

# Earthquake Awareness and Disaster Preparedness

Key Learnings and Reflections from the Emergency Online Lecture Held on March 29, 2025

Lectured and Supervised by Professor Hiroyuki Nomoto

Faculty of Social Sciences and Humanities, Tokyo Metropolitan University

Earthquakes may surprise us,  
but with the right knowledge,  
we can respond with confidence.



The poster features the logos of Chulalongkorn University and the School of Global Health at the top. The title 'Earthquake Awareness and Disaster Preparedness' is prominently displayed in yellow. Below the title, a quote reads: 'Earthquakes may surprise us, but with the right knowledge, we can respond with confidence. Join us for practical guidance.' The speaker is identified as Prof. Hiroyuki Nomoto, with a circular portrait. The event date and time are listed as 'Mar 29, 2025 | 13:00-14:00 (BKK Time)'. Zoom meeting details are provided: 'Meeting ID: 987 1085 1258' and 'Password: 655666'. An illustration shows a firefighter, a person in a red shirt, and a person in a blue shirt running. At the bottom, there is a 'Contact Us' button with the email 'Jayu.l@chula.ac.th' and a 'Join Us! Free' button.

**Earthquake Awareness and Disaster Preparedness**

Earthquakes may surprise us, but with the right knowledge, we can respond with confidence. Join us for practical guidance.

**Speaker**  
Prof. Hiroyuki Nomoto  
Faculty of Social Sciences and Humanities,  
Tokyo Metropolitan University

Mar 29, 2025 | 13:00-14:00 (BKK Time)

**Zoom Meeting**  
Meeting ID: 987 1085 1258  
Password: 655666

Contact Us  
Jayu.l@chula.ac.th

**Join Us! Free**

“Everything except life can be reconstructed”

**Be Prepared, Not Scared.**

- ✓ Know what to do
- ✓ Stay calm
- ✓ Help each other

School of Global Health, Faculty of Medicine, Chulalongkorn University  
<https://sgh.md.chula.ac.th/>



# Earthquake Awareness and Disaster Preparedness

## Prof. Hiroyuki Nomoto

Faculty of Social Sciences and Humanities,  
Tokyo Metropolitan University

29 March 2025  
13:00-14:00 (BKK time)



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# What is an Earthquake?

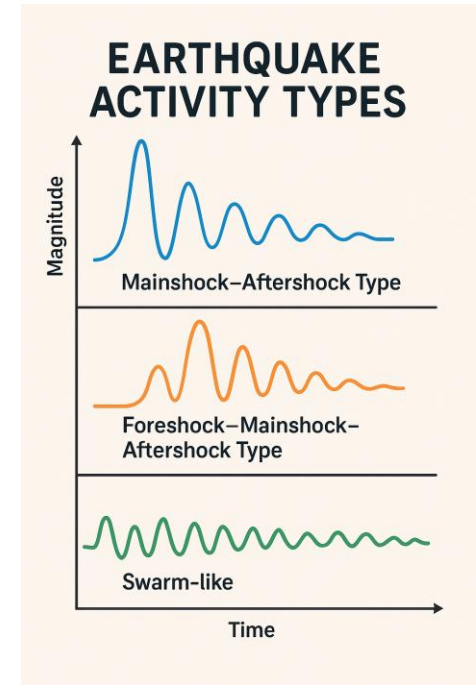
## Basic Terms

- **Earthquake** = Sudden shaking of the ground caused by movement in the Earth's crust.
- **Epicenter** = The point on the ground right above where the earthquake starts.

- **Aftershocks**

Smaller or similar-sized earthquakes that follow the mainshock.  
*Sometimes even stronger.*

**Be careful—aftershocks can be powerful!**



## 📌 Why Should We Care in Bangkok?



- Bangkok is **far from major fault lines**, but **tremors can still be felt** from distant quakes.
- The **soil in Bangkok is very soft (Grade "F")**, which makes shaking **stronger and longer**.
- **Tall buildings** may **sway a lot**, even if the earthquake happens far away.

