

# Secure Your Space

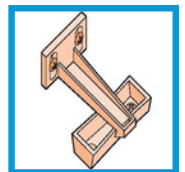
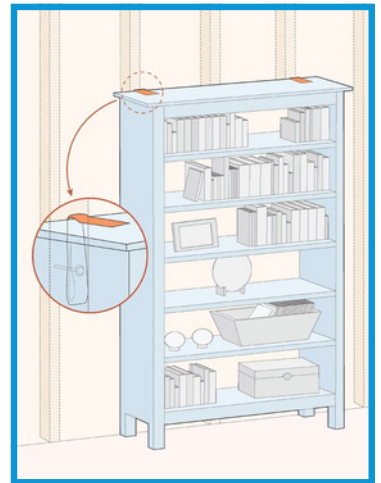
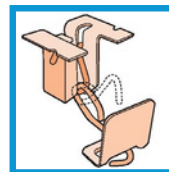
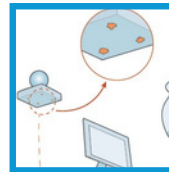
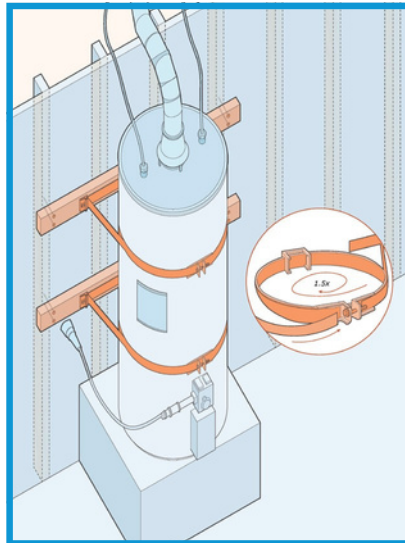
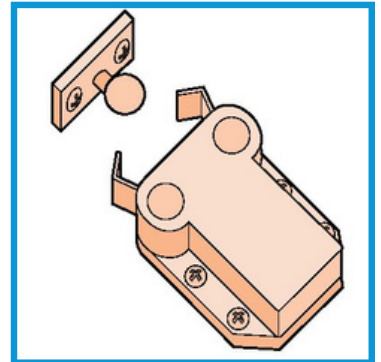
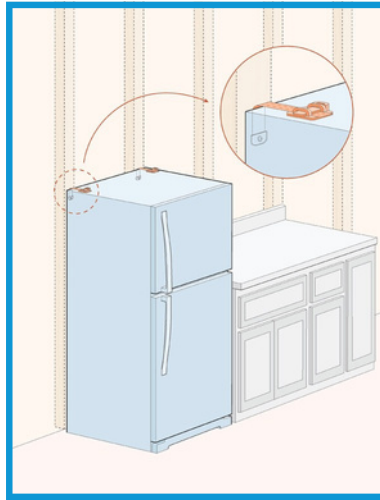
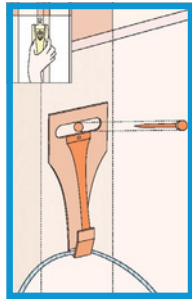
## How to prevent items from falling during earthquakes

Imagine your entire home or workplace being picked up and shaken during an earthquake – even heavy objects can fall or be thrown around! This usually causes the most injuries during earthquakes, and replacing items or repairing damages can also be very costly.

These issues can be prevented through simple actions to secure furniture and other items in place. That's why "Secure Your Space" is Step 1 of the Seven Steps to Earthquake Safety!

Start now by moving tall furniture like bookcases away from beds, sofas, or other places where people spend a lot of time. Move heavy objects to lower locations.

