

EARTHQUAKE PREPAREDNESS WORKBOOK

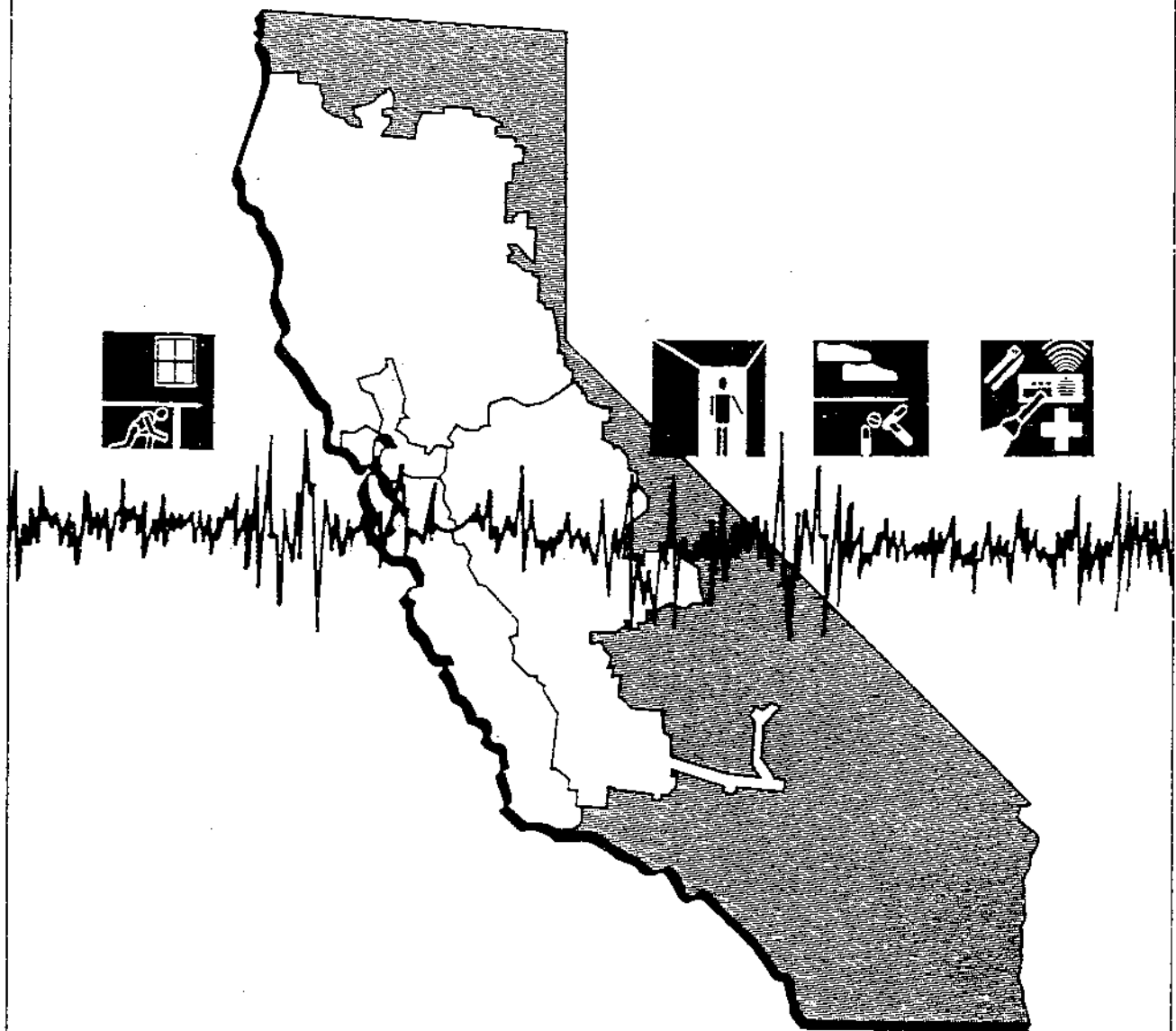


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Important Individual and Family Information

After a major disaster, such as an earthquake, you may need financial assistance and will want to document any property loss for insurance and income tax purposes. Having ready access to the documents necessary for completing application forms, as well as those which could be difficult to replace, will eliminate undue delay and frustration.

- Take a few minutes and record this vital family information. Keep copies in two safe places, fire resistant if possible. They can also be stored in water-tight plastic bags in the freezer.
- Store deeds, wills, tax records, birth certificates and other vital documents.
- Take photographs of all valuables for documentation for insurance claims.

1. Name and social security numbers of all family members:

_____	#	___/___/___
_____	#	___/___/___
_____	#	___/___/___
_____	#	___/___/___
_____	#	___/___/___
_____	#	___/___/___

2. Name, address, and phone number of:

Father's employer: _____
 Address: _____
 Phone: _____

Mother's employer: _____
 Address: _____
 Phone: _____

Child/Other's employer: _____
 Address: _____
 Phone: _____

Child/Other's employer: _____
 Address: _____
 Phone: _____

3. Name, address and phone number of:

Child's school: _____
 Address: _____
 Phone: _____

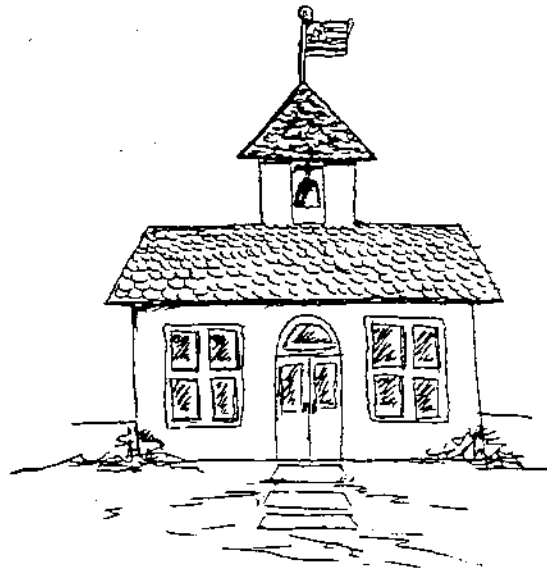
School policy is to hold/release (circle one) child.

Child's school: _____
 Address: _____
 Phone: _____

School policy is to hold/release (circle one) child.

Child's school: _____
 Address: _____
 Phone: _____

School policy is to hold/release (circle one) child.



4. Name, address and phone number of:

Attorney: _____
 Address: _____
 Phone: _____

Doctor: _____
 Address: _____
 Phone: _____

Hospital/Clinic: _____
 Address: _____
 Phone: _____

5. Pertinent medical information:

Allergies:

Name: _____ Type: _____
Name: _____ Type: _____
Name: _____ Type: _____

Regular medication:

Name: _____ Type: _____
Name: _____ Type: _____
Name: _____ Type: _____

Other (on dialysis, confined to wheelchair, etc.):

Name: _____ Type: _____
Name: _____ Type: _____

6. Account/policy type and number:

Bank: _____
Account type: _____ #: _____
Account type: _____ #: _____
Account type: _____ #: _____

Bank: _____
Account type: _____ #: _____
Account type: _____ #: _____

Insurance: _____
Policy type: _____ #: _____
Policy type: _____ #: _____
Policy type: _____ #: _____

Insurance: _____
Policy type: _____ #: _____
Policy type: _____ #: _____

Other: _____
Type: _____ #: _____
Type: _____ #: _____

7. Car, boat, RV, etc. license and vehicle identification (ID) number:

Kind: _____ License #: _____
ID #: _____

Kind: _____ License #: _____
ID #: _____

8. Important Telephone Numbers:

Public Safety (Police and Fire):
911

Paramedics:
911

Emergency Ambulance:
911 or _____

Poison Control Center:
(408) 299-5112

County Hospital Trauma Center:
(408) 299-5311

Physician: _____

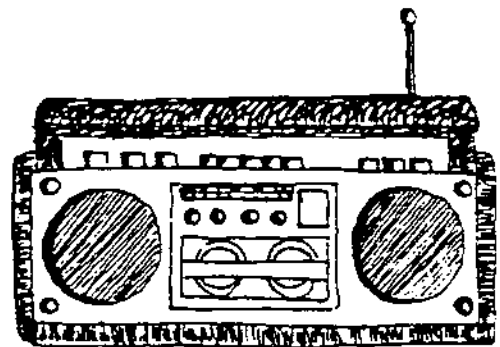
Electric Company: _____

Gas Company: _____

Water Company: _____

Neighbor: _____
Phone number: _____

Neighbor/Landlord/Property Mgr.: _____
Phone number: _____



9. TO OBTAIN EMERGENCY INFORMATION:

Tune to these radio broadcast stations:

