



**BITTERLY
COLD DEFENSE
GUIDE**

Polar Vortex – Visiting North Pole

One of the coldest Arctic outbreaks in two decades has plunged into our country, bringing bitterly cold temperatures to the Midwest, South and



East. They call it POLAR VORTEX and without going into scientific details I'll just define it: Visiting North Pole.

To be honest, I don't ever recall hearing the words "Polar Vortex" before, but when I was young, the winters were so cold that we could skate on local lakes and ponds. Before winter was there, road crews placed red picket snow fences along major roads to keep the snow from drifting across the roads.

And at home we had our own preparations to be done. We knew to fill the tubs and extra jugs with water in case the pipes froze or we lost power. We knew that the car should be topped off with gas to

prevent the gas lines from freezing and in case we had to trek out in an emergency.

We positioned ladders near frozen ponds and were reminded how to test the thickness of the ice and what to do if we or a friend fell through into the frigid water. We brought pets inside and the livestock into the barn. Snow clothes of every size were brought forth from the closet and boxes of boots were matched to ever-growing feet. Mittens, hats, gloves, and scarves- all essential to outdoor work and play- were sorted and sized.

Nowadays when the weather turns cold, the lists about what you should or shouldn't do to "weather the storm" and the pilgrimage to the grocery stores has become a part of our suburban traditions.

The fact is, my experience taught me to understand that a large percentage of our population consists of people that don't know how to drive in the snow or have never owned a house with an outside spigot or ever experienced sub zero temperatures.

So, for starters, here's a list of 15 things to do to get through a cold snap. Make sure you do a check and share with friends and family:

- **Dress in layers** - (wicking, thermal and shell). Layers help conserve your body heat and keep you dry, but not all layers are created equal.
- **Wear a Hat that covers your ears** - you need to keep your head warm and your ears covered, as they are susceptible to frostbite. Wear mittens or gloves for the same reason.
- **Wear a scarf or face mask** - to protect your face and take the chill out of the air you breathe, especially if you have asthma or other respiratory conditions.
- **Understand hypothermia and frostbite and their symptoms**
- **Keep lip balm or cocoa butter in your coat pocket** - and apply it generously to keep your lips from chapping.
- **Understand wind chill and why it matters**
- **Turn off your outdoor faucets and turn on your indoor faucets** - and let the water drip. Fill bottles with water in case of a power outage or burst pipe

- **Let warm air gain access to pipes in areas that are colder** (leave doors open to an unheated basement, or open cabinet doors under the sink).
- **Do not warm frozen pipes with an open source of flame.**
- **Make sure your carbon monoxide detectors are working.**
- **Make sure your car has a full tank of gas** and charge your cell phones, laptops and flashlights.
- **Have emergency supplies in the car** including extra hats, mittens, boots, water, flashlight and extra batteries.
- **Keep your children indoors when the temperature dips below freezing-** children are more susceptible to frostbite and hypothermia and often ignore the warning signs. And what child knows to come inside when their mittens get wet?
- **Check on elderly neighbors** who are also more susceptible to the cold - especially if there is a power outage.
- **Call the Grassroots shelter** if you or someone you know needs to come in out of the cold.

Crucial things to survive the bitterly cold

It is more difficult for you to satisfy your basic water, food and shelter needs in a cold environment than in a warm environment. Even if you have the basic requirements, you must also have adequate protective clothing and the will to survive. The will to survive is as important as the basic needs.

There have been incidents when trained and well-equipped individuals have not survived cold weather situations because they lacked the will to live. Conversely, this will has sustained individuals less well-trained and equipped.

You must not only have enough clothing to protect you from the cold, you must also know how to maximize the warmth you get from it.

For example, always keep your head covered. You can lose 40 percent to 45 percent of body heat from an unprotected head and even more from the unprotected neck, wrists and ankles. These areas of the body are good radiators of heat and have very little insulating fat.

The brain is very susceptible to cold and can stand the least amount of cooling. Because there is much blood circulation in the head, most of which is on the surface, you can lose heat quickly if you do not cover your head.

There are four basic principles to follow to keep warm. The code for this is very simple: "COLD."

Keep clothing CLEAN

This principle is always important for sanitation and comfort. In winter, it is also important from the standpoint of warmth. Clothes matted with dirt and grease lose much of their insulation value. Heat can escape more easily from the body through the clothing's crushed or filled up air pockets.

