

International Conversation Cafe

Lifestyle Topic: Tsunamis, Earthquakes, and Tornadoes

Going through a natural disaster is a terrifying experience. Today, we will read and discuss three kinds of natural disasters: tsunamis, earthquakes, and tornadoes.

What is a tsunami?

Tsunami (soo-NAH-mee) is a Japanese word meaning harbor wave.

A tsunami is a large ocean wave usually caused by an underwater earthquake or a volcanic explosion. Tsunamis are NOT tidal waves. Tidal waves are caused by the forces of the moon, sun, and planets upon the tides, as well as the wind as it moves over the water. Tsunami waves begin deeply and only are seen when they get near to the shore line. With typical waves, water flows in circles, but with a tsunami, water flows straight. This is why tsunamis cause so much damage!

Here is a list of some of the most damaging recent tsunamis.

Japan: Major tsunami in 2011 generated in the Pacific Ocean.

Asia: Major tsunami in 2004 generated in the Indian Ocean.

Alaska: Major tsunamis were generated along the Alaskan coast in 1946, 1957, 1958, 1964, 1965.

Have you or anyone you have known ever been in a tsunami?

Tell about your experience or the stories you have heard.

What advice would you give?

What is an earthquake?

Earthquakes are the shaking, rolling or sudden shock of the earth's surface. They are the Earth's natural means of releasing stress. More than a million earthquakes rattle the world each year. The West Coast is most at risk of having an earthquake, but earthquakes can happen in the Midwest and along the East Coast. Earthquakes can be felt over large areas although they usually last less than one minute. Earthquakes cannot be predicted – although scientists are working on it!

Here are some earthquake facts.

- Seismometers are used to measure the magnitude of earthquakes. You are unlikely to feel a magnitude 3 earthquake but a magnitude 6 earthquake could potentially cause large damage.
- The earthquake that hit the Tohoku region of Japan on March 11, 2011, had a magnitude of 9.0 and killed over 15000 people.
- The 2004 earthquake that occurred in the Indian Ocean near Sumatra, Indonesia triggered a series of tsunamis that killed over 200,000 people in 14 countries.
- The largest recorded earthquake happened in Chile on May 22, 1960. It was a magnitude 9.5.
- Alaska has the record for the largest U.S. earthquake. On March 28, 1964, a magnitude 9.2 quake occurred and killed 131 people.
- Alaska averages 24,000 earthquakes a year, the most seismic activity in North America.
- Southern California has about 10,000 earthquakes a year. Very few are felt.

<http://www.sciencekids.co.nz/sciencefacts/earth/earthquakes.html>

<http://kids.nationalgeographic.com/explore/science/earthquake/#earthquake-houses.jpg>

*Did any of these facts surprise you?
Have you ever been in an earthquake? Describe the experience.*

What is a tornado?

A tornado is a violent rotating column of air extending from a thunderstorm to the ground. The most violent tornadoes are capable of tremendous destruction with wind speeds of up to 300 mph. They can destroy large buildings, uproot trees and hurl vehicles hundreds of yards. They can also drive straw into trees. Damage paths can be in excess of one mile wide to 50 miles long. In an average year, 1000 tornadoes are reported nationwide.

How do tornadoes form?

Most tornadoes form from thunderstorms. You need warm, moist air from the Gulf of Mexico and cool, dry air from Canada. When these two air masses meet, they create instability in the atmosphere. A change in wind direction and an increase in wind speed with increasing height creates an invisible, horizontal spinning effect in the lower atmosphere. Rising air within the updraft tilts the rotating air from horizontal to vertical. An area of rotation, 2-6 miles wide, now extends through much of the storm. Most strong and violent tornadoes form within this area of strong rotation.

There were 1,053 tornadoes reported in the United States in 2016,^[2] of which at least 964 have been confirmed. Worldwide, 129 fatalities were reported: 99 in China, 17 in the United States, five in Uruguay, four in Brazil and two in Italy and Russia each. 2016 was below-average in terms of tornado activity, but near-record tornado numbers occurred in February.

https://en.wikipedia.org/wiki/Tornadoes_of_2016

*Have you ever been in a tornado? What was the experience like?
How should you protect yourself in a tornado? How would you know one is near?
Would you ever be reluctant to move to a location that is prone to tsunamis, earthquakes, or tornadoes?*

What is PTSD (Posttraumatic Stress Disorder)?

PTSD, or Posttraumatic Stress Disorder, is a psychiatric disorder that can occur following the experience or witnessing of a life-threatening events such as military combat, natural disasters, terrorist incidents, serious accidents, or physical or sexual assault in adult or childhood. Most survivors of trauma return to normal given a little time. However, some people will have stress reactions that do not go away on their own, or may even get worse over time. These individuals may develop PTSD. People who suffer from PTSD often relive the experience through nightmares and flashbacks, have difficulty sleeping, and feel detached or estranged, and these symptoms can be severe enough and last long enough to significantly impair the person's daily life.

<http://www.ptsd.ne.gov/what-is-ptsd.html>

*Do you think a person could suffer from PTSD after going through a natural disaster?
What suggestions would you have for a person or family suffering in this way?*