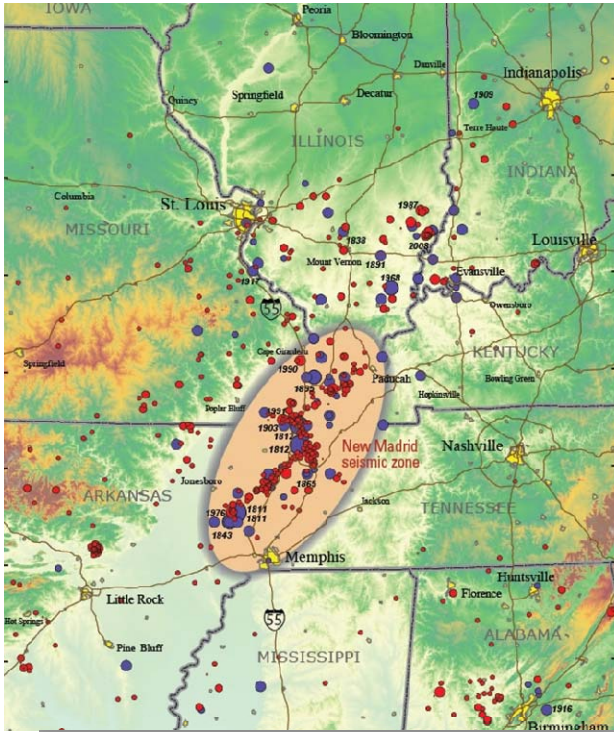

Are You Ready to ShakeOut?



The central United States is earthquake country. A large earthquake could become an unprecedented catastrophe, affecting multiple states and have a devastating impact on the national transportation system, electric power grid, and economy. With earthquakes as an inevitable part of our future, individuals and families *must* make plans and take actions to reduce the consequences of these disasters.

What we do now, before a damaging earthquake strikes, will determine what our lives will be like afterwards.

Scientists estimate that there is a 25-40% probability of a damaging earthquake occurring in the central U.S. within the next 50 years. With this in mind, the Central United States

Earthquake Consortium and its Member States organized the Great Central U.S. ShakeOut (www.shakeout.org/centralus), an earthquake drill and preparedness activity which allows *everyone* to become better prepared for earthquakes. The ShakeOut is designed to help individuals and communities in the region get ready for these earthquakes, practice how to protect themselves, and to prevent disasters from becoming catastrophes.

The following information is designed to help individuals and families learn more about the correct response to earthquake shaking, hold an earthquake drill, and discover ways that you can protect your home from earthquake damage.

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WHAT TO DO DURING AN EARTHQUAKE

One of the cornerstone activities of the ShakeOut is that participants are asked to perform the recommended personal-protective action during an earthquake: ***Drop, Cover, and Hold On***. Federal, state, and local emergency management experts and other official preparedness organizations all agree that ***Drop, Cover, and Hold On*** is the appropriate action to reduce injury and death during earthquakes. It is the safest action to take during ground shaking. There are 3 steps:

- ***DROP*** to the ground (before the earthquake drops you!),
- Take ***COVER*** by getting under a sturdy desk or table, and
- ***HOLD ON*** to it until the shaking stops.



If there isn't a table or desk near you, drop to the ground and then (if possible) move to an inside corner of the building. Be in a crawling position to protect your vital organs and be ready to move if necessary, and cover your head and neck with your hands and arms. Do not try to run to another room just to get under a table - you are more likely to be injured if you try to run during strong shaking. The main point is: *Even if you cannot Drop, Cover, and Hold On, you should immediately take action to protect your head and neck.*

Earthquakes occur without any warning and may be so violent that you cannot walk or you therefore could likely be knocked to the ground where you happen to be. You will never know if the initial jolt will turn out to be the start of a large earthquake. These are general guidelines for most situations. Depending on where you are (in bed, driving, in a theater, etc.), you might take the following actions:

INDOORS: If you are *able*, "***DROP*** to the ground immediately; take ***COVER*** by getting under a sturdy desk or table; ***HOLD ON*** to it until the shaking stops. If you use a wheelchair or have mobility impairments and cannot ***Drop, Cover, and Hold On***, protect your head and neck your arms, and bend over to protect yourself if you are able. If you cannot ***Drop, Cover, and Hold On***, you should immediately take action to protect your head and neck with a pillow or your arms, and bend over to protect yourself if you are able.