Avoid OVERHEAT

When you get too hot, you sweat and your clothing absorbs the moisture. This affects your warmth in two ways: dampness decreases the insulation quality of clothing and as sweat evaporates, your body cools. Adjust your clothing so that you do not sweat.

Do this by partially opening your parka or jacket, by removing an inner layer of clothing, by removing heavy outer mittens or by throwing back your parka hood or changing to lighter headgear. The head and hands act as efficient heat dissipaters when overheated.

Wear your clothing LOOSE AND IN LAYERS

Wearing tight clothing and footgear restricts blood circulation and invites cold injury. It also decreases the volume of air trapped between the layers, reducing its insulating value. Several layers of lightweight clothing are better than one equally thick layer of clothing, because the layers have dead-air space between them. The dead-air space provides extra insulation. Also, layers of clothing allow you to take off or add clothing layers to prevent excessive sweating or to increase warmth.

Keep clothing DRY

In cold temperatures, your inner layers of clothing can become wet from sweat and your outer layer, if not water repellent, can become wet from snow and frost melted by body heat. Wear water-repellent

outer clothing, if available. It will shed most of the water collected from melting snow and frost.

Before entering a heated shelter, brush off the snow and frost. Despite the precautions you take, there will be times when you cannot keep from getting wet. At such times, drying your clothing may become a major problem.

You can place damp socks or mittens, unfolded, near your body so that your body heat can dry them. In a campsite, hang damp clothing inside the shelter near the top, using drying lines or improvised racks. You may even be able to dry each item by holding it before an open fire. Dry leather items slowly. If no other means are available for drying your boots, put them between your sleeping bag shell and liner. Your body heat will help to dry the leather.

A heavy, down-lined sleeping bag is a valuable piece of survival gear in cold weather. Ensure the down remains dry. If wet, it loses a lot of its insulation value. If you do not have a sleeping bag, you can make one out of parachute cloth or similar material and natural dry material, such as leaves, pine needles or moss. Place the dry material between two layers of the parachute material.

Top Cold-Weather items

Other important survival items are a knife; waterproof matches in a waterproof container, preferably one with a flint attached; a durable compass; map; watch; waterproof ground cloth and cover; flashlight; binoculars; dark glasses; fatty emergency foods; food gathering gear; and signaling items.

Remember, a cold weather environment can be very harsh. Give a good deal of thought to selecting the right equipment for survival in the cold. If unsure of an item you have never used, test it in an “overnight backyard” environment before venturing further. Once you have selected items that are essential for your survival, do not lose them after you enter a cold weather environment.

Cold-Weather Health Emergencies

Serious health problems can result from prolonged exposure to the cold. The most common cold-related problems are hypothermia and frostbite.

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. The result is hypothermia, or abnormally low body temperature.

Body temperature that is too low 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 and won't be able to do anything about it.

Hypothermia is most likely at very cold temperatures, but it can occur even at cool temperatures (above 40°F) if a person becomes chilled from rain, sweat, or submersion in cold water.

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.;
- (4) people who drink alcohol or use illicit drugs.

Recognizing Hypothermia

Warnings signs of hypothermia:

If medical care is not available, begin warming the person, as follows:

- Get the victim into a warm room or shelter.
- If the victim has on any wet clothing, remove it.
- Warm the center of the body first—chest, neck, head, and groin—using an electric blanket, if available. Or use skin-to-skin contact under loose, dry layers of blankets, clothing, towels, or sheets.

Adults:

- shivering, exhaustion
- confusion, fumbling hands
- memory loss, slurred speech
- drowsiness

Infants:

- bright red, cold skin
- very low energy

If you notice any of these signs, take the person's temperature. If it is below 95°, the situation is an emergency—get medical attention immediately.

What to Do

- Warm beverages can help increase the body temperature, but do not give alcoholic beverages. Do not try to give beverages to an unconscious person.
- After body temperature has increased, keep the person dry and wrapped in a warm blanket, including the head and neck.
- Get medical attention as soon as possible.

A person with severe hypothermia may be unconscious and may not seem to have a pulse or to be breathing. In this case, handle the victim gently, and get emergency assistance immediately.

