



Shelter

Frequently, when we think of shelter, we think of either our home or emergency protection -- such as a lean-to constructed out of cut branches -- from winter weather.

While that is covered here, there is much more to this critical topic than emergency or cold-weather survival. Most of us are much more likely to be snow-bound on a highway than in the forest -- or left without a roof over our heads due to a hurricane or earthquake, than abandoned in the wilderness far from civilization. This chapter does not yet include information on how to build permanent or semi-permanent shelters in the wilderness (no teepees or birch-bark houses).

For the purposes of this chapter, Captain Dave considers "shelter" to be everything from the clothes on your back to the building you live in.

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Getting by at Home

In many survival situations, shelter may be as near as your home. If you don't need to evacuate ([see chapter 2](#)), you may be better off at home, even if the power is off or the storm threatening. Remember, your bug-out bag has the bare essentials, your survival stash at home should have enough food and water for weeks or even months.



If you are at home or in the vicinity during a natural or man-made disaster, your first course of action must be to determine where you will be safest. If you decide not to evacuate, you must then set about making your current residence as safe as possible. In many cases, this will mean moving into the basement or another protected part of the house. In an apartment or condominium, your best bet will probably be an interior room without windows, or even the basement of the apartment complex.

You can get the latest [weather reports](#) from CNN or check out their [storm center](#).

Hurricanes

Hurricanes are one of the few disasters for which you can anticipate some warning. If your home is near the shore and the rising surf is threatening, or you appear to be in the direct course of the hurricane, you may be better off evacuating to higher ground. Whether or not you choose to evacuate, tremendous structural damage can be caused by objects hurled through windows. Once a window is open, the power of the hurricane can actually blow the roof off the top of the structure!

To protect yourself and your property, windows should be covered with plywood or commercial hurricane shutters. Captain Dave recommends ClearShield hurricane shutters, which are made from tough clear polycarbonate and allow light to enter the window, unlike their steel and aluminum counterparts. Garage doors should also be reinforced and the door between the garage and the house itself should be locked and secured.

Hurricanes cause damage in multiple ways: high winds, flooding, downed trees and utility poles and storm surges. The farther in-land your location, the less power the hurricane will have by the time it reaches you, so pick your location carefully.

If you decided to stay in your home, you should pick an interior room with no windows. If you plan far enough in advance, you can reinforce the room with 2x6 boards or otherwise construct a cage to protect you from fallen trees, caved-in walls or other storm damage. Move whatever survival supplies you will need into the room, especially a battery powered light and radio.

Tornadoes

While tornadoes cannot be predicted as early as hurricanes, current weather forecasting technology will often tell us when atmospheric conditions are right for their formation. By sticking around the homestead during a tornado watch, you can help protect yourself from the tremendous damage twisters can cause.

A direct hit from a funnel cloud can turn a wooden home into a pile of chopsticks, toss a minivan around like a tumbleweed and knock trees down faster than Paul Bunyon. So if you live in a tornado-prone area, you might be wise to invest in an underground shelter, ala the Wizard of Oz. (You can use it as a root cellar or nuclear survival shelter as well.)

If you live in an area not known for tornadoes, but suddenly one is baring down on you, your next-best bet is the basement, preferably in the corner closest to the direction of the tornado.

If you are driving around and a tornado is looming, park under an underpass and run up as high as you can under it. If caught out in the open, head for the lowest ground possible, even a drainage ditch is better than nothing.

Earthquakes

The old advice of standing in a doorway or hiding in the closet or under a table is better than running around panic-stricken, and it may just save your life. If you live in an earth-quake prone area, prepare for it by ensuring your home meets current building standards and you have plenty of food and water stashed away.

If you live through the few minutes of the earthquake, and your house hasn't collapsed, the greater damage may be yet to come. Broken gas lines can cause fires and your house may be condemned, leaving you homeless. Plan for such

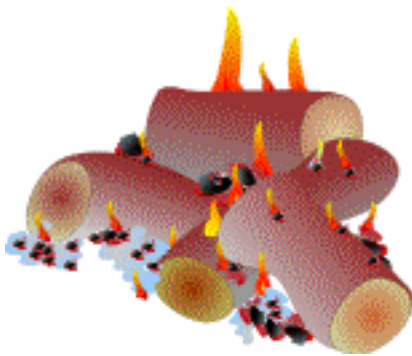
contingencies by having a plastic (non-sparking) wrench available to turn off your gas main and including a good three-day pack including a tent.

