Safe Rooms Save Lives

Extreme weather such as tornadoes and windstorms pose a serious threat to buildings and their occupants. Tornadoes strong enough to damage roofs, destroy mobile homes, snap or uproot large trees and turn debris into damaging windborne missiles are common in Oklahoma.

FEMA, with help from the Wind Engineering Research Center of Texas Tech University, has developed designs for shelters called Safe Rooms that homeowners can build inside their houses.

The purpose of a Safe Room is to provide a space where you and your family can survive a tornado or severe windstorm with little or no injury. These shelters are designed to give protection from the forces of extreme winds as high as 250 mph, including the impact of windborne debris.

Do I need a Safe Room?

Yes! Your house was probably built in accordance with local building codes. However, a tornado can often cause winds much greater than those on which local building code requirements are based. Your house may be built “to code,” but that does not mean it can withstand winds from extreme events.

Basis of Safe Room Design

You can build a Safe Room in one of several places in your house – in your basement, beneath a concrete foundation or garage floor or in an interior room on the first floor. Shelters built below ground level provide the greatest protection, but above ground shelters can also save lives.

To protect its occupants, a Safe Room must be able to withstand the forces exerted by high winds, even if the rest of the house is severely damaged or destroyed.

Therefore:

- The shelter must be adequately anchored to resist overturning and uplift.
- The walls, ceiling and door of the shelter must withstand wind pressure and resist penetration by windborne debris.
- The connections between all parts of the shelter must be strong enough to resist the wind forces without failing.
- If sections of either interior or exterior house walls are used as walls of the Safe Room, they must be separated from the structure of the house so that damage to the house will not cause damage to the shelter.

Shelter-In-Place Kit

Since an emergency can happen at any time, it is important to prepare your kit in advance. Collect the following items and store them in your safest place where you plan to shelter:

- A flashlight with extra batteries
- Heavy blankets for protection from debris
- A NOAA weather radio with battery
- Bottled water
- Healthy, non-perishable food items
- A first-aid kit

A shelter-in-place emergency will probably last only a few hours, so enough food and water for a week is not necessary. Be sure to take any necessary medicines with you to your shelter room.

Child Safety in School

Attempting to pick up children from school during severe weather or a chemical emergency can be dangerous. You and your children could be exposed to the hazards while traveling to and from school. It is safer to leave your children at school where they will be instructed to follow the school’s safety procedures until the danger has passed.

Want to learn more? Taking Shelter From the Storm: Building a Safe Room Inside Your House, (FEMA publication 320) is available at no cost by visiting www.fema.gov.

The booklet provides information that you or your contractor will need to build a shelter that meets these requirements.
What is Shelter-In-Place?

“Shelter-in-Place” means to take shelter where you are, remaining inside your home, workplace or a nearby building. Some emergencies require evacuation, but often during tornadoes, windstorms, floods, and some chemical emergencies it is safer to stay where you are. You may need to shelter-in-place when:

- The emergency or chemical leak is of short duration
- The danger could quickly overtake you if you were outside
- There is not enough time to evacuate

Sheltering-in-Place Works

During severe weather, adequate shelter can save your life. Follow these four steps when instructed to shelter-in-place:

1. Move people and pets indoors immediately and go to your predesignated shelter location. Underground shelters and basements are best, but if your house or building does not have one, go to the lowest level and choose a small interior room with no windows, such as a closet or bathroom. (If you are in a mobile home, find shelter elsewhere.)

2. Crouch under a heavy piece of furniture. Cover yourself with blankets, pillows or a mattress and protect your head and neck with your arms.

3. Turn on the radio or television in order to hear any Emergency Alert System messages and wait for further instructions.

4. Stay inside until you are told that the danger has passed.

During Chemical Emergencies

Chemical emergencies can occur anywhere chemicals are used, stored or transported. You can avoid danger by sheltering-in-place and following these steps:

1. Go indoors immediately. Seal the room tightly by closing and locking all windows and doors. Place a wet towel at the bottom of the door to absorb gases that may leak into the house.

2. Turn off all heating, cooling, and ventilation devices including window and attic fans and anything that moves air in and out of the house. Also, close fireplace dampers.

3. Listen for instructions from emergency officials via television, radio or weather radio and do not leave until you are told it is safe to go out.

4. Stay off the telephone; do not call 911. Officials will need clear telephone lines.

5. After the emergency is over, open all doors and windows and go outside until the house or shelter is well ventilated.