

Preparedness for the Home

Imagine putting everything you own neatly inside a big box—your clothes, your television, your furniture, your decorations, your car keys, etc. Then imagine picking up the box and shaking it really hard. When you open the box, is everything right where you put it?

The same principle applies in an earthquake. Furniture “walks” across the room or falls over; drawers open up and fall out or send their contents flying; things fall off of shelves and out of cabinets.

Damage from these sorts of things can be minimized or even prevented, however, with just a few simple items and little expense, and with only a few minutes of your time.

Furniture

There are two simple ways to keep your furniture in place during an earthquake. The first (an L-bracket) is slightly cheaper, while the second (furniture straps) can be hidden behind the furniture. Both only require a few minutes and a few dollars.

For both methods, use a stud-finder before installation, since both brackets and straps need to be screwed into a stud to be effective.

L-brackets

L-brackets, also called corner braces, are small pieces of metal or wood that secure the top or sides of your furniture to the wall. These come in a variety of sizes, styles, and colors, and are generally very inexpensive. However, these can only be used with wood furniture due to the need for screws (which are often purchased separately, but are also very inexpensive). In addition, brackets aren't flexible like straps, which in a major earthquake can mean holes in your walls when the furniture pulls the brackets out. While metal L-brackets are often unsightly, they are stronger, smaller, and usually cheaper than more



decorative wooden brackets, and are easier to install.

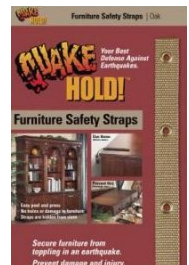
To use metal L-brackets, decide where you want to place them by holding them in place. Mark the wall and the furniture through the screw holes with a pencil (if your bracket has four holes, mark all four). Set the brackets down.

Using a hand drill, drill small “pilot” holes where you made your marks. Pilot holes make it easier to put screws in place, and reduce the chances of cracking or splitting of the furniture or wall. Once you've drilled your pilot holes, put the brackets back in place and insert your screws, tightening them until they are fully seated on the bracket.

Wooden brackets often are slightly more complicated to install, so consult your local hardware store for instructions.

Furniture straps

Straps, while more expensive (generally around \$10 per kit; each kit is good for one piece of furniture), offer three distinct advantages over brackets. First, they can be hidden from view behind the furniture, and come in a variety of colors to match almost any furniture (such as white, beige, oak, black, mahogany, etc.). Second, they can be used with metal or glass furniture, including fish tanks. Third, straps are made from industrial-strength velcro and allow greater flexibility, reducing the likelihood that your furniture will pull them out of the walls during a major earthquake.



Furniture straps usually come in an all-inclusive kit with screws, eliminating the need to count parts and buy multiple items. Each kit generally secures one piece of furniture.

To use furniture straps, first mark the wall at the top edge of your furniture with a pencil, at the

spots where you want to install your straps. Pull the furniture away from the wall and hold the wall-end of the strap up to your pencil lines, with the screw holes starting about 1/2" below the mark. Mark the holes on the wall, set down the strap, and drill pilot holes with a hand drill. Replace the strap on the wall and finish with screws.

Once you've done this for all the straps, push the furniture back into place. Pull the straps down over the top of the furniture, keeping track of where they will sit. Clean the surface of the furniture where the strap will be installed using an alcohol wipe or other solvent that won't damage any finish. Remove the adhesive backing from the velcro portion of the strap and press firmly into place on the furniture.

Appliances/Electronics

Earthquake straps can also be used to secure large appliances and electronics, such as washing machines, televisions, computers, and more, to keep them from sliding out or falling down. These often come in a two-part kit that provides an adjustable strap for both sides of the appliance, and have buckles or quick-release clasps for easy moving or cleaning of the item.

These are installed in a similar manner to furniture straps, only without the use of screws. Consult the instructions that come with your kit for specific directions.

Wall Decorations

Artwork and other wall decorations can also be secured to reduce damage during an earthquake. All that's needed is a simple, inexpensive screw-in wall hook and some earthquake putty or museum wax. Replace your standard art hook with the screw-in wall hook, making the space between the end of the hook and the wall as small as possible. Re-hang your artwork and straighten it out, using a level if desired.



Follow the manufacturer's directions to prepare the wax or putty, then place a small (nickel-sized) amount behind the bottom corners of the artwork. Press it to the wall, hold for a few seconds, and your artwork is secured.

Water Heaters

Water heaters can be a great source of drinking water after a disaster, but they can also be a very dangerous hazard if they come loose. A loose water heater can crack and cause water damage, or even worse pull gas connections loose from the wall, creating a very dangerous fire or explosion hazard. Metal plumber's tape (with the holes running down the middle) is very thin and is not strong enough to hold your water heater in place.

Strap kits are available at most hardware stores for around \$10-\$20, and include all the hardware you'll need to secure your water heater. Installation instructions vary depending on the placement of your water heater relative to the wall, so follow the instructions that come with your kit. Be sure to install the top strap approximately one-third of the way down from the top, and the bottom strap one-third of the way up from the bottom (but at least 4" above the controls).

Note that to install water heater straps, you will need a hand drill and handheld metal cutting tool. In addition, you may need to purchase two short pieces of 2"x4" wood, depending on the distance between your water heater and the wall. If you have metal studs, contact the strap kit's manufacturer for replacement bolts or screws that will be compatible. Also replace copper or metal gas/water connections with flexible ones.

Cabinets/Drawers

Child safety latches are an excellent and inexpensive way to secure drawers and cabinets throughout your home. Packs of latches can often be picked up for \$3-\$4, and most can be used on both cabinets and drawers. Due to design variations, consult your package for installation instructions.

For more information, visit the following websites:

FEMA—What to Do Before an Earthquake:

http://www.fema.gov/hazard/earthquake/eq_before.shtm

Washington Emergency Management Division:

http://www.emd.wa.gov/preparedness/prep_index.shtml