter. However, keep in mind distances are distorted by blowing snow. A building may seem close, but be too far to walk to in deep snow.

If you have a cell phone, contact the authorities. Try and be as descriptive as possible about your location if you lack a newer GPS cell phone.

Run the engine and heater about 10 minutes each hour to keep warm. When the engine is running, open a downwind window slightly for ventilation and periodically clear snow from the exhaust pipe. This will protect you from possible carbon monoxide poisoning.

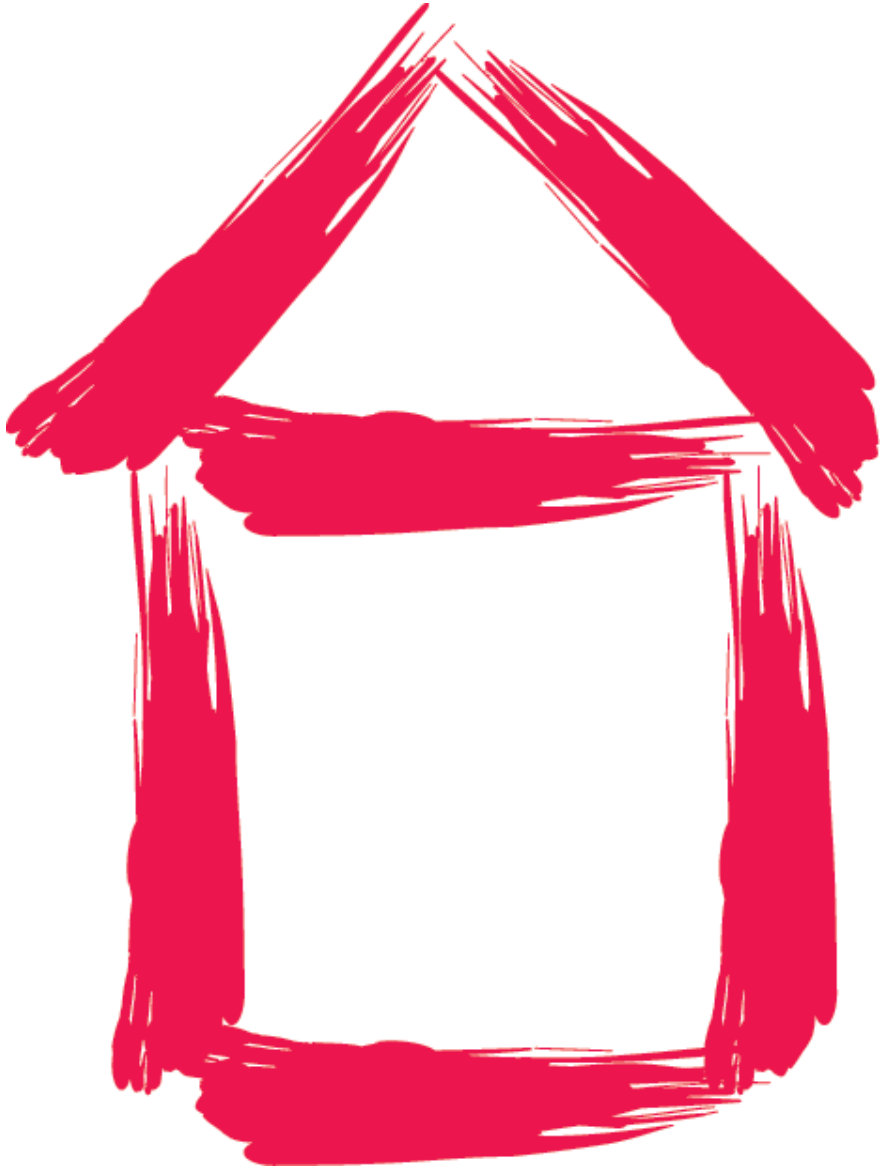
If you choose to continually run the engine and heater to keep warm, **you must also crack a downwind window slightly to prevent carbon monoxide poisoning.** An engine left idling with a full tank of gas can run for many hours (10 gallons of gas in a 6-cylinder car can give you 10 hours of heat). However, you should inspect and clear windows, lights and the exhaust pipe every so often.

Be careful, though. Not to waste battery power. Balance electrical energy needs-the use of lights, heat and radio-with supply.

Move anything you may use from the trunk to the cab so it warms up. If you have an emergency kit, get things out and inventory your items.

Avoid falling asleep. If there is more than one person in the car, take turns sleeping. One person should be awake at all times to look for rescue crews.

If stranded in a remote area, stomp large black letters in an open area spelling out HELP or SOS, and line with rocks or tree limbs to attract the attention of rescue personnel who may be surveying the area by airplane.



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