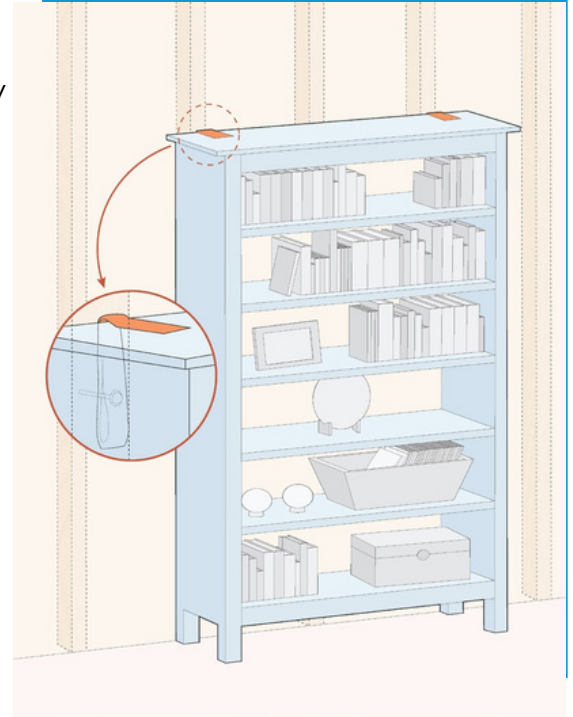
Then continue by securing things such as televisions, dressers, water heaters, cabinet doors, hanging objects, and small objects, following the instructions within this document. Try securing at least one item every weekend until you get everything done. You may need to ask others for help or to borrow tools. Perhaps you might help them too. We're all in this together!



## Secure Your Tall Furniture

Furniture such as bookcases, China hutches, and dressers are top-heavy and can fall over during earthquakes causing damage and injuries, and possibly blocking exits. Flexible fasteners allow furniture to sway slightly without falling over.

- Nylon strap kits available in stores or online screw to the wall at one end and have adhesive pads that stick to the furniture with either Velcro or buckle fasteners.
- These must be screwed into wall studs; identify where these are with a stud finder.
- Screw nylon straps to wall studs near each side of the furniture through a pre-punched hole in the strap. These can be hidden behind the furniture.
  - If taller than 6 feet, secure straps to the sides, at  $\frac{2}{3}$  the height.
- Attach the adhesive end of the strap to the furniture, following the kit's instructions.



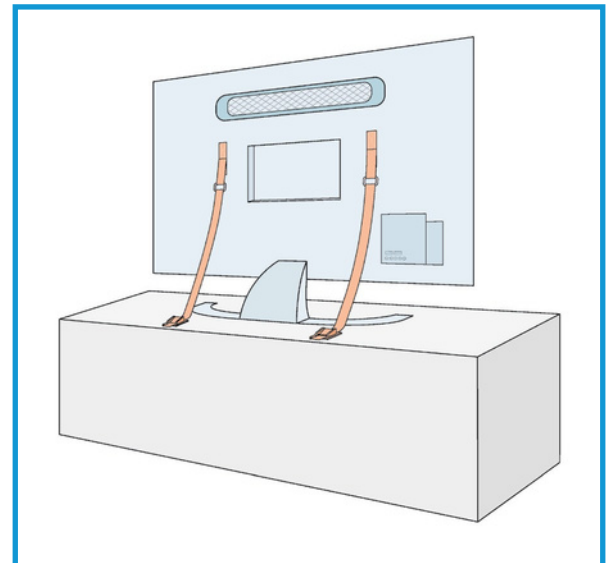
## Secure Your Television

Televisions can easily tip over or fall during earthquakes. Here are two options to prevent this.

### Option 1: Attach the TV to furniture (as shown)

- Use flexible nylon strap packages, with buckle or Velcro fasteners, available at hardware stores and online.
- Stick one end of each strap onto the furniture as shown, following the package's instructions.
- Connect the other end to the back of the TV by screwing the strap into TV mount holes, or by sticking adhesive fasteners onto the TV.
- If the furniture the TV is on is tall, properly secure it to studs in the wall using a stud finder to find the correct locations.

**Option 2:** Attach the TV to a wall with a mounting kit (available where TVs are sold or online). Carefully follow the manufacturer's instructions.



