



# EARTHQUAKES

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What is an earthquake?

**An earthquake is a sudden movement of the Earth caused by the release of energy that has accumulated over a long period of time. Usually, the movement is slow and imperceptible, but in some cases the movement releases a large amount of energy when one of the plates moves abruptly in relation to the other, breaking it and causing an earthquake.**



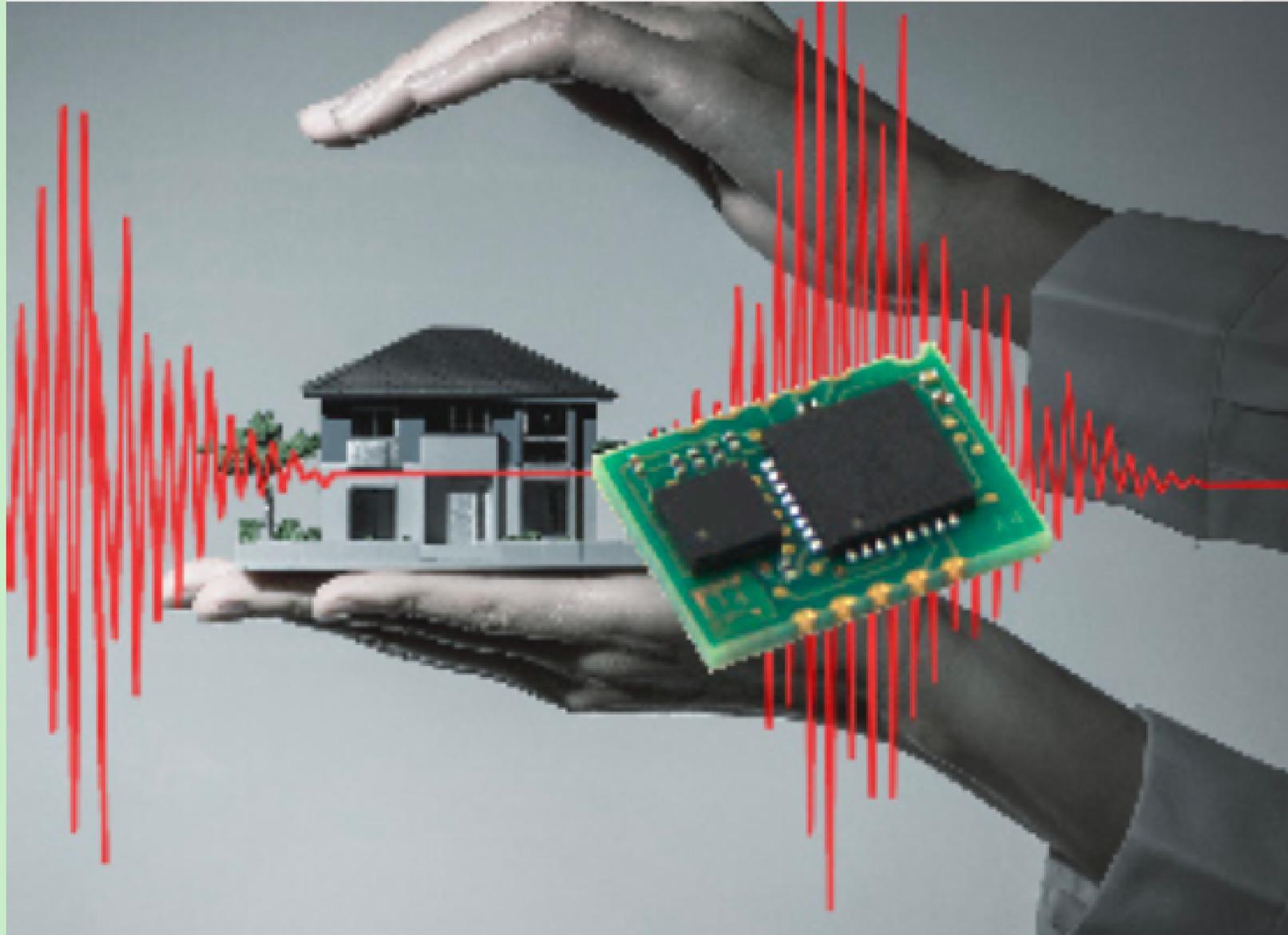
A tectonic plate or lithospheric plate is a relatively rigid piece of the lithosphere that moves after the astrosphere, a relatively plastic region of the upper mantle. The entire lithosphere is divided by tectonic plates, fifteen of which are large and more than forty microplates.



