

Terrorism & Disaster

Public Preparedness Guide



Whittier Police Department
Terrorism Interdiction Unit

Source: Are you ready? – A guide to citizen preparedness, FEMA

A letter from the Chief of Police

Dear Citizens,

The tragic events of September 11, 2001 have changed our way of life. We have become more aware of our vulnerabilities, and more understanding of our personal responsibility to protect our families, our neighbors, and our communities. The Whittier Police Department Terrorism and Disaster Public Preparedness Guide contains practical information on how your family or business can prepare for a variety of natural as well as man-made disaster situations.

Past events demonstrate that disaster preparedness works. While many of us may presently experience uncertainty and apprehension about future disasters, taking preparatory action now will assure that you will be able to exert a measure of control and calmness in the face of such acts.

The men and women of the Whittier Police Department are committed to ensuring your safety and the safety of your loved ones. If you would like additional information about terrorism and disaster preparedness, please visit our website at www.whittierpd.org.

Sincerely,

David M. Singer – Chief of Police



The information listed in this guide is a compilation of selected excerpts from the Federal Emergency Management Agency’s disaster preparedness guide titled: “Are you ready? – A guide to citizen preparedness”. The entire guide can be downloaded at www.fema.gov or can be ordered by calling 1-800-480-2520

Table of Contents

Emergency Planning.....	3
Disaster Supply Kits.....	6
Evacuation.....	12
Shelter.....	15
Earthquakes.....	21
Terrorism.....	26
Chemical and Biological Weapons.....	31
Nuclear and Radiological Attack.....	35
Homeland Security Advisory System.....	41
Disaster Public Education Websites	44

Emergency Planning

Immediately after an emergency, essential services may be cut-off and local disaster relief and government responders may not be able to reach you right away. Even if they could reach you, knowing what to do to protect yourself and your household is essential. This chapter describes how to prepare for any kind of disaster. It also provides specific information about emergency water and food, and a recommended disaster supply kit.

Creating a disaster plan

One of the most important steps you can take in preparing for emergencies is to develop a household disaster plan.

1. Learn about the natural disasters that could occur in your community from your local emergency management office or American Red Cross chapter.
2. Learn whether hazardous materials are produced, stored or transported near your area. Learn about possible consequences of deliberate acts of terror.
3. Ask how to prepare for each potential emergency and how to respond.
4. Talk with employers and school officials about their emergency response plans.
5. Talk with your household about potential emergencies and how to respond to each. Talk about what you would need to do in an evacuation.
6. Plan how your household would stay in contact if you were separated. Identify two meeting places: the first should be near your home—in case of fire, perhaps a tree or a telephone pole; the second should be away from your neighborhood in case you cannot return home.
7. Pick a friend or relative who lives out of the area for household members to call to say they are okay.
8. Draw a floor plan of your home. Mark two escape routes from each room.
9. Post emergency telephone numbers by telephones. Teach children how and when to call 911.
10. Make sure everyone in your household knows how and when to shut off water, gas, and electricity at the main switches. Consult with your local utilities if you have questions.
11. Take a first aid and CPR class. Local American Red Cross chapters can provide information. Official certification by the American Red Cross provides “good

Samaritan” law protection for those giving first aid.

12. Reduce the economic impact of disaster on your property and your household’s health and financial well-being:
 - Review property insurance policies before disaster strikes—make sure policies are current and be certain they meet your needs (type of coverage, amount of coverage, and hazard covered—flood, earthquake)
 - Protect your household’s financial well-being before a disaster strikes—review life insurance policies and consider saving money in an “emergency” savings account that could be used in any crisis. It is advisable to keep a small amount of cash or traveler’s checks at home in a safe place where you can quickly gain access to it in case of an evacuation.
 - Be certain that health insurance policies are current and meet the needs of your household.
13. Consider ways to help neighbors who may need special assistance, such as the elderly or the disabled.
14. Make arrangements for pets. Pets are not allowed in public shelters. Service animals for those who depend on them are allowed.

Emergency Planning for People with Special Needs

If you have a disability or special need, you may have to take additional steps to protect yourself and your household in an emergency. If you know of friends or neighbors with special needs, help them with these extra precautions. Examples include:

- Hearing impaired may need to make special arrangements to receive a warning.
- Mobility impaired may need assistance in getting to a shelter.
- Households with a single working parent may need help from others both in planning for disasters and during an emergency.
- Non-English speaking people may need assistance planning for and responding to emergencies. Community and cultural groups may be able to help keep these populations informed.
- People without vehicles may need to make arrangements for transportation.
- People with special dietary needs should have an adequate emergency food supply.

1. Find out about special assistance that may be available in your community. Register with the office of emergency services or fire department for assistance, so needed help can be provided quickly in an emergency.
2. Create a network of neighbors, relatives, friends and co-workers to aid you in an emergency. Discuss your needs and make sure they know how to operate necessary equipment.
3. Discuss your needs with your employer.
4. If you are mobility impaired and live or work in a high-rise building, have an escape chair.
5. If you live in an apartment building, ask the management to mark accessible exits clearly and to make arrangements to help you evacuate the building.
6. Keep extra wheelchair batteries, oxygen, catheters, medication, food for guide or hearing-ear dogs, or other items you might need. Also, keep a list of the type and serial numbers of medical devices you need.
7. Those who are not disabled should learn who in their neighborhood or building is disabled so that they may assist them during emergencies.
8. If you are a caregiver for a person with special needs, make sure you have a plan to communicate if an emergency occurs.

Disaster Supply Kits

You may need to survive on your own for three days or more. This means having your own water, food and emergency supplies. Try using backpacks or duffel bags to keep the supplies together.

Assembling the supplies you might need following a disaster is an important part of your disaster plan. You should prepare emergency supplies for the following situations:

- A disaster supply kit with essential food, water, and supplies for at least three days—this kit should be kept in a designated place and be ready to “grab and go” in case you have to leave your home quickly because of a disaster, such as a flash flood or major chemical emergency. Make sure all household members know where the kit is kept.
- Consider having additional supplies for sheltering or home confinement for up to two weeks.
- You should also have a disaster supply kit at work. This should be in one container, ready to “grab and go” in case you have to evacuate the building.
- A car kit of emergency supplies, including food and water, to keep stored in your car at all times. This kit would also include flares, jumper cables, and seasonal supplies.

The following checklists will help you assemble disaster supply kits that meet the needs of your household. The basic items that should be in a disaster supply kit are water, food, first-aid supplies, tools and emergency supplies, clothing and bedding, and specialty items. You will need to change the stored water and food supplies every six months, so be sure to write the date you store it on all containers. You should also re-think your needs every year and update your kit as your household changes. Keep items in airtight plastic bags and put your entire disaster supply kit in one or two easy-to-carry containers such as an unused trash can, camping backpack or duffel bag.

Water: the absolute necessity

Stocking water reserves should be a top priority. Drinking water in emergency situations should not be rationed. Therefore, it is critical to store adequate amounts of water for your household.

- Individual needs vary, depending on age, physical condition, activity, diet, and climate. A normally active person needs at least two quarts of water daily just for drinking. Children, nursing mothers, and ill people need more. Very hot temperatures can double the amount of water needed.

- Because you will also need water for sanitary purposes and, possibly, for cooking, you should store at least one gallon of water per person per day.
- Store water in thoroughly washed plastic, fiberglass or enamel-lined metal containers. Don't use containers that can break, such as glass bottles. Never use a container that has held toxic substances. Sound plastic containers, such as soft drink bottles, are best. You can also purchase food-grade plastic buckets or drums.
- Containers for water should be rinsed with a diluted bleach solution (one part bleach to ten parts water) before use. Previously used bottles or other containers may be contaminated with microbes or chemicals. Do not rely on untested devices for decontaminating water.
- If your water is treated commercially by a water utility, you do not need to treat water before storing it. Additional treatments of treated public water will not increase storage life.
- If you have a well or public water that has not been treated, follow the treatment instructions provided by your public health service or water provider.
- If you suspect that your well may be contaminated, contact your local or state health department or agriculture extension agent for specific advice.
- Seal your water containers tightly, label them and store them in a cool, dark place.
- It is important to change stored water every six months.
- For water purification for immediate or near term use, please read the “Shelter” chapter of this guide.