Even if the victim appears dead, CPR should be provided. CPR should continue while the victim is being warmed, until the victim responds or medical aid becomes available. In some cases, hypothermia victims who appear to be dead can be successfully resuscitated.

Frostbite

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. The risk of frostbite is increased in people with reduced blood circulation and among people who are not dressed properly for extremely cold temperatures.

Recognizing Frostbite

At the first signs of redness or pain in any skin area, get out of the cold or protect any exposed skin—frostbite may be beginning. Any of the following signs may indicate frostbite:

- a white or grayish-yellow skin area
- skin that feels unusually firm or waxy
- numbness

A victim is often unaware of frostbite until someone else points it out because the frozen tissues are numb.

What to Do

If you detect symptoms of frostbite, seek medical care. Because frostbite and hypothermia both result from exposure, first determine whether the victim also shows signs of hypothermia, as described previously. Hypothermia is a more serious medical condition and requires emergency medical assistance.

If

(1) there is frostbite but no sign of hypothermia

(2) immediate medical care is not available, proceed as follows:

- 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 (the temperature should be comfortable to the touch for unaffected parts of the body).
- Or, warm the affected area using body heat.

For example, 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 can cause more damage.

- Don't 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.

These procedures are not substitutes for proper medical care. Hypothermia is a medical emergency and frostbite should be evaluated by a health care provider. It is a good idea to take a first aid and emergency resuscitation (CPR) course to prepare for cold-weather health problems. Knowing what to do is an important part of protecting your health and the health of others.

What You Need to Know About Hypothermia and the Elderly

Shivering is one of those amazing things our bodies do to keep us operating at top speed. It's as if we had an internal thermostat. Too hot, we sweat in order to cool off. Too cold, we shiver to stay warm.

Hypothermia : When the core body temperature is below 95 °F. It occurs if the body loses heat faster than it can be produced. Severe hypothermia can be fatal.

But did you know that as we age the thermostat doesn't always work the way it should? Not good, especially in the kind of weather

we've been experiencing lately, and one of the reasons why elderly people are at increased risk of developing hypothermia.

Why elderly people are at more risk for hypothermia?

- Lower metabolic rate, which makes it more difficult to maintain a normal body temperature when the room temperature drops below about 65 °F.
- Decreased ability to detect changes in the temperature.
- Decreased shivering and constricting of the blood vessels, which ordinarily helps maintain core body heat by diverting blood away from the arms and legs.
- Chronic medical conditions, such as diabetes, stroke, underactive thyroid, and Parkinson's disease.
- Medications, such as antidepressants and sedatives, which may change how the body regulates temperature.

Approximately 600 elderly people die in the USA each year from hypothermia. Unfortunately, these are people who may be on a fixed income and will cut back on heating during winter months if they

feel they cannot afford heating bills. Unfortunately, the power outages force us all to bear the extreme cold and risk suffering from hypothermia.

What is especially important to know is that what might seem too warm for a younger person may not be warm enough for an older person. Ideally, the thermostat should be set between 68 °F and 70°F. Even just slightly lower can trigger hypothermia in a frail, elderly person.

Preventing hypothermia in an elderly person

- ✓ Wear several layers of clothing.
- ✓ Wear long underwear, socks and slippers.
- ✓ Wear a hat or a cap.
- ✓ Keep the thermostat at 68 °F - 70 °F.
- ✓ Drink warm beverages, but be cautious with alcoholic beverages because they can increase risk.
- ✓ Check with doctor about medication risks.
- ✓ If you are caring for elderly people, be mindful that they may not be able to tell you they feel cold, may not be able to simply reach for a sweater for blanket, or may be concerned about the

cost of turning up the heat. Also remember that they may not even realize it when they're cold.

The signs of hypothermia in elderly people are easy to miss if you're not paying close attention.

How do you know if someone has hypothermia? Look for the “umbles”— stumbles, mumbles, fumbles, and grumbles — these show that the cold is a problem.

Check for:

- ✓ Confusion or sleepiness
- ✓ Slowed, slurred speech, or shallow breathing
- ✓ Weak pulse
- ✓ Change in behavior or in the way a person looks
- ✓ A lot of shivering or no shivering; stiffness in the arms or legs
- ✓ Poor control over body movements or slow reactions

What to do if you suspect hypothermia

If you suspect someone has hypothermia, take his or her temperature. If it's 96 °F or below, the person needs medical attention right away. The best thing to do while you're waiting is to

keep him/her warm and dry. Warm drinks are fine, but no alcohol or anything with caffeine.

