FAMILY PREPAREDNESS

According to the U.S. Geological Survey, there is a 60% probability of an >6.0 earthquake rupturing on the San Andreas Fault or Newport–Englewood Fault in Southern California (Orange County) within the next 22 years. There are also other possible disasters that could occur such as conflagrations, flooding, hazardous material spills, derailments, transportation accidents, civil disturbances, terrorism or war.

PLANNING

The key to surviving any disaster situation is planning and preparation. Develop and discuss disaster plans with household members. Teenagers and adult members of the household should share in the actual preparation decisions. Be sure to consider any special needs, disabilities, or particular hazards near your home. Make sure everyone in your household knows where the closest fire station, medical facility, and police station are.
Have two different escape routes planned for each part of your home or workplace. It is important that every member of your household know the quickest and safest escape routes from each room, and all the possible hazards that could be in their path.

Have a flashlight and a pair of shoes by everyone's bed. A major earthquake will probably disrupt electrical service and if it happens at night you will need a flashlight to see. No one wants to cut their feet on broken glass or fallen objects walking to the closet to get a pair of shoes, so have them right next to the bed.
Know where the utility shutoffs are. Locate your gas, electrical, and water shutoffs, and know how to operate them. It is recommended that the shutoffs be painted white or a light reflective color so they are highly visible in dark or smoky conditions. Have a wrench next to your gas shutoff.

After all the preparation is done, practice your plan to see if it actually works. Make it fun but try to make it real. Practice is especially meaningful if it is done at night, when it is dark, with all the electricity off.
REUNIFICATION PLAN

You should decide together where you will meet if a major disaster strikes when the family is separated. Have plans for each member of the family to reach the safe refuge area. Make sure you have adequate emergency supplies in the car as well as at the workplace.

This reunification plan must consider many possibilities. Will family members at work go home, or will you meet some other place? Who will pick up the children at school? What if a family member is out of the area when the earthquake hits? What if the home is structurally damaged and uninhabitable? Your plan should answer all your questions.
There may be no means of transportation except by foot if there is severe damage to the roadways. It may take days for some family members to reunite. It will be easier to deal with the stress of this separation if the household has considered the possibilities beforehand. Try to have every member of your family prepared to deal appropriately with any emergency, and then trust their good sense and knowledge to help them through.

Select a place to use as an evacuation site where the family can reunite if the earthquake has damaged your home. At this site the family can evaluate the situation, make plans for appropriate actions, and be safe from injury due to aftershocks. It should be near your home, in the open, and away from any hazards, especially overhead hazards that can fall and injure family members. A safe refuge could be your backyard or front yard, a nearby park, a parking lot, or even the sidewalk.
TELEPHONE CONTACT

It is extremely important that you do not use your telephone indiscriminately after an earthquake. The telephone lines will be jammed with emergency calls.

You should have a telephone contact that lives out of the area, preferably out of the state. Separated family members can use this contact to find out if everyone in the family is OK, to relay messages, and to set up an alternative meeting place. Family members not living in the area can call this contact to find out if everything is OK.
72-HOUR SUPPLIES

Put together a basic kit for your home, your car, and one for work. The home kit should provide the basic equipment and provisions needed by the family for at least a 72-hour period after an earthquake. The car and workplace kits should have enough supplies to last until you can get to the reunification site.

The container should be large enough to hold all the supplies but small enough to handle without difficulty. A daypack or small duffel bag works well for the car or workplace, a plastic garbage can is suggested for the home. In the appendix of this book there is a suggested list of supplies for your home, car, and workplace.
PREPARING YOUR STRUCTURE

Single-family wood frame buildings are the most earthquake resistant of any type of construction. These buildings typically move with the earthquake. The key to riding out an earthquake is to make sure your home behaves as one continuous unit. The following measures should be taken to help protect your home.

1. Your home should be bolted to the foundation. The foundation’s condition should be checked to see if it is still in good shape, especially in older homes. Houses built before 1940 were not required to have sill bolting, and some houses built since then do not have them. Standard sill bolts, 5/8" by 8-1/2", should be installed every 4 feet if you do not have them now.
2. If your house has a crawl space between the ground and the first floor, check to see if you have cripple walls. Plywood shear paneling used to cover the entire wall area will stiffen these walls. In the Loma Prieta earthquake several houses that were bolted to their foundations partially collapsed because they had no cripple wall shear support.

