

# Step 1: Secure Your Space

How to prevent items from falling during earthquakes

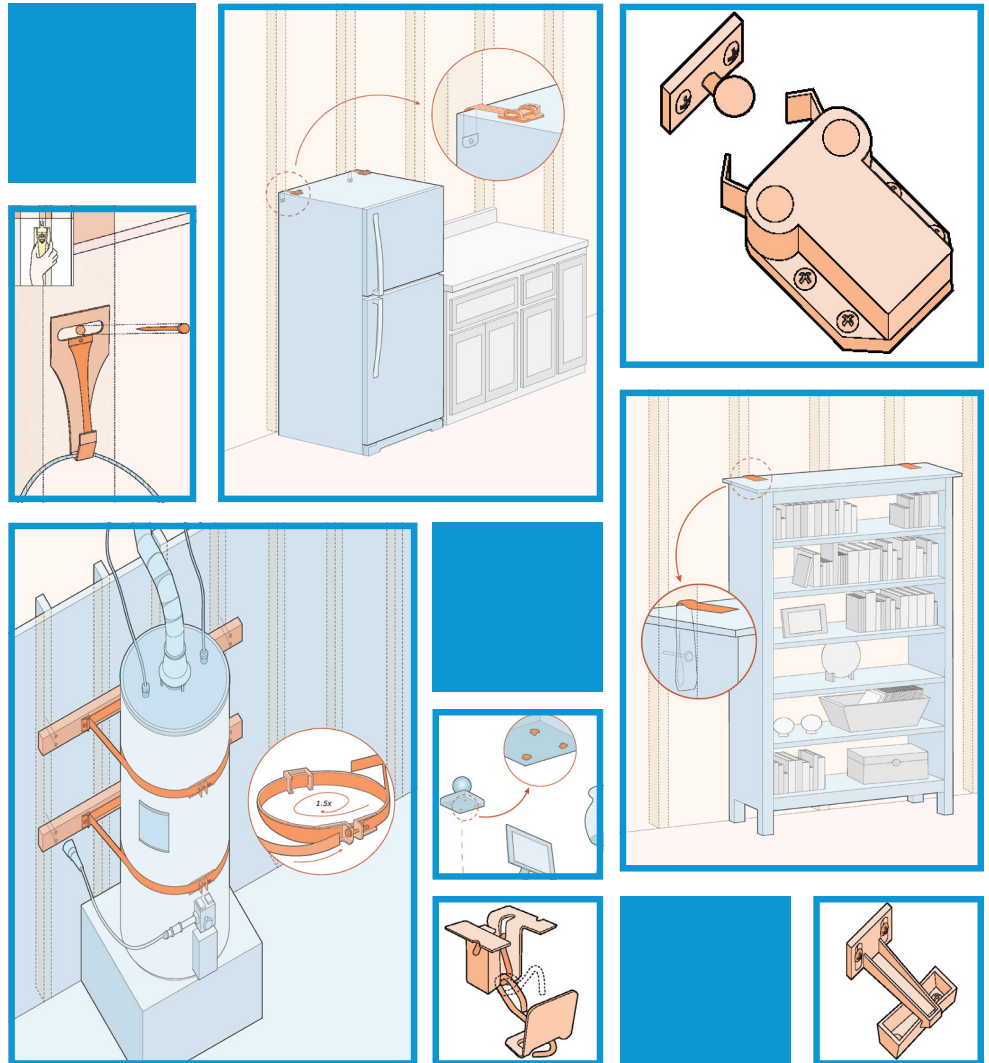


Imagine your entire home or workplace being picked up and shaken during an earthquake – even heavy objects can fall or be thrown around! This usually causes the most injuries during earthquakes, and replacing items or repairing damages can also be very costly.

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!