## Secure Your Hanging Objects

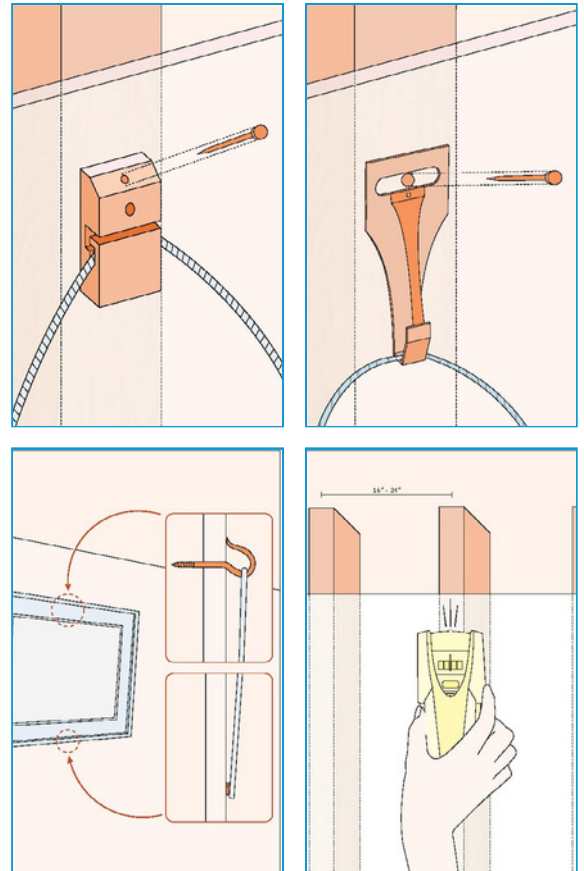
Mirrors, framed pictures, and other objects can fall off walls and hit people or shatter glass on floors. The solution depends on the weight of the object:

### Objects under 20 lbs.:

- Place on a nail or picture hook and secure by placing earthquake putty or Velcro tabs at all four corners.

### Objects up to 50 lbs.:

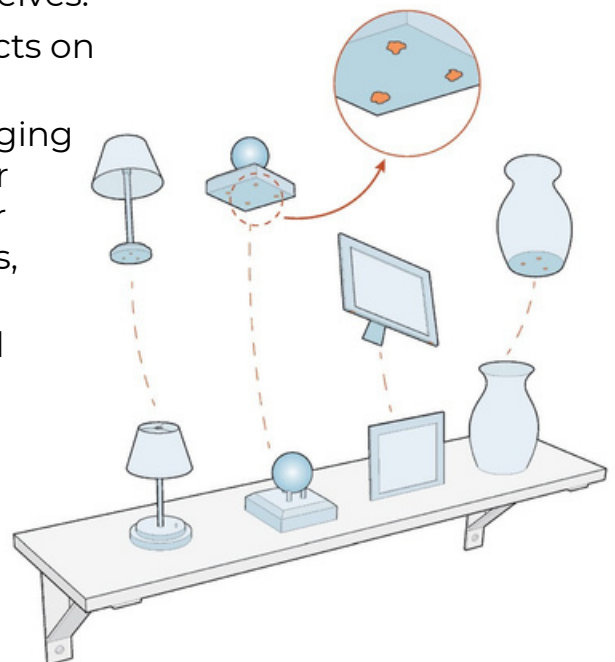
- Use a stud finder to find the closest wall stud.
- Screw closed-loop picture hanger (several types are in stores or online). This prevents the wire from jumping off the hook during strong earthquake shaking.
- For additional protection, secure the bottom corners with earthquake putty or Velcro tabs.
- Consider professional help for securing objects over 50 lbs., like wall-mounted artwork or mirrors.



## Secure Your Small Objects

Collectibles, pottery, and lamps can fall or be thrown during earthquake shaking, becoming dangerous and potentially deadly projectiles and creating hazards like broken glass. Follow these recommendations to secure them:

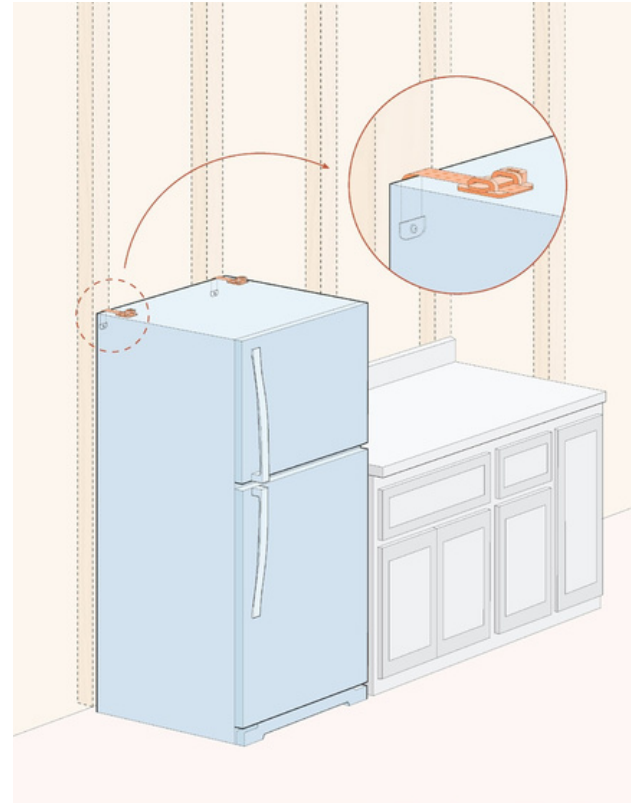
- Move heavy items and breakables to lower shelves.
- Use Velcro fastener pads to stick heavier objects on surfaces.
- Secure smaller items in place with non-damaging adhesives like QuakeHold™, Museum Wax™ or Quake Secure™ available at hardware stores or online. These products do not damage surfaces, and some are clear for use with glass or crystal:
  - Using a small amount, roll in your fingers until soft, stick to the base of the object, and then set the object in place. Lightly press object down to complete bonding.
  - Remove the object by twisting carefully and lifting from base.