Food: preparing an emergency supply.

1. If activity is reduced, healthy people can survive on half their usual food intake for an extended period or without any food for many days. Food, unlike water, may be rationed safely, except for children and pregnant women.
2. You don't need to go out and buy unfamiliar foods to prepare an emergency food supply. You can use the canned foods, dry mixes and other staples on your cupboard shelves. Canned foods do not require cooking, water or special preparation. Be sure to include a manual can opener.
3. Keep canned foods in a dry place where the temperature is fairly cool. To protect boxed foods from pests and to extend their shelf life, store the food in tightly closed plastic or metal containers.

4. Replace items in your food supply every six months. Throw out any canned good that becomes swollen, dented, or corroded. Use foods before they go bad, and replace them with fresh supplies. Date each food item with a marker. Place new items at the back of the storage area and older ones in front.
5. Food items that you might consider including in your disaster supply kit include: ready-to-eat meats, fruits, and vegetables; canned or boxed juices, milk, and soup; high-energy foods like peanut butter, jelly, low-sodium crackers, granola bars, and trail mix; vitamins; foods for infants or persons on special diets; cookies, hard candy; instant coffee, cereals, and powdered milk.
6. You may need to survive on your own after a disaster. Local officials and relief workers will be on the scene after a disaster, but they cannot reach everyone immediately. You could get help in hours, or it may take days. Basic services, such as electricity, gas, water, sewage treatment and telephones, may be cut off for days, even a week or longer. Or you may have to evacuate at a moment's notice and take essentials with you. You probably won't have the opportunity to shop or search for the supplies you'll need. Your household will cope best by preparing for disaster before it strikes.

First aid supplies

Assemble a first aid kit for your home and for each vehicle. The basics for your first aid kit should include the following items:

- ___ First aid manual
- ___ Sterile adhesive bandages in assorted sizes
- ___ Assorted sizes of safety pins
- ___ Cleansing agents (isopropyl alcohol, hydrogen peroxide)/soap/germicide
- ___ Antibiotic ointment
- ___ Latex gloves (2 pairs)
- ___ Petroleum jelly
- ___ 2-inch and 4-inch sterile gauze pads (4-6 each size)
- ___ Triangular bandages (3)
- ___ 2-inch and 3-inch sterile roller bandages (3 rolls each)
- ___ Cotton balls
- ___ Scissors
- ___ Tweezers
- ___ Needle
- ___ Moistened towelettes
- ___ Antiseptic
- ___ Thermometer
- ___ Tongue depressor blades (2)
- ___ Tube of petroleum jelly or other lubricant
- ___ Sunscreen

- It may be difficult to obtain prescription medications during a disaster because stores may be closed or supplies may be limited. Ask your physician or pharmacist about storing prescription medications. Be sure they are stored to meet instructions on the label and be mindful of expiration dates - be sure to keep your stored medication up to date.
- Extra pair of prescription glasses or contact lens.
- Have the following nonprescription drugs in your disaster supply kit:
 - ___ Aspirin and nonaspirin pain reliever
 - ___ Antidiarrhea medication
 - ___ Antacid (for stomach upset)
 - ___ Syrup of ipecac (use to induce vomiting if advised by the poison control)
 - ___ Laxative
 - ___ Vitamins

Tools and emergency supplies

It will be important to assemble these items in a disaster supply kit in case you have to leave your home quickly. Even if you don't have to leave your home, if you lose power it will be easier to have these item already assembled and in one place.

- Tools and other items:
 - ___ A portable, battery-powered radio or television and extra batteries (also have a NOAA weather radio, if appropriate for your area)
 - ___ Flashlight and extra batteries
 - ___ Signal flare
 - ___ Matches in a waterproof container (or waterproof matches)
 - ___ Shut-off wrench, pliers, shovel and other tools
 - ___ Duct tape and scissors
 - ___ Plastic sheeting
 - ___ Whistle
 - ___ Small canister, A-B-C-type fire extinguisher
 - ___ Tube tent
 - ___ Compass
 - ___ Work gloves
 - ___ Paper, pens, and pencils
 - ___ Needles and thread
 - ___ Battery-operated travel alarm clock
- Kitchen items:
 - ___ Manual can opener
 - ___ Mess kits or paper cups, plates, and plastic utensils

- ___ All-purpose knife
 - ___ Household liquid bleach to treat drinking water
 - ___ Sugar, salt, pepper
 - ___ Aluminum foil and plastic wrap
 - ___ Re-sealing plastic bags
 - ___ If food must be cooked, small cooking stove and a can of cooking fuel
- Sanitation and hygiene items:
 - ___ Washcloth and towel
 - ___ Towelettes, soap, hand sanitizer, liquid detergent
 - ___ Tooth paste, toothbrushes, shampoo, deodorants, comb and brush, razor, shaving cream, lip balm, sunscreen, insect repellent, contact lens solutions, mirror, feminine supplies
 - ___ Heavy-duty plastic garbage bags and ties for personal sanitation uses and toilet paper
 - ___ Medium-sized plastic bucket with tight lid
 - ___ Disinfectant and household chlorine bleach
 - ___ Consider including a small shovel for digging a latrine
 - Household documents and contact numbers:
 - ___ Personal identification, cash (including change) or traveler's checks, and a credit card
 - ___ Copies of important documents: birth certificate, marriage certificate, driver's license, social security cards, passport, wills, deeds, inventory of household goods, insurance papers, immunizations records, bank and credit card account numbers, stocks and bonds. Be sure to store these in a watertight container.
 - ___ Emergency contact list and phone numbers
 - ___ Map of the area and phone numbers of places you could go
 - ___ Extra set of car keys and house keys.

Clothes and bedding

- One complete change of clothing and footwear for each household member. Shoes should be sturdy work shoes or boots. Rain gear, hat and gloves, extra socks, extra underwear, thermal underwear, sunglasses.
- Blankets or a sleeping bag for each household member & pillows.

Specialty items

Remember to consider the needs of infants, elderly persons, disabled persons, and pets and to include entertainment and comfort items for children.

- For baby
- For the elderly
- For pets
- Entertainment: books, games, quiet toys and stuffed animals.

It is important for you to be ready, wherever you may be when disaster strikes. With the checklists above you can now put together an appropriate disaster supply kits for your household:

- A disaster supply kit kept in the home with supplies for at least three days;
- Although it is unlikely that food supplies would be cut off for as long as two weeks, consider storing additional water, food, clothing and bedding other supplies to expand your supply kit to last up to two weeks.
- A work place disaster supply kit. It is important to store a personal supply of water and food at work; you will not be able to rely on water fountains or coolers. Women who wear high-heels should be sure to have comfortable flat shoes at their workplace in case an evacuation requires walking long distances.
- A car disaster supply kit. Keep a smaller disaster supply kit in the trunk of you car. If you become stranded or are not able to return home, having these items will help you be more comfortable until help arrives. Add items for severe winter weather during months when heavy snow or icy roads are possible—salt, sand, shovels, and extra winter clothing, including hats and gloves.

Evacuation

Evacuations are more common than many people realize. Hundreds of times each year, transportation and industrial accidents release harmful substances, forcing thousands of people to leave their homes. Fires and floods cause evacuations even more frequently. And almost every year, people along the Gulf and Atlantic coasts evacuate in the face of approaching hurricanes.

When community evacuations become necessary, local officials provide information to the public through the media. In some circumstances other warning methods, such as sirens or telephone calls, are also used. Government agencies, the American Red Cross, Salvation Army, and other disaster relief organizations provide emergency shelter and supplies. To be prepared for an emergency, you should have enough water, food, clothing and emergency supplies to last at least three days. In a catastrophic emergency, you might need to be self-sufficient for even longer.