IN BED: Stay there and try your best to hold on, protecting your head with a pillow, until the shaking stops.

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HIGH-RISE OR A PUBLIC BUILDING: If you are *able*, ***Drop, Cover, and Hold On*** or protect your head and neck as best possible. Do not use elevators. If you use a wheelchair or have other mobility impairments and cannot ***Drop, Cover, and Hold On***, protect your head and neck your arms, and bend over to protect yourself if you are able. When the shaking subsides, you should follow the building evacuation plan or move to the designated zones for evacuation and wait for assistance by first responders if you have mobility impairments.

OUTDOORS: Move to a clear area away from wires, buildings, and anything else that could fall and hurt you, *but only if you can safely do so*. Otherwise stay where you are. If you are *able*, ***Drop, Cover, and Hold On*** or protect your head and neck as best possible. If you use a wheelchair or have other mobility impairments and cannot ***Drop, Cover, and Hold On***, protect your head and neck your arms, and bend over to protect yourself if you are able. Stay where you are until the shaking stops. Only move indoors when it is clear that it is safe to do so.

STADIUM OR THEATER: If you are *able*, ***Drop, Cover, and Hold On*** or protect your head and neck. Protect your head and neck with your arms as best possible. If you use a wheelchair or have other mobility impairments and cannot ***Drop, Cover, and Hold On***, protect your head and neck your arms, and bend over to protect yourself if you are able. Don't try to leave until the shaking is over. When facility staff indicates you to do so, follow their directions to evacuate the premises.

DRIVING: Pull over to the side of the road, stop, and set the parking brake. Avoid bridges and overhead hazards. Stay inside the vehicle until the shaking is over. Remember that some areas of the road may be impassable and you should proceed with caution as you make your way home.

WHAT NOT TO DO: It is particularly important that you **DO NOT** try to get to a "safer place" or run outside while the ground is shaking. Movement will be very difficult and most earthquake related injuries and deaths in the U.S. occur from falling or flying objects hitting you (TVs, lamps, glass, bookcases, etc.) than from collapsed buildings.

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HOLDING AN EARTHQUAKE DRILL IN YOUR HOME

- **Before The Drill**
 - Log onto [ShakeOut.org/centralus](http://www.shakeout.org/centralus) and click the “Register Now” button to enter in your information and pledge your participation. Encourage your friends, neighbors, and co-workers to do the same
 - Review the different methods in this guide for protecting yourself during an earthquake, and practice them ahead of time
 - Find out if a radio or TV station in your area will be broadcasting the drill, and make sure to tune to that station on drill day (local listings are found in the Media Center section of the ShakeOut website). If no media outlet is listed to announce the broadcast on drill day, visit <http://www.shakeout.org/centralus/drill/broadcast> and download the audio or video drill broadcast to your computer
 - Download a ShakeOut Scenario at www.shakeout.org/centralus/scenario to get an idea of what might happen during an earthquake
 - Review your family emergency, evacuation, and communications plan. If you don’t have these, visit <http://www.ready.gov/emergency-planning-checklists> to create them. Make sure that all family members have a copy of this plan, and that you have reviewed it together. Your plans should also include considerations for aiding family members who need assistance, the care of pets, and safely shutting off utilities
- **During the Drill**
 - On the date and time of the drill (as listed on the ShakeOut website):
 - Turn on your radio or TV and listen for the drill broadcast (or play the broadcast on your computer)
 - Depending on your location and abilities, perform one of the protective actions described on the previous pages of this manual (**Drop, Cover, and Hold On**)
 - Think about what types of things may fall and hurt you if this were a real earthquake, and hold your position for at least one minute to simulate a possible earthquake
 - After the simulated earthquake is over, implement your family emergency, evacuation, and/or communications plan, if applicable
- **After the Drill**
 - Review and revise your family emergency, evacuation, and communication plans to make sure that they are up-to-date
 - Review the contents of your emergency supply kit for items that may need to be rotated out or replaced
 - Go to the ShakeOut website and take a Post-ShakeOut Survey and/or place pictures of your drill on the ShakeOut website at <http://www.shakeout.org/centralus/share/>
 - Remember, disasters can occur at any time, so **Be Ready!**