## Secure Your Refrigerator

Refrigerators can injure you by moving or tipping over, and can spill their contents.

- Purchase flexible earthquake appliance straps at hardware stores or online, and follow the included instructions.
- Choose if you will attach the straps at the top or on the sides (at about 2/3 the height) of the refrigerator.
- Use a stud finder to locate the studs within the wall behind the refrigerator, near where you will place the straps. The wall attachment locations can be concealed behind the refrigerator.
- Use included screws to secure each strap to the wall.
- Clean the surface where the adhesive of the fastener (bracket or Velcro) will be placed using the included alcohol pad.
- Remove plastic from the adhesive pad and place the pad in position. Press down hard for thirty seconds. Leave undisturbed for 72 hours in order for the adhesive to form a secure bond.
- Connect the free end of the strap to the fastener base.

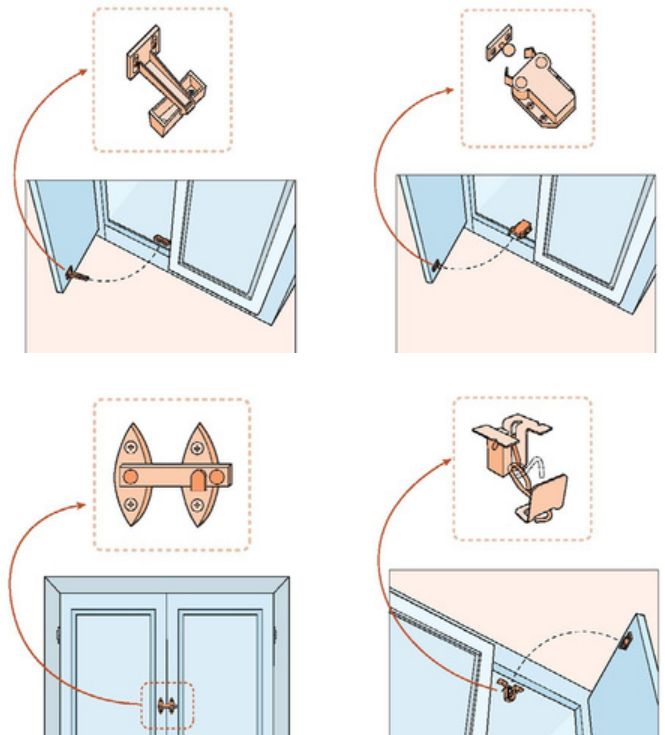


**NOTE:** If your refrigerator is within a cabinet and you cannot connect straps to walls, most likely it will not tip over.

## Secure Your Cabinet Doors

Unsecured cabinet doors fly open during earthquakes, allowing glassware and dishes to crash to the floor. Many types of latches are available to prevent this.

- **Pull / Throwover** – Screws to the front of cabinet doors.
- **Push Latch** – A base attaches with screws on the inner shelf, and a small peg is attached to the back of the door. The base holds the peg until the door is pushed inward.
- **Child Proof Latch** – Most install using strong adhesives, close automatically, and release by pulling the door open slightly and lifting a release latch.
- **SeismoLatch™** – Installed using peel-n-stick high-bond adhesive; latch falls into place during earthquake shaking.



