

Fact Sheet: Earthquakes

Two major tectonic plates lie in California, the Pacific Plate and the North American Plate, increasing the frequency and intensity of earthquakes.

What is an Earthquake?

An earthquake is the shaking of earth's surface. This is caused by the slow-moving tectonic plates underneath earth's surface. The plates overcome friction at faults and emit energy waves, leading to the shaking we feel.



Earthquake Risk

There is no method to definitively determine if or when an earthquake will strike your area, but there are estimated probabilities.

Three main factors used to estimate the probability of seismic hazards.

- Historical faults and earthquakes
- Behaviors of seismic waves
- Location specific near-surface site conditions

Visit myhazards.caloes.ca.gov to determine the risk level based on where you live.

Preparing for an Earthquake

Anchor Items: Bookshelves, water heaters, and other large objects that have the potential to fall should be secured properly to a wall.

Have a Water Supply: A general rule of thumb is to have one gallon of drinking water per person in the household per day for a minimum of a week.

Identify Unsafe Areas: Knowing where not to be can be helpful to determine the safest place in your home during an earthquake.

- Doorways are not the safest areas to be in modern homes.
- Areas next to windows, beneath ceiling fixtures, and/or adjacent to large items are not safe during an earthquake.

Locate Gas and Water Shutoffs: Shutting off the gas and water in your home promptly after an earthquake can prevent further damages.

Lower Heavy and Flammable Items: Items that are heavy or flammable (paint, cleaning supplies, etc.) should not be kept on high shelves.

Maintain Emergency Supplies: Keep a battery-powered radio, flashlight, extra batteries, blankets, and a first aid kit in an easily accessible location in your home.

- Have a plan to communicate in the event that cell phone signal and other technology is unavailable after an earthquake.

During an Earthquake

Misinformation and outdated advice may lead to actions that increase risk during an earthquake. The best thing to do is drop, cover, and hold on.

Drop: Get on the ground to reduce the risk of falling.

Cover: Get underneath a sturdy desk or table

- In modern homes and buildings, a doorway is not any safer and will not protect you from falling or flying objects, whereas a table will.
- If unable to get under furniture, sit against an interior wall with your bottom and feet flat on the floor, while protecting your head.

Hold On: Firmly grasp the table or desk until the shaking stops.

At Home: Stay away from cabinets, heavy/hanging items, large appliances, mirrors, tall furniture, and windows.

- The kitchen is the most dangerous room to be in during an earthquake, as it has many of these hazards.

In Public: Stay clear of anything that may fall onto you and remain calm.

- Do not rush to doorways
- Do not use the elevator

Outdoors: Move to a clear area away from any hazards.

Driving: Move out of traffic, pull over, and stay inside your vehicle.

After an Earthquake

Be ready for Aftershocks: Aftershocks are earthquakes that follow a larger mainshock.

- Aftershocks are most frequent immediately after the mainshock, but can continue for days, weeks, or months.

Check for Fires: Ensure there are no active fires or major fire hazards around your home.

Check Gas and Electric Lines: Complete any necessary shutoffs

- If you turned off gas lines, do not attempt to turn them back on yourself.
- Do not touch any downed power lines.

Stay Calm and Stay Put: Do not use a cellphone or drive anywhere, unless it is an emergency.

Turn on the Radio: Listen for news and instructions

References

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