

What is a Tsunami?

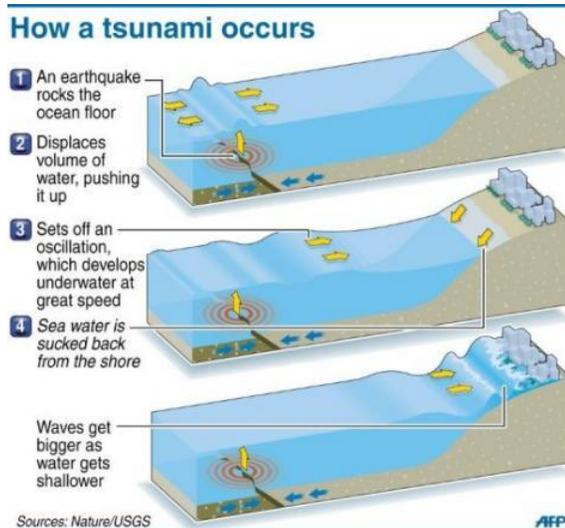
Tsunamis (soo-NAH-mee) are a series of long-wavelength, long-period ocean waves

They are caused primarily by earthquakes occurring below or near the seafloor.

They are less frequently caused by underwater volcanic eruptions, landslides, slumps, and meteorites.

Tsunami waves are distinguished from ordinary ocean waves by their great length between wave crests, often exceeding 60 miles (100 km) or more in the deep ocean, and by the time between these crests, ranging from 10 minutes to an hour.

How a tsunami occurs



As they reach the shallow waters of the coast, the waves slow down and the water can pile up into a wall of destruction 30 ft or more in height.

What You Should Know.

1. All earthquakes do not cause tsunamis, but many do. When you know that an earthquake has occurred, stand by for a tsunami emergency message.

2. An earthquake in your area is one of nature's tsunami warning signals. Do not stay in low-lying coastal areas after a strong earthquake has been felt.

3. Tsunamis are sometimes preceded by a noticeable fall in sea level as the ocean retreats seaward exposing the seafloor. A roar like an oncoming train may sometimes be heard as the tsunami wave rushes toward the shore. These are also nature's tsunami warning signals.

4. A tsunami is not a single wave, but a series of waves carrying a massive volume of water that can flood and inundate land for hours. The first wave may not be the largest. Stay out of danger areas until an "all-clear" is issued by HMCI.

5. A small tsunami at one point on the shore can be extremely large a few miles away. Don't let the modest size of one make you lose respect for all.

Tsunami Warning

Since 2006, the PACIFIC TSUNAMI WARNING CENTER (PTWC) has provided interim tsunami advisory services to countries of the Caribbean region and may issue the following advisories to designated agencies.

Tsunami Watch - An alert issued to areas outside the warned area. The area included in the watch is based on the magnitude of the earthquake. For earthquakes over magnitude 7.0, the watch area is 1 hour tsunami travel time outside the warning zone. For all earthquakes over magnitude 7.5, the watch area is 3 hours tsunami travel time outside the warning zone. The watch will either be upgraded to a warning in subsequent bulletins or will be cancelled depending on the severity of the tsunami.

Tsunami Warning - Indicates that a tsunami is imminent and that coastal locations in the warned area should prepare for flooding. The initial warning is typically based on seismic information alone.

Earthquakes over magnitude 7.0 trigger a warning covering the coastal regions within 2 hours tsunami travel time from the epicenter. When the magnitude is over 7.5, the warned area is increased to 3 hours tsunami travel time. As water level data showing the tsunami is recorded, the warning will either be, cancelled, restricted, expanded incrementally, or expanded in the event of a major tsunami.

Preparedness

- ❖ Be aware of tsunami facts. This knowledge could save your life!
- ❖ Share this knowledge with family and friends. It could save their lives!
- ❖ Everyone needs to know what to do in the event of a tsunami.
- ❖ Be aware of concrete, reinforced, multi-story buildings nearby. The upper floors can provide a safe place should there be a tsunami warning and you cannot move quickly inland to higher ground.
- ❖ If you are in school and you hear there is a tsunami warning, you should follow the advice of teachers and other school personnel.
- ❖ If you are at home and hear there is a tsunami warning, you should make sure your entire family is aware of the warning. Prepare a family emergency plan beforehand so that everyone knows what to do.

What To Do?

SENSING A TSUNAMI

Tsunamis can be detected using our human senses.

Recognize a tsunami's natural warning signs.

FEEL

- Big local earthquakes may cause tsunamis.
- FEEL the ground shaking severely, or for a long time?

SEE

- Tsunami may be preceded by rapid fall in sea level as the ocean recedes, exposing reefs, rocks, and fishes on the sea bottom.
- Tsunami often come ashore as a wall of water, and quickly floods inland.
- SEE an unusual disappearance of water, or oncoming wall of water?

HEAR

- Abnormal ocean activity, a wall of water, and approaching tsunami create a loud "roaring" sound similar to that of a train or jet aircraft.
- HEAR the roar?

RUN

- Don't wait for official evacuation orders. Authorities may not have enough time to issue a Tsunami Warning.
- Immediately leave low-lying coastal areas.
- Move inland to higher ground.
- **RUN** if you see a tsunami coming!



are too close to outrun it. Most tsunamis are full of debris. Tsunami waves typically do not curl and break, so do not try to surf a tsunami.

After A Tsunami

- ✓ Help injured or trapped persons and call for help
- ✓ Keep out of stagnant water and buildings that have been damaged.
- ✓ Since tsunami wave activity is imperceptible in the open ocean, do not return to port if you are at sea and a tsunami warning has been issued for your area.
- ✓ Damaging wave activity and unpredictable currents can affect harbors for a period of time following the initial tsunami impact on the coast. Contact the Port Authority before returning to port making sure to verify that conditions in the harbor are safe for navigation and berthing.

Knowledge Is Safety

As dangerous as tsunamis are, they do not happen very often. You should not let this natural hazard diminish your enjoyment of the beach and ocean. But, if you think a tsunami may be coming, the ground shakes under your feet, the ocean recedes out to sea exposing the sea bottom, you hear the train-like roar of the tsunami, or you know that there is a warning, tell your relatives and friends, and

Move Quickly Inland and to Higher Ground!



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- ❖ If you are unable to quickly move inland, multi-story, reinforced concrete buildings may provide a safe refuge on the 3rd floor and above.
- ❖ Never go down to the shore to watch for a tsunami. When you can see the wave, you