The Pacific Ring of Fire is located on the shores of the Pacific Ocean and is characterized by the concentration of some of the marked areas in the world, it merges an area in the world, it merges us with the fixation of intense energy. The bottom of the Pacific Ocean rests on several tectonic plates that are in constant friction and therefore accumulate stress. When this stress is released, it causes earthquakes in the belt countries, and the area is also concentrated in constant volcanic activity. In this area, the plates of the earth's crust sink a few centimeters a year and at the same time accumulate enormous stresses that must be released in the form of earthquakes.



# HOW EARTHQUAKES ARE DETECTED



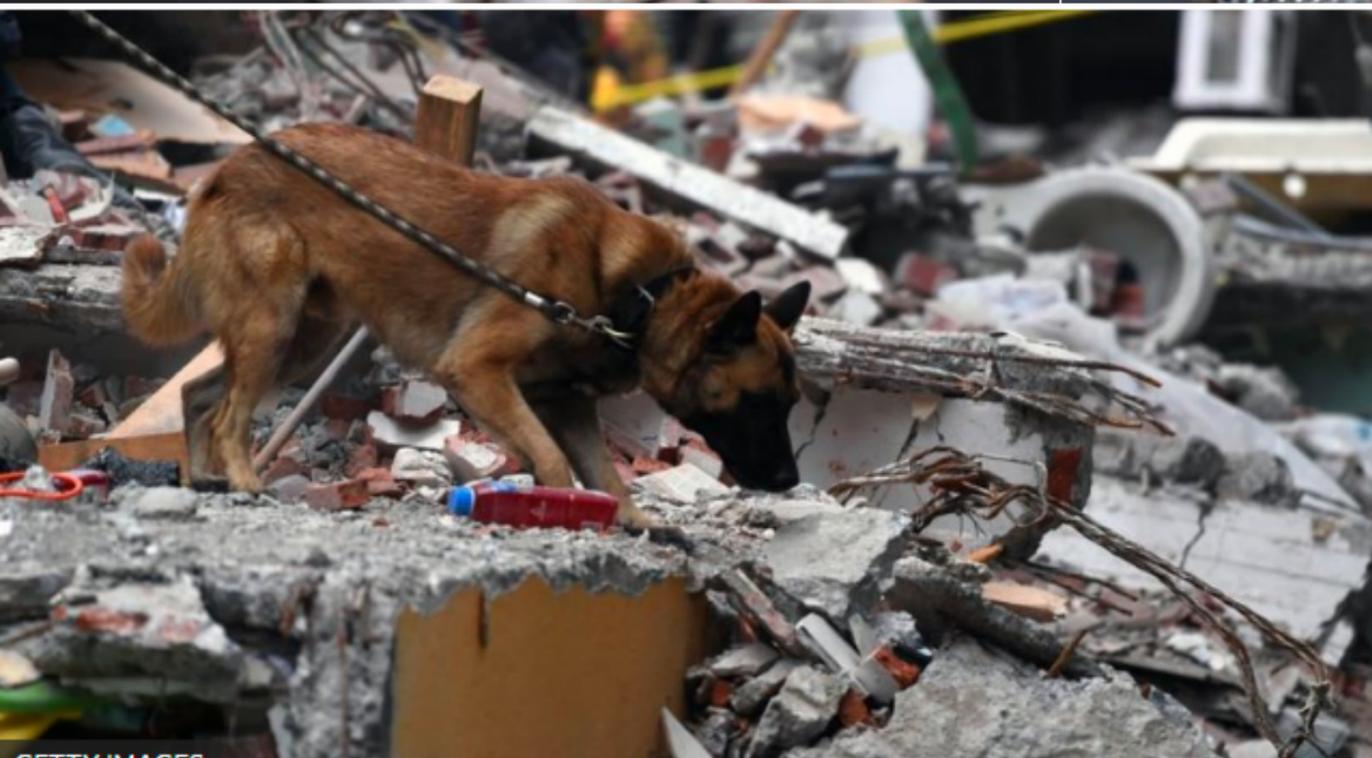
When seismic waves propagate, they cause a movement of the ground through which they travel. To record these movements, devices called seismographs or accelerographs are used, whose principle, based on the inertia of the bodies, consists in suspending the mass on a spring, which allows the user to rest several times in relation to the movement of the land. If you attach a pencil to a suspended mass, which can be painted on cardboard glued to a cylinder that rotates at a constant speed, you get a record of the movement of the ground or a seismogram, which can be stored locally or transmitted through some medium of communication (telephone, radio, satellite) to the acquisition center.