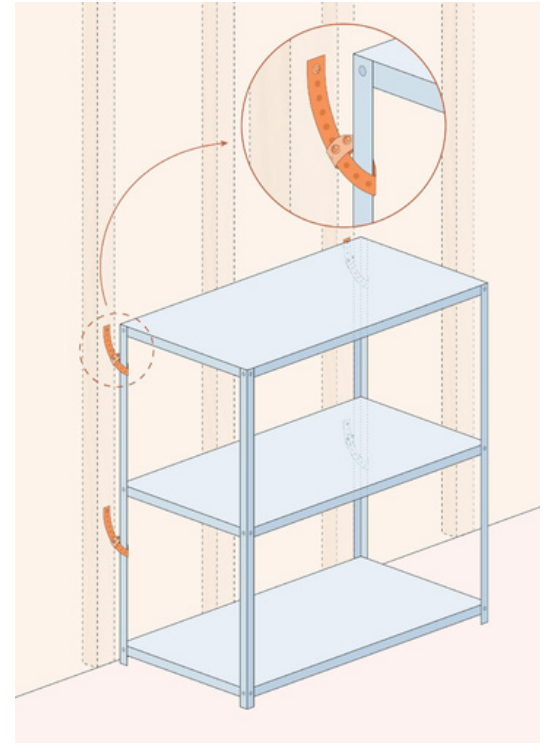


## Secure Your Storage Racks

Storage racks may slide or overturn during strong shaking, unless secured: •

Use flexible nylon straps that have holes for screws (available at hardware stores or online). Place two straps near the top of the rack. For very tall racks or racks on wheels, also place two straps near the middle (as shown).

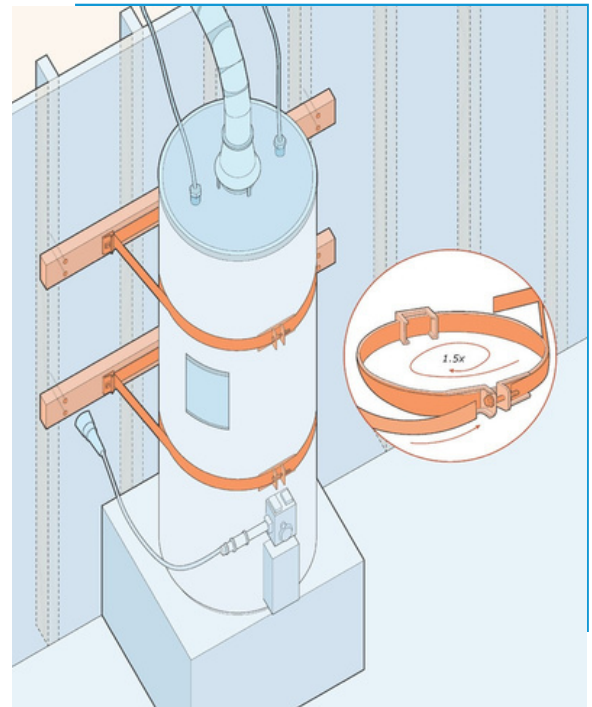
- Make a tight loop with each strap around a rear post as shown, and connect the end of the strap to itself by inserting a short bolt through the holes in the strap and then screwing on a washer and nut.
- Screw the long end of each strap into a stud in the wall behind the rack (use a stud finder to determine where).
- Alternatively, attach eye-screws onto the wall studs. Use a bungee cord or 1/8" diameter wire looped around your furniture. Secure to the eye-screws and furniture using carabiner hooks - allowing for moving furniture when needed.
- For racks positioned on wheeled supports, be sure to set wheel locks if included, and if the rack is moved, always reattach to the wall with straps after using.



## Secure Your Water Heater

Water heaters can topple over during earthquakes, causing gas and water leaks, and even fires. Here is how to prevent this:

- First, check that your gas and water pipes have flexible connectors. Ask a plumber to replace these if needed.
- Prevent the tank from tipping backwards by making sure it is within 2" of the wall. If necessary, reduce a larger gap by attaching a wooden block to the vertical "studs" within the wall behind the water heater (use a stud finder to determine where to screw).
- Purchase a special kit with metal straps at a hardware store or online. Place each strap as shown in the image; start at the back of the tank, bring each strap to the front and then back to the wall.
- Connect each strap to wall studs (or the wood block) using screws provided in the kit. If securing into concrete, use 1/4" expansion bolts.



# Plan to Be Safe

Plan to Be Safe by creating your emergency plan and deciding how you will communicate.

Will everyone in your household do the right thing during the violent shaking of a major earthquake? Before the next earthquake, get together with your family or housemates to plan now what each person will do before, during and after.