The amount of time you have to evacuate will depend on the disaster. If the event can be monitored, like a hurricane, you might have a day or two to get ready. However, many disasters allow no time for people to gather even the most basic necessities. This is why you should prepare now.

Planning for evacuation

1. Ask your local emergency management office about community evacuation plans. Learn evacuation routes. If you do not own a car, make transportation arrangements with friends or your local government.
2. Talk with your household about the possibility of evacuation. Plan where you would go if you had to leave the community. Determine how you would get there. In your planning, consider different scales of evacuations. In a hurricane, for example, entire counties would evacuate, while much smaller area would be affected by a chemical release.
3. Plan a place to meet your household in case you are separated from one another in a disaster. Ask a friend outside your town to be the “checkpoint” so that everyone in the household can call that person to say they are safe.
4. Find out where children will be sent if schools are evacuated.
5. Assemble a disaster supplies kit. Include a battery-powered radio, flashlight, extra batteries, food, water and clothing. See the “Emergency Planning and Disaster Supplies” chapter for a complete list.
6. Keep fuel in your car if an evacuation seems likely. Gas stations may be closed during emergencies and unable to pump gas during power outages.

7. Know how to shut off your home's electricity, gas and water supplies at main switches and valves. Have the tools you would need to do this (usually adjustable pipe and crescent wrenches).

What to do when you are told to evacuate

Listen to a battery-powered radio and follow local instructions. If the danger is a chemical release and you are instructed to evacuate immediately, gather your household and go. Take one car per household when evacuating. This will keep your household together and reduce traffic congestion and delay. In other cases, you may have time to follow these steps:

1. Gather water, food, clothing, emergency supplies, and insurance and financial records. See the "Emergency Planning and Disaster Supplies" chapter for important information.
2. Wear sturdy shoes and clothing that provides some protection, such as long pants, long-sleeved shirts, and a cap.
3. Secure your home. Close and lock doors and windows. Unplug appliances. If a hard freeze is likely during your absence, take actions needed to prevent damage to water pipes by freezing weather, such as:
 - Turn off water main
 - Drain faucets
 - Turn off inside valves for external faucets and open the outside faucets to drain.
4. Turn off the main water valve and electricity, if instructed to do so
5. Let others know where you are going.
6. Leave early enough to avoid being trapped by severe weather.
7. Follow recommended evacuation routes. Do not take shortcuts. They may be blocked. Be alert for washed-out roads and bridges. Do not drive into flooded areas. Stay away from downed power lines.

Disaster situations can be intense, stressful, and confusing. Should an evacuation be necessary, local authorities will do their best to notify the public, but do not depend entirely on this. Often, a disaster can strike with little or no warning, providing local authorities scant time to issue an evacuation order. Also, it is possible that you may not hear of an evacuation order due to communications or power failure or not listening to your battery-powered radio. Local authorities and meteorologists could also make mistakes, including underestimating an emergency or disaster situation. In the absence of evacuation instructions from local authorities, you should evacuate if you feel you and

your household are threatened or endangered. Use pre-designated evacuation routes and let others know what you are doing and your destination.

Shelter

Taking shelter is often a critical element in protecting yourself and your household in times of disaster. Sheltering can take several forms. In-place sheltering is appropriate when conditions require that you seek protection in your home, place of employment, or other location where you are located when disaster strikes. In-place sheltering may either be short-term, such as going to a safe room for a fairly short period while a tornado warning is in effect or while a chemical cloud passes. It may also be longer-term, as when you stay in your home for several days without electricity or water services following a winter storm. We also use the term “shelter” for Mass Care facilities that provide a place to stay along with food and water to people who evacuate following a disaster.

The appropriate steps to take in preparing for and implementing short-term in-place sheltering depend entirely on the emergency situation. For instance, during a tornado warning you should go to an underground room, if such a room is available. During a chemical release, on the other hand, you should seek shelter in a room above ground level. Because of these differences, short-term in-place shelter is described in the chapters dealing with specific hazards. See the chapters on “Thunderstorms” and “Hazardous Materials Incidents” for more information. The remainder of this chapter describes steps you should take to prepare for long-term in-place sheltering and for staying in a mass care shelter if you evacuate.

Long-term in-place sheltering

Sometimes disasters make it unsafe for people to leave their residence for extended periods. Winter storms, floods, and landslides may isolate individual households and make it necessary for each household to take care of its own needs until the disaster abates, such as when snows melt and temperatures rise, or until rescue workers arrive. Your household should be prepared to be self-sufficient for three days when cut off from utilities and from outside supplies of food and water.

1. Stay in your shelter until local authorities say it’s okay to leave. The length of your stay can range from a few hours to two weeks.
2. Maintain a 24-hour communications and safety watch. Take turns listening for radio broadcasts. Watch for fires.
3. Assemble an emergency toilet, if necessary.
4. Use a garbage container, pail or bucket with a snug-fitting cover. If the container is small, use a larger container with a cover for waste disposal. Line both containers with plastic bags.
5. After each use, pour or sprinkle a small amount of regular household disinfectant, such as chlorine bleach, into the container to reduce odors and germs.

Managing water supplies

Water is critical for survival. Plan to have about one gallon of water per person per day for drinking, cooking and personal hygiene. You may need more for medical emergencies.

1. Allow people to drink according to their need. The average person should drink between two and two-and-one-half quarts of water or other liquids per day, but many people need more. This will depend on age, physical activity, physical condition and time of year.
2. Never ration water unless ordered to do so by authorities. Drink the amount you need today and try to find more for tomorrow. Under no circumstances should a person drink less than one quart of water each day. You can minimize the amount of water your body needs by reducing activity and staying cool.
3. Drink water that you know is not contaminated first. If necessary, suspicious water, such as cloudy water from regular faucets or muddy water from streams or ponds, can be used after it has been treated. If water treatment is not possible, put off drinking suspicious water as long as possible, but do not become dehydrated.
4. In addition to stored water, other sources include:
 - Melted ice cubes.
 - Water drained from the water heater faucet, if the water heater has not been damaged.
 - Water dipped from the flush tanks (not the bowls) of home toilets. Bowl water can be used for pets.
 - Liquids from canned goods such as fruit and vegetable juices.
5. Carbonated beverages do not meet drinking-water requirements. Caffeinated drinks and alcohol dehydrate the body, which increases the need for drinking water.
6. If water pipes are damaged or if local authorities advise you, turn off the main water valves to prevent water from draining away in case the water main breaks.
 - The pipes will be full of water when the main valve is closed.
 - To use this water, turn on the faucet at the highest point in your house (which lets air into the system).
 - Then draw water, as needed, from the lowest point in your house, either a faucet or the hot water tank.
7. Unsafe water sources include:
 - Radiators.
 - Hot water boilers (home heating system).

- Water beds (fungicides added to the water or chemicals in the vinyl may make water unsafe to use).
- Swimming pools and spas (chemicals used in them to kill germs are too concentrated for safe drinking, but can be used for personal hygiene & cleaning)

Water treatment

Treat all water of uncertain purity before using it for drinking, food washing or preparation, washing dishes, brushing teeth or making ice. In addition to having a bad odor and taste, contaminated water can contain microorganisms that cause diseases such as dysentery, cholera, typhoid and hepatitis.

There are many ways to treat water. None is perfect. Often the best solution is a combination of methods. Before treating, let any suspended particles settle to the bottom, or strain them through layers of clean cloth.

Following are four treatment methods. The first three methods—boiling, chlorination and water treatment tablets—will kill microbes but will not remove other contaminants such as heavy metals, salts, most other chemicals and radioactive fallout. The final method—distillation—will remove microbes as well as most other contaminants, including radioactive fallout.

Boiling is the safest method of treating water.