# **Frida and the other dogs from Mexico who became "heroes" for their rescue efforts during earthquakes**

**Mexicans have expressed their admiration and affection for the Navy search and rescue dogs that searched for survivors of the September 19, 2017 earthquake.**



SANTIAGO ARAU

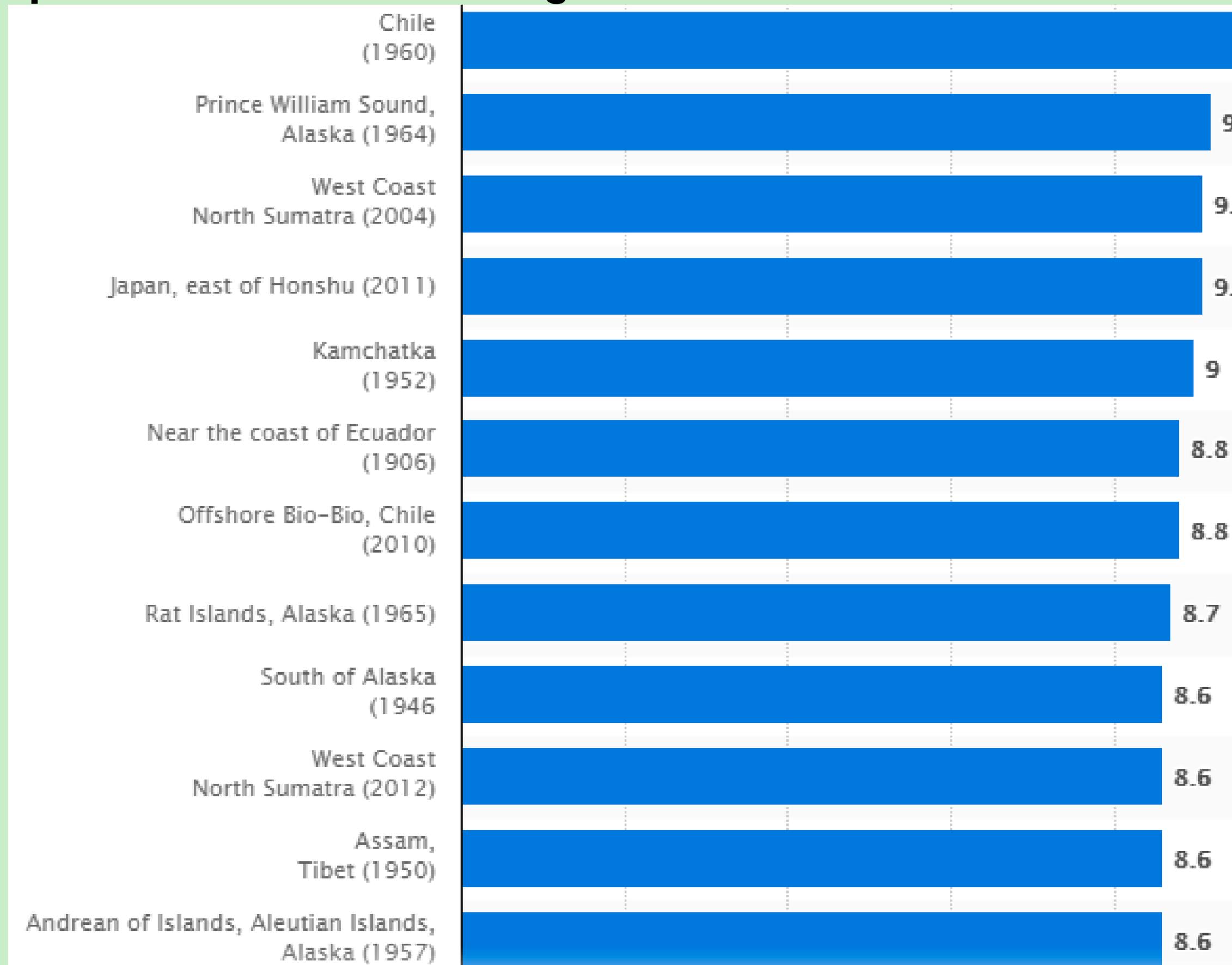


GETTY IMAGES

**In the midst of the tragedy caused by the earthquake, which left more than 300 dead, Frida generated hope: that of being able to find people alive in the middle of the ruins and, in one case, in an elementary school.**

