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## Well-built: The importance of safe buildings

A key to protecting yourself during disasters is finding safe shelter, whether it be at home, work or school. To maximize your safety, however, it's good to know whether the building was made to properly withstand a disaster, especially if the building is in a high-risk location, such as an area prone to hurricanes or near earthquake fault lines. It's an important issue, as many disaster-related injuries and deaths can be prevented when buildings are engineered to weather a catastrophe.

Here are some tips that can tell you if the buildings you spend time in are structurally safe from disasters.

### Build it safe

Buildings are legally required to meet certain codes and rules that set minimum safety standards. These codes are important because they not only help protect us from disasters, but because we all rely on them to keep us safe from a range of threats.

To determine whether a building can withstand a disaster, you have to first know your risk. Find out what kind of disasters your community may encounter, such as tornadoes, flooding or earthquakes.

If the building is still in the planning stages, consider these tips:

- If building along coasts subject to a storm surge, which is a rise of water due to a strong storm or hurricane, elevating the building with stilts or anchoring the foundation to solid rock can reduce the risk of damage and flooding.
- If building in tornado-prone areas, make sure you have an easily accessible basement or other underground shelter, which can keep you and your loved ones safe.
- Dome-shaped roofing is better able to withstand hurricane- and tornado-force winds. If building in hurricane-prone areas, there are building methods that can be used to reduce the risk that your roof will be blown away.



*Photo courtesy iStockphoto—Lisa Young*

- Concrete buildings are often better able to withstand wind, floods and fire. Building materials that are flexible, such as wood and steel, can better withstand an earthquake.

## Retrofit for safety

Improving, or retrofitting, an existing building to make it safer is another option. Before getting started, check with local building officials, as retrofitting that includes major construction may require permits and have to meet specific building codes. Some tips:

- Fit your windows with hurricane shutters. Such shutters can prevent windows from shattering and creating dangerous debris. Glass windows can also be replaced with plastic panes or shatterproof glass.
- To withstand strong winds, make sure your entry door has at least three hinges and a deadbolt security lock. Your local building supply store should sell kits to help you retrofit a garage door to withstand strong winds as well.



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- To protect against flood damage, seal walls with waterproof coatings, install flood shields on doors and windows, and install backflow pumps on drains and sewer lines.
- Add a “safe room” to your home or business. Safe rooms provide a place where people can seek refuge from threats such as hurricanes and tornadoes. They are usually located in a basement or an interior area on the ground floor. For guidelines on creating safe rooms, check with the Federal Emergency Management Agency.
- People living in coastal areas should consider seeking out a professional windstorm inspector who can tell them if their buildings are safe.

## In the aftermath



Photo courtesy iStockphoto—Joel T.

After a disaster, listen for updates from local officials, as some buildings must be declared safe before you re-enter. Even if your home or business is standing after a disaster, you should still take precautions:

- Don't enter a building if the foundation has shifted or been weakened.
- Don't try to demolish a building without professional help.
- If a building is safe to enter, bring a flashlight and be careful of debris.
- Don't use matches or lighters, as the disaster may have damaged gas lines.



800 I Street, NW • Washington, DC • 20001-3710  
202-777-APHA • [www.aphagetready.org](http://www.aphagetready.org) • [getready@apha.org](mailto:getready@apha.org)

See our website for extensive information under the Emergency Preparedness link.



555 Lexington Ave., Mansfield OH 44907 • [www.richlandhealth.org](http://www.richlandhealth.org)