# What is an Earthquake?

## Earthquake on March 28, 2025

Here are the key features of the earthquake that was felt in Bangkok:

Feature	Details
Epicenter	Mandalay, Myanmar
Depth of Epicenter	Approx. 10 km (shallow earthquake)
Distance from Bangkok	About 1,000 km
Energy Released	<ul style="list-style-type: none"><li>• About <math>2 \times</math> the energy of 2024 Noto Earthquake</li><li>• About <math>10 \times</math> the 1995 Great Hanshin-Awaji Earthquake</li></ul>
Effect	Generated long-period ground motions, causing buildings to sway even far from the epicenter

Short-Period Ground Motion	Long-Period Ground Motion
	
<ul style="list-style-type: none"><li>✓ Short, rapid shaking</li><li>✓ Primary impacts on low-and mid-rise buildings, houses</li></ul>	<ul style="list-style-type: none"><li>✓ Slow, large shaking with a period longer than 2 seconds</li><li>✓ Significantly affects tall buildings</li></ul>


🧠 Did you feel it?

Even though it happened far away, many in Bangkok felt shaking — this shows why we must all be aware and prepared!

# What To Do During an Earthquake

## If You Are Indoors

- ✓ **Drop** to the ground
- ✓ **Take cover** under a strong table or desk
- ✓ **Hold on** and stay in place until the shaking stops
- ⚠ If cover is not available, protect your **head and neck** with your arms and crouch beside an interior wall.
- ✗ **Do NOT use elevators**
- ✗ **Stay away from windows or glass**

-  **If the building feels like it might collapse** (loud cracking, walls splitting, extreme swaying):
  - ➔ Quickly move to the **nearest safe exit**, if you can do so **during a lull or weaker shaking**.
  - ➔ If unable to escape safely, protect yourself **next to a strong structure** (e.g., wall, pillar, or furniture).

## Take shelter under a sturdy table



### Protective Turtle Position

#### ✓ How to protect yourself:


- Sit low and curl up your body
- Put your forehead close to the floor
- **Clasp both hands behind your neck**
- **Use a blanket, book, pan, or cushion** to protect your head if you can
- If under a table, hold one leg diagonally for balance

#### ? Why:

- **Protects your neck and spine**,— essential for moving and staying alive.
- **Makes your body small** to avoid falling or flying objects
- Soft or hard items can **help cover your head**
- Safe places: under a sturdy table, or in the center of a room away from things that can fall

## What To Do During an Earthquake

### If You Are in a Car or Train

- ✓ **Stop safely** in a clear area
- ✓ **Stay inside** your vehicle
- ✓ Turn on the radio for emergency updates
- ✗ Avoid stopping under bridges, trees, or power lines
-  **If on a train**, hold on to a handrail or seat. Follow instructions from staff.

### Q: Transportation during and after earthquakes

#### A ( Japan's experience):

- Trains automatically stop during strong shaking
- Services resume only after safety checks
- Roads may be blocked — people often walk home
- Some stations have designated shelters

### Q: How to prepare for evacuation in crowded cities

#### A ( Japan's experience):

- Distribute maps with evacuation routes and shelters
- Practice public drills regularly
- Emergency exits are clearly marked in all buildings
- Residents are encouraged to carry small emergency kits

# What To Do During an Earthquake

## If You Are Outdoors

- ✓ Move to an open space
- ✓ Stay away from buildings, trees, power lines, and signs
- ✓ Watch out for falling objects

## If You Are in a Tall Building

- ✓ Stay on your floor **unless evacuation is clearly safer**
- ✓ Take cover under sturdy furniture
- ✗ Do NOT use elevators
- ⚠ **Do NOT use stairs during strong shaking.**
  - ➔ Wait until the shaking stops, **then use stairs to evacuate if needed.**
  - ➔ Be alert for **aftershocks**, and **do not re-enter** if the building seems unsafe.

## If you're in an elevator

- ⦿ Press all floor buttons
- ↓ Newer elevators will stop at the nearest floor automatically



## Key points

No matter where you are, the first priority is to **protect your life**.

If you cannot evacuate, find the **safest possible space nearby** — under, beside, or behind something solid.

💡 “Your instinct might say ‘run,’ but during strong shaking, it’s usually safer to **stay and protect** yourself until the shaking stops.”

## 📄 Immediately after the Earthquake – What Next?

### ✅ Quick Safety Checklist

- ✅ Check yourself and others for **injuries** 🩹
- ✅ Check for **fire** 🔥, **gas leaks** 🔴, or **water pipe damage** 💧
- ✅ If your building is **damaged**, evacuate **slowly and carefully**
- ✅ Be ready for **aftershocks**
- ✅ Keep your **shoes, flashlight, and whistle** nearby

### Do NOT flush toilets or use tap water

until authorities confirm it's safe.