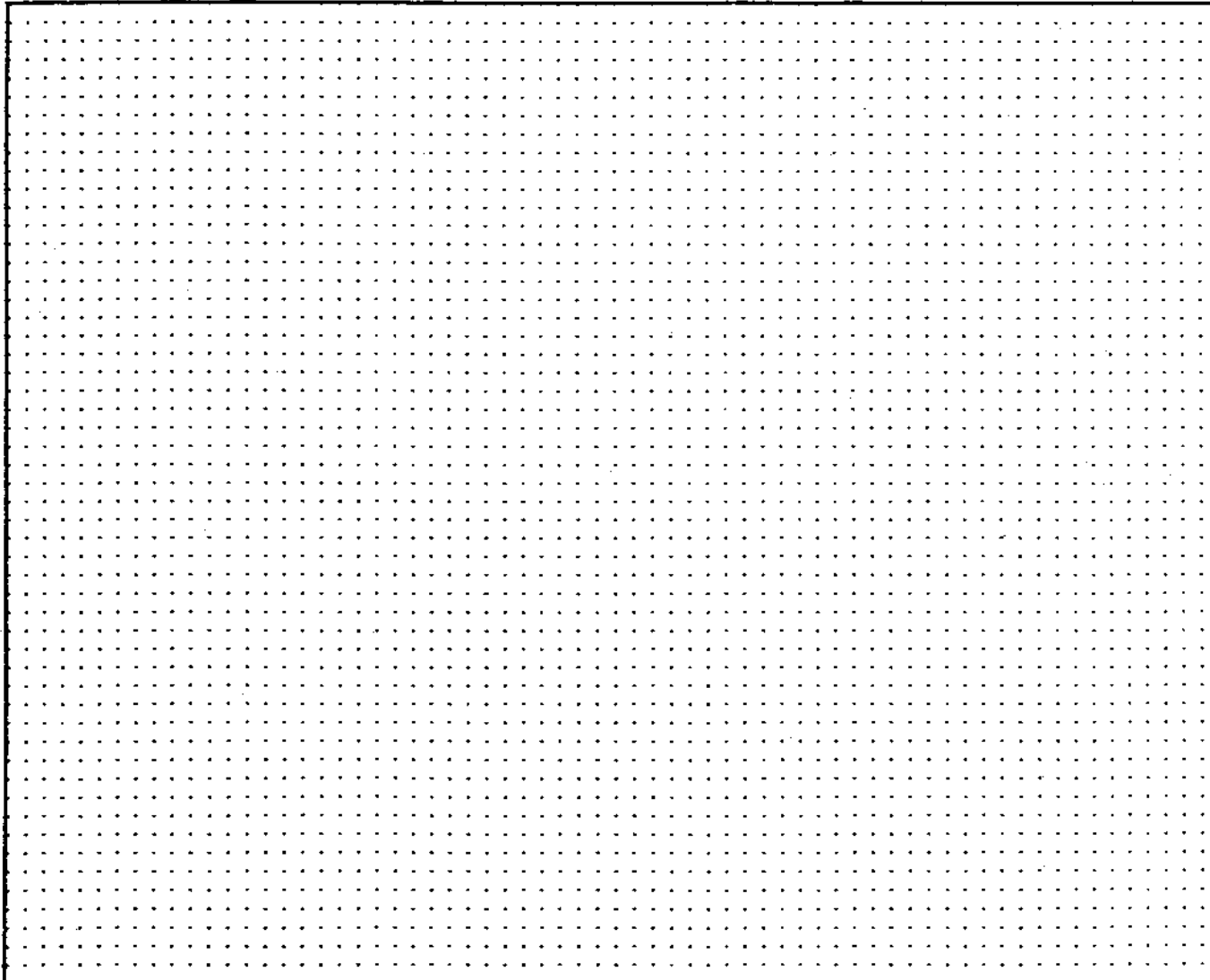
- KNBR 680 AM
- KCBS 740 AM
- KGO 810 AM
- KKIS 990 AM
- KKIQ 92 FM

Individual and Family Evacuation Plans

In the event of a fire, flood, or disaster such as a toxic waste spill, you will need to be prepared to quickly and efficiently evacuate. By planning and practicing what to do before you need to, you will help yourself and your family to react correctly and spontaneously at the first sign of danger.

Planning to Evacuate

- Sketch the floor plan of the place where you live.
- Show a second way to exit from each room. If you need special equipment, such as a rope ladder, mark where it is located.
- Mark where your emergency food, water, first-aid kits and fire extinguishers are kept.
- Mark where the utility (gas, water and electric) turn-off valves are located.
- Indicate the location of your family's emergency outdoor meeting place.



Evacuation Priority List

If you are told that you need to immediately evacuate, you will have little time to think about what to do. To help you be prepared to respond before the disaster strikes, take a few minutes to complete this list.

- List the most important items to be taken with you, and only those that can be hand carried.

_____	_____
_____	_____
_____	_____
_____	_____

- List other items in order of importance.

_____	_____
_____	_____
_____	_____
_____	_____

- List items to be removed by car or truck if one is available.

_____	_____
_____	_____
_____	_____
_____	_____

- Make a list of things to do if time permits. For example, locking the doors and windows, turning off the utilities, etc.

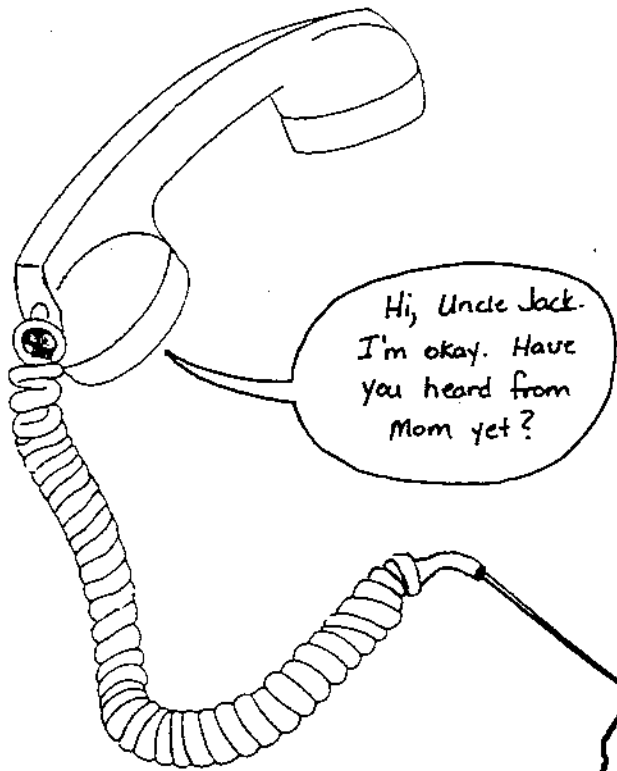
_____	_____
_____	_____
_____	_____
_____	_____

If You Must Evacuate Your Home:

- Post a message indicating where you have gone.
- Take vital documents, emergency supplies and equipment, and extra medications with you.
- Confine pets in the basement, garage or bathroom. Make sure that they have plenty of water. (Pets will not be allowed in designated Red Cross shelters.)

Family Reunion Plans

Disasters, such as an earthquake, have a good chance of occurring when your family is not all together. The kids may be at school. You may be at work, the shopping center, or the theatre. To prepare for these possible separations, take a few minutes and develop a reunion plan. This plan will help you to get back together, or if that is not possible, to let each other know you are okay.



Planning to Reunite

List two or three places to go if you cannot stay at home. Possibilities include: neighbors' or nearby relatives' homes, local schools, churches or community centers. If you arrive home and no one is there, it will give you some places to start looking.

1. _____
2. _____
3. _____

Choose a relative who lives at least 100 miles away who can be contacted by all family members if it becomes impossible to reach the reunion locations. You can report to them where you are and how you are and learn where and how other family members are as well.

Name: _____
Phone number: () _____

Two keys to family safety are planning for the disaster and practicing exactly what you will do when it happens.

Before the Earthquake

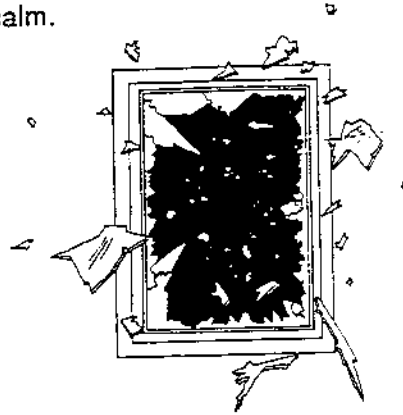
- Walk through your home together.
- Search for hazards using the guide on pages 20 and 21.
- Discuss where and how you can protect yourself in each room. Practice by physically placing yourself in these locations.



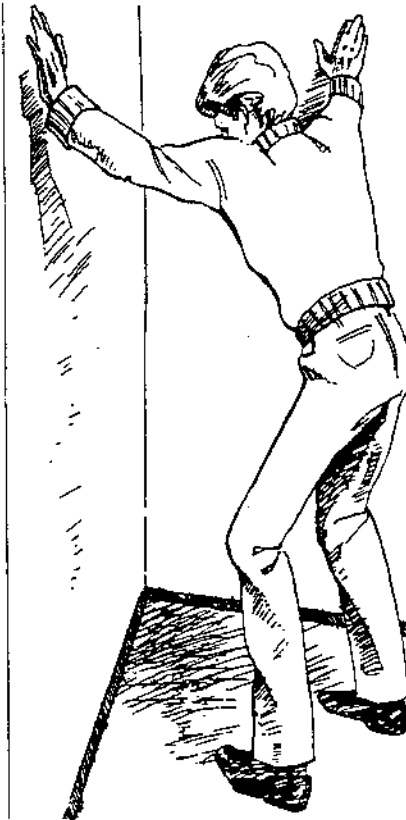
- Hold earthquake drills. Every once in awhile, call out "earthquake." Discuss what each family member did, and should have done.

During the Earthquake

- Stay calm.



- Move away from glass doors and windows.



- Avoid heavy, standing objects such as bookcases, china cabinets, etc.
- If you are indoors, stay there. Resist the tendency to run outside. Quickly move to one of the safe places you have identified.
- If you are outside, move away from power lines and poles, trees, tall buildings, walls and chimneys.

After the Disaster

- Expect aftershocks.
- Wear sturdy shoes for protection from debris or broken glass.
- Immediately check for injuries.
- Immediately check for fires.
- Use a flashlight. DO NOT light a match until you are positive there are no gas leaks.
- Check utilities, appliances, and the sewer line for damages before using.
- Listen to the radio for details. Do not use the telephone except for emergencies.

Coping with Your Child's Fears

Before the Disaster

Your child is less likely to experience prolonged fear or anxiety if he/she knows what to expect after the disaster.