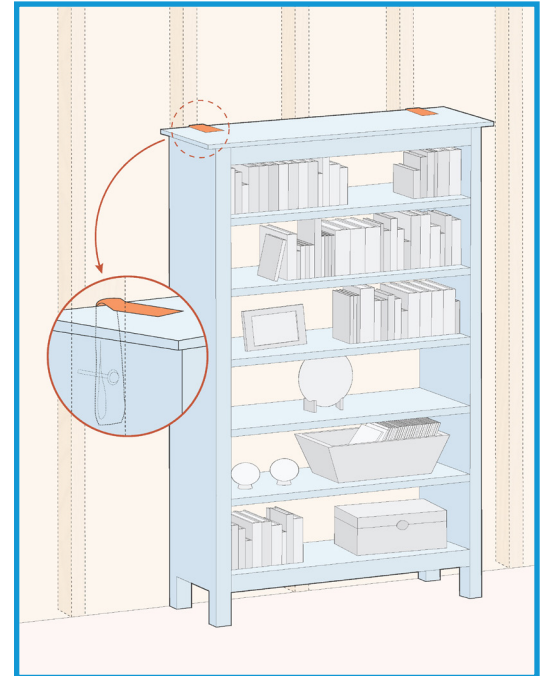


Learn more at [EarthquakeCountry.org/Step1](https://EarthquakeCountry.org/Step1)

## 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 2/3 the height.
- Attach the adhesive end of the strap to the furniture, following the kit's instructions.

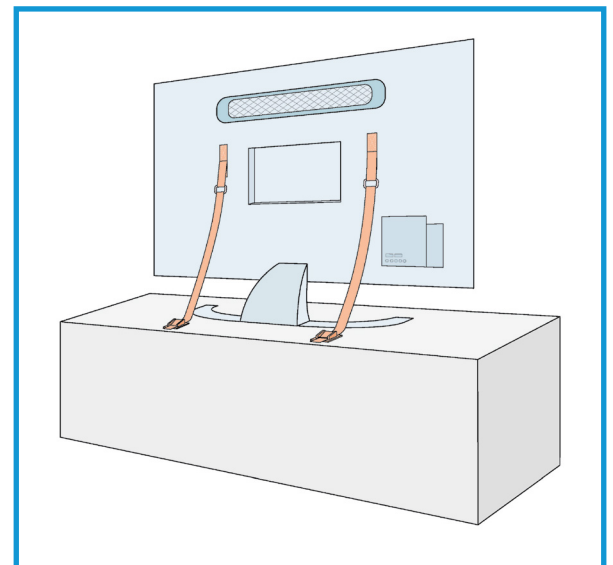


## Secure Your Television

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

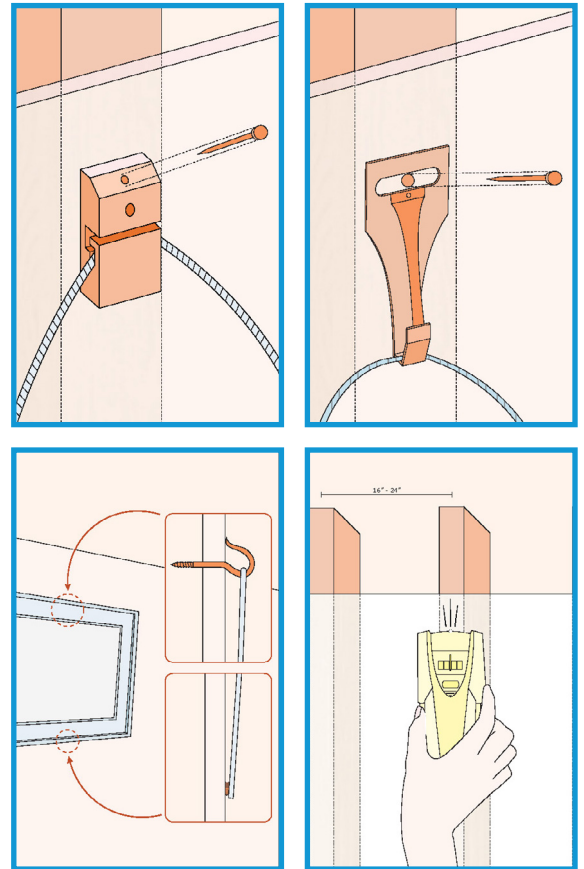
Mirrors, framed pictures, and other objects can fall off walls and hit people or shatter glass on floors. The solution depends on the weight of the object:

