Duck – get under a sturdy piece of furniture, making yourself into a little ball (do not duck under beds or other objects that could collapse).

Cover – keep your head and eyes protected from falling or flying objects. Cover your head with one hand.

Hold – with your other hand, hold onto the piece of furniture. If it moves, move with it. Stay under shelter until you are sure the shaking has stopped.

If you cannot shelter under furniture, move against an interior wall if you are indoors, duck, put your arms over your head and across the back of your neck for protection.

If you are driving when an earthquake starts, slow down carefully and come to a stop in an area free of hazards.

After an Earthquake

1. EXPECT AFTERSHOCKS

2. **WEAR STURDY SHOES** to avoid injury from broken glass and debris.

3. **CHECK FOR INJURIES** (if a person is bleeding, put direct pressure on the wound, use clean gauze or cloth if available; If a person is not breathing administer CPR; **DO NOT** attempt to move seriously injured persons unless they are in further danger of injury; **COVER** injured persons with blankets to keep warm; SEEK medical help for serious injuries

4. CHECK FOR HAZARDS

Fire hazards--put out fires in your home or neighborhood immediately, call for help;
Gas leaks--shut off main gas valve ONLY if you suspect a leak because of broken pipes or odor;
Electrical --Shut off power at the control box if there is any danger to house wiring;
Downed or damaged utility lines--do not touch downed power lines or any objects in contact with them;
SPILLS--clean up any spilled medicines, drugs, or other harmful materials such as bleach, lye, gas;
FALLEN ITEMS--beware of items tumbling off shelves when you open doors of closets and cupboards;
CHECK FOOD AND WATER SUPPLIES--Do not eat or drink anything from open containers near shattered glass; If power is off, plan meals to use up foods that will spoil quickly or frozen foods (food in the freezer should be good for at least a couple of days; Don't light your kitchen stove if you suspect a gas leak; USE BBQ or camp stoves, outdoors only for emergency cooking; If your water is off you can drink supplies from water heaters, melted ice cubes or canned vegetables (AVOID drinking water from swimming pools --it may have too many chemicals in it to be safe.)

5. **DO NOT** use matches, lighters, camp stoves or barbecues, electrical equipment, appliances UNTIL you are sure there are no gas leaks. They may create a spark that could ignite leaking gas and cause an explosion and fire

6. **DO NOT** use your telephone, EXCEPT for a medical or fire emergency. You could tie up the lines needed for emergency response. If the phone doesn't work send someone for help

7. **DO NOT** expect firefighters, police or paramedics to help you. They may not be available.

Hazard Management Cayman Islands

Preparing for All Hazards

Earthquake

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EARTHQUAKES

Definition of an earthquake

An earthquake is a natural phenomenon like rain. Earthquakes have occurred for billions of years.

In simple terms, Earthquakes are the sudden, rapid release of energy stored in rocks.

The earth's rock layer is broken into large pieces. These pieces are in slow but constant motion. They may slide by each other smoothly and almost imperceptibly.
From time to time, the pieces may lock together and energy that accumulates between the pieces may be suddenly released. The energy that is released travels through the Earth in the form of waves. People on the surface of the earth then experience an earthquake.

Earthquake epicenters

The epicenter of an earthquake is the place on the Earth's surface directly above the focus or (hypocenter), the place inside the earth where the quake originates. Earthquake foci are usually somewhere between the surface and 100 km in depth. In some areas, however, the foci may be as deep as 700 km.

Physical results of earthquakes

The waves of energy earthquakes release not only shake the Earth, but also alter the nature of many soils, giving them an unstable liquid-like consistency. Then structures sink or tip, and hillsides topple.

Land Shifts and Scarps

Sections of ground may be elevated or may subside during an earthquake. Sometimes one side of a fault will rise or sink, creating a scarp (an earthquake caused cliff). Scarps may be lifted again and again in successive earthquakes, with the uplifts in any one earthquake ranging from a few centimeters to several meters or more.

Water Changes

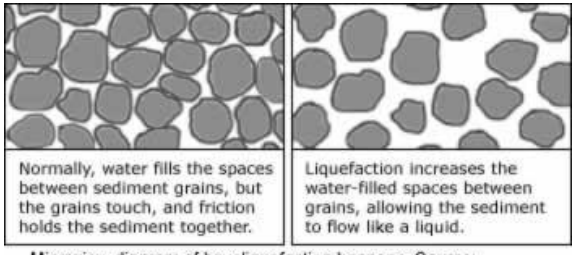
The underground water system may also be disturbed by an earthquake, causing fluctuations in water pressure and stream volume, and the appearance or disappearance of springs. Well water levels or temperature can change, and the water can become cloudy and muddy. Underground oil and gas deposits could be similarly disturbed.

Seiches

When an enclosed body of water such as a bay, a dam, a swimming pool, or even a pan of water is rocked, the water may begin to slosh back and forth rhythmically. During this phenomenon, known as a "seiche" (pronounced sash), the water surges from one side to the other often gaining in intensity and may overflow its basin before gradually slowing down and stopping.

Soil Liquefaction

Loose soils with a high water table (water in the soil close to the surface) may experience the phenomenon of liquefaction. As the earthquake's vibrations pass through the loose soil, it becomes like quicksand. Heavy objects such as buildings and other structures situated over such areas may sink or tilt into the liquefied soil. Hillsides or earth-filled dams situated over such an area could also collapse. The effect is temporary, but the results can be very damaging.

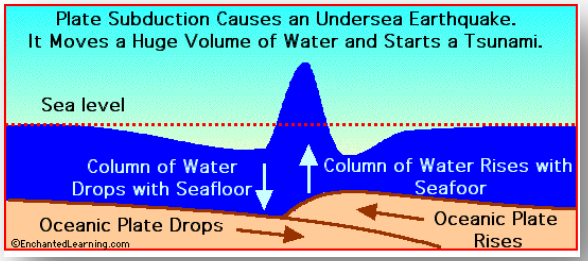


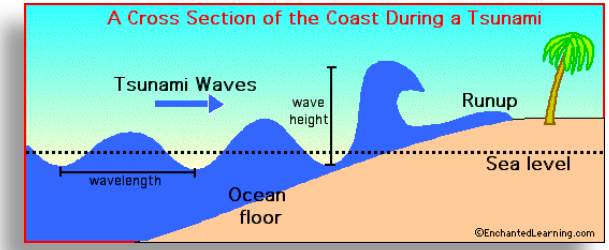
Microview diagram of how liquefaction happens. Source: http://earthobservatory.nasa.gov/Study/Earthquake/, accessed February 17, 2006.

Tsunamis

Tsunami (pronounced soo.nah.me) is a Japanese word that means "wave in the harbour".

Tsunamis are caused by earthquakes undersea or near the coastline strong enough to rock the sea floor and disturb the mass of water over it. These movements generate waves that travel at speeds up to 800 km (500 miles) per hour.





Source: http://www.enchantedlearning.com/subject/tsunami/

In deep water, on the open ocean, tsunamis cause no damage and are hardly noticed. When they meet shallow water, however, they can batter coastlines with waves as high as 60 meters (200 ft.).

DURING AN EARTHQUAKE

Take Cover in the Nearest Space

Take cover where you are. If you are outside during an earthquake take cover there, do not rush indoors or vice versa.

Duck, Cover and Hold

Practice the Duck, Cover and Hold procedure until it becomes second nature.