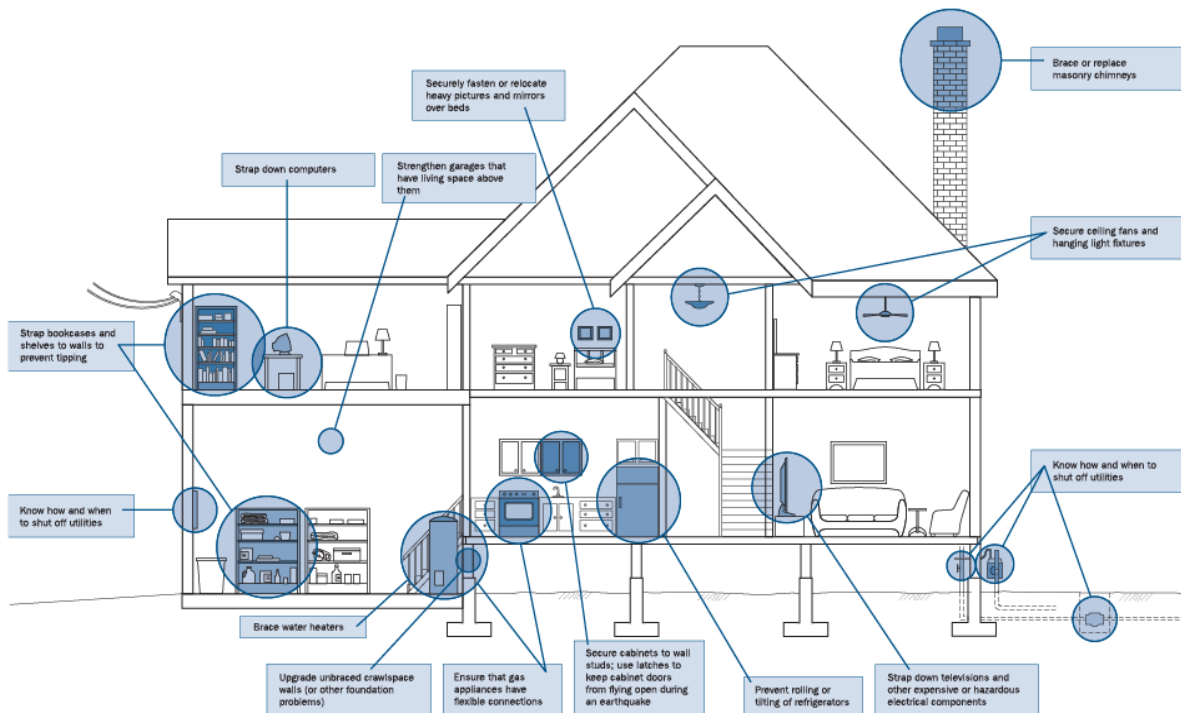
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PROTECTING YOUR HOME FROM POTENTIAL EARTHQUAKE DAMAGE

It may sound elementary, but the best time to prepare your home for disasters is before the disaster strikes. This is especially true for earthquakes. There are several free and inexpensive measures you can take to begin preparing your home for earthquakes. Use the ShakeOut as an opportunity to begin this process and make a checklist of things that you can do to reduce your risk. Here are several options to get your home ready for earthquakes.

Conduct an Earthquake Home Hazard Hunt



Most earthquake related injuries and deaths occur from falling or flying objects hitting you (TVs, lamps, glass, bookcases, etc.) rather than from collapsed buildings. You should secure anything 1) heavy enough to hurt you if it falls on you, or 2) fragile and/or expensive enough to be a significant loss if it falls. In addition to contents within your living space, also secure items in other areas, such as your garage, to reduce potential damage to vehicles or hazardous material spills.

