

EARTHQUAKE

WHAT IT IS

An earthquake is a shaking of the ground that can cause damage to buildings and infrastructure. Following an earthquake, fire is a significant risk due to gas leaks and water-pressure failures.

Earthquake strength is described by the Richter Scale, which measures amplitude on a logarithmic basis – meaning that each whole number correlates to a 10-fold increase in earthquake amplitude, or a 30-fold increase in total energy released. Earthquakes below 5 on the Richter scale may be felt but rarely cause damage; earthquakes of 9 and up cause complete regional devastation.

For context, the 2011 Virginia earthquake rated 5.9 on the Richter Scale; the 1995 Northridge, California earthquake 6.7; the 2017 Mexico City earthquake 8.2; the 2011 Fukushima, Japan earthquake 9.1.

Virginia is one of 45 states or territories in the US at risk of earthquakes.

WHAT TO DO

Before (Preparedness/ Mitigation)

- Sign up for Fairfax Alerts and have a battery or crank powered radio available.
- Locate safe spots in each room under a sturdy table or against an inside wall.
- Hold earthquake drills with your family members.
- Understand how your home or structure will react, and consider hardening if there are areas of concern.
- Learn First Aid.
- Refer to “Power Outage/ Blackout” and “Medical Emergency,” below.

During (Response)

- Drop, cover, and hold on. Drop to your hands and knees, if you can, protecting your head and neck.
- Stay away from windows if you are indoors.
- Stay indoors until the shaking stops or if you are sure it is safe.

KEY TERMS

- ▶ An **Aftershock** is an earthquake of similar or lesser intensity that follows the main earthquake.
- ▶ The **Epicenter** is the place on the earth’s surface directly above the point on the fault where the earthquake rupture began.
- ▶ A **Fault** is the fracture along which the earth’s crust is displaced during an earthquake.
- ▶ **Magnitude** is the amount of energy released during an earthquake.

- If you are outside, find a clear spot away from tall buildings and drop to the ground until the shaking stops.
- If you are in a vehicle, pull over to a clear location and stop.
- Listen to official information.

After (Recovery)

- Expect aftershocks (smaller earthquakes) for hours or days after the initial quake.
- Avoid damaged areas.
- Check your utilities (especially gas), and evacuate and call 911 if you smell gas.
- Look for cracks in your foundation or drywall, as this may be a sign of structural damage. If you find damage, have the structure inspected before reoccupying it.
- Check in with family and friends by texting or using social media.