- Talk about your own experiences and/or read aloud about disasters, such as earthquakes. Local libraries have a number of good books on earthquakes.
- Ask the staff at your child's school about the school's disaster plan.
- Provide your child with the name of a relative, neighbor or friend who will care for him/her until the family can be reunited.

Name: _____

Phone: _____

After the Disaster

- Encourage your child to express his/her feelings of fear.
- Your child may need both verbal and physical reassurance that everything will be all right. Hug him/her a lot.
- Include your child in any clean-up activities. It is comforting to the child to watch the household begin to resume its normal functions, and to have a job to do.



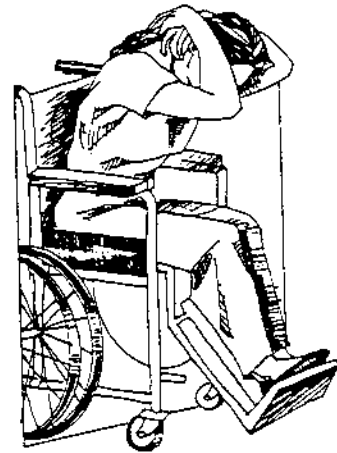
Tips for the Elderly or the Disabled

Before the Disaster

- Tell your neighbors now if you might not move well or quickly in an emergency.
- People who are blind should keep an extra cane at home and at work. After the earthquake, your seeing eye dog may be injured or too frightened to help you.
- Know where the safer places are in each room of your home, such as: under a sturdy desk or table, in a doorway, or in the corner of an inside wall.
- Figure out how you can get out of each room if the doorway is blocked.

During the Disaster

- Move to one of the areas of safety mentioned above.
- Stay away from tall furniture and glass doors.
- If you are in a wheelchair, stay in it. Move to a doorway, or other area of safety. Lock the wheels and cover your head with your arms to protect yourself from falling debris.



After the Disaster

- If you are trapped inside, make as much noise as possible to attract attention to yourself. You might like to carry a whistle at all times.



Emergency Food

- A disaster can dramatically disrupt the food supply at any time, so plan to maintain at least a three to five day supply of food above your normal requirements. You may have plenty of food on hand right now, but check your supplies to make sure.

When storing food, it is not necessary to buy dehydrated or other types of emergency food. Canned foods, dry mixes and other supplies you already have on hand are good for a number of reasons: they do not require cooking or water for preparation; they can be integrated into your regular supply; and, with proper storage, they will remain fresh for about two years.

Remember to date each package and tin so you will know when to rotate them into your normal food supply. This should be done once or twice a year.

Choose Foods That:

- Your family will enjoy, especially the kids. It is best to serve familiar foods in stressful times.
- Require little or no cooking or refrigeration in case the utilities are disrupted.
- Come in cans or package sizes that contain portions small enough for one meal so the food will not be wasted.
- Have a long storage life.
- Need little or no water for preparation in case water service is disrupted.
- Will not increase thirst.
- Will meet the needs of family members who are on special diets.

How To Store Emergency Food:

- How long food lasts depends to a great extent on how it is stored. The ideal location is a cool, dry, dark place. The best temperature is 40° to 60° F. High temperatures contribute to the rapid deterioration of most types of food.
- Keep food away from petroleum products. Some food products absorb their smell.
- Protect food from rodents and insects. Items stored in boxes or in paper cartons will keep longer if they are heavily wrapped or stored in metal containers.

How To Use Emergency Food:

- Use perishable food in your refrigerator or freezer before using food in your emergency kit. Be sure any food you eat that has been stored for long periods of time is safe to eat. Discard cans that bulge at the end or are leaking.

Other Items To Store:

- Paper plates and cups
- Plastic eating utensils
- A manual can and bottle opener

DO NOT EAT OR DRINK ANYTHING FROM OPEN CONTAINERS NEAR SHATTERED GLASS!

Using the chart below as a guideline, maintain a three to five day supply of the following food groups for each family member.

1. Canned stew, spaghetti, corned beef hash, soup, beans, tuna, sardines, meats, fruits and vegetables.
2. Drinks such as canned juices, soda, coffee, tea, bouillon and cocoa.
3. Crackers and spreads for crackers such as peanut butter, canned meat and cheese.
4. Salt, pepper, sugar, catsup and mustard.
5. Hard candies, raisins, canned nuts, instant puddings, dried fruit, seeds, granola bars, etc.
6. Dried and/or evaporated milk.
7. Ready-to-eat cereals.
8. Oatmeal cookies or crackers.

Guidelines for Emergency Food Amounts for Adults

Type of Food	72 hour (3 days) Supply	Two Week Supply	Useful Information
Canned meat, fish, poultry Canned soup Nuts/Peanut butter	6 servings	28 servings	One serving equals: 2-3 oz. meat, poultry, fish 3/4 oz. dried meat 5 oz. condensed soup 1/2 cup nuts 4 Tbs. peanut butter
Fruits and vegetables	10 1/2 cup servings	46 servings	One serving equals: 4 oz. canned fruit or vegetables 1/2 oz. dried fruit 4-8 oz. canned juices
Cereals and baked goods Crackers	10-12 servings one serving equals: 1 slice of bread 1/2 to 1 cup dry cereal 1/2 cup cooked cereal or pasta 2/3 cup cooked rice 6 squares graham crackers	46 servings	One serving equals: 1 bread, roll or pancake 1/2 to 1 oz. dry cereal 1 oz. quick-cook cereal 1 oz. crackers 1 oz. cookies 3/4 oz. uncooked pasta 6 oz. cooked pasta 3/4 oz. rice
Fats and oils		Up to 1 pound, or 1 pint per person	Choose types that do not require refrigeration

Shelf Life* for Common Foods

Beverages - powdered	24	Milk - evaporated and dry	6
Biscuit, brownie, muffin mixes	9	Mustard - unopened	24
Bouillon cubes or granules	24	Nuts - canned	12
Cake mixes	1-2	Pancake mix	6-9
Catsup - unopened	12	Pasta - tightly covered	24+
Cereals		Peanut butter	9
Ready-to-eat	6-12	Pudding mix	12
Uncooked - in original package	12	Rice mixes	6
Uncooked - in metal container	24	Rice - white - tightly covered	24+
Cocoa mixes	12	Salad dressings - unopened	18
Coffee, tea	18	Salad oil - unopened	6
Fruits		Sauce and gravy mixes	6-12
Canned citrus fruits and juices	12	Soups	
Canned other fruits and juices	18	Condensed meat and vegetable	12
Dried - in metal container	12	Dry mixes	12
Gelatin	18	Tuna and other canned fish	12
Hard candy and gum	18	Vegetables	
Honey - tightly covered	12	Canned tomatoes and sauerkraut	12
Jams and syrups - tightly covered	12	Canned others	18
Meat, poultry - canned (except fish)	18	Instant potatoes	18

* In months



Water is one of the most important survival necessities after an earthquake or other major disaster. A person can survive weeks without food, but only a few days without water.

Amount

- Store one gallon per person per day. While it is good to store enough for seven days, it is essential that you prepare for at least three days.

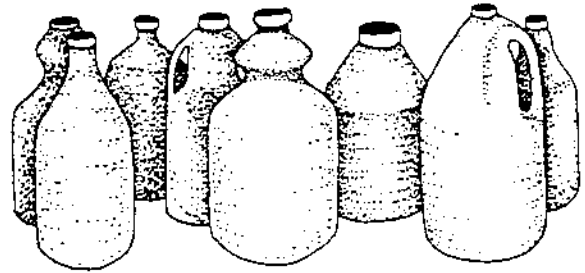
Water Storage

- Water should be stored in sturdy plastic bottles preferably opaque. Chlorine bleach bottles work well. Plastic juice and milk containers are less desirable as they tend to crack and leak more readily.

NOTE: Avoid placing water containers in areas where toxic substances, such as gasoline and pesticides are present. These vapors penetrate the plastic after time.

Existing Water Sources in the Home

- Water drained from the water heater faucet, provided it remains upright. (Water will drain easier if a faucet in the home is turned on.)
- Water dipped from the flush tank of the toilet. Purify this water before using. Use the bowl water for pets. Do not use chemically "blue" water.
- Melted ice cubes.
- Canned fruit, vegetable juice, and liquids from other canned goods.
- Water from swimming pool. Use this water only after other sources of pure water are exhausted.



Do Not Use Water From:

- Hot water boilers (home heating system)
- Radiators
- Water beds (fungicides added to the water or chemical substances in the vinyl may cause the water to become undrinkable).

Purification of Water

Strain out any sediment or particles from the water by pouring through several layers of cheesecloth or coffee filters. Then use one of the following purification methods:

- Boil for 5 - 10 minutes, or
- Add liquid bleach with 5.25% sodium hypochlorite (chlorine bleach) in these amounts:

Water amount	If water is cloudy	If water is clear
1 quart	4 drops	2 drops
1 gallon	16 drops	8 drops
5 gallons	1 teaspoon	1/2 teaspoon

Let water stand for 30 minutes. There should be a chlorine scent after treating. If not, repeat dosage and let stand for another 15 minutes.

- Purchase an eye dropper to add bleach. Keep it for this purpose only.

- Purification tablets may be used, but are not recommended because of their short shelf life.

First Aid

Assemble a first aid kit. The items suggested below should be tailored to meet your individual needs.

- Keep your kit freshly stocked by using it for every day needs.
- Your supplies will be easy to carry and protected from water if you store them in a small tool or fishing tackle box.

Drugs

- Hydrogen peroxide to wash and disinfect wounds
- Antibiotic ointment for dressing wounds
- Individually wrapped alcohol swabs (available at drugstores)
- Antacids
- Aspirin (to reduce swelling) and non-aspirin tablets
- Prescriptions from doctor for any long term medications (keep these current)
- Diarrhea medicine
- Laxatives
- Syrup of Ipecac (to induce vomiting)
- Vitamin supplements
- Eye drops

When buying drug items, check the expiration dates. Buy only fresh supplies for longest shelf life.