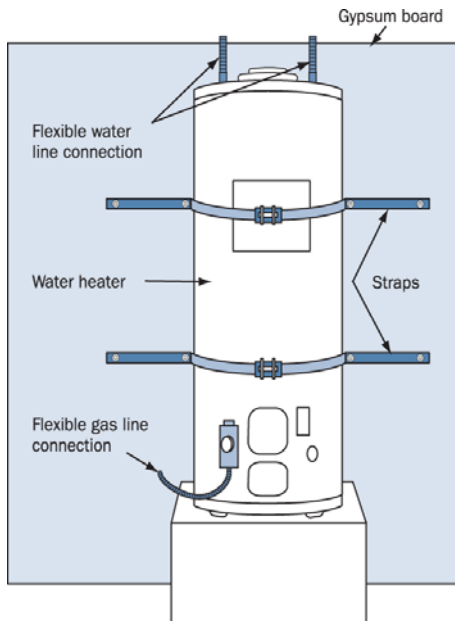
Take time now, before an earthquake, to take a look around your home and property to identify simple things that you can do to protect your family if an earthquake were to happen tomorrow. **START NOW** by moving furniture such as bookcases away from beds, sofas, or other places where people sit or sleep. Move heavy objects to lower shelves. Then begin to look for other items in your home that may be hazardous in an earthquake. Once you have a list of areas that need to be addressed, make a plan

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of action to secure your space. The following items are commonly found in most homes and can be secured for minimal effort and investment.

Securing Your Hot Water Heater



Problem: Most hot water heaters are not secured to wall studs. Your hot water heater can be a source of fire and/or water damage following an earthquake. If secured properly, this risk can be reduced, and provide you with a potential source of emergency water following an earthquake.

Solution: Your local home-improvement center likely stocks (or can order) a strapping kit that you can use to secure the water heater and prevent tipping. It is also recommended that you have a plumber install flexible supply lines to the water and gas connections.

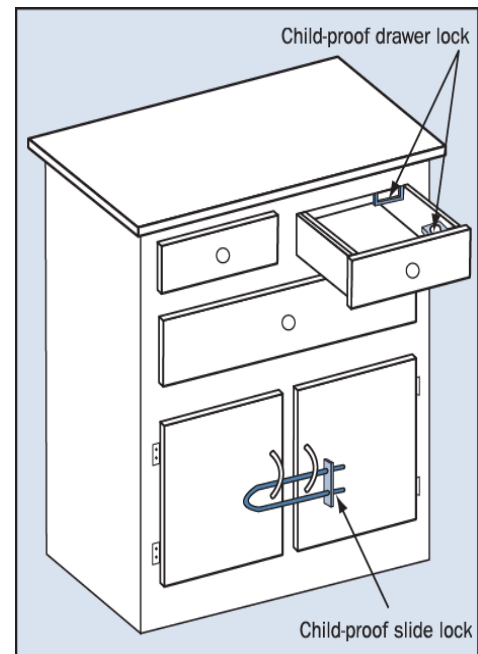
Estimated cost: \$30-50 per house Do-It-Yourself Cost (professional service may be more)

Securing Kitchen and Bathroom Cabinets

Problem: Most kitchen and bathroom cabinetry hold items that could break (plates, glassware, etc.), create a potentially hazardous spill (chemicals stored under cabinets), or fall on you (items stored in wall-mounted cabinetry) and cause injury. If cabinets are secured properly, the potential for injury and loss of property can be reduced.

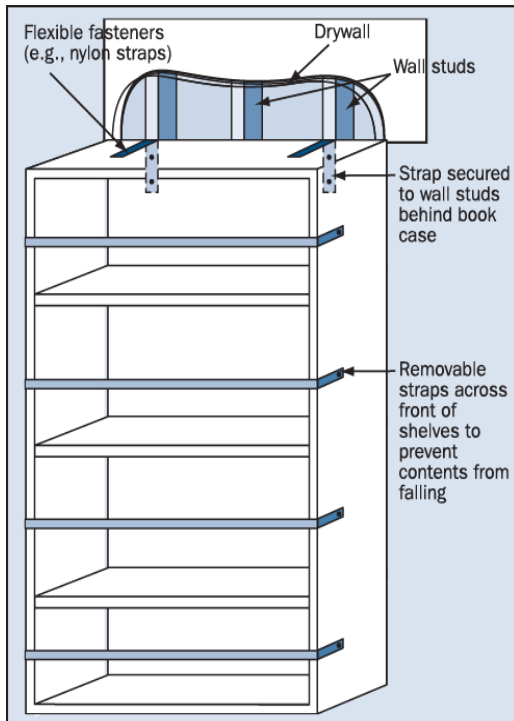
Solution: Your local home-improvement center stocks (or can order) child-proof safety latches or locks. These can be used to keep drawers and cabinets from opening during an earthquake. There are push style latches and heavy-duty magnetic locks to choose from, depending on the application.