Winter Storms

While people do die in their homes due to bitter winter weather, these deaths are often caused by kerosene heaters or other sources of heat. Fire is a danger with any secondary heat source, including wood stoves, fireplaces, kerosene, propane and electric heaters, but they can be managed to reduce fire hazards. Carbon monoxide poisoning is also a concern which must be considered when using untraditional heat sources, such as gathering around the gas oven and opening the door.

(Captain Dave once had a stupid roommate from deep south who apparently didn't know how to turn up a thermostat. One cold day he used the oven to heat the house, so don't think it can't happen! He also didn't know you had to open the flue before lighting the fire, but that's another story.)

Another danger is freezing to death if the power fails. People often think they will be OK because they have a gas or oil furnace. This is a fallacy, because the gas furnace needs an electric fan to move warm air throughout your house while even the oil furnace probably has an electric starter and/or fuel pump.



A secondary source of heat is important, and wood stoves are probably the most efficient. While fire places send much of the heat up the chimney they share with wood stoves the conveniences of being able to find fuel all around you, from books to furniture. (Let's face it, most of have too much junk in our houses anyway.) You can also cook over them in a pinch, and when the blizzard is howling around your house, a cup of hot chocolate tastes twice as good and restores the spirits.

Kerosene and propane heaters can also crank out the BTUs in an emergency but probably require ventilation (check the manufacturer's literature for specifics).

A key to keeping warm with these back-up heat sources is not to try to heat the entire house. Gather everything you think you might need into a single room and close the room off. Use any blankets you can spare over windows and doors, if necessary to reduce drafts. Gather together under your comforters and share your body heat.

Floods

The best way to prevent damage from flooding is to move before one occurs. Seriously, don't live on a flood plain unless you have no choice. If you learned anything in the last decade, it should be floods can and do occur in low-lying areas previously thought safe. Rivers and streams rise to record levels, levees break, and there's just too much concrete for the ground to absorb all that rain.

If you're stuck in a flood, follow your instincts and move to the highest ground possible. Exercise caution when traveling because it doesn't take much water to float a car or pick up truck.

Looters

After a disaster, you may have to protect your home and belongings from looters. Sure, they'll probably march out the National Guard, but like the police, they can't be everywhere all the time. Just as you are assuming responsibility for your survival by reading this guide, you'll need to assume responsibility for protecting yourself from human predators.

Remember the "looters will be shot" signs after Hurricane Andrew? Makes you want to add spray paint to your survival-stash, doesn't it? How many houses posting signs like that were looted? Sometimes just the threat or presence of a visible weapon will be all you need. At other times, you may have to make the ultimate survival decision and weigh the value of your life, or the life of your loved ones, against that of a criminal. It's your decision, and you have to live with the results, but Captain Dave believes in judicious use of lethal force to meet and repel a grave threat to yourself.

Tents and Trailers

If your house is uninhabitable or condemned, you can pitch a tent in the back yard. This allows you to stay in close proximity to your survival stash and be available to protect your belongings. You'll also have access to clothes, pots and pans and all sorts of other stuff you'll realize you need only after an actual disaster strikes.

A step up from a tent (in both creature comforts and budget) is a trailer or RV. Pop the top on your trailer and you've got all the comforts of home. An RV will allow you all not only comfort, but mobility, which is great if you decided to evacuate in the case of a flood or hurricane. With a well-stocked camper or RV, you'll have beds with mattresses, a propane stove, food, cooking utensils, water

hookup, etc.

Other Buildings

When bad weather or another disaster strikes, home isn't the only option. Think of those folks working on Wilshire Blvd. in LA during the riots. Were they better off running to their cars and trying to drive through the riot or staying right there on the 18th floor, high above the riots? Certainly Captain Dave would want to have been at home protecting his family, but you need to weigh the benefits versus the risk. (That's one reason survival planning should involve the entire family.)

In many offices, you'll have a water cooler, vending machines, microwave, coffee maker, TV and phone service. Plus, power lines are underground, so they're protected from both the elements and rioters.

