

EARTHQUAKE PROCEDURES

What Is An Earthquake?

An earthquake is shaking of the ground caused by the sudden breaking and movement of large sections (tectonic plates) of the earth's rocky outermost crust. The edges of the tectonic plates are marked by faults (or fractures). Most earthquakes occur along the fault lines when the plates slide past each other or collide against each other.

Geologist Paul Mann of the University of Texas along with his colleagues were able to map the 100-mile east-west fault, which stretches all the way from the Dominican Republic, through Haiti's western peninsula, along the sea floor, and into Jamaica. Mann named it the Enriquillo-Plantain Garden fault for the two points at its ends. "It is considered a strike-slip fault similar to the San Andreas, because each side moves horizontally with respect to the other", said Mann.

The shifting masses send out shock waves that may be powerful enough to alter the surface of the Earth, opening great cracks in the ground and causing great damage, collapse of buildings, bridges, roads and other man-made structures, broken power lines (and consequent fire), landslides, tsunamis (giant sea waves) and volcanic eruptions.

Each year, more than a million earthquakes occur worldwide. Most of these are so small that people do not feel the shaking; but some are large enough that people feel them, and a few of those are so large that they cause significant damage similar to the Haitian tragedy in January 2010.

Scientists can figure out whether an earthquake is likely to happen in a place by studying plate tectonics, the faults underground, and the history of the area's earthquakes. However, unlike weather events, earthquakes cannot be forecasted ahead of time.

Jamaica's Earthquake History:

Excerpts from the website of the Earthquake Unit UWI Mona, Jamaica, report that Jamaica's recorded history is rife with incidences of felt earthquakes. The famous Port Royal earthquake of June 7, 1692 was perhaps our largest and most damaging natural disaster. Although it was felt island-wide, the most extensive loss of life occurred at Port Royal, where a portion of the town sank into the sea. (*Earthquake Unit UWI Mona, Jamaica*)

Another was the Great Kingston Quake that occurred January 14, 1907; approximately One Thousand (1,000) persons perished; mostly in fires following the main quake and aftershocks. Aftershocks continued for some time during the rest of the year. (*Earthquake Unit UWI Mona, Jamaica*)

Instrumental Seismicity

About 200 earthquakes are located in and around Jamaica per year most of which are minor; having magnitudes less than 4.0. The most seismically active areas are the Blue Mountain block in eastern Jamaica and the Montpelier-Newmarket belt in western Jamaica. Other areas of notable seismicity include the near offshore south-west of Black River on the south coast, and offshore Buff Bay on the north-east coast. (*Earthquake Unit UWI Mona, Jamaica*)

How Prepared are We?

Official rescue teams around the world who have been dispatched to the scene of earthquakes continue to advocate use of the internationally recognized "**Drop, Cover and Hold On**" procedure to protect lives during an earthquake.

- **DROP** to the ground (before the earthquake drops you!),
- **COVER** by getting under a sturdy table.
- **HOLD ON** to the legs of the table until the shaking stops.

If there isn't a table near you, drop to the ground in the corner of the room and cover your head and neck with your hands and arms. Do not try to run to another room just to get under a table.



The main point is to not try to move but to **immediately** protect yourself as best as possible where you are. Earthquakes occur without any warning and may be so violent that you cannot run or crawl; you therefore will most likely be knocked to the ground where you happen to be. You will never know if the initial jolt will turn out to be the start of a big one. Therefore, you should "**Drop, Cover, and Hold on**" immediately!

How to Prepare:

These procedures are simple guidelines that will assist in alleviating fatalities. Nevertheless these procedures can be categorized into three stages.

- BEFORE Preparatory actions.
- DURING Tranquil actions during the event.
- AFTER Recovery and assessment.

Before an Earthquake:

1. Potential hazards in the home should be removed or corrected.
2. All doors should be pushed to exit the building.
3. Family members must have knowledge of evacuation procedures.
4. Family members must have knowledge of the *Emergency Assembly Area* (EAA).
5. Family members must have knowledge of the Triage area.
6. Family members should acquire first aid training.
7. Practise earthquake drills as frequently as is possible.

During an Earthquake:

1. Stay calm, do not panic and use the “**Drop Cover and Hold on**” procedure which is the appropriate action to reduce injury and death.
2. If you are indoors, remain indoors.
3. Get under a sturdy table
4. Stay away from glass windows and glass doors.
5. If you are outside stay in the open away from buildings and electrical power lines.
6. If you are travelling in a vehicle it should be brought to a stop, away from buildings and electrical power lines.
7. Remain in the vehicle.

After an Earthquake:

1. Evacuate the building as soon as the tremor stops.
2. Proceed to the designated *Emergency Assembly Area* (EAA).
3. Do a roll call of family members.
4. Check for injuries and provide first aid if needed.
5. Carefully inspect exterior of building for cracks in wall.
6. Turn off all electrical power.
7. Be prepared for aftershocks.

Conclusion

While we cannot predict exactly when or where an earthquake will occur, we do know that we live on an Island which could have a major earthquake any time; and it is possible for us to exercise precautionary procedures that would greatly minimize its destructiveness.

Therefore; regular training at home and the workplace should be done to co-ordinate the use of resources both human and material, for the saving of lives.