**According to Navy officials, Frida located more than 50 people in her career, and 12 of them were rescued alive.**

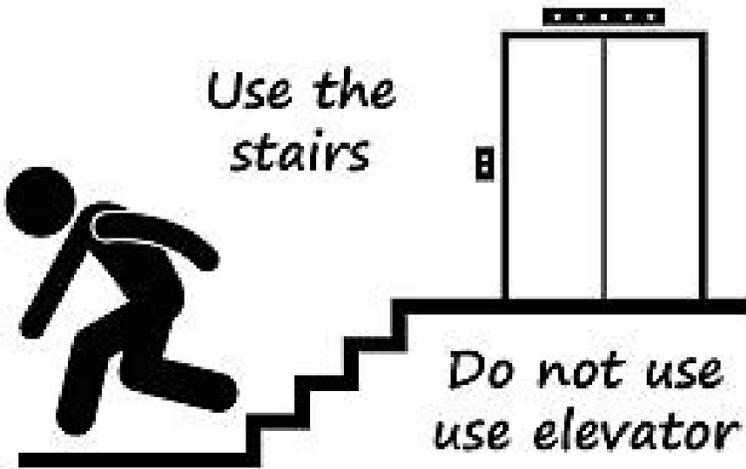
# Strongest earthquakes worldwide according to measurements on the Richter scale as of 2021