3. If your home was built before 1960 your chimney may not be properly reinforced and tied into the building. Damaged or falling chimneys were one of the biggest hazards in the Loma Prieta earthquake.
SAFETY SURVEY OF YOUR HOME

Look at each room in your home and workplace with "Earthquake Eyes". Take some time and sit in each room and think "if a major earthquake hit right now, what would injure me". Then fix the hazard. To prevent injury and reduce damage, each room of your home should be carefully examined for potential hazards. The following are some suggestions to correct these hazards. Use them as a starting point in the examination of your home.

KITCHEN:

An unprepared kitchen is probably the most hazardous room in the house. Shattered glass, spilled chemicals, gas fed fires, and falling objects are all potential disasters in an unprepared kitchen.

Read the labels on all household chemicals. Segregate chemicals according to manufacturer's suggestions. In the kitchen, all chemicals should be stored at floor level in a secure cabinet.
All gas appliances should be installed with a flexible gas line.

Install latches on all kitchen cabinet doors. "Child proof" latches are inexpensive and are not visible from the exterior. These latches will prevent breakables and heavy objects from falling out of the cabinets. Store the heaviest items on the lower shelves. If they happen to break through the latches they will not injure anyone.

Put guardrails on open shelves so that items cannot slide off. To display fragile objects on open shelves use industrial strength "Velcro" tape or silicon adhesive on the bottom. Attach hanging plants, clocks, paintings, and kitchen pots to a wall stud. Heavy appliances on wheels should be blocked with a doorstop, or their wheels should be locked to prevent them from rolling.
You probably spend more time in this room than in any other in the house. When examining the hazards in this room, pay careful attention to objects that could fall and injure you in bed or fall and block your escape routes.

Beds should not be placed under a window. Falling glass is one of the major causes of injury in an earthquake. Beds should be located by an interior wall away from windows or anything that could fall on them. Pictures, mirrors, or other heavy objects mounted on the wall above the bed should be removed. If beds with wheels are on bare floors, these wheels should be locked, or non-skid coasters should be placed under the wheels.
Attach tall furniture to wall studs to prevent it from falling over and blocking escape routes. Remove heavy objects from the upper shelves of bookcases, closets, or the tops of dressers. Place all heavy objects on the floor or low shelves.

Each occupied bedroom of your house should have a flashlight and a pair of shoes next to the bed; the flashlight to see at night and the shoes to protect feet from broken glass.

BATHROOM:

Broken glass is the greatest potential hazard in the bathroom. Mirrors, shower doors, and toiletries can all fall and break. This makes the bathroom, although probably the smallest, potentially one of the most dangerous rooms in the house.

Medicine cabinet doors should be equipped with a “child-proof” latch to prevent things from falling out. Glass containers should not be stored on open shelves.
Read the labels on cleaning supplies, segregate them according to the manufacturers directions, and store them at floor level in a secure cabinet.

LIVING AREAS OF THE HOME:

All tall furniture in the living room, dining room, or den should be secured to the wall studs. TVs, computers, and stereos should be secured to shelving with industrial strength Velcro to prevent falling. Paintings and mirrors should be attached using security hangers or anti-theft hangers.
LAUNDRY ROOM:

The water heater should be securely double strapped to the studs in the wall behind it—one strap about 1/3 from the top and the second strap about 1/3 from the bottom. Strapping material and lag bolts for this purpose are available at building supply houses. The water heater should also be attached to the gas supply by a flexible gas line with shutoff that will move in the event of an earthquake.

Remove all heavy objects from upper storage shelves especially around the car. All heavy objects should be at floor level.
Hazardous materials should be segregated and stored in well-marked, unbreakable containers. They should be stored in a low cabinet with an earthquake-proof latch. Dispose of any hazardous materials that are no longer needed. The Orange County Integrated Waste Management Authority schedules household and small business hazardous waste collection days periodically. Contact your local city hall for dates and times to dispose of your hazardous waste.
Make a disaster plan
"Safety Survey" your home and workplace
Plan escape routes
Choose a reunification site
Establish a telephone contact out of the area
Store a 72-hour emergency supply kit
Have CERT supplies readily available
Practice your disaster plan

PREPAREDNESS:

Locate, mark, and test the operation of utility shutoffs
Have a shutoff wrench next to the gas shutoff
Install flexible gas lines on all appliances
Segregate all hazardous materials and store in secure cabinet
Remove heavy objects from upper shelves
Secure all objects on walls
Attach tall furniture and bookcases to wall studs
Install strong latches on kitchen cabinets
Strap water heater to wall studs
Block wheels on appliances and beds
Secure office equipment and electronics with industrial strength Velcro
Have emergency supplies in car and at office
STRUCTURE PREPAREDNESS:

Chimney supports
Foundation bolted
Cripple walls reinforced