- Boiling water kills harmful bacteria and parasites. Bringing water to a rolling boil for 1 minute will kill most organisms. Let the water cool before drinking.
- Boiled water will taste better if you put oxygen back into it by pouring it back and forth between two containers. This will also improve the taste of stored water.
- Chlorination uses liquid chlorine bleach to kill microorganisms such as bacteria.
- Use regular household liquid bleach that contains no soap or scents. Some containers warn, “Not For Personal Use.” You can disregard these warnings if the label states sodium hypochlorite as the only active ingredient and if you use only the small quantities mentioned in these instructions.
- Add six drops (1/8 teaspoon) of unscented bleach per gallon of water, stir and let stand for 30 minutes. If the water does not taste and smell of chlorine at that point, add another dose and let stand another 15 minutes. This treatment will not kill parasitic organisms.
- If you do not have a dropper, use a spoon and a square-ended strip of paper or thin cloth about 1/4 inch by 2 inches. Put the strip in the spoon with an end hanging down about 1/2 inch below the scoop of the spoon. Place bleach in the spoon and carefully

tip it. Drops the size of those from a medicine dropper will drip off the end of strip.

Water treatment “purification” tablets release chlorine or iodine. They are inexpensive and available at most sporting goods stores and some drugstores. Follow the package directions carefully. *NOTE:* People with hidden or chronic liver or kidney disease may be adversely affected by iodized tablets and may experience worsened health problems as a result of ingestion. Iodized tablets are safe for healthy, physically fit adults and should be used only if you lack the supplies for boiling, chlorination and distillation.

Distillation involves boiling water and collecting the vapor that condenses back to water. The condensed vapor may include salt or other impurities.

- Fill a pot halfway with water.
- Tie a cup to the handle on the pot’s lid so that the cup hangs right side up when the lid is upside-down (make sure the cup is not dangling into the water).
- Boil for 20 minutes. The water that drips from the lid into the cup is distilled.

Managing food supplies

1. It is important to be sanitary when storing, handling and eating food.
 - Keep food in covered containers.
 - Keep cooking and eating utensils clean.
 - Keep garbage in closed containers and dispose outside. Bury garbage, if necessary. Avoid letting garbage accumulate inside, both for fire and sanitation reasons.
 - Keep hands clean. Wash frequently with soap and water that has been boiled or disinfected. Be sure to wash:
 - Before preparing or eating food.
 - After toilet use.
 - After participating in flood cleanup activities.
 - After handling articles contaminated with floodwater or sewage.
2. Carefully ration food for everyone except children and pregnant women. Most people can remain relatively healthy with about half as much food as usual and can survive without any food for several days.
3. Try to avoid foods high in fat and protein, since they will make you thirsty. Try to eat salt-free crackers, whole grain cereals and canned foods with high liquid content.

4. For emergency cooking, heat food with candle warmers, chafing dishes and fondue pots, or use a fireplace. Charcoal grills and camp stoves are for outdoor use only.
5. Commercially canned food can be eaten out of the can without warming. Before heating food in a can, remove the label, thoroughly wash the can, and then disinfect them with a solution consisting of one cup of bleach in five gallons of water, and open before heating. Re-label your cans, including expiration date, with a marker.
 - Do not eat foods from cans that are swollen, dented or corroded even though the product may look okay to eat.
 - Do not eat any food that looks or smells abnormal, even if the can looks normal.
 - Discard any food not in a waterproof container if there is any chance that it has come into contact with contaminated floodwater.
 - Food containers with screw-caps, snap-lids, crimped caps (soda pop bottles), twist caps, flip tops, snap-open, and home canned foods should be discarded if they have come into contact with floodwater because they cannot be disinfected. For infants, use only pre-prepared canned baby formula. Do not use powdered formulas with treated water.
6. Your refrigerator will keep foods cool for about four hours without power if it is left unopened. Add block or dry ice to your refrigerator if the electricity will be off longer than four hours.
7. Thawed food usually can be eaten if it is still “refrigerator cold,” or re-frozen if it still contains ice crystals. To be safe, remember, “When in doubt, throw it out.” Discard any food that has been at room temperature for two hours or more, and any food that has an unusual odor, color, or texture.
8. If you are without power for a long period:
 - Ask friends to store your frozen foods in their freezers if they have electricity.
 - Inquire if freezer space is available in a store, church, school, or commercial freezer that has electrical service.
 - Use dry ice, if available. Twenty-five pounds of dry ice will keep a ten-cubic-foot freezer below freezing for 3-4 days. Use care when handling dry ice, and wear dry, heavy gloves to avoid injury.

Staying in a mass care shelter

The American Red Cross and Salvation Army, assisted by community and other disaster relief groups, work with local authorities to set up public shelters in schools, municipal buildings and churches. While they often provide water, food, medicine and basic sanitary facilities, you should plan to have your own supplies as well—especially water. See the “Emergency Planning and Disaster Supplies” chapter for more details.

1. Cooperate with shelter managers and others staying in the shelter. Living with many people in a confined space can be difficult and unpleasant.
2. Restrict smoking to designated areas that are well-ventilated. Ensure that smoking materials are disposed of safely.
3. If you go to an emergency shelter, remember that alcoholic beverages and weapons are prohibited in shelters. Pets, except for service animals, are also not allowed in public shelters. See “Animals in Disaster” chapter or contact your local humane society for additional information.

Earthquakes

An earthquake is a sudden shaking of the earth caused by the breaking and shifting of rock beneath the earth's surface. Earthquakes can cause buildings and bridges to collapse, telephone and power lines to fall, and result in fires, explosions and landslides. Earthquakes can also cause huge ocean waves, called tsunamis, which travel long distances over water until they crash into coastal areas.

The following information includes general guidelines for earthquake preparedness and safety. Because injury prevention techniques may vary from state to state, it is recommended that you contact your local emergency management office, health department, or American Red Cross chapter.

What to do before an earthquake

1. Know the terms associated with earthquakes.

- Earthquake - a sudden slipping or movement of a portion of the earth's crust, accompanied and followed by a series of vibrations.
- Aftershock - an earthquake of similar or lesser intensity that follows the main earthquake.
- Fault - the earth's crust slips along a fault—an area of weakness where two sections of crust have separated. The crust may only move a few inches to a few feet in a severe earthquake.
- Epicenter - the area of the earth's surface directly above the origin of an earthquake.
- Seismic Waves - are vibrations that travel outward from the center of the earthquake at speeds of several miles per second. These vibrations can shake some buildings so rapidly that they collapse.
- Magnitude - indicates how much energy was released. This energy can be measured on a recording device and graphically displayed through lines on a Richter Scale. A magnitude of 7.0 on the Richter Scale would indicate a very strong earthquake. Each whole number on the scale represents an increase of about 30 times the energy released. Therefore, an earthquake measuring 6.0 is about 30 times more powerful than one measuring 5.0.

2. Look for items in your home that could become a hazard in an earthquake:

- Repair defective electrical wiring, leaky gas lines, and inflexible utility connections.
- Bolt down water heaters and gas appliances (have an automatic gas shut-off device installed that is triggered by an earthquake).

- Place large or heavy objects on lower shelves. Fasten shelves to walls. Brace high and top-heavy objects.
 - Store bottled foods, glass, china and other breakables on low shelves or in cabinets that can fasten shut.
 - Anchor overhead lighting fixtures.
 - Check and repair deep plaster cracks in ceilings and foundations. Get expert advice, especially if there are signs of structural defects.
 - Be sure the residence is firmly anchored to its foundation.
 - Install flexible pipe fittings to avoid gas or water leaks. Flexible fittings are more resistant to breakage.
3. Know where and how to shut off electricity, gas and water at main switches and valves. Check with your local utilities for instructions.
 4. Hold earthquake drills with your household:
 - Locate safe spots in each room under a sturdy table or against an inside wall. Reinforce this information by physically placing yourself and your household in these locations.
 - Identify danger zones in each room—near windows where glass can shatter, bookcases or furniture that can fall over, or under ceiling fixtures that could fall down.
 5. Develop a plan for reuniting your household after an earthquake. Establish an out-of-town telephone contact for household members to call to let others know that they are okay.
 6. Review your insurance policies. Some damage may be covered even without specific earthquake insurance. Protect important home and business papers.
 7. Prepare to survive on your own for at least three days. Assemble a disaster supply kit. Keep a stock of food and extra drinking water. See the “Emergency Planning and Disaster Supplies” and “Evacuation” chapters for more information.