# In Case of Earthquake



Tremor



Use the stairs

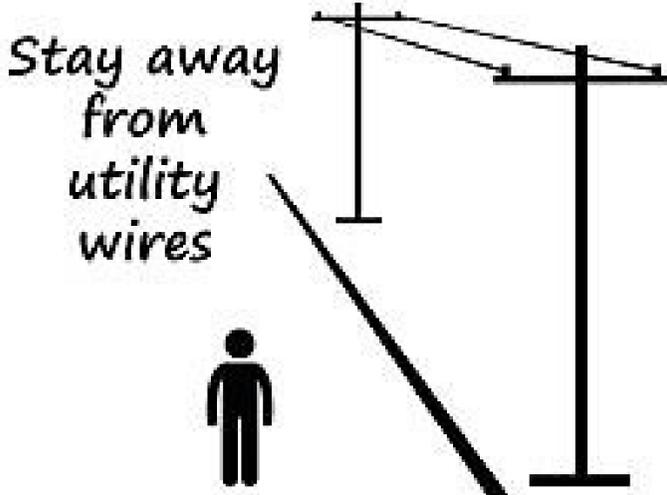
Do not use use elevator



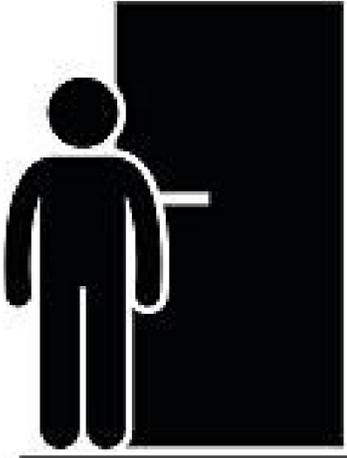
Get under desk and hold on



Cover your head and neck



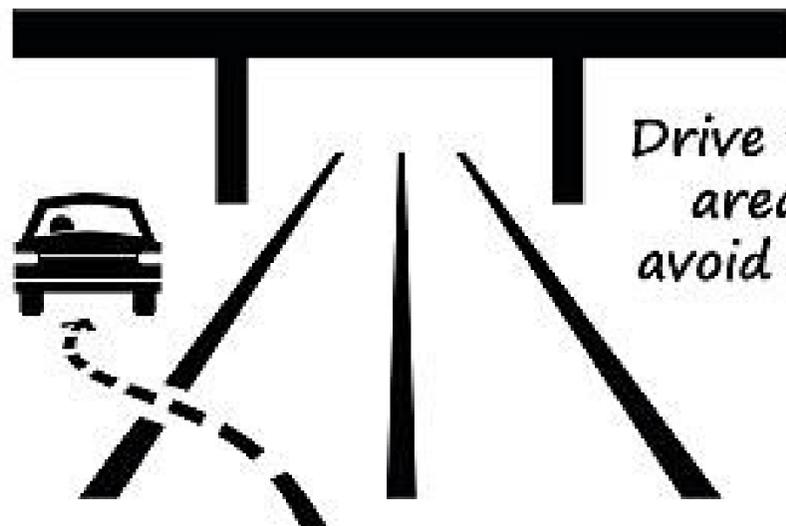
Stay away from utility wires



Do not stand at a doorway



Stay away from potentially danger objects



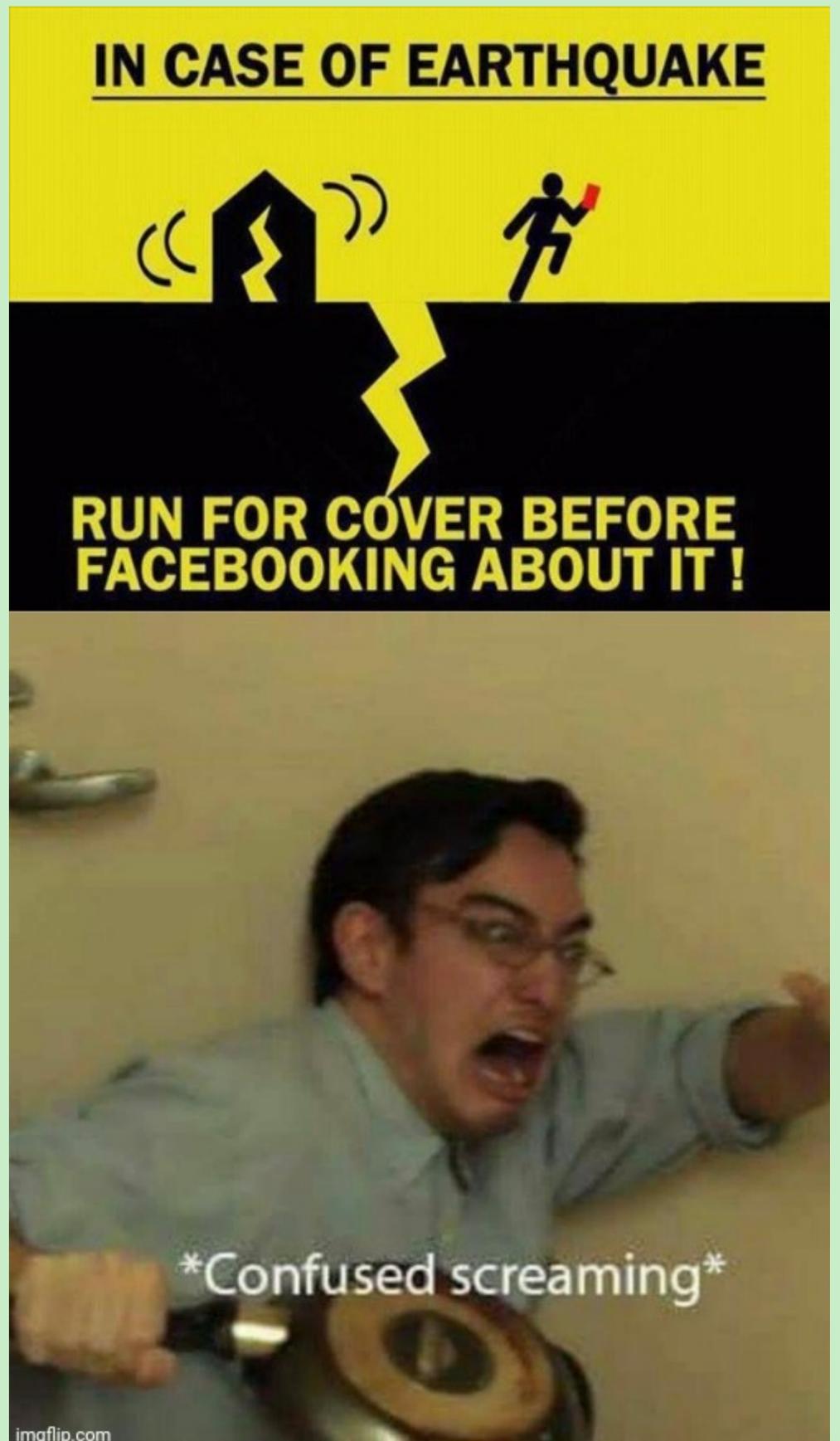
Drive to clear area and avoid bridges

# What to do before, during and after?

**Before an earthquake, the expert recommends making sure that in homes or work areas there are no heavy objects at a height from where they can fall on people. It is also recommended to organize an emergency kit with items such as: water for three days –1 gallon per person–, non-perishable food, a first-aid kit, a flashlight, a radio and batteries.**



**During an earthquake it is recommended to stay away from heavy elements, refrain from staying in places such as the kitchen and not stand under doors. Also, the most important thing first and foremost is to stay calm. “Never panic. In Mexico, 85% of the people who are injured are due to causes of restlessness”.**



**After the earthquake, the building must be evacuated as soon as possible, always avoiding the elevators. And, most importantly, try to help people who need it. "You have to have a spirit of service for the community. We must create bonds of solidarity. These positive impacts help the recovery of a place "**



THANKS