REDUCING TORNADO DAMAGE

RESIDENTIAL

While only a few specialty buildings are designed to withstand the direct impact of a severe tornado, good construction choices can give added protection and increase the likelihood that at least part of a home will remain standing to provide some shelter. Strengthened homes near the storm's edge would have a good chance of surviving intact or with minor cosmetic damage.

Even if you live outside "Tornado Alley," the area of the country that runs north from Texas through eastern Nebraska and northeast to Indiana, you are still vulnerable to tornadoes. Some areas may see more of these unpredictable and dangerous storms than other states, but the rest of the country also gets its share of twisters.

You don't have to be blown away when nature lets loose. It's never too early to prepare and you can take several basic steps right now to protect your family and your home from disaster.

Report any property damage to your insurance agent or company representative immediately after a severe weather event or other natural disaster and make temporary repairs to prevent further damage. For information about filing an insurance claim after a natural disaster, contact your insurance agent or insurance company.

Insurance Institute for Business & Home Safety®

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WORKING OUTSIDE

To reduce the risk of damage from wind-borne debris, replace gravel/rock landscaping material with shredded bark. Keep trees and shrubbery trimmed. Cut weak branches and trees that could fall on your house.

WHEN A TORNADO THREATENS

You can improve the odds of your home surviving high winds by taking these precautions, but you won't make it tornado-proof. While these measures can't guarantee your safety, you can help your family be better protected.

When a tornado approaches, go to the closest identified shelter immediately. As previously discussed, if you don't have a storm cellar or in-residence "safe" room and you don't have time to get to a community shelter, head to the centermost part of your basement or home, away from windows and preferably under something sturdy like a workbench or staircase.

Don't open your windows. You won't save the house, as once thought and you will put yourself at risk of injury from breaking glass. You also may actually make things worse by giving wind and rain a greater chance of getting inside.

Don't try to ride out a tornado in a manufactured home. Even manufactured homes with tie-downs overturn in these storms because they have light frames and offer winds a large surface area to push against. Their exteriors are also vulnerable to high winds and wind-borne debris.

YOUR HOME

Homes in inland areas of the United States are typically held together only with nails, instead of straps connecting the roof, walls and foundation. This type of construction is commonplace in hurricane-prone areas, but should also be considered by anyone who wants to increase their property's protection from other severe windstorms. Refer to the International Building Code (IBC) and International Residential Code (IRC), developed by the International Code Council, for specific references to guides for building wind-resistant structures.

If you want to get a sense of how well your home is built, you can conduct a relatively quick inspection. Depending upon what you find, it may be a wise investment to add strapping to help tie the house together.

a. Look at the connection between your roof system (rafters or trusses) and the exterior walls. Pay specific attention to whether there are any straps used to connect the two. Older homes and those located in inland areas are less likely to have straps.

b. If your garage has unfinished interior walls or your home has a crawl space, try to determine whether the walls and floor system are anchored to the foundation. Look for bolts with nuts and washers that attach the bottom of the wall to the floor slab or foundation. Also check for any additional strapping tying the walls or wood-frame floor to the foundation.

YOUR SAFETY

The most economical and effective way to provide a safe place for riding out a tornado is to have a shelter that meets the requirements of the National Storm Shelter Association (NSSA) or the International Code Council's Shelter Standard. Sample designs for shelters are also available in the guide FEMA 320.

Short of building or installing a tornado shelter, you should identify the safest area of your home. This is usually a small interior room without windows, such as a bathroom, where you can ride out the storm. Be sure you can easily access this area when a tornado threatens. The more walls between you and the outside, the better.

Having time to seek shelter in severe weather situations is critical. Using a NOAA all-hazard radio that is specifically tuned to pick up warnings for your local area is a good option. This will minimize more frequent and broader warnings that may or may not apply to you.

Become familiar with your community's severe weather warning system and make certain every adult and teenager in your family knows what to do when a tornado "watch" or "warning" sounds. Learn about your workplace's disaster safety plans and similar measures at your children's schools or day care centers.

Study the local disaster preparedness plan. Decide in advance where you will take shelter (a local community shelter, your own underground storm cellar or in-residence "safe" room) and create a family plan. Identify escape routes from your home and neighborhood and designate an emergency meeting place for your family to reunite if you become separated. Also establish a contact person to communicate with concerned relatives.

Put together an emergency kit that includes first aid supplies, a portable NOAA all-hazard radio, a flashlight, fresh batteries, basic tools, work gloves, portable lanterns, a signaling device such as an air horn, prescription medications, extra car keys, extra eyeglasses, cash and important documents such as insurance policies.

BUILDING OR REMODELING

CONNECTIONS

The points where the roof and the foundation meet the walls of your house are extremely important if your home is to resist high winds and the pressures they place on the entire structure.

- If you are building a new home, have the builder use straps and wood structural sheathing to tie the structure together and anchor it to the foundation. These connections are relatively inexpensive when used during construction, adding three to four percent to the price of a home.

- If you are remodeling, ask the contractor to install straps and anchors that will strengthen the house from the roof to the foundation, even if it is only in the area that is being remodeled. This should only cost a few hundred dollars for a typical 1,500 to 2,000 square foot house.

GABLES

Brace the end wall of a gable roof properly to resist high winds. Check the current model building code for high-wind regions for appropriate guidance, or consult a qualified engineer or architect.