

## Tornado Preparedness: The Six Keys to Safety

The US has more tornadoes than any other area on the globe. We get them in the spring, as weather changes in the fall, when summer storms hit, and as byproducts of hurricanes. Though the Midwest is known as “tornado alley,” there’s really no place in the country that’s immune. Add to this the fact that hurricanes and severe thunderstorms can produce directional winds nearly as destructive as the vortex of a twister, and it’s easy to see that we need additional preparedness info beyond “duck and cover.”

We’re going to cover the six main areas of tornado preparedness that will help you before, during, and after a tornado or heavy storm strikes. Appropriately, we’ll use the acronym **S.T.O.R.M.S.**:

**Shelter** – Strengthen your home and know where to find expedient shelter.

**Time** – Increase your chances of getting the early warning.

**Others** – Safety and protection involves the whole family and communicating with others.

**Resources** – You’ll need everything from immediate supply to good insurance.

**Medical** – Help yourself now to save the injured later.

**Sweeping Up** – Tips and tricks for dealing with the aftermath.

### **Shelter**

Severe storms with driving rain, possible hail, and projectiles hurled by strong winds offer extreme dangers from which we need to protect ourselves. The best protection would be a steel-reinforced concrete safe room located in the basement of a structurally sound building. Lacking that, let’s look at a few things you should do now:

1. Reinforce your house. There are simple things we can do to greatly strengthen our homes. Ask your local home-supply store rep about angle brackets, strapping, and techniques to install them to make your roof, walls, doors, and connection to the foundation stronger. Also, do an internet search for “hurricane retrofit” (including quotes) to find additional instruction. One such source is from the Institute for Business and Home Safety at <http://www.ibhs.org/publications/downloads/128.pdf>. Hint: You can greatly strengthen your doors by using longer screws to hold your hinges and strike plates in place. Not only does this keep the wind from blowing your doors open, but it helps against the average intruder as well.
2. Create a safe room or area within your home. The general rule of thumb is to pick an area near the center of your house and below ground if possible or at least on the lowest floor. Consider these points:
  - Turn your walk-in closet into a safe area. Remove the sheetrock from walls and ceiling, add extra wall studs held in place with screws, strapping, and angle brackets, and then replace the sheetrock with one or two layers of ¾” marine plywood held in place with structural adhesive and screws. Finish and paint the walls and you’ll never know it was retrofitted.
  - For some online sources of “safe-room construction” do an internet search or see:
    - National Hurricane Center [http://www.nhc.noaa.gov/HAW2/pdf/building\\_safe\\_room.pdf](http://www.nhc.noaa.gov/HAW2/pdf/building_safe_room.pdf).
    - The "Blue Sky Foundation" has some good info at [http://www.bluesky-foundation.net/studyguides/DecisionGuide\\_v5.6.pdf](http://www.bluesky-foundation.net/studyguides/DecisionGuide_v5.6.pdf).
  - If you live in a mobile home, your best bet for safety would be a storm cellar. One simple and relatively inexpensive way to make a storm cellar is to have a septic tank company install a clean new unit in your yard, but leave about a foot above the ground. You can build a strong cover over that and use it as an outdoor deck, or as the foundation for a storage shed.
  - Some locations might reimburse you for building a safe room. Check with your tax assessor, county extension office, insurance provider, insurance commissioner, or local emergency management office.
3. Learn the “safe points.” When a tornado strikes you might be at home, but it’s more likely you’ll be at work, out running errands, or on a trip. Learn to recognize all the locations that will provide protection. Does the building you’re in have shelters? For example, in the Denver Airport, the restrooms are designated tornado shelters. Does the building have a basement? Are you on the road? How far are you from a known safe building, or from a deep ditch?

### **Time**

In emergencies, our most important asset is time. The two best ways to gain extra time in weather emergencies are to prepare now, and to get as early a warning as possible that severe weather is heading your way. If you wait for your community’s alert sirens, you’ve waited too long.

1. Buy an NOAA Weather Alert Radio. Not only do they warn you of inclement weather, but the system is now being tied in to the regular EAS system to warn you of other emergencies.
2. Sign up for an alternate alert service such as the Weather Channel's at [www.weather.com/notify](http://www.weather.com/notify), or the Emergency Email & Wireless Network at <http://www.emergency.com>. Hint: When you get the warning, take action! Don't do dumb things like videotaping the tornado.
3. Learn the indicators of severe weather. The Weather Channel and others such as the National Oceanic and Atmospheric Administration at <http://www.noaa.gov>, have educational information that will teach you how to spot incoming severe weather. Some "symptoms" may include:
  - A large anvil-shaped thunderhead cloud or a thick, very dark, cloud cover with a pea-soup consistency.
  - Hail or, in some cases, unseasonable snow.
  - Green lightning (as lightning flashes behind clouds heavily laden with water).
  - A sudden change in humidity, wind direction or wind speed, rain volume, or rain direction.
  - A sudden change in air pressure (your ears may pop).
4. Network with others. Sometimes our friends and coworkers are our best early warning system. Develop a phone tree or at least a general agreement among friends and relatives that you'll warn each other about dangers in the area.