When winter temperatures drop significantly below normal, staying warm and safe can become a challenge. Extremely cold temperatures often accompany a winter storm, so you may have to cope with power failures and icy roads. Although staying indoors as much as possible can help reduce the risk of car crashes and falls on the ice, you may also face indoor hazards.

Many homes will be too cold—either due to a power failure or because the heating system isn't adequate for the weather. When people must use space heaters and fireplaces to stay warm, the risk of household fires increases, as well as the risk of carbon monoxide poisoning.

Exposure to cold temperatures, whether indoors or outside, can cause other serious or life-threatening health problems. Infants and the elderly are particularly at risk, but anyone can be affected. To keep yourself and your family safe, you should know how to prevent cold-related health problems and what to do if a cold-weather health emergency arises.

The emergency procedures outlined here are not a substitute for training in first aid. However, these procedures will help you to know when to seek medical care and what to do until help becomes available.

What Is Extreme Cold?

What constitutes extreme cold and its effects can vary across different areas of the country. In regions relatively unaccustomed to winter weather, near freezing temperatures are considered “extreme cold.”

Whenever temperatures drop decidedly below normal and as wind speed increases, heat can leave your body more rapidly. These weather-related conditions may lead to serious health problems.

Extreme cold is a dangerous situation that can bring on health emergencies in susceptible people, such as those without shelter or who are stranded, or who live in a home that is poorly insulated or without heat.

Plan Ahead

Prepare for extremely cold weather every winter—it's always a possibility. There are steps you can take in advance for greater wintertime safety in your home and in your car.

Winter Survival Kit for Your Home

Keep several days' supply of these items:

- Food that needs no cooking or refrigeration, such as bread, crackers, cereal, canned foods, and dried fruits. Remember baby food and formula if you have young children.
- Water stored in clean containers, or purchased bottled water (5 gallons per person) in case your water pipes freeze and rupture.
- Medicines that any family member may need.

If your area is prone to long periods of cold temperatures, or if your home is isolated, stock additional amounts of food, water, and medicine.

Emergency Supplies List:

- an alternate way to heat your home during a power failure:
 - dry firewood for a fireplace or wood stove, or
 - kerosene for a kerosene heater
- furnace fuel (coal, propane, or oil)
- electric space heater with automatic shut-off switch and non-glowing elements
- blankets
- matches
- multipurpose, dry-chemical fire extinguisher
- first aid kit and instruction manual
- flashlight or battery-powered lantern
- battery-powered radio
- battery-powered clock or watch
- extra batteries
- non-electric can opener
- snow shovel
- rock salt
- special needs items (diapers, hearing aid batteries, medications, etc.)

Prepare Your Home for Winter

Although periods of extreme cold cannot always be predicted far in advance, 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 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 yearly.

Your ability to feel a change in temperature decreases with age and older people are more susceptible to health problems caused by cold. If you are over 65 years old, place an easy-to-read thermometer in an indoor location where you will see it frequently, and check the temperature of your home often during the winter months.

Insulate any water lines that run along exterior walls so your water supply will be less likely to freeze. To the extent possible, 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 that they have access to unfrozen water.

Prepare Your Car for Winter

You can avoid many dangerous winter travel problems by planning ahead. Have maintenance service on your vehicle as often as the manufacturer recommends. In addition, every fall:

Winter Survival Kit for Your Car

Equip your car with these items:

- Have the radiator system serviced, or check the antifreeze level yourself with an antifreeze tester. Add antifreeze, as needed.
- Replace windshield-wiper fluid with a wintertime mixture.
- Replace any worn tires, and check the air pressure in the tires.

During winter, keep the gas tank near full to help avoid ice in the tank and fuel lines.