Once the earthquake is over, we will have to live with the risk of fire, the potential lack of utilities and basic services, and the certainty of aftershocks. By planning now, you will be ready. This plan will also be useful for other emergencies.



Planning for an earthquake or other emergency is not much different from planning for an event or vacation. Make sure that your emergency plan includes evacuation and reunion plans; your out-of-state contact person's name and number; the location of your emergency supplies and other pertinent information. Finally, have occasional earthquake "drills" to practice your plan, and share your plan with people who take care of your children, pets, or home.

## Plan NOW to respond after an earthquake:

- Keep shoes and a flashlight in a closed "under-bed bag" tied to each bed.
- Get a fire extinguisher for your home. Your local fire department can train you and your family to use it properly.
- Teach everyone in your household to use emergency whistles and/or to knock three times repeatedly if trapped. Rescuers searching collapsed buildings will be listening for sounds.
- Know the location of utility shutoffs and keep needed tools nearby. Make sure you know how to turn off the gas, water, and electricity to your home. Only turn off the gas if you smell or hear leaking gas.
- Install smoke alarms and test them monthly. Change the battery once a year, or when the alarm emits a "chirping" sound (low-battery signal).
- Take a Red Cross first aid and cardiopulmonary resuscitation (CPR) training course. Learn who else in your neighborhood is trained in first aid and CPR.
- Check with your city or county to see if there is a Community Emergency Response Team (CERT) in your area. If not, ask how to start one.
- Work with your neighbors to identify who has skills and resources that will be useful in an emergency, and who may need special attention (children, elderly, disabled, etc).
- Learn about neighborhood preparedness programs such as Map Your Neighborhood, Neighborfest, etc.
- Identify the needs of household members and neighbors with special requirements or situations, such as use of a wheelchair, walking aids, special diets, or medication.

## **Plan NOW to communicate and recover after an earthquake:**

- Sign up for city, county, and/or state emergency alert systems to receive information via text, or download apps that provide similar information. (In California: [CalAlerts.org](https://www.calalerts.org).)
- Chose a safe place outside of your home to meet your family or housemates after the shaking stops.
- Provide all family members with a list of important contact phone numbers.
- Designate an out-of-area contact person who can be called by everyone in the household to relay information.
- Learn about the earthquake plan developed by your children's school or day care. Keep your children's school emergency release card current.
- Consider where you might live if your home cannot be occupied after an earthquake or other disaster.
- Keep copies of essential documents, such as identification, insurance policies, and financial records, in a secure, waterproof container, and keep with your emergency supplies kits. Include a household inventory (a list and photos or video of your belongings).

## **A special note about children**

If earthquakes scare us because we feel out of control, think how much more true this must be for children, who already must depend on adults for so much of their lives. It is important to spend time with children in your care before the next earthquake to explain why earthquakes occur. Involve them in developing your disaster plan, prepare emergency supplies kits, and practice “drop, cover, and hold on.” Consider simulating post-earthquake conditions by going without electricity or tap water.

After the earthquake, remember that children will be under great stress. They may be frightened, their routine will probably be disrupted, and the aftershocks won't let them forget the experience. Adults tend to leave their children in order to deal with the many demands of the emergency, but this can be devastating to children. Extra contact and support from parents in the early days will pay off later. Whenever possible, include them in the recovery process.

## **Organize Emergency Supplies in convenient locations**

Everyone should have emergency supplies stored in accessible locations at home, at work, and in vehicles. Having emergency supplies readily available can reduce the impact of an earthquake or other emergency on you and your family.

You can choose what to put in each location:

- Under-Bed Bags hold shoes, a flashlight, and other items for when an earthquake happens while sleeping.
- Go-Bags or car kits contain supplies for about 3 days for when evacuation is needed.
- Home or work supplies are for sheltering in place for up to to 2 weeks or for larger groups.

The lists below include the items you can choose to include in each location.