### 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.:

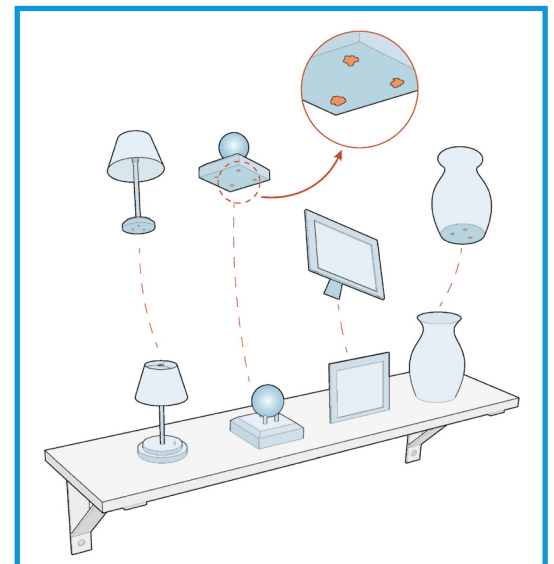
- Use a stud finder to find the closest wall stud.
- Screw closed-loop picture hanger (several types are in stores or online). This prevents the wire from jumping off the hook during strong earthquake shaking.
- For additional protection, secure the bottom corners with earthquake putty or Velcro tabs.
- 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:

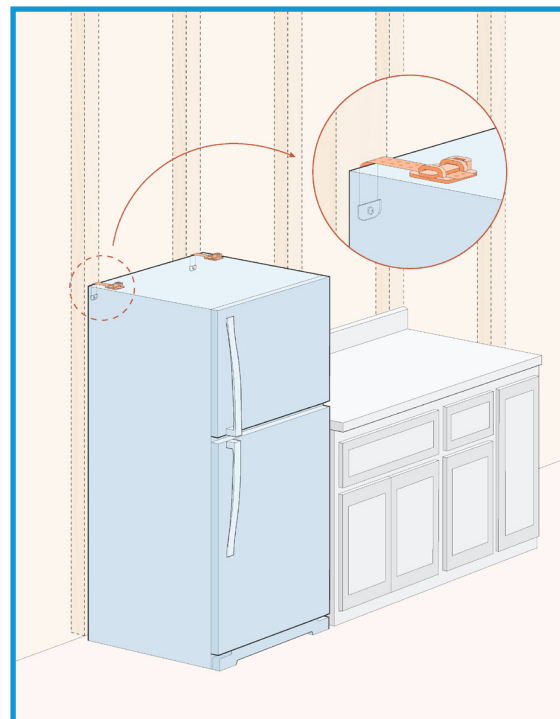
- Move heavy items and breakables to lower shelves.
- Use Velcro fastener pads to stick heavier objects on surfaces.
- Secure smaller items in place with non-damaging adhesives like QuakeHold™, Museum Wax™ or Quake Secure™ available at hardware stores or online. These products do not damage surfaces, 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.

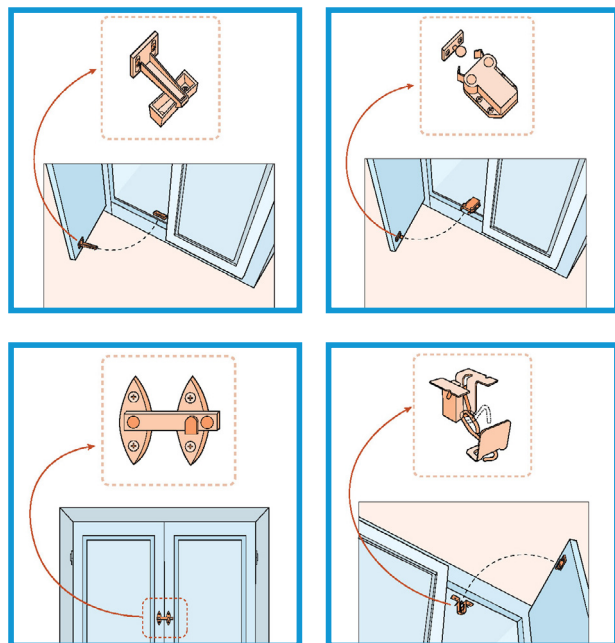


**NOTE:** If your refrigerator is within a cabinet and you cannot connect straps to walls, most likely it will not tip over.