- blankets
- first aid kit
- a can and waterproof matches (to melt snow for water)
- windshield scraper
- booster cables
- road maps
- mobile phone
- compass
- tool kit
- paper towels
- bag of sand or cat litter (to pour on ice or snow for added traction)
 - tow rope
 - tire chains (in areas with heavy snow)
 - collapsible shovel
 - container of water and high-calorie canned or dried foods and a can opener
 - flashlight and extra batteries
 - canned compressed air with sealant (for emergency tire repair)

- brightly colored cloth

Indoor Safety

Heat Your Home Safely

If you plan to use a wood stove, fireplace, or space heater, be extremely careful. Follow the manufacturer's instructions as well as the home safety measures on page 3, 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 air space.
- Do not burn paper in a fireplace.
- Ensure adequate ventilation if you must use a kerosene heater.
- Use only the type of fuel your heater is designed to use— don't substitute.
- Do not place a space heater within 3 feet of anything that may catch on fire, such as drapes, furniture, or bedding, and never cover your space heater.
- Never place a space heater on top of furniture or near water.
- Never leave children unattended near a space heater.
- Make sure that the cord of an electric space heater is not a tripping hazard but do not run the cord under carpets or rugs.

- Avoid using extension cords to plug in your space heater.
- If your space heater has a damaged electrical cord or produces sparks, do not use it.
- Store a multipurpose, dry-chemical fire extinguisher near the area to be heated.
- Protect yourself from carbon monoxide (CO) poisoning by installing a battery-operated CO detector and never using generators, grills, camp stoves, or similar devices indoors.

Light and Cook Safely

If there is a power failure:

- Use battery-powered flashlights or lanterns rather than candles, if possible.
- Never leave lit candles unattended.
- Never use a charcoal or gas grill indoors— the fumes are deadly.
 - Never use an electric generator indoors, inside the garage, or near the air intake of your house because of the risk of carbon monoxide poisoning:
- Plug in appliances to the generator using individual heavy-duty, outdoor-rated cords.

- Do not use the generator or appliances if they are wet because of the risk of electrocution.
- Do not store gasoline indoors where the fumes could ignite.

Conserve Heat

You may need fresh air coming in for your heater or for emergency cooking arrangements. However, if you don't need extra ventilation, keep as much heat as possible inside your home. Avoid unnecessary opening of doors or windows. Close off unneeded rooms, stuff towels or rags in cracks under doors, and close draperies or cover windows with blankets at night.

Monitor Body Temperature

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

- (1) infants lose body heat more easily than adults;
- (2) unlike adults, infants can't make enough body heat by shivering.

Provide warm clothing for infants and try to maintain a warm indoor temperature. If the temperature cannot be maintained, make

temporary arrangements to stay elsewhere. In an emergency, you can keep an infant warm using your own body heat. If you must sleep, take precautions to prevent rolling on the baby. Pillows and other soft bedding can also present a risk of smothering; remove them from the area near the baby.

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

Keep a Water Supply

Extreme cold can cause water pipes in your home to freeze and sometimes rupture. When very cold temperatures are expected:

- Leave all water taps slightly open so they drip continuously.
- Keep the indoor temperature warm.
- Improve the circulation of heated air near pipes. For example, open kitchen cabinet doors beneath the kitchen sink.

If your pipes do freeze, do not thaw them with a torch. Instead, thaw them slowly by directing the warm air from an electric hair dryer onto the pipes.

If you cannot thaw your pipes, or the pipes are ruptured, use bottled water or get water from a neighbor's home. As an emergency measure—if no other water is available—snow can be melted for water. Bringing water to a rolling boil for one minute will kill most microorganisms or parasites that may be present, but won't remove chemical pollutants sometimes found in snow.

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 help maintain your body temperature. If you have any dietary restrictions, ask your doctor.

Outdoor Safety

When the weather is extremely cold, and especially if there are high winds, try to stay indoors. Make any trips outside as brief as possible, and remember these tips to protect your health and safety:

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 (they are warmer than gloves)
- water-resistant coat and boots
- several layers of loose-fitting clothing

Be sure the outer layer of your clothing is tightly woven, preferably wind resistant, to reduce body-heat loss caused by wind. 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 of clothing whenever you feel too warm. Also, avoid getting gasoline or

alcohol on your skin while de-icing and fueling your car or using a snow blower.

These materials in contact with the skin greatly increase heat loss from the body. Do not ignore shivering. It's an important first sign that the body is losing heat. Persistent shivering is a signal to return indoors.

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 out- door chores, dress warmly and work slowly. Remember, your body is already working hard just to stay warm, so don't overdo it.

Understand Wind Chill

The Wind Chill index is the temperature your body feels when the air temperature is combined with the wind speed. It is based on the rate of heat loss from exposed skin caused by the effects of wind and cold.