## Under-Bed Bags

While the other emergency supplies below are for nearly any emergency, “Under-Bed Bags” are just in case of earthquakes, especially when people are sleeping. Items that you leave next to your bed (including shoes and glasses) will be scattered during earthquakes and possibly covered with fallen items or under your bed. Shoes may also be filled with broken glass. So it’s a good idea to have these items within a closed bag, attached to each bed:

Essential:

- Shoes
- Glasses/contacts
- Flashlight/headlamp
- Dust mask
- Whistle

Optional:

- Clothing
- Hard Hat / helmet
- Gloves
- Crowbar
- First Aid Kit

## Go-Bags and Car Kits

Everyone should have a personal emergency supplies “Go-Bag” to take if evacuation is necessary. These can be for an individual, family, or small group, with contents to last for about 3 days. You can also keep these supplies in a car. These items are recommended:

- Medications, prescription list, copies of medical cards, doctor’s name and contact information
- Medical consent forms for dependents
- First aid kit and handbook
- Examination gloves (non-latex)
- Dust mask
- Spare eyeglasses or contact lenses and cleaning solution
- Bottled water
- Personal hygiene supplies
- Whistle (to alert rescuers to your location)
- Sturdy shoes
- Emergency cash
- Road maps
- List of emergency out-of-area contact phone numbers
- Snack foods, high in water and calories
- Working flashlight with extra batteries and light bulbs, or light sticks
- Portable radio with extra batteries (or hand crank for charging)
- Comfort items such as games, crayons, writing materials, teddy bears
- Toiletries and special provisions you need for yourself and others in your family including elderly, disabled, small children, and animals.
- Copies of personal identification (drivers license, work ID card, etc.)



## Household and Workplace Supplies

Electrical, water, transportation, and other vital systems can be disrupted for several days or much longer in some places after a large earthquake. Emergency response agencies and hospitals could be overwhelmed and unable to provide you with immediate assistance. Providing first aid and having supplies will save lives, will make life more comfortable, and will help you cope after the next earthquake. In addition to your personal emergency supplies kits, store household or workplace emergency supplies in an easily accessible location (in a large watertight container that can be easily moved), with a supply of the following items to last at least 3 days and ideally for 2 weeks:

- Water (minimum one gallon a day for each person)
- Wrenches to turn off gas and water supplies
- Work gloves and protective goggles
- Heavy duty plastic bags for waste, and to serve as tarps, rain ponchos, and other uses
- Portable radio with extra batteries (or hand crank for charging)
- Additional flashlights or light sticks
- Canned and packaged foods
- Charcoal or gas grill for outdoor cooking and matches if needed
- Cooking utensils, including a manual can opener
- Pet food and pet restraints
- Comfortable, warm clothing including extra socks
- Blankets or sleeping bags, and perhaps even a tent
- Copies of vital documents such as insurance policies

Use and replace perishable items like water, food, medications and batteries on a yearly basis.

## Minimize Financial Hardship

**Minimize Financial Hardship by organizing important documents, strengthening your property, and considering insurance coverage.**

Earthquakes may last only seconds but they can shake up our lives for weeks and months to come. You can minimize your financial hardship by organizing important documents, strengthening your property (home or other building) and considering earthquake insurance.



## **Organize Important Documents**

You may need to leave your house quickly after an earthquake, if there's a fire, etc. To help you organize the most important information you will need, begin with designating a "grab-and-go" backpack or bag. Consider what documents you will need if you are away from home for an extended time (such as what you will need as identification, to reach loved ones, to file an insurance claim, etc.) Put all of these important documents in a sealed plastic bag, then place it into your "grab-and-go" bag. Leave your "go bag" somewhere you can get to easily.

Consider what important documents you will need:

- Copies of identification.
- Copies of insurance cards.
- List of emergency contact numbers.
- Photos of belongings in your home. (This will help you file an insurance claim)

## **Strengthen Your Home or Building: Common problems**

Most houses, apartment buildings, or commercial buildings are not as safe as they could be, especially if they are more than 30 years old. While building codes have been improved over time, few building codes require issues with older buildings to be fixed. Still, there are things that you can do to improve the structural integrity of your home or other building. Below are some of the most common issues. Others are listed on the menu for this step.

Inadequate foundations. Look under your house at your foundation. If the foundation is damaged or built in the "pier and post" style, consult a contractor or engineer about replacing it with a continuous perimeter foundation. Look for bolts, and square washers, in the mudsills (so you see a connection between the base of the home's wood frame and the poured concrete foundation). They should be no more than 1.8 meters (6 feet) apart in a single story and 1.2 meters (4 feet) apart in a multistory building. Adding bolts to unsecured houses is one of the most important steps toward earthquake safety. This can be done by a contractor or by someone skilled at home maintenance with proper earthquake retrofit training.

Unbraced cripple walls. Homes with a crawl space should have panels of plywood connecting the studs of the short "cripple" walls (see figure). You or a contractor can strengthen the cripple walls relatively inexpensively.