## 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.

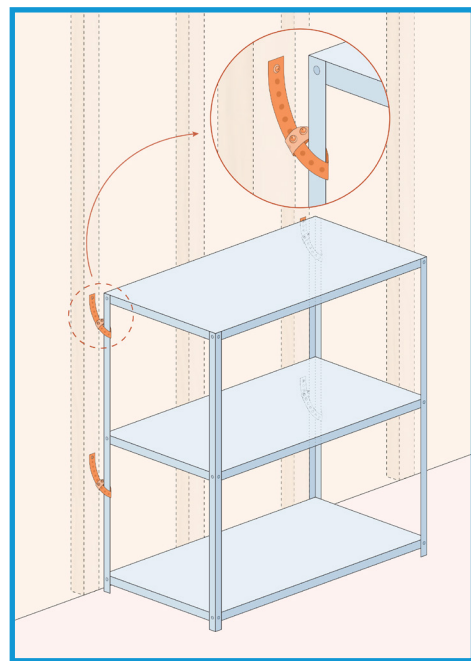




## Secure Your Storage Racks

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

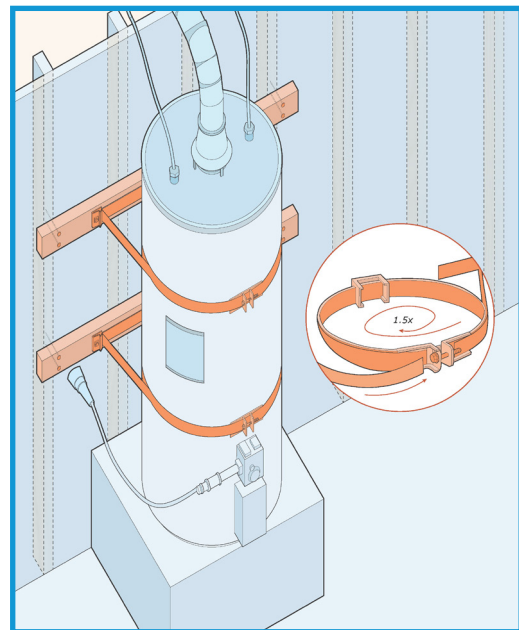
- Use flexible nylon straps that have holes for screws (available at hardware stores or online). Place two straps near the top of the rack. For very tall racks or racks on wheels, also place two straps near the middle (as shown).
- Make a tight loop with each strap around a rear post as shown, and connect 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

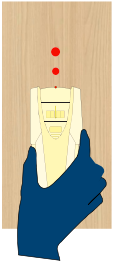
Water heaters can topple over during earthquakes, causing gas and water leaks, and even fires. Here is how to prevent this:

- 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.



## Secure Your Space - Worksheet

Earthquake shaking can move almost anything, even large or heavy items. Imagine your home or workplace being shaken by an earthquake sideways and up-and-down — what could be thrown around? **How can you prevent it?**



**START NOW** by moving furniture such as bookcases away from beds, sofas, or other places where people sit, sleep, or spend a lot of time. Move heavy objects to lower shelves and secure bookcases to walls. Then continue your **"hazard hunt"** to help identify and fix things such as unsecured televisions, computers, furniture, water heaters, etc. Use the chart below to list what you need to secure these items and plan how to get it done. Guidance for how to secure most items is at [EarthquakeCountry.org/step1](https://www.EarthquakeCountry.org/step1).

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