What to do during an earthquake

Stay inside until the shaking stops and it is safe to go outside. Most injuries during earthquakes occur when people are hit by falling objects when entering or exiting buildings.

1. Drop, Cover and Hold On! Minimize your movements during an earthquake to a few steps to a nearby safe place. Stay indoors until the shaking has stopped and you are sure exiting is safe.
2. If you are indoors, take cover under a sturdy desk, table or bench, or against an inside wall, and hold on. Stay away from glass, windows, outside doors or walls and anything that could fall, such as lighting fixtures or furniture. If you are in bed, stay there, hold on and protect your head with a pillow, unless you are under a heavy light fixture that could fall.
3. If there isn't a table or desk near you, cover your face and head with your arms and crouch in an inside corner of the building. Doorways should only be used for shelter if they are in close proximity to you and if you know that it is a strongly supported load-bearing doorway.
4. If you are outdoors, stay there. Move away from buildings, streetlights and utility wires.
5. If you live in an apartment building or other multi-household structure with many levels, consider the following:
 - Get under a desk and stay away from windows and outside walls.
 - Stay in the building (many injuries occur as people flee a building and are struck by falling debris from above).
 - Be aware that the electricity may go out and sprinkler systems may come on.
 - DO NOT use the elevators.
6. If you are in a crowded indoor public location:
 - Stay where you are. Do not rush for the doorways.
 - Move away from tall shelves, cabinets and bookcases containing objects that may fall.
 - Take cover and grab something to shield your head and face from falling debris and glass.
 - Be aware that the electricity may go out or the sprinkler systems or fire alarms may turn on.
 - DO NOT use elevators.
7. In a moving vehicle, stop as quickly as safety permits, and stay in the vehicle. Avoid stopping near or under buildings, trees, overpasses or utility wires. Then, proceed

cautiously, watching for road and bridge damage.

If you become trapped in debris:

- Do not light a match.
 - Do not move about or kick up dust.
 - Cover your mouth with a handkerchief or clothing.
 - Tap on a pipe or wall so rescuers can locate you. Use a whistle if one is available. Shout only as a last resort—shouting can cause you to inhale dangerous amounts of dust.
8. Stay indoors until the shaking has stopped and you are sure exiting is safe.

What to do after an earthquake

1. Be prepared for aftershocks. These secondary shock waves are usually less violent than the main quake but can be strong enough to do additional damage to weakened structures.
2. Check for injuries. Do not attempt to move seriously injured persons unless they are in immediate danger of death or further injury. If you must move an unconscious person, first stabilize the neck and back, then call for help immediately.
 - If the victim is not breathing, carefully position the victim for artificial respiration, clear the airway and start mouth-to-mouth resuscitation.
 - Maintain body temperature with blankets. Be sure the victim does not become overheated.
 - Never try to feed liquids to an unconscious person.
3. If the electricity goes out, use flashlights or battery powered lanterns. Do not use candles, matches or open flames indoors after the earthquake because of possible gas leaks.
4. Wear sturdy shoes in areas covered with fallen debris and broken glass.
5. Check your home for structural damage. If you have any doubts about safety, have your home inspected by a professional before entering.
6. Check chimneys for visual damage; however, have a professional inspect the chimney for internal damage before lighting a fire.

7. Clean up spilled medicines, bleaches, gasoline and other flammable liquids. Evacuate the building if gasoline fumes are detected and the building is not well ventilated.
8. Visually inspect utility lines and appliances for damage.
 - If you smell gas or hear a hissing or blowing sound, open a window and leave. Shut off the main gas valve. Report the leak to the gas company from the nearest working phone or cell phone available. Stay out of the building. If you shut off the gas supply at the main valve, you will need a professional to turn it back on.
 - Switch off electrical power at the main fuse box or circuit breaker if electrical damage is suspected or known.
 - Shut off the water supply at the main valve if water pipes are damaged.
 - Do not flush toilets until you know that sewage lines are intact.
9. Open cabinets cautiously. Beware of objects that can fall off shelves.
10. Use the phone only to report life-threatening emergencies.
11. Listen to news reports for the latest emergency information.
12. Stay off the streets. If you must go out, watch for fallen objects, downed electrical wires, weakened walls, bridges, roads and sidewalks.
13. Stay away from damaged area unless your assistance has been specifically requested by police, fire or relief organizations.

Terrorism

Terrorism is the use of force or violence against persons or property in violation of the criminal laws of the United States for purposes of intimidation, coercion or ransom. Terrorists often use threats to create fear among the public, to try to convince citizens that their government is powerless to prevent terrorism, and to get immediate publicity for their causes.

Acts of terrorism range from threats of terrorism, assassinations, kidnappings, hijackings, bomb scares and bombings, cyber attacks (computer-based), to the use of chemical, biological and nuclear weapons.

High-risk targets include military and civilian government facilities, international airports, large cities and high-profile landmarks. Terrorists might also target large public gatherings, water and food supplies, utilities, and corporate centers. Further, they are capable of spreading fear by sending explosives or chemical and biological agents through the mail.

In the immediate area of a terrorist event, you would need to rely on police, fire and other officials for instructions. However, you can prepare in much the same way you would prepare for other crisis events.

Preparing for terrorism

1. Wherever you are, be aware of your surroundings. The very nature of terrorism suggests there may be little or no warning.
2. Take precautions when traveling. Be aware of conspicuous or unusual behavior. Do not accept packages from strangers. Do not leave luggage unattended. Unusual behavior, suspicious packages and strange devices should be promptly reported to the police or security personnel.
3. Do not be afraid to move or leave if you feel uncomfortable or if something does not seem right.
4. Learn where emergency exits are located in buildings you frequent. Notice where exits are when you enter unfamiliar buildings. Plan how to get out of a building, subway or congested public area or traffic. Note where staircases are located. Notice heavy or breakable objects that could move, fall or break in an explosion.
5. Assemble a disaster supply kit at home and learn first aid. Separate the supplies you would take if you had to evacuate quickly, and put them in a backpack or container, ready to go.

6. Be familiar with different types of fire extinguishers and how to locate them. Know the location and availability of hard hats in buildings in which you spend a lot of time.

Protection against cyber attacks

Cyber attacks target computer or telecommunication networks of critical infrastructures such as power systems, traffic control systems, or financial systems. Cyber attacks target information technologies (IT) in three different ways. First, is a direct attack against an information system “through the wires” alone (hacking). Second, the attack can be a physical assault against a critical IT element. Third, the attack can be from the inside as a result of compromising a trusted party with access to the system.

1. Be prepared to do without services you normally depend on that could be disrupted—electricity, telephone, natural gas, gasoline pumps, cash registers, ATM machines, and internet transactions.
2. Be prepared to respond to official instructions if a cyber attack triggers other hazards, for example, general evacuation, evacuation to shelter, or shelter-in-place, because of hazardous materials releases, nuclear power plant incident, dam or flood control system failures.

Preparing for a building explosion

Explosions can collapse buildings and cause fires. People who live or work in a multi-level building can do the following:

1. Review emergency evacuation procedures. Know where emergency exits are located.
2. Keep fire extinguishers in working order. Know where they are located, and learn how to use them.
3. Learn first aid. Contact the local chapter of the American Red Cross for information and training.
4. Building owners should keep the following items in a designated place on each floor of the building.
 - Portable, battery-operated radio and extra batteries
 - Several flashlights and extra batteries
 - First aid kit and manual
 - Several hard hats
 - Fluorescent tape to rope off dangerous areas

Bomb threats

If you receive a bomb threat, get as much information from the caller as possible. Keep the caller on the line and record everything that is said. Then notify the police and the building management.