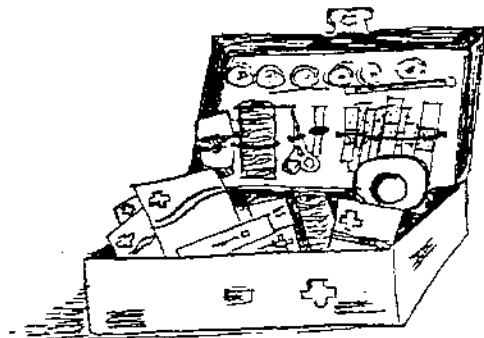
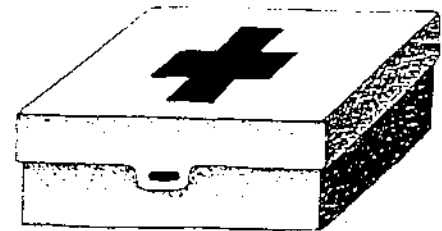
Important medical information and prescriptions can be stored in the refrigerator. This provides excellent protection from fires.

Dressings

- Band-aids (Bandages can also be made from clean rags, disposable diapers and sanitary napkins. Dressings can be held in place by men's ties, plastic bags and nylon stockings.)
- Clean sheets torn into strips to use as bandages or slings
- Ace bandages
- Butterfly bandages
- Rolled gauze - 1 each of 1", 2", and 3"
- Cotton-tipped swabs
- Adhesive tape roll - 1/2" or 1" wide
- Bandage, sterile roll - 2" x 4" wide
- 3 large triangular bandages (36" x 36" x 50")

Other Supplies

- First aid book - an excellent choice is "Standard First Aid and Personal Safety" from the Red Cross
- Writing materials - pen, pencil and paper
- Scissors
- Tweezers
- Thermometer
- Bar soap
- Tissues
- Skin lotion
- Sunscreen lotion
- Paper cups
- Plastic bags
- Plastic spoons
- Waterproof matches
- Safety pins
- Needle & thread
- Instant cold packs for sprains and burns
- Sanitary napkins
- Ammonia inhalant (smelling salts)
- Mylar space blankets
- Pocket knife
- Pre-moistened towelettes
- Splinting materials



Make sure that you have at least one of each of the following on hand:

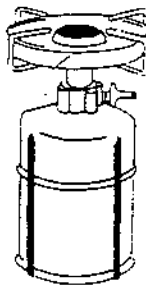
Lighting

CAUTION: Do not use matches, candles, lamps or an open flame until you are sure there are no gas leaks.

Flashlights are safe for use immediately after an earthquake. Store extra batteries and bulbs. (Batteries will stay fresh longer if stored in the refrigerator.)

Lightsticks are short-term safety lights. They need no source of ignition, and are convenient to store with emergency supplies.

Camping lanterns provide an excellent source of light. Remember to store extra fuel, matches, wicks and mantles.



Cooking Devices

Matches can be stored in a waterproof, airtight tin.

Camp stoves, barbeques, and hibachis are useful. Remember to store propane or charcoal if you plan on using them. **CAUTION:** Never burn charcoal indoors. An inadequately ventilated site may cause carbon monoxide poisoning.

NOTE: Do not use your fireplace for cooking until the chimney has been inspected for cracks and damages. Sparks may escape into your attic through an undetected crack and start a fire.

Emergency Information

Obtain a battery-powered transistor radio. For emergency information, tune to:

KNBR 680 AM
KCBS 740 AM
KGO 810 AM
KKIS 990 AM
KKIQ 92 FM

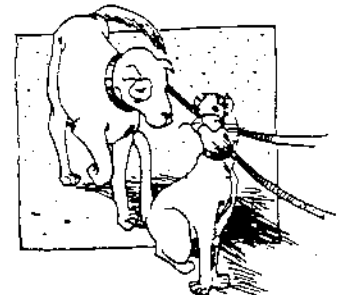
Sanitation Supplies

Portable camp toilets, sturdy buckets, or small trash cans with tight fitting lids can be used as emergency toilets. Store a supply of plastic bag liners, twist ties, toilet paper and disinfectant in them.

Hygiene supplies include soap, shampoo, toothpaste, deodorant and sanitary napkins.

Clean Up

- Axe
- Shovel
- Broom



Shelter

- Water-proof tarp
- Tent
- Sleeping bags
- Blankets
- Newspapers

Pets

- Pet food
- Leashes



Personal Items

- Eyeglasses - Store an extra pair.
- Sturdy shoes - Keep a pair near the bed. They will protect your feet from broken glass.
- Work gloves for all family members. They will be invaluable as you begin clean-up activities.

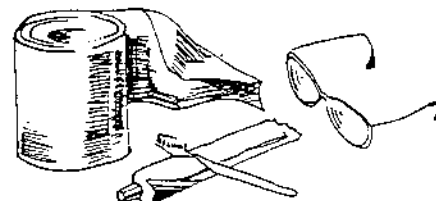
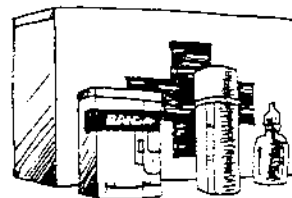
Storage Suggestions

Finding extra space to store your emergency supplies is often a little tricky. However, it is important that you locate them with care. They will do you little good if you cannot get to them or they are destroyed or damaged during the disaster.

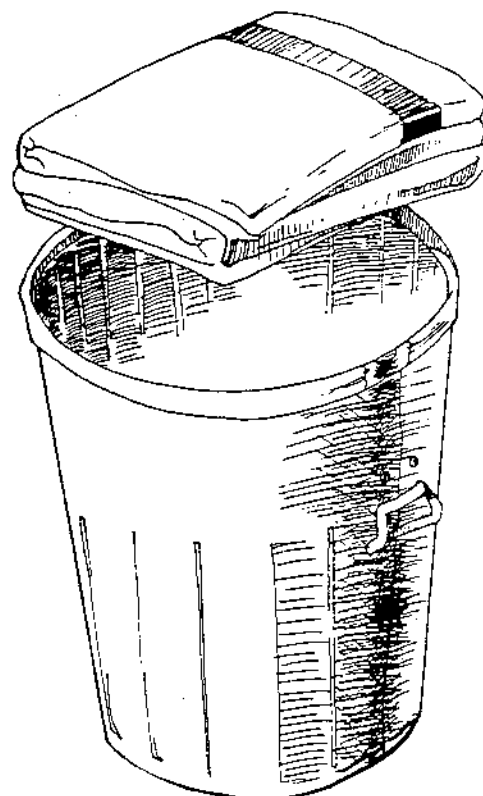
Perishable supplies will remain stable longer if they are stored in a cool, dark place.

One suggested method of storing emergency supplies is to place them in a large, covered trash container, which can then be stored outside in a cool, sheltered location. Put the contents inside moisture-proof bags before placing them in the can.

The amount of each item you put in the can will depend upon the number of people you are storing for.



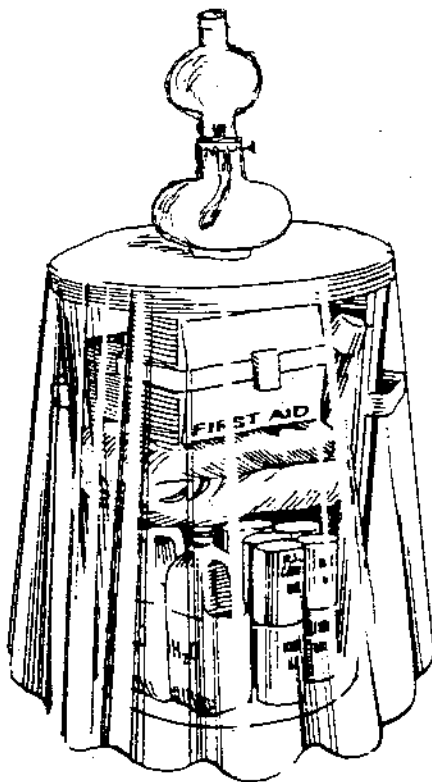
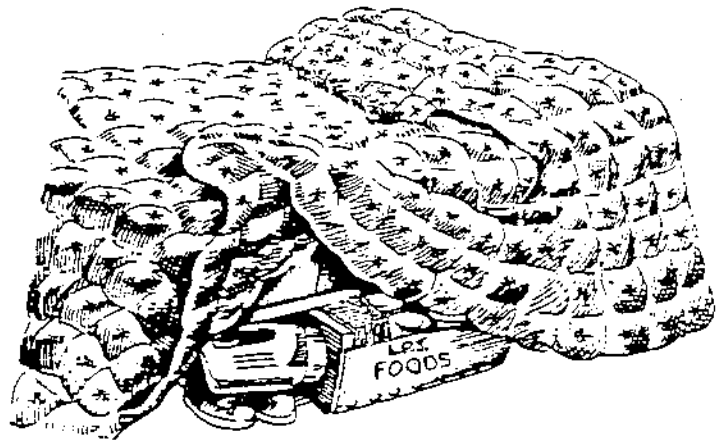
Paper towels Toilet paper Sanitary napkins	First aid supplies	Books Pencils Paper
Tooth paste Tooth brushes Bar soap Shampoo Sponge Liquid cleaner 2 gallons liquid bleach	Razor blades Can opener Scissors	Flashlight Batteries Candles Matches
Blankets 2-4 towels	Change of clothes Sweaters	Foods such as: Canned meats & tuna Canned vegetables Canned fruit Warm drinks & juices Peanut butter Candy, nuts & raisins Vitamin pills Dried beans & rice Soups
Sterno stove & canned Sterno Cooking pot Utensils Aluminum foil String Plastic dishes Aluminum dish Large & small plastic garbage bags Newspapers	Water (at least one gallon per person)	



- Storing your supplies in different locations will prevent all of them from becoming inaccessible in an emergency.