As the speed of the wind increases, it can carry heat away from your body much more quickly, causing skin temperature to drop. When there are high winds, serious weather-related health problems are more likely, even when temperatures are only cool.

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 Safe During Recreation

Notify friends and family where you will be before you go hiking, camping, or skiing. Do not leave areas of the skin exposed to the cold. Avoid perspiring or becoming over-tired. Be prepared to take emergency shelter. Pack dry clothing, a two-wave radio, waterproof matches and paraffin fire starters with you.

Do not use alcohol and other mood altering substances, and avoid caffeinated beverages. Avoid walking on ice or getting wet. Carefully watch for signs of cold-weather health problems.

Be Cautious About Travel

- Listen for radio or television reports of travel advisories issued by the National Weather Service.
- Do not travel in low visibility conditions.
- Avoid traveling on ice-covered roads, overpasses, and bridges if at all possible.
- If you must travel by car, use tire chains and take a mobile phone with you.
- If you must travel, let someone know your destination and when you expect to arrive. Ask them to notify authorities if you are late.
- 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.

- Always carry additional warm clothing appropriate for the winter conditions.

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—this will reduce the risk of carbon monoxide poisoning.
- As you sit, keep moving your arms and legs to improve your circulation and stay warmer.

- Do not eat unmelted snow because it will lower your body temperature.
- Huddle with other people for warmth.

How To Survive A Cold Night In Your Car

It's a harrowing statistic, but according to the National Weather Service, about 70 percent of winter weather-related fatalities occur in an automobile.

You can bet many of those vehicle-related deaths began with someone simply leaving the house to run an errand, make a short trip to visit family or friends or take care of routine business.

The weather turns unexpectedly bad, road conditions rapidly deteriorate and, suddenly, what was an ordinary drive becomes an overnight ordeal.

Don't think just because you don't live in New England, the upper Midwest or the western mountains that something like this can't happen to you. Even in areas where snow is a rare event, cars can slide off icy roads and become stranded in freezing weather, leaving passengers stuck right there with them. Here's how to make it

through a freezing night in your car and ride out events until help can arrive.

Be Prepared

The first thing to do as winter approaches is be sure you have stored a few key items in your car. If you wait until you need them to try to round them up, it will be too late. Essential items to include in a winter survival kit include:

- ✓ Bottled water (at least four quarts)
- ✓ Snack foods, particularly nutritious energy bars
- ✓ Raisins, dried fruit, nuts, candy bars
- ✓ Strike-anywhere, waterproof matches and small candles
- ✓ A flashlight with extra batteries
- ✓ First-aid kit
- ✓ Folding knife and multi-tool
- ✓ Emergency flares
- ✓ An extra winter coat, mittens and a wool cap
- ✓ Winter boots
- ✓ Toilet paper
- ✓ Cellphone and charger
- ✓ A space blanket

- ✓ A spare blanket or sleeping bag
- ✓ A portable radio with spare batteries
- ✓ Tow rope
- ✓ Nylon cord
- ✓ Flagging tape
- ✓ Chemical hand and body warmer packets

Other essential winter tools in severe weather country include jumper cables, a small shovel, tire chains and rock salt, sand or kitty litter to provide added traction when stuck on a slick surface.

Before You Go

If you're leaving for an extended trip, always check weather and road conditions before departing. If poor conditions are forecast, you may consider postponing your trip.

Also, let others know when you are leaving, which way you will be traveling and when you should arrive at your destination so they can alert authorities and provide them with solid information to help in finding you should the need arise.

Fill your car with fuel and make frequent stops to stretch, relax and refill your tank, never allowing it to get much below a half tank. Should you become stuck and need to spend the night in your car, the ample gas will allow you to start your car throughout the night and run the heat for short intervals.

If You Are Stranded

First call for help if you can't get your car unstuck. Don't overexert yourself and don't leave your car and begin walking for help. You stand a much better chance of being found if you remain with your car, which can also provide the best shelter from the elements.

Don't run your car constantly. Instead, be sure the exhaust pipe is free from snow and roll down a window enough to vent the car and prevent carbon monoxide buildup. Run the car for short 15-20 minute intervals to warm up and then turn it back off, using blankets, a sleeping bag, hand warmers and the body heat of others in your car to stay warm. Eat snacks to keep nourished and read a book until help arrives.