If you are notified of a bomb threat, do not touch any suspicious packages. Clear the area around suspicious packages and notify the police immediately. In evacuating a building, don't stand in front of windows, glass doors or other potentially hazardous areas. Do not block sidewalk or streets to be used by emergency officials or others still exiting the building.

Suspicious parcels and letters

Be wary of suspicious packages and letters. They can contain explosives, chemical or biological agents. Be particularly cautious at your place of employment.

Some typical characteristics postal inspectors have detected over the years, which ought to trigger suspicion, include parcels that:

- Are unexpected or from someone unfamiliar to you.
- Have no return address, or have one that can't be verified as legitimate.
- Are marked with restrictive endorsements, such as "Personal," "Confidential" or "Do not x-ray."
- Have protruding wires or aluminum foil, strange odors or stains.
- Show a city or state in the postmark that doesn't match the return address.
- Are of unusual weight, given their size, or are lopsided or oddly shaped.
- Are marked with any threatening language.
- Have inappropriate or unusual labeling.
- Have excessive postage or excessive packaging material such as masking tape and string.
- Have misspellings of common words.
- Are addressed to someone no longer with your organization or are otherwise outdated.
- Have incorrect titles or title without a name.
- Are not addressed to a specific person.
- Have handwritten or poorly typed addresses.

With suspicious envelopes and packages other than those that might contain explosives, take these additional steps against possible biological and chemical agents.

- Refrain from eating or drinking in a designated mail handling area.
- Place suspicious envelopes or packages in a plastic bag or some other type of container to prevent leakage of contents. Never sniff or smell suspect mail.

- If you do not have a container, then cover the envelope or package with anything available (e.g., clothing, paper, trash can, etc.) and do not remove the cover.
- Leave the room and close the door, or section off the area to prevent others from entering.
- Wash your hands with soap and water to prevent spreading any powder to your face.
- If you are at work, report the incident to your building security official or an available supervisor, who should notify police and other authorities without delay.
- List all people who were in the room or area when this suspicious letter or package was recognized. Give a copy of this list to both the local public health authorities and law enforcement officials for follow-up investigations and advice.
- If you are at home, report the incident to local police.

What to do if there is an explosion

Leave the building as quickly as possible. Do not stop to retrieve personal possessions or make phone calls. If things are falling around you, get under a sturdy table or desk until they stop falling. Then leave quickly, watching for weakened floors and stairs and falling debris as you exit.

1. If there is a fire:

- Stay low to the floor and exit the building as quickly as possible.
- Cover your nose and mouth with a wet cloth.
- When approaching a closed door, use the back of your hand to feel the lower, middle and upper parts of the door. Never use the palm of your hand or fingers to test for heat: burning those areas could impair your ability to escape a fire (i.e., ladders and crawling).
- If the door is NOT hot, open slowly and ensure fire and/or smoke is not blocking your escape route. If your escape route is blocked, shut the door immediately and use an alternate escape route, such as a window. If clear, leave immediately through the door. Be prepared to crawl. Smoke and heat rise. The air is clearer and cooler near the floor.
- If the door is hot, do not open it. Escape through a window. If you cannot escape, hang a white or light-colored sheet outside the window, alerting fire fighters to your presence.

- Heavy smoke and poisonous gases collect first along the ceiling. Stay below the smoke at all times.

2. If you are trapped in debris:

- Do not light a match.
- Do not move about or kick up dust. Cover your mouth with a handkerchief or clothing.
- Rhythmically tap on a pipe or wall so that rescuers can hear where you are. Use a whistle if one is available. Shout only as a last resort when you hear sounds and think someone will hear you—shouting can cause a person to inhale dangerous amounts of dust.

Chemical and Biological Weapons

In case of a chemical or biological weapon attack near you, authorities will instruct you on the best course of action. This may be to evacuate the area immediately, to seek shelter at a designated location, or to take immediate shelter where you are and seal the premises. The best way to protect yourself is to take emergency preparedness measures ahead of time and to get medical attention as soon as possible, if needed.

Chemical

Chemical warfare agents are poisonous vapors, aerosols, liquids or solids that have toxic effects on people, animals or plants. They can be released by bombs, sprayed from aircraft, boats, or vehicles, or used as a liquid to create a hazard to people and the environment. Some chemical agents may be odorless and tasteless. They can have an immediate effect (a few seconds to a few minutes) or a delayed effect (several hours to several days). While potentially lethal, chemical agents are difficult to deliver in lethal concentrations. Outdoors, the agents often dissipate rapidly. Chemical agents are also difficult to produce.

There are six types of agents:

- Lung-damaging (pulmonary) agents such as phosgene,
- Cyanide,
- Vesicants or blister agents such as mustard,
- Nerve agents such as GA (tabun), GB (sarin), GD (soman), GF, and VX,
- Incapacitating agents such as BZ, and
- Riot-control agents (similar to MACE).

Biological

Biological agents are organisms or toxins that can kill or incapacitate people, livestock and crops. The three basic groups of biological agents which would likely be used as weapons are bacteria, viruses, and toxins.

1. *Bacteria*. Bacteria are small free-living organisms that reproduce by simple division and are easy to grow. The diseases they produce often respond to treatment with antibiotics.
2. *Viruses*. Viruses are organisms, which require living cells in which to reproduce and are intimately dependent upon the body they infect. Viruses produce diseases which generally do not respond to antibiotics. However, antiviral drugs are sometimes effective.

3. *Toxins*. Toxins are poisonous substances found in, and extracted from, living plants, animals, or microorganisms; some toxins can be produced or altered by chemical means. Some toxins can be treated with specific antitoxins and selected drugs.

Most biological agents are difficult to grow and maintain. Many break down quickly when exposed to sunlight and other environmental factors, while others such as anthrax spores are very long lived. They can be dispersed by spraying them in the air, or infecting animals which carry the disease to humans as well through food and water contamination.

- Aerosols—Biological agents are dispersed into the air, forming a fine mist that may drift for miles. Inhaling the agent may cause disease in people or animals.
- Animals—Some diseases are spread by insects and animals, such as fleas, mice, flies, and mosquitoes. Deliberately spreading diseases through livestock is also referred to as agroterrorism.
- Food and water contamination—Some pathogenic organisms and toxins may persist in food and water supplies. Most microbes can be killed, and toxins deactivated, by cooking food and boiling water.

Anthrax spores formulated as a white powder were mailed to individuals in the government and media in the fall of 2001. Postal sorting machines and the opening of letters dispersed the spores as aerosols. Several deaths resulted. The effect was to disrupt mail service and to cause a widespread fear of handling delivered mail among the public. Person-to-person spread of a few infectious agents is also possible. Humans have been the source of infection for smallpox, plague, and the Lassa viruses.

What to do to prepare for a chemical or biological attack

Assemble a disaster supply kit and be sure to include:

- ___ Battery-powered commercial radio with extra batteries.
- ___ Non-perishable food and drinking water.
- ___ Roll of duct tape and scissors.
- ___ Plastic for doors, windows and vents for the room in which you will shelter in place—this should be an internal room where you can block out air that may contain hazardous chemical or biological agents. To save critical time during an emergency, sheeting should be pre-measured and cut for each opening.
- ___ First aid kit.
- ___ Sanitation supplies including soap, water and bleach.

What to do during a chemical or biological attack

1. Listen to your radio for instructions from authorities such as whether to remain inside or to evacuate.
2. If you are instructed to remain in your home, the building where you are, or other shelter during a chemical or biological attack:
 - Turn off all ventilation, including furnaces, air conditioners, vents and fans.
 - Seek shelter in an internal room, preferably one without windows. Seal the room with duct tape and plastic sheeting. Ten square feet of floor space per person will provide sufficient air to prevent carbon dioxide build-up for up to five hours. (See “Shelter” chapter.)
 - Remain in protected areas where toxic vapors are reduced or eliminated, and be sure to take your battery-operated radio with you.
3. If you are caught in an unprotected area, you should:
 - Attempt to get up-wind of the contaminated area.
 - Attempt to find shelter as quickly as possible.
 - Listen to your radio for official instructions.