Suggestions include:

- Behind a drape
- Under a bed or behind a couch
- On a closet floor
- In a trash barrel, topped with a plywood circle, and covered with a floor length tablecloth
- Up off cement floors in your garage or outbuildings



Emergency Mini - Supply Kits

Car Mini-Survival Kit

Most people spend many hours in their cars each week. A major disaster could force you to rely on your car for short-term shelter and survival.

Assemble a survival kit for your car with some or all of the following items. Storing these supplies in a small day or back pack will make them convenient to carry if you need to walk home.

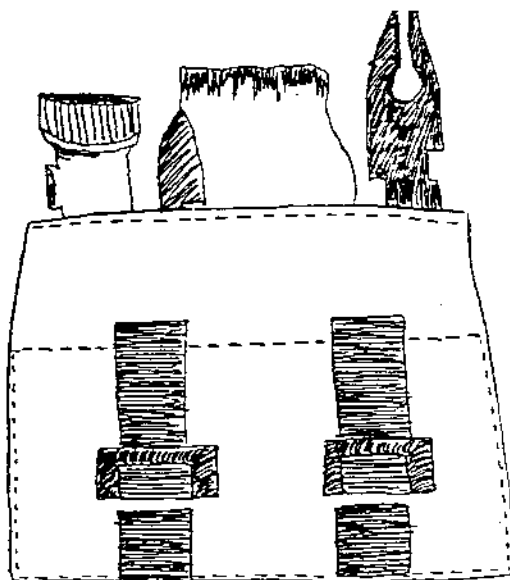
- Snack-type, nutritious foods - dried fruits, nuts, granola bars, crackers, seeds, jerky, etc.
- Comfortable shoes
- Bottled water
- Small first aid kit (include personal medications)
- Fire extinguisher: A-B-C type
- Flares
- Blanket
- Local maps and compass
- Flashlight and batteries
- Tools - screwdriver and pliers
- A pair of heavy work gloves
- Ziplock bags, toilet tissue and newspapers
- Good book

Work Mini-Survival Kit

Many of us stand a 33% chance of being at work when a disaster strikes. A mini-survival kit could make the hours until you get home more comfortable and safe.

Assemble a survival kit for your work with some or all of the following:

- Snack-type nutritious foods
- Comfortable shoes
- Bottled water
- Small first aid kit
- Blanket
- Flashlight and extra batteries
- Essential medication
- Battery-operated AM radio
- Ziplock bags, toilet tissue
- Emergency instructions
- A pair of heavy work gloves



Earthquake Hazard Hunt

Imagine what would happen if your home had wheels and was speeding down a twisting, bumpy road. A major earthquake will have a similar effect.

Take 30 minutes to walk through your home. Identify potential hazards by using this worksheet.

- Correct these hazards by completing the suggested tasks on the noted pages.



1. Check your water heater. Is it securely fastened to the wall studs with a strap or plumber's tape?

_____ yes _____ no

Secure your water heater with plumber's tape. See page 22.

2. Identify top-heavy, free-standing furniture which could topple in an earthquake, such as bookcases and china cabinets.

_____	_____
_____	_____
_____	_____

Secure these items by installing appropriate anchoring materials. See page 23.

3. Identify heavy or breakable objects on high shelves or in cabinets.

_____	_____
_____	_____

Securely fasten or move these objects to lower locations.

4. Identify electronic equipment (stereos, computers, etc.) and appliances (microwaves, toasters, etc.) which may slide off their cabinets.

_____	_____
_____	_____

Secure these by using double-stick tape or velcro-like fasteners, or provide a restraining edge on the cabinet or shelf.

5. Identify hanging plants, especially those in heavy baskets, and hanging lights which are near windows.

_____	_____
_____	_____

Move these to a safer location, or securely fasten them. See page 24.

6. Identify mirrors, heavily-framed pictures, etc. which are placed over beds, couches and chairs.

_____	_____
_____	_____

Relocate these, or securely mount them. See page 24.

7. Identify appliances which could move enough to rupture gas or electrical lines.

- Securely fasten these objects.
See page 25.

8. Check all appliances and the water heater to make sure they are connected to the fuel source with flexible lines.

- Install flexible connectors on all gas appliances and the water heater.

9. Identify latches on kitchen and bathroom cabinets which will not hold the door closed during heavy shaking.

- Install more secure latches or hooks.
See page 25.

10. Inspect the foundation of your home. Is your house securely bolted to it?

____yes _____no

- Secure your home to its foundation.
See page 28.

11. Check your chimney and roof for loose tiles and bricks.

chimney: _____

roof: _____

- Remove or replace them and strengthen the roof.
See page 29.

12. Identify poisons, toxics or solvents in breakable containers which are located in high or dangerous locations.

- Move these containers to a safe, well-ventilated storage area. Keep them away from your water storage, and out of the reach of children and pets.
See page 31.

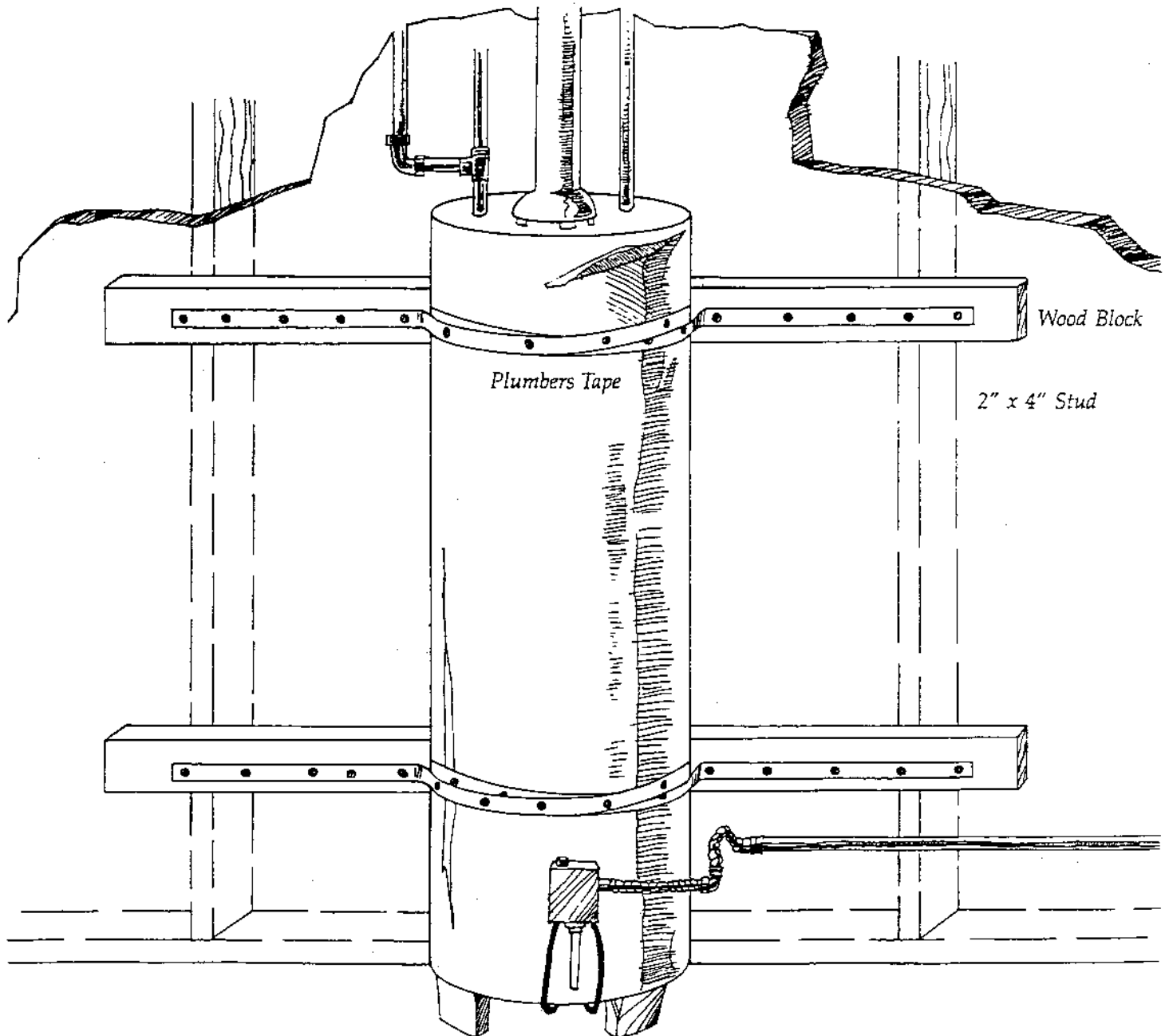
How To Secure Your Water Heater

The typical water heater weighs about 450 pounds when full. Such a massive object resists being moved suddenly (inertia). In an earthquake, the floor on which it is standing tends to move out from under the heater, causing it to topple over. This movement also breaks its gas and water line connectors.

- Wrap steel plumber's tape around the entire heater at least twice. Then secure the tape to two different wall studs with big two inch or longer lag screws.



- Install flexible gas and water connectors.

