


Cool Earthquake Facts



1. The **largest recorded earthquake in the United States** was a magnitude 9.2 that struck Prince William Sound, Alaska on Good Friday, March 28, 1964.
2. The **largest recorded earthquake in the world** was a magnitude 9.5 in Chile on May 22, 1960.
3. The **earliest reported earthquake in California** was felt in 1769 by the exploring expedition of Gaspar de Portola while the group was camping about 30 miles southeast of Los Angeles.
4. Before electronics allowed recordings of large earthquakes, scientists built large **spring-pendulum seismometers** in an attempt to record the long-period motion produced by such quakes. The largest one weighed about 15 tons. There is a medium-sized one three stories high in Mexico City that is still in operation.
5. The **first "pendulum seismoscope"** to measure the shaking of the ground during an earthquake was developed in 1751, and it wasn't until 1855 that faults were recognized as the source of earthquakes.
6. Although both are sea waves, a **tsunami and a tidal wave** are different. A tidal wave is a shallow water wave caused by the gravitational interactions between the Sun, Moon, and Earth. A tsunami is a sea wave caused by an underwater earthquake or landslide (usually triggered by an earthquake) displacing the ocean water.
7. The **hypocenter** of an earthquake is the location beneath the earth's surface where the rupture of the fault begins. The **epicenter** of an earthquake is the location directly above the hypocenter on the surface of the earth.
8. It is estimated that there are **500,000 detectable earthquakes** in the world each year. 100,000 of those can be felt, and 100 of them cause damage.
9. It is thought that more damage was done by the resulting fire after the **1906 San Francisco earthquake** than by the earthquake itself.
10. A **seiche** (pronounced SAYSH) is what happens in the swimming pools during and after an earthquake. It is "an internal wave oscillating in a body of water" or, in other words, it is the sloshing of the water in your swimming pool, or any body of water, caused by the ground shaking in an earthquake. It may continue for a few moments or hours, long after the generating force is gone. A seiche can also be caused by wind or tides.
11. The swimming pool at the University of Arizona in Tucson lost water from sloshing (seiche) caused by the **1985 M8.1 Michoacan, Mexico earthquake** 2000 km (1240 miles) away.
12. The **magnitude** of an earthquake is a measured value of the earthquake size. The magnitude is the same no matter where you are, or how strong or weak the shaking was in various locations.
The **intensity** of an earthquake is a measure of the shaking created by the earthquake, and this value does vary with location.
13. There is no such thing as "**earthquake weather**". Statistically, there is an equal distribution of earthquakes in cold weather, hot weather, rainy weather, etc. Furthermore, there is no physical way that the weather could affect the forces

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- several miles beneath the surface of the earth. The changes in barometric pressure in the atmosphere are very small compared to the forces in the crust, and the effect of the barometric pressure does not reach beneath the soil.
14. From 1975-1995 there were only **four states that did not have any earthquakes**. They were: Florida, Iowa, North Dakota, and Wisconsin.
 15. Most earthquakes occur at depths of **less than 50 miles** from the Earth's surface.
 16. The **San Andreas Fault is NOT a single, continuous fault**, but rather is actually a fault zone made up of many segments. Movement may occur along any of the many fault segments along the zone at any time. The San Andreas Fault system is more than 800 miles long, and in some spots is as much as 10 miles deep.
 17. The **world's deadliest recorded earthquake** occurred in 1556 in central China. It struck a region where most people lived in caves carved from soft rock. These dwellings collapsed during the earthquake, killing an estimated 830,000 people.
 18. Florida and North Dakota have the **smallest number of earthquakes** in the United States.
 19. Alaska is the **most earthquake-prone state** and one of the most seismically active regions in the world. Alaska experiences a magnitude 7 earthquake almost every year, and a magnitude 8 or greater earthquake on average every 14 years.
 20. The **earliest recorded evidence of an earthquake** has been traced back to 1831 BC in the Shandong province of China, but there is a fairly complete record starting in 780 BC during the Zhou Dynasty in China.
 21. It was recognized as early as 350 BC by the Greek scientist Aristotle that **soft ground shakes more than hard rock** in an earthquake.
 22. The **cause of earthquakes was stated correctly in 1760** by British engineer John Michell, one of the first fathers of seismology, in a memoir where he wrote that earthquakes and the waves of energy that they make are caused by "shifting masses of rock miles below the surface".
 23. In 1663 the European settlers experienced their **first earthquake in America**.
 24. The **San Andreas Fault was named** in 1895 by geologist A.C. Lawson. He named it after the San Andreas Lake, a sag pond through which the fault passes about 20 miles south of San Francisco. He likely did not realize at the time that the fault ran almost the entire length of California!

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Kentucky Earthquake Facts

1. Kentucky has a variety of fault systems across the Commonwealth. The two that affect Kentucky the most are in adjacent states: the New Madrid in Missouri and the Wabash in Indiana.
2. A strong quake occurred in 1980 near Sharpsburg in Bath County. It measured 5.2 on the Richter scale and caused an estimated **\$3 million in damage**. 269 homes and 37 businesses in nearby Maysville were damaged.
3. A broad area of Kentucky, Illinois, Indiana and Tennessee, estimated at 75,000 square miles, was affected by an earthquake on September 2, 1925. It was apparently centered near **Henderson, Kentucky** where some landslides were noted. In Louisville, about 100 miles away, a chimney fell and a house reportedly sank.
4. **Seven other earthquakes**, all with Intensity V effects, have been recorded in Kentucky. The epicenter areas and dates are: western Kentucky (March 23, 1922); near Mayfield (May 13, 1925); near Maysville (May 28, 1933); felt in adjoining portions of Ohio, Paducah (March 26, 1957); vicinity of the Illinois/Kentucky/ Missouri border (January 27, 1958 and August 2, 1963); and near Louisville (December 11, 1968).
5. **RealFoot Lake**, in Fulton County Kentucky was created by the December 1811 New Madrid earthquake.