Estimated cost: \$25-100 per house Do-It-Yourself Cost



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Securing Bookshelves and Other Heavy Furnishings



Problem: Many homes have tall, top-heavy items in them such as bookcases, refrigerators, armoires, or file cabinets. In strong earthquakes, these items usually fall over, and are one of the main causes of injury. Additionally, these items pose a risk to children and toddlers who climb on them out of curiosity.

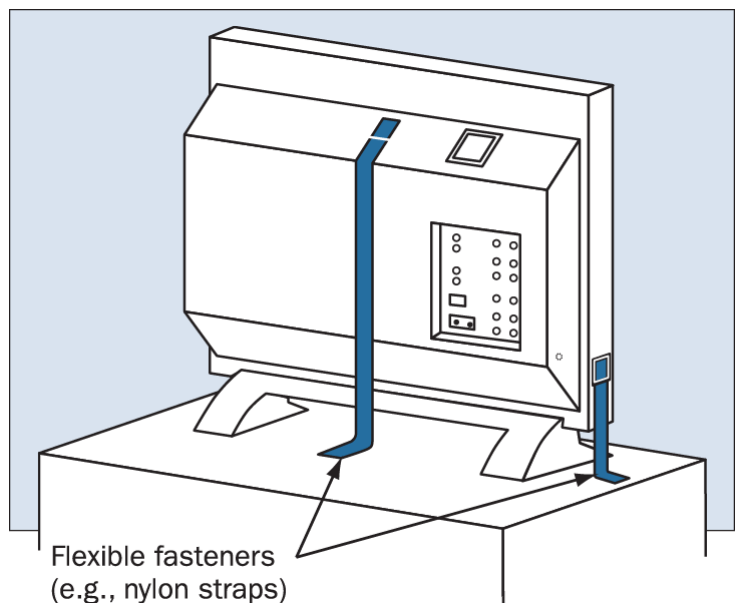
Solution: Move heavy objects to lower shelves and purchase flexible straps or L-Brackets to fasten these items to wall studs. Flexible straps allow the item to sway without falling over, reducing the strain on wall studs. Additionally, you may purchase museum grade putty to secure fragile objects such as fine china, glassware, or other objects that may break or cause injuries.

Estimated cost: \$5-10 per piece Do-It-Yourself Cost

Securing Home Electronics & Computers

Problem: Televisions, computers, printers, and other electronic items are prevalent in most homes. In addition to becoming projectiles during an earthquake, these items topple over easily and are expensive to replace.

Solution: Purchase flexible straps and fasteners to secure items to furniture and desks. This reduces the risk of being injured by the object. Be sure to use removable straps so that the object may be relocated if needed.



Estimated cost: \$5-10 per piece Do-It-Yourself Cost

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ACKNOWLEDGEMENTS AND ADDITIONAL RESOURCES

The Great Central U.S. ShakeOut is a multi-state partnership to increase earthquake awareness and preparedness in the central U.S. Activities in the central U.S. are coordinated by CUSEC, the Central U.S. Earthquake Consortium, and its Member and Associate States. CUSEC's primary mission is "the reduction of deaths, injuries, property damage and economic losses resulting from earthquakes in the central United States".

The ShakeOut originated in California, where it has been an annual public outreach effort since 2008. In 2011, more than 8.6 million people participated in California, where ShakeOut activities are coordinated by the Earthquake Country Alliance (ECA) and the Southern California Earthquake Center (SCEC). For more information, visit www.earthquakecountry.info and www.scec.org.

For more information on earthquakes and disaster preparedness, please visit:

www.CUSEC.org
www.DropCoverHoldOn.org
www.earthquake.usgs.gov
www.FEMA.gov
www.NEHRP.gov
www.Ready.gov
www.RedCross.org
www.ShakeOut.org/centralus

Images

Map of New Madrid Seismic Zone; "Earthquake Hazard in the New Madrid Seismic Zone Remains a Concern", US Geological Survey; USGS Fact Sheet 2009-3071; August 2009

Drop, Cover, and Hold On Graphic; Southern California Earthquake Center www.dropcoverholdon.org; January 2012

Home Hazard Hunt and Home Furnishings Images; FEMA 528: "Earthquake Home Hazard Hunt", Federal Emergency Management Agency, FEMA Publication #528
<http://www.fema.gov/library/viewRecord.do?id=1666>; September 2005

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