The need to prepare is real

Being prepared can reduce fear, anxiety, and losses that accompany disasters. Communities, families, and individuals should know what to do in the event of an earthquake. If a disaster occurs, local government and disaster-relief organizations will try to help you, but you need to be ready as well. You should also be ready to be self-sufficient for at least three days.

One of the most frightening and destructive phenomena of nature is a severe earthquake and its terrible after-effects. An earthquake is a sudden movement of the earth, caused by the abrupt release of strain that has accumulated over a long time. For hundreds of millions of years, the forces of plate tectonics have shaped the earth, as the huge plates that form the earth's surface slowly move over, under, and past each other. Sometimes, the movement is gradual. At other times, the plates are locked together, unable to release the accumulating energy. When the accumulated energy grows strong enough, the plates break free. If the earthquake occurs in a populated area, it may cause many deaths and injuries and extensive property damage.

Knowledge Check

Check your knowledge about what to do during an earthquake. For each question, choose answer *A* or *B* and circle the correct response. When you have finished, check your responses using the answer key below.

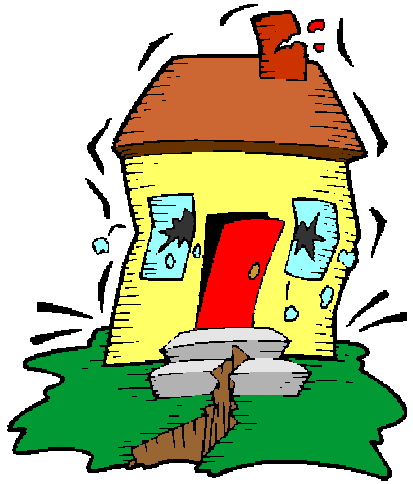
What action should you take during an earthquake? The answer varies by where you are when an earthquake strikes. For each situation, pick the best course of action from the choices given.

1. At home
   A. Stay inside
   B. Go out to the street
2. In bed
   A. Stand by a window to see what is happening
   B. Stay in bed and protect your head with a pillow
3. In any building
   A. Stand in a doorway
   B. Crouch in an inside corner away from the exterior wall
4. On the upper floor of an apartment building
   A. Take the elevator to the ground floor as quickly as possible
   B. Stay in an interior room under a desk or table
5. Outdoors
   A. Run into the nearest building
   B. Stay outside away from buildings
6. Driving a car
   A. Stop the car in an open area
   B. Stop the car under an overpass

Answer key
1. A 2. B 3. B 4. B 5. B 6. A

Earthquakes

Are you prepared ?



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Know the Terms

Familiarize yourself with these terms to help identify an earthquake hazard:

Earthquake - A sudden slipping or movement of a portion of the earth's crust, accompanied and followed by a series of vibrations.

Aftershock - An earthquake of similar or lesser intensity that follows the main earthquake.

Fault - The fracture across which displacement has occurred during an earthquake. The slippage may range from less than an inch to more than 10 yards in a severe earthquake.

Epicenter - The place on the earth's surface directly above the point on the fault where the earthquake rupture began. Once fault slippage begins, it expands along the fault during the earthquake and can extend hundreds of miles before stopping.

Seismic Waves - Vibrations that travel outward from the earthquake fault at speeds of several miles per second. Although fault slippage directly under a structure can cause considerable damage, the vibrations of seismic waves cause most of the destruction during earthquakes.

Magnitude - The amount of energy released during an earthquake, which is computed from the amplitude of the seismic waves. A magnitude of 7.0 on the Richter Scale indicates an extremely strong earthquake. Each whole number on the scale represents an increase of about 30 times more energy released than the previous whole number represents. Therefore, an earthquake measuring 6.0 is about 30 times more powerful than one measuring 5.0.

Take Protective Measures

The following are things you can do to protect yourself, your family, and your property in the event of an earthquake:

• Repair defective electrical wiring, leaky gas lines, and inflexible utility connections.
Get appropriate professional help. Do not work with gas or electrical lines yourself.

• Bolt down and secure to the wall studs your water heater, refrigerator, furnace,
and gas appliances. If recommended by your gas company, have an automatic gas shut-off valve installed that is triggered by strong vibrations.

• Place large or heavy objects on lower shelves. Fasten shelves, mirrors, and large picture frames to walls. Brace high and top-heavy objects.

• Store bottled foods, glass, china, and other breakables on low shelves or in cabinets that fasten shut.

• Anchor overhead lighting fixtures.

• Be sure the residence is firmly anchored to its foundation.

• Locate safe spots in each room under a sturdy table or against an inside wall. Reinforce this information by moving to these places during each drill.

• Hold earthquake drills with your family members: Drop, cover, and hold on!

After an Earthquake

• Be prepared for aftershocks. These secondary shockwaves are usually less violent than the main quake but can be strong enough to do additional damage to weakened structures.

• Open cabinets cautiously. Beware of objects that can fall off shelves.

• Stay away from damaged areas unless your assistance has been specifically requested by police, fire, or relief organizations.

Earthquake Insurance:: Hazard insurance, which protects you financially from the effects of damage, is usually bought as part of your homeowner's insurance policy. Earthquake insurance is typically written as an endorsement to the standard comprehensive homeowners policy. Different types of hazard insurance offer different levels of help when you repair or rebuild. Review your policy, age level and any exclusions that apply. Obtain additional coverage as needed to cover dwelling, contents, other structures, loss of use and miscellaneous expenses.

During an Earthquake

If you are:	Then:
Indoors	• Take cover under a sturdy desk, table, or bench or against an inside wall, and hold on. If there isn't a table or desk near you, cover your face and head with your arms and crouch in an inside corner of the building. • Stay away from glass, windows, outside doors and walls, and anything that could fall, such as lighting fixtures or furniture. • Stay in bed - if you are there when the earthquake strikes - hold on and protect your head with a pillow, unless you are under a heavy light fixture that could fall. In that case, move to the nearest safe place. • Use a doorway for shelter only if it is in close proximity to you and if you know it is a strongly supported, load bearing doorway. • Stay inside until the shaking stops and it is safe to go outside. Most injuries during earthquakes occur when people are hit by falling objects when entering into or exiting from buildings. • Be aware that the electricity may go out or the sprinkler systems or fire alarms may turn on. • DO NOT use the elevators.
Outdoors	• Stay there. • Move away from buildings, streetlights, and utility wires.
Moving Vehicle	• Stop as quickly as safety permits and stay in the vehicle. Avoid stopping near or under buildings, trees, overpasses, and utility wires. • Proceed cautiously once the earthquake has stopped, watching for road and bridge damage.
Trapped Under Debris	• Do not light a match. • Do not move about or kick up dust. • Cover your mouth with a handkerchief or clothing. • Tap on a pipe or wall so rescuers can locate you. Use a whistle if one is available. Shout only as a last resort - shouting can cause you to inhale dangerous amounts of dust.