

What happens in a tsunami?

Tsunamis move very fast. If someone sees one approaching, then it is probably too late for them to get away from it! Sometimes, though, there are signs that a tsunami is on its way.

Many tsunami survivors describe how the **sea level** drops. Water is suddenly sucked away from the shore, uncovering sand, mud and reefs on the sea floor and leaving fish and boats stranded. The reason for this is that the water has moved to fill the space on the ocean floor created by an **earthquake**. Then the water returns in waves.

'I saw the entire bay suddenly drain of water with a quiet roar.' Mark Vanderkam, a survivor of the tsunami that hit Thailand in 2004

Before the first tsunami waves arrive, the sea is sucked back from the shore. This is what it looked like at Galle in Sri Lanka right before the 2004 tsunami hit.



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Wave train

As the sea gurgles out from land, there is sometimes a very strong wind. This is air being pushed in front of the speeding tsunami. A big tsunami often comes in a series of waves called a wave train. The time between each wave **crest** may be minutes or even as long as an hour. Between each tsunami crest there is a **trough**, when water is again sucked out to sea. It seems like the water is being pulled by an enormous vacuum cleaner before it shoots back!

The first tsunami may not be the worst – the biggest, most dangerous waves in a wave train are often the third and eighth waves to arrive. After the tsunamis have struck, it may take days before normal ocean waves get back to their expected sizes.

The first tsunami wave to break may not cause the most damage. Other, more damaging waves, may arrive later.



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