What to do after a chemical attack

Immediate symptoms of exposure to chemical agents may include blurred vision, eye irritation, difficulty breathing and nausea. A person affected by a chemical or biological agent requires immediate attention by professional medical personnel. If medical help is not immediately available, decontaminate yourself and assist in decontaminating others. Decontamination is needed within minutes of exposure to minimize health consequences. (However, you should not leave the safety of a shelter to go outdoors to help others until authorities announce it is safe to do so.)

1. Use extreme caution when helping others who have been exposed to chemical agents:
 - Remove all clothing and other items in contact with the body. Contaminated clothing normally removed over the head should be cut off to avoid contact with the eyes, nose, and mouth. Put into a plastic bag if possible. Decontaminate hands using soap and water. Remove eyeglasses or contact lenses. Put glasses in a pan of household bleach to decontaminate.
2. Remove all items in contact with the body.

3. Flush eyes with lots of water.
4. Gently wash face and hair with soap and water; then thoroughly rinse with water.
5. Decontaminate other body areas likely to have been contaminated. Blot (do not swab or scrape) with a cloth soaked in soapy water and rinse with clear water.
6. Change into uncontaminated clothes. Clothing stored in drawers or closets is likely to be uncontaminated.
7. If possible, proceed to a medical facility for screening.

What to do after a biological attack

In many biological attacks, people will not know they have been exposed to an agent. In such situations, the first evidence of an attack may be when you notice symptoms of the disease caused by an agent exposure, and you should seek immediate medical attention for treatment.

In some situations, like the anthrax letters sent in 2001, people may be alerted to a potential exposure. If this is the case, pay close attention to all official warnings and instructions on how to proceed. The delivery of medical services for a biological event may be handled differently to respond to increased demand. Again, it will be important for you to pay attention to official instructions via radio, television, and emergency alert systems.

If your skin or clothing comes in contact with a visible, potentially infectious substance, you should remove and bag your clothes and personal items and wash yourself with warm soapy water immediately. Put on clean clothes and seek medical assistance. For more information, visit the website for the Centers for Disease Control and Prevention, www.bt.cdc.gov.

Nuclear and Radiological Attack

Nuclear explosions can cause deadly effects—blinding light, intense heat (thermal radiation), initial nuclear radiation, blast, fires started by the heat pulse, and secondary fires caused by the destruction. They also produce radioactive particles called fallout that can be carried by wind for hundreds of miles.

Terrorist use of a radiological dispersion device (RDD)—often called “dirty nuke” or “dirty bomb”—is considered far more likely than use of a nuclear device. These radiological weapons are a combination of conventional explosives and radioactive material designed to scatter dangerous and sub-lethal amounts of radioactive material over a general area. Such radiological weapons appeal to terrorists because they require very little technical knowledge to build and deploy compared to that of a nuclear device. Also, these radioactive materials, used widely in medicine, agriculture, industry and research, are much more readily available and easy to obtain compared to weapons grade uranium or plutonium.

Terrorist use of a nuclear device would probably be limited to a single smaller “suitcase” weapon. The strength of such a weapon would be in the range of the bombs used during World War II. The nature of the effects would be the same as a weapon delivered by an inter-continental missile, but the area and severity of the effects would be significantly more limited.

There is no way of knowing how much warning time there would be before an attack by a terrorist using a nuclear or radiological weapon. A surprise attack remains a possibility. The danger of a massive strategic nuclear attack on the United States involving many weapons receded with the end of the Cold War. However, some terrorists have been supported by nations that have nuclear weapons programs.

If there were threat of an attack from a hostile nation, people living near potential targets could be advised to evacuate or they could decide on their own to evacuate to an area not considered a likely target. Protection from radioactive fallout would require taking shelter in an underground area, or in the middle of a large building.

In general, potential targets include:

- Strategic missile sites and military bases.
- Centers of government such as Washington, D.C., and state capitals.
- Important transportation and communication centers.
- Manufacturing, industrial, technology and financial centers.
- Petroleum refineries, electrical power plants and chemical plants.
- Major ports and airfields.

Taking shelter during a nuclear attack is absolutely necessary. There are two kinds of shelters—blast and fallout.

Blast shelters offer some protection against blast pressure, initial radiation, heat and fire, but even a blast shelter could not withstand a direct hit from a nuclear detonation. Fallout shelters do not need to be specially constructed for that purpose. They can be any protected space, provided that the walls and roof are thick and dense enough to absorb the radiation given off by fallout particles. The three protective factors of a fallout shelter are *shielding*, *distance*, and *time*.

- *Shielding*. The more heavy, dense materials—thick walls, concrete, bricks, books and earth—between you and the fallout particles, the better.
- *Distance*. The more distance between you and the fallout particles, the better. An underground area, such as a home or office building basement, offers more protection than the first floor of a building. A floor near the middle of a high-rise may be better, depending on what is nearby at that level on which significant fallout particles would collect. Flat roofs collect fallout particles so the top floor is not a good choice, nor is a floor adjacent to a neighboring flat roof.
- *Time*. Fallout radiation loses its intensity fairly rapidly. In time, you will be able to leave the fallout shelter. Radioactive fallout poses the greatest threat to people during the first two weeks, by which time it has declined to about 1% of its initial radiation level.
- Remember that any protection, however temporary, is better than none at all, and the more shielding, distance and time you can take advantage of, the better.

Electromagnetic pulse

In addition to other effects, a nuclear weapon detonated in or above the earth's atmosphere can create an electromagnetic pulse (EMP), a high-density electrical field. EMP acts like a stroke of lightning but is stronger, faster and briefer. EMP can seriously damage electronic devices connected to power sources or antennas. This includes communication systems, computers, electrical appliances, and automobile or aircraft ignition systems. The damage could range from a minor interruption to actual burnout of components. Most electronic equipment within 1,000 miles of a high-altitude nuclear detonation could be affected. Battery powered radios with short antennas generally would not be affected. Although EMP is unlikely to harm most people, it could harm those with pacemakers or other implanted electronic devices.

What to do before a nuclear or radiological attack

1. Learn the warning signals and all sources of warning used in your community. Make sure you know what the signals are, what they mean, how they will be used, and what you should do if you hear them.

2. Assemble and maintain a disaster supply kit with food, water, medications, fuel and personal items adequate for up to 2 weeks—the more the better. (See the “Emergency Planning and Disaster Supplies” chapter for more information).
3. Find out what public buildings in your community may have been designated as fallout shelters. It may have been years ago, but start there, and learn which buildings are still in use and could be designated as shelters again.
 - Call your local emergency management office.
 - Look for yellow and black fallout shelter signs on public buildings. Note: With the end of the Cold War, many of the signs have been removed from the buildings previously designated.
 - If no noticeable or official designations have been made, make your own list of potential shelters near your home, workplace and school: basements, or the windowless center area of middle floors in high-rise buildings, as well as subways and tunnels.
 - Give your household clear instructions about where fallout shelters are located and what actions to take in case of attack.
4. If you live in an apartment building or high-rise, talk to the manager about the safest place in the building for sheltering, and about providing for building occupants until it is safe to go out.
5. There are few public shelters in many suburban and rural areas. If you are considering building a fallout shelter at home, keep the following in mind.
 - A basement, or any underground area, is the best place to shelter from fallout. Often, few major changes are needed, especially if the structure has two or more stories and its basement—or one corner of it—is below ground.
 - Fallout shelters can be used for storage during non-emergency periods, but only store things there that can be very quickly removed. (When they are removed, dense, heavy items may be used to add to the shielding.)
 - All the items you will need for your stay need not be stocked inside the shelter itself but can be stored elsewhere, as long as you can move them quickly to the shelter.
6. Learn about your community’s evacuation plans. Such plans may include evacuation routes, relocation sites, how the public will be notified and transportation options for people who do not own cars and those who have special needs. See the “Evacuation” chapter for more information.