Broken pipes may cause flooding or sewage leaks.

### 🔌 Utilities & Home Safety

⚠️ If safe to do so:

- Turn off **gas, electricity, and water**
- Do NOT use **elevators**
- Do NOT use **open flames** (like candles or gas stoves)

🚽 **Do NOT flush toilets or use tap water** until authorities confirm it's safe.

Broken pipes may cause **flooding or sewage leaks**.

### ✅ Keep These Beside You!



- **Shoes:** Protect your feet from broken glass and debris.
- **Flashlight:** Helpful in the dark and for signaling SOS.
- **Whistle:** Use it to call for help without shouting — save your energy.

### 📄 Evacuation Key points

- Exit carefully using **stairs**, not elevators
- Bring your **emergency kit** (water, food, medicine, ID, phone charger)
- Head to a **pre-designated meeting point or shelter** if needed
- Avoid re-entering the building until it's inspected



## Stay Connected & Informed

### Download This App: Thai Disaster Alert

- Get real-time warnings
- Available in English
- Apple: [Thai Disaster Alert on iOS](#)
- Android: [Thai Disaster Alert on Android](#)

### Communicate Safely

- Use **text messages (SMS)** — phone lines may be busy
- Set a **family meeting point**
- Keep a **portable charger** ready


 **Q: How much warning time does Japan  give?**

**A:**


- Only a few seconds to tens of seconds
- Enough to:
  - Take cover
  - Stop elevators
  - Shut off dangerous equipment

## Help Each Other in Emergencies


### Check on neighbors

- Especially elderly, disabled, or those living alone
-  “Are you okay? Do you need help?”

### Building managers:

- Keep a list of residents who may need assistance
-  (Name / Room / Special needs)

### Volunteer if you can

- Offer help with evacuation or supplies
-  **Community support saves lives!**

# Stay Ready – Even After the Shaking Stops!

## 🌍 Aftershocks Can Be Dangerous

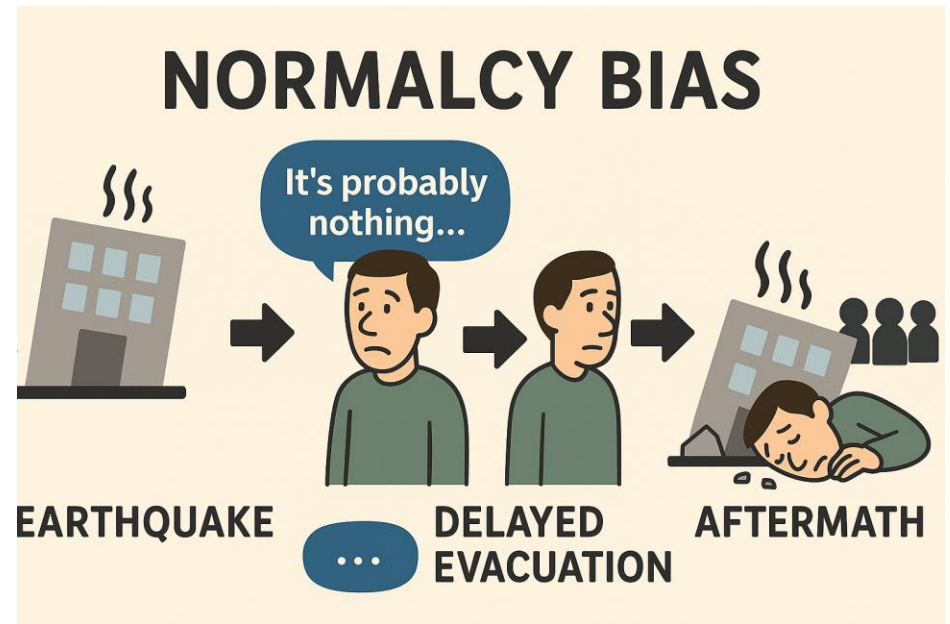
- Aftershocks may happen **minutes, hours, or days** after the main quake
- Some can be **stronger** than the first earthquake
- Stay alert and ready to evacuate again if needed

## 🧠 Don't Be Fooled by Normalcy Bias

- “It’s probably over.” “It wasn’t so bad.”  
These thoughts are **normal**, but **dangerous**.