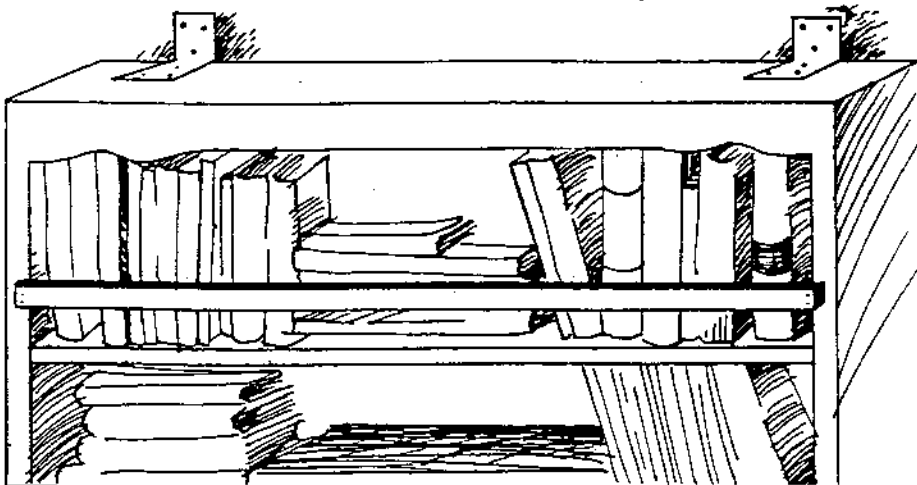
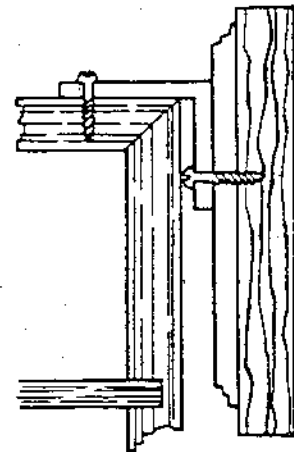
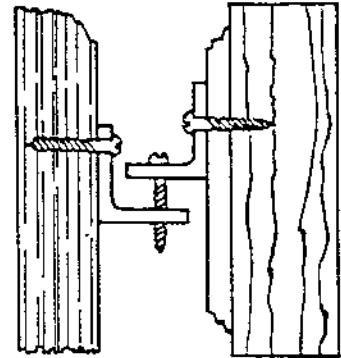


A major disaster has the potential of causing substantial damage to your possessions. In fact, it is estimated that *one-third* of the total damage estimate will be due to nonstructural (furniture, equipment, supplies, etc.) damage.

How you secure your furniture will depend upon its value, location and your imagination. Below are just a few ideas to help you get started.

Tall or Top-Heavy Furniture

- Secure your furniture by using:
 - "L" brackets, corner brackets or "anodized" aluminum molding to attach tall or top heavy furniture to the wall.
 - Corner brackets or eye bolts to secure items located a short distance from the wall.
- Attach a wooden or metal guardrail on open shelves to keep items from sliding or falling off.
 - Fishing line can be used as a less visible means of securing an item.
- Place heavy and/or large objects on lower shelves.

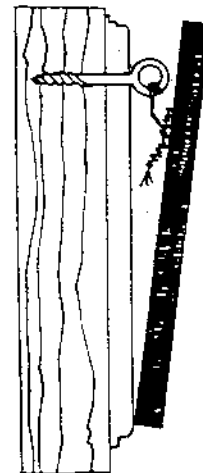
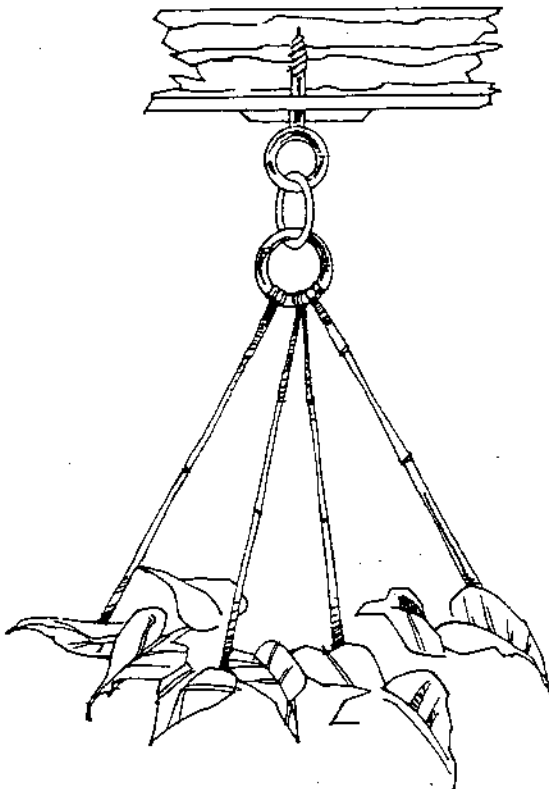
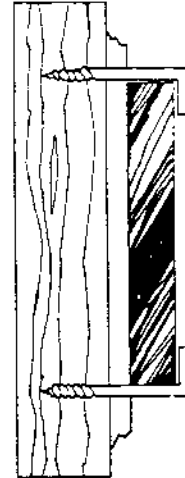


How To Secure Pictures, Mirrors and Hanging Objects

Pictures, Mirrors and Hanging Objects

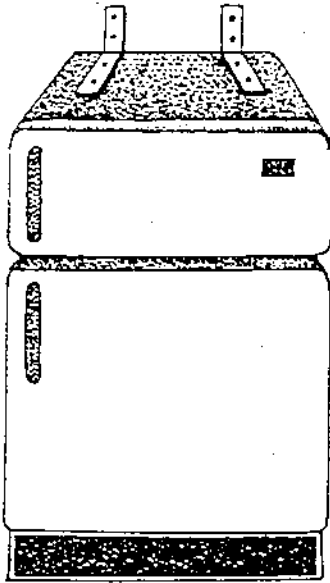
When a major earthquake strikes, you may be severely injured by falling and flying objects. Consider removing heavily-framed pictures and mirrors from above beds, couches and chairs. Determine whether the full swing of your hanging plants and lamps will strike a window, and if they will, consider moving them.

- Secure hanging objects by closing the opening in the hook.
- Secure pictures and/or mirrors by placing angle screws on both sides, the top and the bottom. Then screw these into the studs.
- Or secure these with wire through an eye bolt screwed into the stud.

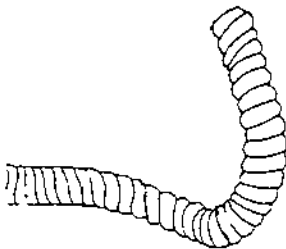


Appliances

- Secure your large appliances with flexible cable, braided wire or strapping.
- Because the floor will be moving and shifting under your appliances, remember to allow for a small amount of flexibility.



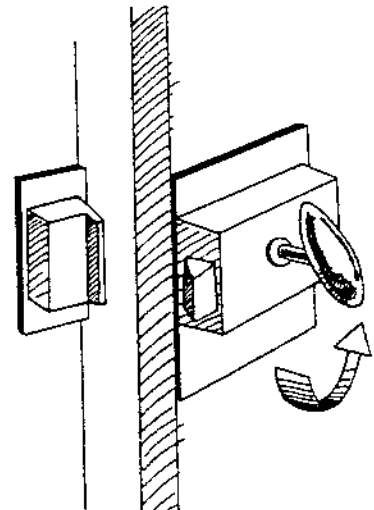
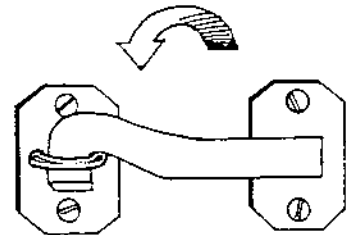
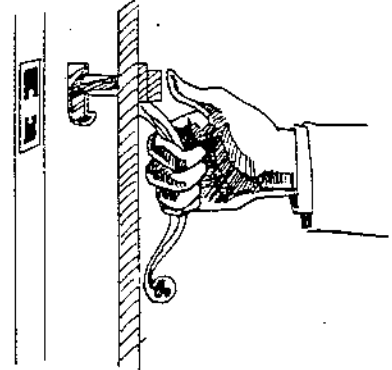
- Install flexible gas connectors on all gas appliances. This will significantly reduce your chances of having a major fire following an earthquake.



Cabinets

- Secure your cabinets or cupboards by installing any one of the following latches:

- Guillotine
- Bolt action
- Automatic latches
- Hook and eye

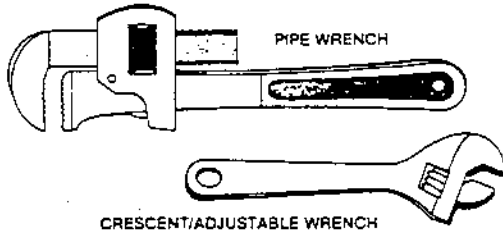


Utility Shut-Off

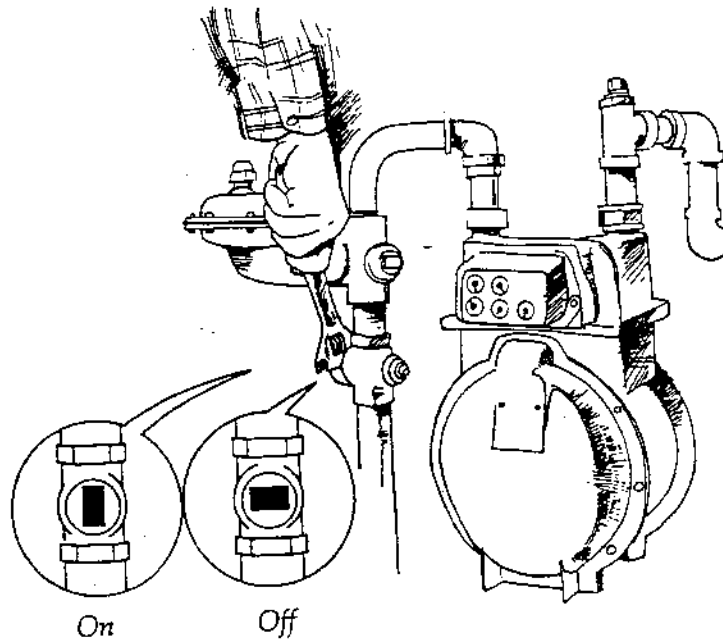
- Locate your gas, water and electric utilities.
- Know how to turn the utilities off.
- Teach all family members how to shut off all utilities, and when to do so.