### **Others**

There are two sets of "others" you might deal with in concert with a severe storm. One is your family and the other is first responders. Communicate with your family both now – to prepare for a tornado – and later in the event a tornado watch or warning is given. You also may need to communicate with first responders if you experience injury or certain types of property damage that requires official assistance. Consider:

1. Tornado drills. Emergency reactions are worth practicing. Have your family practice getting into the safe room and into a safe position ("duck and cover") within 30 seconds or less.
2. Protect your pets. On warning of severe weather, round up your pets, put them on leads or in carriers, and take them to your safe area. If your house is damaged in the storm your pets are more protected and easier to care for afterward. Hint: You can train your pets to head to the safe room on command. Your vet can give you some training pointers.
3. Communication and signaling may be vitally important if your home is damaged and/or someone sustains injury during a tornado. For example, though everyone might be uninjured, you may be trapped in the debris that was once your home and need someone to dig you out. In addition to your house phone and cell phone, have backup options like a hand-held two-way radio, and something that can make a loud noise such as an air-horn or whistle. Also, make sure your neighbors know you have a safe room in the house, or storm cellar in your yard. They can tell authorities where to look if no one has heard from you.
  - Visit <http://www.nationalsos.com> for networking information regarding your hand-held two-way radio.
  - Go to <http://www.arrl.org> to learn more about the world of Ham Radio Operators and how they help.
  - Note: Do not use anything flame-producing to signal with. This includes flares, candles, etc.

### **Resources**

In a disaster, you'll need goods, gear, or services to help you deal with the event and then recover afterward. Make sure you have adequately covered each of the following areas:

1. Make sure your insurance policy covers all types of natural disaster including water damage from rain or flood since many policies have strict exclusions. Also, make sure your policy will provide for the costs of temporary lodging and the full replacement value for your property and possessions.
2. Document all your possessions by taking photos and videos, list everything you own, and keep important receipts in your safe deposit box.
3. Keep your isolation and evacuation supplies together in a protected spot where you can access them immediately, or where they'll be protected if your home is damaged while you're away.
4. Make a list of services you might need after a tornado, such as cleanup and repair services or temporary lodging. Look through your phone book to find services like tree-cutting and debris removal, structural home repairs, automotive repairs, lodging, etc. Write their contact information down and keep it with your emergency kits so you can call these services immediately after a disaster to get your name on their lists.

### **Medical**

We're hoping that all the advice above has kept you safe in the event of a tornado. However, we know things do happen and people get hurt. Cover the following, just in case:

1. First aid training is important for every family regardless of the threat, so learn the basics of general first aid and CPR. Next, talk with your doctor about first aid measures for specific ailments. For example, if someone in your family has Asthma and they have an attack, what are some things you can do to care for them if you can't immediately get to their inhaler or medication?
2. First aid kits are a must and families should have several and not just one. The main kit should be kept in the home, but smaller kits should be kept in each automobile and at your workplace.
3. Copies of medical information should be kept at home. After a destructive event there's no guarantee your family doctor will be available or that the hospital's computers will be functional. In case of injury, medical practitioners will need to know a general medical history of the injured. Keep a list of ailments, conditions, special medical needs, and current medications of each family member (including pets). Remember, even though you're the head of household and you know all that information, you may be injured and unable to communicate.

### **Sweeping Up**

All destructive events have at least one thing in common; they're going to create quite a mess. Here are a few tips to help you stay safe while cleaning up:

1. Though you might think the power is completely out, stay away from downed power lines.
2. Stay alert to the hissing sound of a broken gas line or the smell of gas.
3. Dress for the weather, but still dress to protect. Wear sturdy shoes or boots (and watch out for boards with nails, broken glass, etc.), a hat and sunscreen, insect repellent, and heavy work gloves. The hospitals will be too full of major injuries to deal with the minor injuries you could have prevented.
4. Physical labor after a stressful event can be quite taxing. Drink plenty of fluids, eat regularly, and take periodic breaks.
5. Here is where you'd need your list of professional cleanup services. Call as soon as possible.
6. In the case of total destruction, your property itself will be a trash pile. Therefore, use your main trashcan as a receptacle for the items you want to salvage. Label it accordingly so no one throws away its contents. Hint: Take photographs or video of all the damage for insurance purposes.
7. It's possible that your valued possessions might be strewn about the neighborhood. It'll be easier to have things returned if your name is written or engraved on them. If you don't want to use your name, use a unique identifier such as the first phone number you can remember from childhood. Hint: Never use your Social Security Number or other sensitive info.

Though this article is longer than average, there is still no way we can pass along all the helpful hints and tips that will keep you safe in an emergency and help you recover afterward. Do what you can with the information presented, and continue your education on your own. The steps you take to protect yourself against tornadoes will help protect you and yours during any number of other disaster preparedness scenarios. Stay safe!

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Copyright 2008, Paul Purcell. About the author: Paul Purcell is an Atlanta-based security analyst and preparedness consultant with over twenty years risk management and preparedness experience. He's also the author of **Disaster Prep 101** found at [www.disasterprep101.com](http://www.disasterprep101.com). The direct link to this article is <http://www.disasterprep101.com/tornadoes.htm>.

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