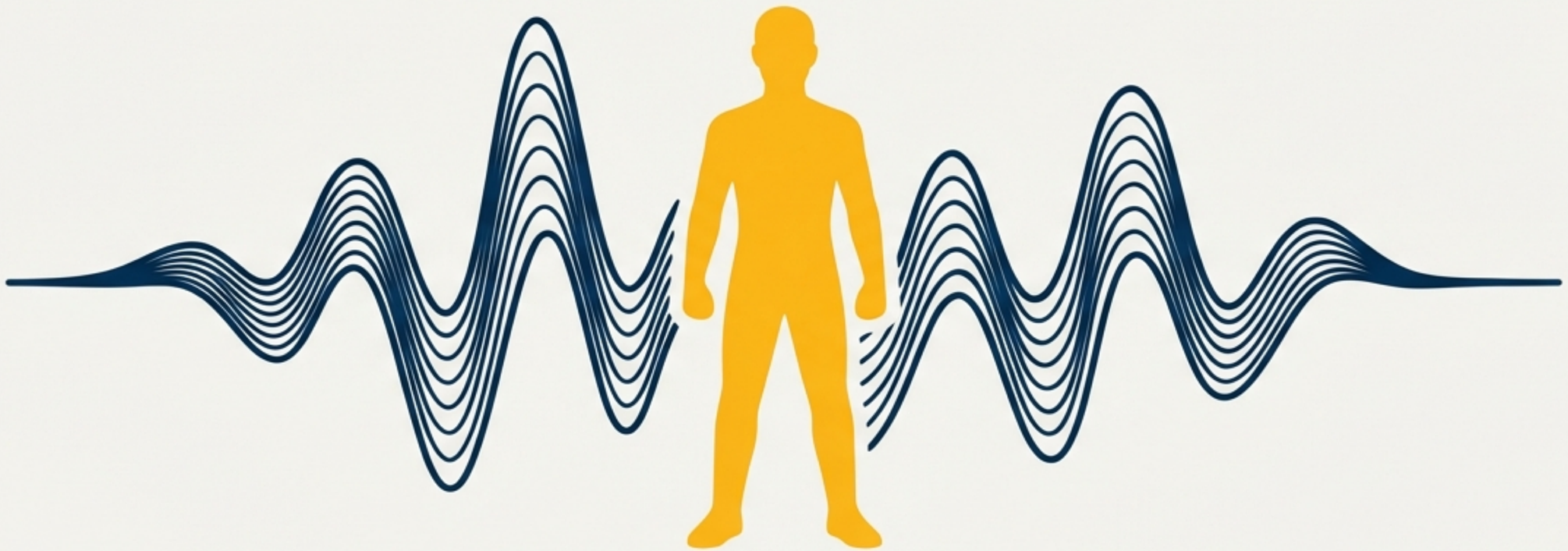
Earthquake Resilience: A Strategic Guide to Safety and Recovery



Mastering the controllable factors in an unpredictable world.

The Three Acts of Resilience

Earthquakes are uncontrollable, but your response is not. This guide is structured as a three-act journey, moving from proactive preparation to instinctual response and strategic recovery. Each phase empowers you to maximize safety and minimize risk.

Act I: Build Your Foundation
(Prepare & Mitigate)

Act II: The Critical Moments
(Survive & Respond)

Act III: The Path Forward
(Recover & Rebuild)

Act I: Secure Your Space to Mitigate Non-Structural Hazards

> The majority of earthquake injuries are not caused by collapsing buildings, but by falling objects. Securing these items is your first line of defense and ensures egress routes remain clear.

- Anchor heavy furniture (bookcases, file cabinets) to walls.
- Secure large appliances, especially refrigerators and water heaters.

Expert Focus: A toppled water heater is a primary fire risk, as it can sever gas lines. Securing it is a critical fire prevention measure.

- Use straps or hooks for televisions and large wall hangings.
- Store heavy and breakable items on low shelves.

Know How to Control Your Utilities

Locate and **label** your **main shut-offs** for gas, water, and electricity *before* an emergency. Ensure you have the necessary tools (e.g., wrench) readily available.

Water

Shut off the main valve to prevent flooding and preserve the clean water in your hot water tank and pipes.

Electricity

Turn off power at the main circuit breaker to prevent fires from damaged wiring.

Natural Gas

CRITICAL PROTOCOL: Only shut off the gas if you actively smell gas or hear a hissing sound. Premature shut-off is strongly discouraged, as service can only be restored by a qualified professional, potentially delaying your recovery.

Assemble Your Resilience Kits

Organize supplies into three distinct, accessible kits for different scenarios.

Go-Kit (Portable, 3+ Days): For evacuation. Includes water, non-perishable food, flashlight, radio, first aid, whistle, medications, copies of important documents, and cash.

Stay-at-Home Kit (Stationary, 2+ Weeks): A larger supply of the essentials for sheltering in place.

Bed-Kit (Immediate Access): Attach a bag to your bed with items needed if an earthquake strikes while you are sleeping: sturdy shoes (to protect from broken glass), flashlight, whistle, and glasses.

Establish a Resilient Communication Plan

- **Designate an Out-of-State Contact:** This person acts as a central hub for family or team members to report their status. Long-distance lines are often less congested than local networks.
- **Prioritize Low-Bandwidth Methods:** In a crisis, data networks are more resilient than voice networks.