Gas

- Attach an adjustable wrench to the gas meter. (You will not want to take time to find one after an earthquake.)

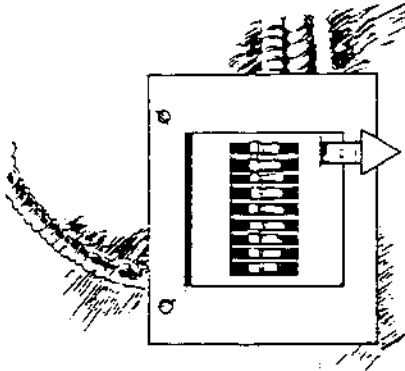


- After a major disaster, shut off the gas immediately **ONLY IF** you smell the characteristic warning odor of gas and/or you notice a large consumption of gas being registered on the gas meter.
- **DO NOT USE** matches, lighters, open flame appliances or operate electrical switches until you are sure no gas leaks exist. Sparks from electrical switches could ignite gas, causing an explosion.
- The main shut-off valve is located next to the meter on the inlet pipe. Use a wrench to turn the valve in the direction illustrated.
- An automatic valve (Earthquake Command System) is also commercially available that will turn the gas off for you.

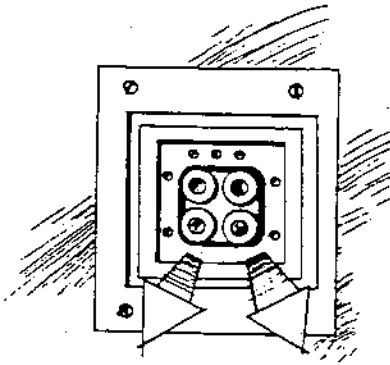


Electricity

- After a major disaster, shut off the electricity and check for damage to the wiring. Sparks from electrical switches could ignite leaking gas and cause an explosion. You will probably have one of these two types of electrical breakers in your home.



Circuit Breaker



Pull-out Cartridge Fuses

Water

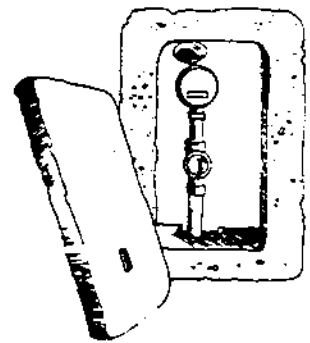
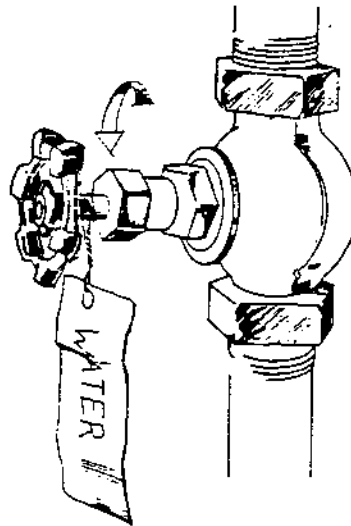
- Attach a valve wrench to the water line. (This tool can be purchased at most hardware stores.)

- Milpitas lines are gravity filled and located below most houses. If you do not shut the line off, the water from your water heater will drain back into the street.

Water may be turned off at either of two locations:

- At the main meter, which controls the water flow to the entire property, or
- At the water main leading into the home. We recommend that you shut off your water here because it may flow out of the water heater and back into the main line if you do not.

- Label the water main for quick identification.



Structural Preparation

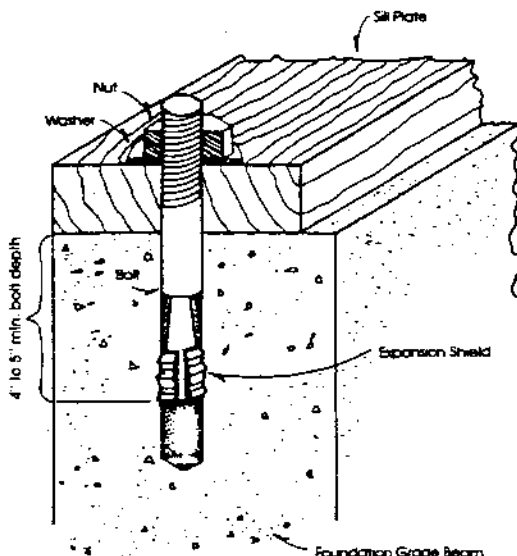
Now that you have secured things inside your home, take a few minutes to examine the structural safety of the house itself. If your house is of conventional wood construction, it will probably be relatively resistant to earthquake damage, particularly if it is a single story. But this is the case only if the roof, ceilings, walls and foundation remain connected.

These suggestions will take time and money, but implementing them will ensure even greater stability for your home and its contents.

Foundation

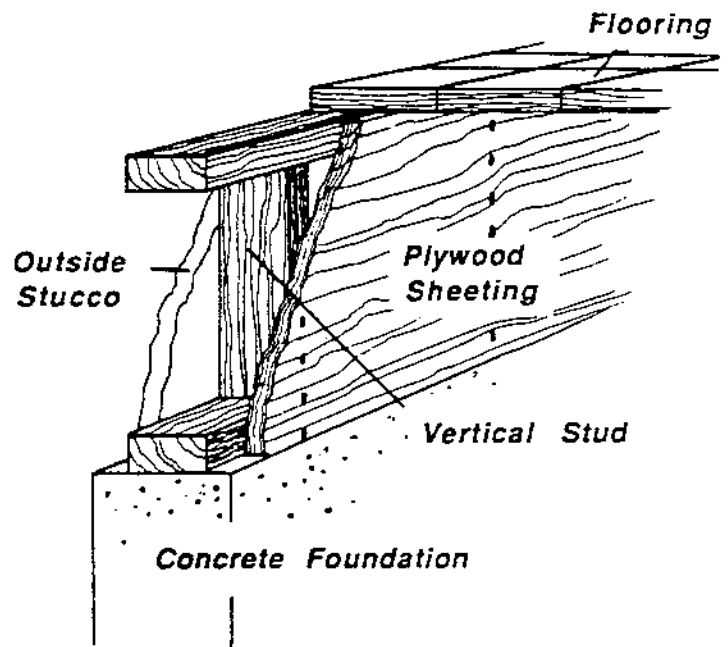
☐ Check to see if your house or garage is securely fastened to the foundation. (If your home was built before 1950, it probably does not have bolts securing the wood structure to the concrete foundation.) If not, take the following steps:

- Using a hammer drill and a carbide bit, drill a hole through the sill plate into the foundation. Holes should be approximately 6 feet apart.
- Drop a 1/2" x 7" expansion bolt into the hole and finish by tightening the nut and washer.



Cripple Walls

- ☐ Inspect your house for inadequately braced cripple walls located between the frame and foundation. If they are exposed, they are a weak link in the house construction. Nail plywood sheathing onto the vertical studs to strengthen the walls. Remember to also check the garage, particularly if it is supporting living quarters.

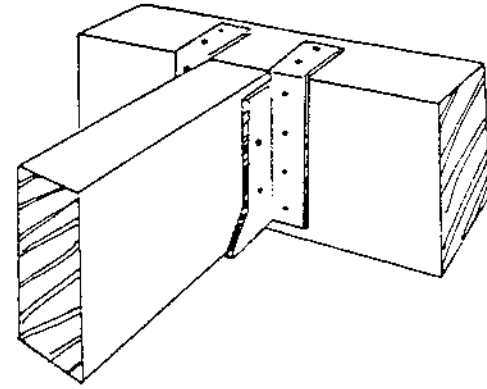


Beams, Posts, Joists and Plates

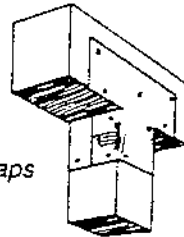
Strengthen the areas of connection between joists, beams, posts and plates using the following hardware:

- "T" and "L" straps
- Mending plates
- Joist hangers
- Twin post caps
- Nails and lag screws

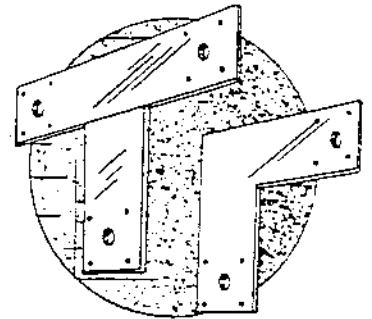
Pay particular attention to exposed framing in garages, basements, porches and patio covers.



