Deadly earthquakes have hit Turkey before: Why there? Could a similar quake hit the US?

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Rescue workers continue recovery efforts in Turkey and Syria following a devastating series of earthquakes that began near the border of the two

countries on Feb. 6.

Authorities say the death tolls has already surpassed 7,000 and will likely keep climbing, with an estimated 6,000 buildings toppled.

"We are facing one of the biggest disasters not only of the history of the Turkish Republic but also of ... the world," Turkish President Recep Tayyip Erdogan said Tuesday.

Because so many geological plates come together in that area, Turkey and Syria often see devastating quakes compared to more geologically stable areas.

Here's what to know:

What caused the earthquakes in Turkey, Syria?

- The Anatolian Fault system: The border between Turkey and Syria lies near the Anatolian Fault system, where several geologic plates interact: the African, Anatolian (where Turkey sits), Arabian and the Eurasian.
- Plates moving in different directions, different speeds: Turkey sits atop the small Anatolian tectonic plate, which itself sits between several other plates that are moving in different directions, putting pressure on the fault lines.
- Similar to the San Andreas Fault in California: That fault borders the Pacific and North American plates and is the source of "The Big One," a legendary hypothetical earthquake that could devastate Los Angeles. Quakes in this areas are typically caused by faults moving horizontally, known as strike-slip faults.
- How to visualize: It's like squeezing a watermelon seed between your fingers—it stays in place until the pressure builds and the seed ultimately pops out, said Susan Hough, a California-based

seismologist with the U.S. Geological Survey.

How long was the earthquake in Turkey, Syria?

The USGS said the magnitude 7.8 quake struck on Feb. 6 at 4:17 a.m. local time in the southern Turkish province of Kahramanmaras, about 20 miles from the city of Gaziantep. The USGS has calculated the initial quake's duration at 60-75 seconds.

Scores of aftershocks followed, authorities said, and witnesses reported feeling the ground shake for about two minutes. Hours later, a 7.5 magnitude quake struck more than 60 miles away. Multiple smaller quakes have followed in the same area.

What other major earthquakes have happened in that region?

- 2020: Turkey was struck by a magnitude 6.7 earthquake in January that caused significant damage.
- 1999: a series of earthquakes hit northwest Turkey. A 7.4 magnitude quake hit Istanbul, killing about 17,000 people.
- 1939: a magnitude 7.8 earthquake shook the Erzincan area, and in some areas the ground slipped more than 12 feet horizontally along the North Anatolian Fault Line. That quake killed more than 30,000 people, authorities said.

Because Turkey is prone to quakes, many newly constructed buildings are designed to withstand significant shaking, usually by isolating them from the ground below with the equivalent of giant shock absorbers. In 2009, Turkey celebrated the completion of what at the time was the world's biggest earthquake-isolated building: the international terminal at Istanbul's Sabiha Gökçen Airport, which sits atop 300 isolation columns.

Could something like this happen in the United States?

Experts generally agree the most significant earthquake risk to the United States is in California, where the Pacific and North American plates meet. The region generally has more earthquake risk than Turkey and Syria, but some of that is mitigated by tough building codes.

Apple's $5 billion ring-shaped headquarters building in nearby Cupertino, for instance, sits atop 700 "base isolators" that help protect it from movement of the earth below. California's cities and towns have attempted to account for earthquake danger since the 1906 San Francisco quake and then the 1933 Long Beach quake.

"Building collapse isn't as big a danger in California as it is in Turkey. For many people here, a bigger danger is stuff falling. That isn't to say some buildings won't collapse," said David Oglesby, a geophysics professor at the University of California-Riverside. in an emailed statement. "Most of our buildings, particularly certain critical ones, are designed to withstand significant shaking."

Earthquake risk exists on the East Coast too, but the building codes often aren't as strict. New York City only began requiring earthquake considerations for new buildings in 1995.

Big quakes can happen throughout the country. The USGS says the Aug. 23, 2011, Mineral, Va., quake of 5.8 magnitude was the most widely felt quake in U.S. history. That's because the East Coast's tectonics allowed the quake to travel further than it might have in California, and because it happened on the densely populated East Coast. That quake damaged the National Monument about 90 miles away from the epicenter.

"If that quake had been closer to Washington, D.C., that could have been a real shock to the country," Hough said.

What was the largest earthquake ever recorded?

Using modern measurement techniques, the biggest earthquake ever recorded happened May 22, 1960, in Bio-Bio, Chile. Known as the Valdivia Earthquake, it measured 9.5 magnitude, according to the USGS.