Priority	Communication Type	Justification
P1 (Highest)	**911/Emergency Voice Call**	Reserved exclusively for life-threatening emergencies.
P2 (Standard)	**Text Messages / Data**	Preferred method for status updates; low-bandwidth is more reliable on congested networks.
P3 (Hub)	**Out-of-State Contact Call**	Central relay point; leverages less-congested long-distance networks.
P4 (Unreliable)	**VoIP / Broadband Phones**	Dependent on power and vulnerable to outages.

Act II: The Universal Protocol: Drop, Cover, and Hold On

During a seismic event, the window to react is seconds long. Hesitation is the enemy. Frequent, mandatory practice is essential to transform this procedure into an automatic reflex, **maximizing your immediate protection.**

DROP

Prevents being violently thrown down and establishes a stable center of gravity.

COVER

Shields your head and spine from falling non-structural debris.

HOLD ON

Ensures your cover moves with you during the shaking.

DCHO in Practice: Scenario-Specific Actions

Indoors

Stay inside. Get under a sturdy table or desk. If none is available, move to an interior wall away from windows and glass. DO NOT run outside. Avoid doorways.

In Bed

Stay in bed. Lie face down and protect your head and neck with a pillow.

In a Vehicle

Pull over to a clear area away from buildings, trees, overpasses, and utility wires. Set the parking brake and remain inside until shaking stops.

Outdoors

Stay outdoors. Move to an open area away from buildings, power lines, and trees. Drop to the ground and cover your head.

Specialized Guidance for High-Rises and Mobility Needs

High-Rise Buildings

- Stay inside; move away from windows and exterior walls.
- Perform DCHO.
- **NEVER use elevators.**
- Be prepared for fire alarms and sprinkler systems to activate.

Individuals with Mobility Constraints

- **Protocol: Lock, Cover, and Hold On.**
- For wheelchair/walker users: Lock your wheels, remain seated, and cover your head/neck with your arms or any available object (e.g., a book).
- Do not attempt to transfer during shaking.
- If unable to drop, brace yourself against an interior wall and protect your head and neck.

Act III: Immediate Actions After the Shaking Stops

1. **Triage Yourself First:**
   Check for injuries before attempting to help others.

2. **Protect Your Feet:**
   Put on sturdy, closed-toe shoes immediately to protect against broken glass and debris.

3. **Assess and Evacuate:**
   If the building is damaged, evacuate calmly using the stairs. Move quickly to an open area away from the building's exterior "danger zone" where facades and debris may fall. Do not re-enter damaged buildings.

4. **Prepare for Aftershocks:**
   Expect smaller quakes to follow. Be ready to Drop, Cover, and Hold On again at any moment.

Managing Critical Secondary Hazards

Fire

Fire is the most common earthquake-related hazard. Use flashlights, not candles. Do not use matches, light switches, or appliances until you are certain there are no gas leaks.

Tsunami (Coastal Areas)

The earthquake itself is your primary warning. If you are near the coast and feel strong shaking: **Move immediately to high ground or inland**. Do not wait for an official alert. A safe zone is at least 100 feet above sea level or 1 mile inland.

Downed Power Lines & Flooding

Treat all downed lines as live. Never touch them or objects in contact with them. Avoid wading through floodwater, which can conceal energized lines.

If Trapped: A Protocol for Survival and Rescue

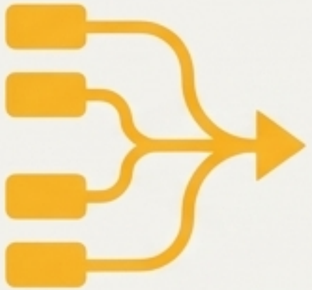
- **Protect Your Airway:** Cover your mouth and nose with a cloth, clothing, or dust mask to filter dust.
- **Conserve Energy:** Do not shout unless as a last resort. Shouting can cause you to inhale dangerous amounts of dust and quickly exhausts you.
- **Signal Intelligently:** Use a whistle if you have one. If not, bang loudly on a pipe or wall.
- **The Rescue Cadence:** Signal in a structured pattern of three loud repetitions every few minutes. Rescue teams are trained to listen for these sequences.

Assessing Structural Safety: The Official Posting System

After an earthquake, buildings are assessed and classified using a color-coded placard system. This system provides a clear, standardized directive on whether a structure is safe to enter.

Placard Color	Classification	Action Mandate
	**SAFE FOR USE**	Re-occupancy permitted. No significant structural damage.
	**UNSAFE FOR USE**	Moderate damage. Restricted entry for authorized personnel only.
	**DANGEROUS FOR USE**	Severe damage; imminent danger of collapse. Must not be entered under any circumstances.

Organizational Resilience: Continuity and Reunification



Business Continuity Planning (BCP)

The goal of a BCP is not just to resume operations *after* a disaster, but to ensure critical services remain available *during* one. Plans must include asset inventories, communication protocols, and assistance for employees with disabilities.

School Emergency Reunification Protocol

A formal plan is critical for the safe, secure transfer of students to guardians. This requires a pre-determined **off-site** location with three distinct areas: Parent Check-In, Student Check-In, and the final Reunification Area.

Your Resilience Journey Begins with a Single Step

Resilience is built through deliberate action. You now have the strategic
the strategic framework: Secure your space to mitigate hazards, embed your response through practice, and understand the path to recovery.

Take the first step today. Choose one action from this guide and complete it.

- Secure one heavy item in your home or office.
- Assemble your Bed-Kit.
- Practice Drop, Cover, and Hold On with your family or team.