

Tremors Behind Tsunamis

Tsunamis are gigantic waves that come ashore with little or no warning. A tsunami is caused by earthquakes or volcanoes that move the land on the bottom of the ocean. Movement of the earth's land is called an earth tremor. When a tremor shakes the land under the sea, it causes the water at the surface to rise up in a hump. This high swell of water starts moving away. After a long trip, this swell finally reaches shore. It roars onto the beach as a wave. This tsunami wave can be a wall of water 7 meters (21 feet) to 33 meters (100 feet) high.

The name **tsunami** comes from two Japanese words. **Tsu** means "port" and **nami** means "wave." Many tsunamis hit the coasts of the Japanese islands. To understand why, look at Japan on a world map. Its eastern and southern coasts face the whole Pacific Ocean. A tsunami can form far away in the southern or eastern Pacific. It starts moving towards Asia and builds up size and speed as the tsunami heads west. For thousands of miles, there is no land to stop it or slow it down. Then it hits the coast of Japan. This is why Japan has more tsunamis than anywhere else in the world.

Today scientists have more warning that a tsunami is forming. They can find earthquakes under the ocean using a machine called a seismograph. Also, photos taken from airplanes and images taken by space satellites show ocean waves. Scientists send early warnings to port cities that a big wave is on the way.