Joist Hanger



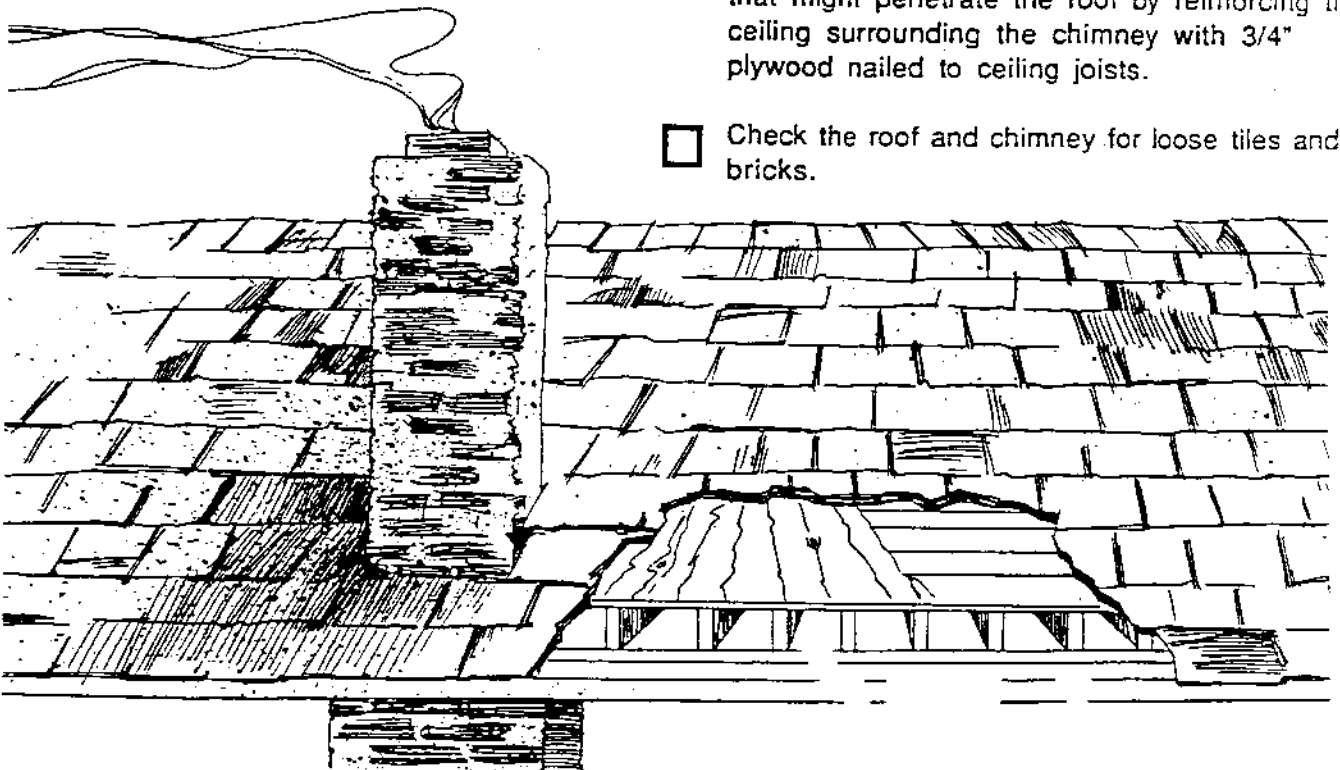
Twin Post Caps



"T" and "L" Straps

Chimney

- Protect yourself from falling chimney bricks that might penetrate the roof by reinforcing the ceiling surrounding the chimney with 3/4" plywood nailed to ceiling joists.
- Check the roof and chimney for loose tiles and bricks.



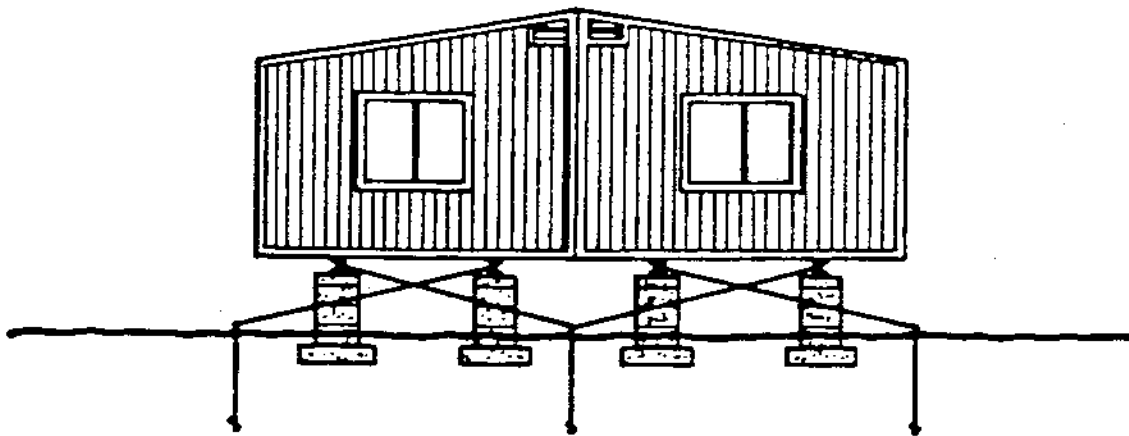
Mobile Homes

Most damage that a mobile home suffers during an earthquake is a result of it falling off its supports. To reduce this damage, leave the wheels on to limit its fall, and:

- Check the foundation to make sure that it has been reinforced and that the undercarriage has been securely tied to the foundation. Without this, the mobile home may be thrown off its foundation even during small tremors.
- Tie double-wide mobile homes together. The two units are generally of different weights. When an earthquake strikes, they tend to react differently and pull apart.

Structural support bracing systems are commercially available. Designs and costs vary, but a good bracing system can be a very worthwhile investment. In September, 1985, regulations became effective requiring the Department of Housing and Community Development to certify earthquake resistant bracing systems for mobile homes. The sale or installation of systems not certified by the Department is unlawful. All certified bracing systems are required to bear a label indicating the manufacturer's name, the product name, the model number, and a statement that indicates "this system complies with the California Administrative Code, Title 25, Chapter 2, Article 7.5."

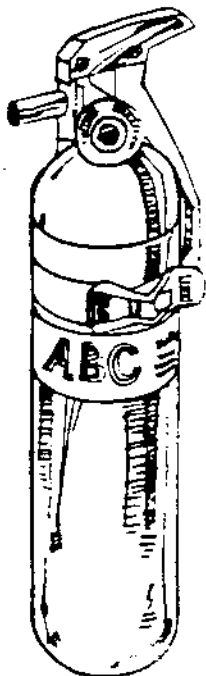
If you are interested in a seismic bracing system, contact your mobile home owner's association or local mobile home dealer, look in the Yellow Pages.



This sketch illustrates the recommended method for connecting and anchoring frame ties for mobile homes. The x-bracing system is preferred for its greater resistance to lateral earthquake forces.

Fire Extinguishers

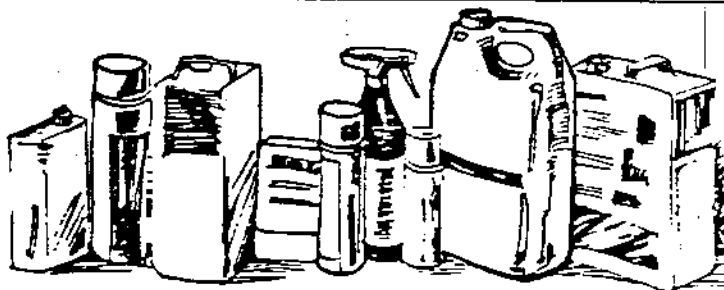
- Place your fire extinguisher(s) where they are very accessible.
- An A:B:C type is effective for all three classes of fires: A - fires involving ordinary combustibles such as wood, paper, cloth; B - fires from oil, grease and gasoline; C - fires in electrical equipment and appliances.
- Extinguishers should be checked periodically to be sure they are fully charged and ready for use.
- Never use water to put out an electrical (type C) or oil, grease or gas (type B) fire.
- It is better to have several smaller extinguishers well distributed throughout the house (kitchen, garage, etc.) than one large one that is hard to get to quickly.



Toxic Substances

To Store Toxic Substances:

- Place pesticides, gasoline, paint thinners, etc. on the floor, on a low shelf, or in a locked cabinet that is securely fastened to the wall.
- If placed on a shelf, install a guardrail to prevent the bottles or containers from slipping off the shelf and breaking or spilling onto the floor.
- Close lids tightly on all containers.
- Store gasoline for lawn mowers, etc. in vapor-proof containers.
- Store ammonia and bleach in different locations. If these liquids mix, they create toxic fumes.



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3. Foraker, Joseph W. WHAT YOU SHOULD KNOW ABOUT EARTHQUAKES: IT COULD SAVE YOUR LIFE: AN EARTHQUAKE AWARENESS BOOK. Mission Viejo, CA SJB Publishing Company, 1983.
4. Gene, James M. and Haresh C. Shah. TERRA NON-FIRMA: UNDERSTANDING AND PREPARING FOR EARTHQUAKES. Stanford, CA: Stanford Alumni Association, 1984.
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6. Iacopi, Robert. EARTHQUAKE COUNTRY. Menlo Park, CA: Lane Publishing Company, 1976.
7. Mattingly, Carolyn. LIVING WITH OUR FAULTS - AN EARTHQUAKE PREPARATION GUIDE. Palo Alto, CA: 1986.
8. PACIFIC BELL TELEPHONE DIRECTORY - the front of the telephone directory lists emergency phone numbers, and contains a short chapter regarding emergency techniques for medical problems such as burns, bleeding, heart attack and poisoning.
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11. Contra Costa County, Office of Emergency Services, 50 Glacier Dr., Martinez, CA 94553.
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DISASTER RESPONSE CHECKLIST

- 1. Remain calm - reassure others.
- 2. If inside, stay there - if outside, stay there!
- 3. Do not light a match or turn on a light switch. Use a flashlight.
- 4. Wear sturdy shoes.
- 5. Check others for injuries - administer first aid.
- 6. Check for fires.
- 7. Check utilities - shut off if necessary.
- 8. Draw a moderate amount of cold water.
- 9. Turn on battery-operated or car radio for emergency bulletins.
- 10. Clean up any chemicals or medications which may have spilled.
- 11. Take routine medication.
- 12. Do not go without food or water too long.
- 13. Confine frightened pets.
- 14. Check house for structural damage. Evacuate if necessary.
- 15. Do not use the telephone except in extreme emergencies.
- 16. Be prepared for additional earthquake shocks.
- 17. Stay out of danger areas. Never go to the beach to watch for a tsunami, a giant sea wave.

If you can see it, you are too close to escape it.