In a large building, you can count on a security force who will probably be smart enough to lock the doors and take some action to prevent access to the building by a crowd. If you think the building is being overrun by rioters, pull the fire alarm. This will result in all the elevators being recalled to the lobby and they won't run again until they are reset.

On your floor or in your suite, bar the door, check your personal weapon and, if there are enough people present, assign some people to stand guard. If you are alone on the floor, or there are invaders in the building, look for a good hiding place. Captain Dave's favorite: hiding in the crawl space above a drop ceiling.

Shopping centers, fast food restaurants and other public buildings also may offer some protection in natural disasters, but they could be targets for looting, so you will want to avoid them. And while you may be buddies with the guy at the local gun store, his place will be on top of the list for gangs to loot, followed by electronics and furniture stores.

In a severe survival situation, you got to look out for number one. So if you're trying to get out of the city in an emergency and your car breaks down, who's going to blame you for breaking into that empty house and seeking shelter? In a life-or-death situation, property crimes will be the least of your worries (and if caught, you can hope for a sympathetic jury).

Getting By on the Road

Anyone who spends a great deal of time in their car



must face the possibility that they will be stranded in their vehicle during an emergency. Whether you're five or 500 miles from home, stuck in a snow bank or stranded by a flash flood or terrorist action, you may need to survive on just what you have in the vehicle. That's why a survival kit for your car is critical.

If you are stranded with only the car and the contents of your pockets, you'll be glad to have your survival kit in the vehicle. While the [Big List](#) includes plenty of suggestions, Captain Dave's kit includes the following:

- Cellular phone for emergency communication (includes cigarette lighter charger)
- Detailed map of the local and general map of the broader region
- Pepper spray
- Loaded magazine for handgun and an extra box of ammo
- Four bottles of water (bottles can freeze and thaw without leaking)
- Juice packs (also can freeze/thaw)
- Two MREs
- Granola bars
- Packets of peanut butter and crackers
- Pouches of nuts and dried fruit
- Chocolate bars
- Hard candy
- Towelettes
- Diapers and wipes
- Tools, including jack and spare tire
- Flares
- Tow strap
- Jumper cables
- Spare tire in a can
- Folding military surplus shovel
- Tie-down straps
- Broken-in sneakers
- Blanket
- Space blanket
- Hand heater packets
- Light sticks
- Waterproof matches

- Hexane (fuel) blocks
- Magnesium fire starter
- Metal canteen cup for cooking/boiling water/melting snow
- Basic first-aid kit

In the winter, this stash is supplemented with the following:

- Additional blanket
- Snowmobile suit
- Old pair of boots
- Heavy wool socks
- Hat, gloves and face mask
- Windshield washer fluid

All of this is stored in the center console, glove compartment, spare tire compartment and a metal tool box. This gear is supplemented by the survival gear Captain Dave carries on his person pretty much all the time, including a knife (or two) and gun (or two).

When traveling with family members or other people, additional supplies are added as appropriate. For example, if embarking on a long trip in the winter, a sleeping bag and other supplies would be added. In the summer, more water would be carried.

Your car as Shelter

If you are stranded in the wilderness -- or even on the side of the road -- in a snowstorm or accident, you'll probably need all this and more.

In the bitter cold, you must utilize your resources sparingly. While a car will cut the wind, your body alone cannot heat the interior. (Just wait for someone on a winter day in a parking lot without the car running and you'll come to the same conclusion. Sitting in a car, you get cold quickly.) For the long term, you may be better off in a carefully constructed shelter. If you can reasonably expect rescue the next day, you can run your engine 10 minutes out of every hour for heat, as long as you make sure the exhaust pipe is not blocked by snow.

If you are planning to stay in your vehicle for the night (or any amount of time over an hour or so), put on the warmest clothes possible and cover up with the blankets. Sit sideways so you place your feet on the seat, because the foam cushion will offer some insulation and the coldest area of the vehicle will be the foot wells. Place something behind you so your head is not in direct contact with

the cold window. If you have enough blankets/materials, try to section off the back of the car so you only have to heat the front seat area.

Or, you can lie down on the back seat (or front, if it's a bench seat), draping blankets over the seat to form a tiny triangular tent. Practice good winter survival by not exerting yourself to the point where you sweat -- you'll get much colder if you are damp. And do not eat snow, you should melt it first. (It's actually easier to melt ice than snow, believe it or not).