- Normalcy bias = assuming “everything will stay the same”
- Take action even if you’re unsure

•**Better safe than sorry**














# Stay Ready – Even After the Shaking Stops!

## Prepare Your Emergency Supplies

Have enough for **at least 2 weeks**:

**until public assistance arrives**





-  **Water** (2 liters/day per person)
-  **Non-perishable food** (canned, dry goods)
-  **Regular medicine** (blood pressure, insulin, etc.)
-  **Copies of ID**, passport, emergency contacts
  
-  **Toilet paper**, sanitary items, wet wipes
-  **Flashlight**, batteries, power bank
  
-  **Emergency toilet** (portable or disposable)
-  **Plastic bags** (for waste, storage, or rain protection)
  
-  **Radio** (for updates during power or network outages)
  
-  Keep shoes, flashlight, and whistle near your bed
  
-  Fix heavy items to walls


## Stay Ready – Even After the Shaking Stops!

### Avoid Economy Syndrome (DVT)

Deep Vein Thrombosis = blood clots from sitting too long without moving

In shelters or during long waits:

-  ♂ Stretch or walk every **1–2 hours**
-  Drink water often to stay hydrated
-  Wear **compression socks** if possible
-  Watch for **leg swelling, pain, or redness**

-  If untreated, the clot may move to the **lungs** and cause **pulmonary embolism**, a life-threatening emergency  
→ Symptoms: **sudden chest pain, shortness of breath, fast heartbeat**

 **Don't ignore the signs** — seek medical help immediately if symptoms appear.

## Evacuation (Earthquakes / Fire) Drills Save Lives!

- ✓ Regular drills help people stay calm and act quickly
- ✓ Knowing evacuation routes is essential in schools, offices, apartments, houses

### In Schools & Communities:

- Practice earthquake and fire drills
- Know where emergency exits and shelters are
- Teach the correct earthquake response:

#### Drop, Cover, and Hold On

A simple, life-saving sequence to protect yourself during shaking:

- **DROP** – Get down on your hands and knees as soon as you feel shaking.  
*This position prevents you from falling and allows you to move if necessary.*
- **COVER** – Take cover under a sturdy table or desk and protect your head and neck with your arms.  
*This shields you from falling or flying objects.*
- **HOLD ON** – Hold on to your shelter until the shaking stops.  
*This keeps your shelter in place and protects you if it moves.*

➔ Practicing this response helps overcome panic and enables quicker, more confident actions in a real earthquake.

### Q: How do schools teach disaster awareness?

A (  Japan's experience):

- Disaster education is part of the school curriculum
- Regular evacuation drills are held
- Students learn to protect themselves
- Roles like “safety leader” are assigned during drills

### Q: What training is provided for elderly/condo residents?

A (  Japan's experience):

- Condominium associations hold regular drills
- Keep lists of residents who may need help
- Emergency supplies stored in common areas
- Government teams visit to teach disaster response

## 🌍 Earthquake! What Should You Do?

- 1 Protect Yourself First**  
Get under a sturdy table or desk.  
If nothing is nearby, cover your head with a cushion or bag.  

- 2 Wait before Turning Off the Stove**  
Don't rush while cooking.  
Wait until the shaking stops, then turn off the gas safely.  

- 3 Secure an Exit**  
Open a door or window when the shaking slows down.  
This helps prevent being trapped.  

- 4 Do NOT Rush Outside**  
Broken glass, falling walls, and roof tiles are dangerous.  
Stay indoors until it's safe.  

- 5 Evacuate Calmly If Needed**  
Leave the building only if it's unsafe.  
Turn off the **circuit breaker** to prevent fires when power returns.  

- Prevent Electrical Fires**  
Unplug appliances and switch -off breakers

↑without reason **Why you shouldn't rush to turn off the stove during shaking**

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**Why you shouldn't rush to turn off the stove during shaking:**
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  - Hot pots or pans may fall.It's safer to wait until then shaking stops.  



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Unplug appliances and switch off breakers after power outages.

 **Keep In Your Mind !!**

- Don't ignore warnings — avoid **normalcy bias**
- Save yourself first — it helps others too