



## Know the risks



### Earthquakes:

The Pacific Coast is the most earthquake-prone region of Canada, with more than 100 earthquakes registering at a magnitude of greater than 5.0 over the past 70 years. The concentration of earthquakes in this region is due to the presence of active faults, or breaks, on the earth's crust that make up the Pacific Ring of Fire. The surface of the earth is always changing, as the plates that make up the earth's crust are moving constantly at a speed of about 2 to 10cm per year. That's about how fast our fingernails grow.

The west coast of Canada is at a unique risk since it is one of the few areas in the world where all three types of plate movements occur. Plates slide past one another, collide towards each other and diverge apart, which creates different types of earthquakes, including the "Big One," the subduction interface or megathrust earthquake that would be the result of a Cascadia Subduction Zone event.

**WARNING SIGNS:** There is currently no way of predicting earthquakes. Contrary to some reports, even pets can't predict earthquakes! Sometimes, before an earthquake strikes you can hear a loud BOOM – this sound is coming from the first P wave (primary, non-damaging wave) before the S wave (sheer wave, brings the shaking) arrives. British Columbia is currently investing in earthquake early warning systems that could potentially give a brief warning (seconds) at the detection of the first P wave in order to improve life safety and provide a few vital seconds to "Drop, Cover and Hold On."

For more information, visit Natural Resources Canada (NRCan) or the United States Geological Survey (USGS).

For information on how to prepare for an earthquake and how to register your class or your household to participate in the world's largest earthquake drill, visit ShakeOut BC.

For information on what to do during an earthquake, visit Know the Risks > Earthquakes on PreparedBC.