If you decided to light a fire to keep warm, light one outside of your car, not in it. See the section on outdoor survival or fire making for more specifics.

In the desert or in hot weather, you will be better off in the shade of the car — even under it — than inside it. At night, temperatures will drop and you'll probably want to be back inside the car using some of the techniques described above to keep warm.

Whatever the temperature or climate, communication is critical for calling for rescue. At minimum, put something on your antenna or display a sign calling for help. A cell phone is the best bet, although it won't work in some rural areas. (A CB radio is your next best choice.) A common flare can also help if you believe a helicopter or search plane is in the area. If searchers are on foot, snow mobile or vehicle, three shots from your gun is an international signal similar to S.O.S.

In January 1997, searchers in North Dakota used an F-16 jet with a infrared sensing device to look for a missing woman stranded in her car. While they eventually located her by the signal from her cell phone, think how well a flare would have showed up on the infrared screen. (For the record, more than 20 people were killed in this deep freeze, including two less-well-prepared people who froze in their vehicles.)

Winter Survival Guidelines

There are many items critical to surviving in cold temperatures. Here are a few basics:



- Protect yourself from the wind, it can suck the heat out of your body faster than you can replace it.
- If your clothes are not warm enough, add insulation. Newspaper is a great wind breaker and insulator. It works in everything from your shoes to shirt. Dried grass and even leaves will also work (avoid damp leaves, obviously).
- Try not to sweat, since this can cause excessive chilling when you stop. Remove a glove, unzip a few inches or expose part of your ear to cool off if you start to sweat.
- Do not sleep directly on the ground. The frozen ground cools you faster than the air, so pile branches, pine needles and/or a ground cloth under you.
- Do not eat snow or suck ice to get water, it will lower your body temperature too fast. You do need plenty of liquids, however, so melt the ice and snow over a fire.
- Eat plenty of food, if available, since your body will need energy to generate heat. Large meals will make you cold the following half hour, so nibble regularly rather than "sitting down" for a large meal.

Winter Shelters

In the snow, your most basic shelter can be found at the base of a pine tree. Lie down or sit with the wind at your back, and your back against the tree trunk. Pile plenty of branches under you to insulate you from the ground. Build up a wall of branches and snow around you, if possible.



Even if there is no snow, the base of a pine tree with drooping boughs close to the ground can be a fairly sheltered location. You can also add other branches to improve your position, cut the wind, etc.

In deep snow, you can dig a cave into a drift. You can also dig a deep trench and cover the top with branches and then snow. In either situation, dig a trench on the low end of the shelter where water (melting snow) can accumulate. You don't want to end up lying in a puddle. Remember, as long as you stay dry and are wearing warm clothes, snow can insulate you from the even-colder air and block the wind. A snow cave can asphyxiate you, so be sure you have proper ventilation.

Speaking of caves, if you can find a small, uninhabited one, you're in luck. Caves offer protection against the wind, snow and rain and you can light a nice big fire just inside the entrance. Caves are also nice and defensible,

If you can't find a cave, look for an overhang/slanting cliff wall, it will offer you some protection from the wind and snow/rain. You can build a large fire in this scenario, something that isn't practical in the small snow caves.

If no wall is available, you can build one out of blocks of compacted snow, laying them out like bricks. Don't just make a straight wall, curve it so it offers even greater protection. If you're stuck for days, you can build an igloo by moving each layer of bricks in a few inches or so as you get near the top.

Another shelter can be built by bracing a fallen sapling or limb in the notch of a tree and piling branches against it at an angle. (Think of this lean-to as a tent, with the sapling as a ridge pole and the branches on the side as the tent sides.) Choose branches with plenty of leaves or needles, as these will catch the snow and stop the wind.

Remember, these home-made shelters should not be large. You should be able to lie down in one and move slightly without knocking it over. But the bigger the space, the bigger the area you'll need to warm.

Finally, Captain Dave has read that you can build a huge pile of leaves and then borrow into the middle of it, but he can't vouch for this method.

Another untried method is to make a pile of branches and cover it with mounds of snow, packed tightly into place. Then remove most of the inside branches to make room for yourself. Will this method work? Let Captain Dave know if you've tried it.