What to do during a nuclear or radiological attack

1. Do not look at the flash or fireball—it can blind you.
2. If you hear an attack warning:
 - Take cover as quickly as you can, **BELOW GROUND IF POSSIBLE**, and stay there unless instructed to do otherwise.
 - If you are caught outside, unable to get inside immediately, take cover behind anything that might offer protection. Lie flat on the ground and cover your head.
 - If the explosion is some distance away, it could take 30 seconds or more for the blast wave to hit.
3. Protect yourself from radioactive fallout. If you are close enough to see the brilliant flash of a nuclear explosion, the fallout will arrive in about 20 minutes. Take shelter, even if you are many miles from ground zero—radioactive fallout can be carried by the winds for hundreds of miles. Remember the three protective factors: *shielding*, *distance* and *time*.
4. Keep a battery-powered radio with you, and listen for official information. Follow the instructions given. Local instructions should always take precedence: officials on the ground know the local situation best.

What to do after a nuclear or radiological attack

In a public or home shelter:

1. Do not leave the shelter until officials say it is safe. Follow their instructions when leaving.
2. If in a fallout shelter, stay in your shelter until local authorities tell you it is permissible or advisable to leave. The length of your stay can range from a day or two to four weeks.
 - Contamination from a radiological dispersion device could affect a wide area, depending on the amount of conventional explosives used, the quantity of radioactive material and atmospheric conditions.
 - A “suitcase” terrorist nuclear device detonated at or near ground level would produce heavy fallout from the dirt and debris sucked up into the mushroom cloud.
 - A missile-delivered nuclear weapon from a hostile nation would probably cause an explosion many times more powerful than a suitcase bomb, and provide a greater

cloud of radioactive fallout.

- The decay rate of the radioactive fallout would be the same, making it necessary for those in the areas with highest radiation levels to remain in shelter for up to a month.
 - The heaviest fallout would be limited to the area at or downwind from the explosion, and 80% of the fallout would occur during the first 24 hours.
 - Because of these facts and the very limited number of weapons terrorists could detonate, most of the country would not be affected by fallout.
 - People in most of the areas that would be affected could be allowed to come out of shelter and, if necessary, evacuate to unaffected areas within a few days.
3. Although it may be difficult, make every effort to maintain sanitary conditions in your shelter space.
 4. Water and food may be scarce. Use them prudently but do not impose severe rationing, especially for children, the ill or elderly.
 5. Cooperate with shelter managers. Living with many people in confined space can be difficult and unpleasant.

Returning to your home

1. Keep listening to the radio for news about what to do, where to go, and places to avoid.
2. If your home was within the range of a bomb's shock wave, or you live in a high-rise or other apartment building that experienced a non-nuclear explosion, check first for any sign of collapse or damage, such as:
 - Toppling chimneys, falling bricks, collapsing walls, plaster falling from ceilings.
 - Fallen light fixtures, pictures and mirrors.
 - Broken glass from windows.
 - Overturned bookcases, wall units or other fixtures.
 - Fires from broken chimneys.
 - Ruptured gas and electric lines.
3. Immediately clean up spilled medicines, drugs, flammable liquids, and other potentially hazardous materials.
4. Listen to your battery-powered radio for instructions and information about community services.

5. Monitor the radio and your television for information on assistance that may be provided. Local, state and federal governments and other organizations will help meet emergency needs and help you recover from damage and losses.
6. The danger may be aggravated by broken water mains and fallen power lines.
7. 7. If you turned gas, water and electricity off at the main valves and switch before you went to shelter:
 - Do not turn the gas back on. The gas company will turn it back on for you or you will receive other instructions.
 - Turn the water back on at the main valve only after you know the water system is working and water is not contaminated.
 - Turn electricity back on at the main switch only after you know the wiring is undamaged in your home and the community electrical system is functioning.
 - Check to see that sewage lines are intact before using sanitary facilities.
8. Stay away from damaged areas.
9. Stay away from areas marked “radiation hazard” or “HAZMAT.”

Homeland Security Advisory System

The Homeland Security Advisory System was designed to provide a comprehensive means to disseminate information regarding the risk of terrorist acts to federal, state, and local authorities and to the American people. This system provides warnings in the form of a set of graduated “Threat Conditions” that increase as the risk of the threat increases. At each threat condition, federal departments and agencies would implement a corresponding set of “Protective Measures” to further reduce vulnerability or increase response capability during a period of heightened alert.

Although the Homeland Security Advisory System is binding on the executive branch, it is voluntary to other levels of government and the private sector. There are five threat conditions, each identified by a description and corresponding color.

The greater the risk of a terrorist attack, the higher the threat condition. Risk includes both the probability of an attack occurring and its potential gravity.

Threat conditions are assigned by the Attorney General in consultation with the Assistant to the President for Homeland Security. Threat conditions may be assigned for the entire nation, or they may be set for a particular geographic area or industrial sector. Assigned threat conditions will be reviewed at regular intervals to determine whether adjustments are warranted.

Threat Conditions and Associated Protective Measures

There is always a risk of a terrorist threat. Each threat condition assigns a level of alert appropriate to the increasing risk of terrorist attacks. Beneath each threat condition are some suggested protective measures that the government and the public can take, recognizing that the heads of federal departments and agencies are responsible for developing and implementing appropriate agency-specific Protective Measures:

Low Condition (Green). This condition is declared when there is a low risk of terrorist attacks. Federal departments and agencies will consider the following protective measures.

- Refine and exercise prearranged protective measures;
- Ensure personnel receive proper training on the Homeland Security Advisory System and specific prearranged department or agency protective measures; and
- Institute a process to assure that all facilities and regulated sectors are regularly assessed for vulnerabilities to terrorist attacks, and all reasonable measures are taken to mitigate these vulnerabilities.

Members of the public can develop a household disaster plan and assemble a disaster supply kit.

Guarded Condition (Blue). This condition is declared when there is a general risk of terrorist attacks. In addition to the measures taken in the previous threat condition, federal departments and agencies will consider the following protective measures:

- Check communications with designated emergency response or command locations;
- Review and update emergency response procedures; and
- Provide the public with any information that would strengthen its ability to act appropriately.

Members of the public, in addition to the actions taken for the previous threat condition, can:

- Update their disaster supply kit;
- Review their household disaster plan;
- Hold a household meeting to discuss what members would do and how they would communicate in the event of an incident;
- Develop a more detailed household communication plan;
- Apartment residents should discuss with building managers steps to be taken during an emergency; and
- People with special needs should discuss their emergency plans with friends, family or employers.

Elevated Condition (Yellow). An Elevated Condition is declared when there is a significant risk of terrorist attacks. In addition to the measures taken in the previous threat conditions, federal departments and agencies will consider the following protective measures:

- Increase surveillance of critical locations;
- Coordinate emergency plans with nearby jurisdictions as appropriate;
- Assess whether the precise characteristics of the threat require the further refinement of prearranged protective measures; and
- Implement, as appropriate, contingency and emergency response plans.

Members of the public, in addition to the actions taken for the previous threat condition, can:

- Be observant of any suspicious activity and report it to authorities;
- Contact neighbors to discuss their plans and needs;
- Check with school officials to determine their plans for an emergency and procedures to reunite children with parents and caregivers; and
- Update the household communication plan.

High Condition (Orange). A High Condition is declared when there is a high risk of terrorist attacks. In addition to the measures taken in the previous threat conditions,

federal departments and agencies will consider the following protective measures:

- Coordinate necessary security efforts with federal, state, and local law enforcement agencies, National Guard or other security and armed forces;
- Take additional precautions at public events, possibly considering alternative venues or even cancellation;
- Prepare to execute contingency procedures, such as moving to an alternate site or dispersing the workforce; and
- Restrict access to a threatened facility to essential personnel only.

Members of the public, in addition to the actions taken for the previous threat conditions, can:

- Review preparedness measures (including evacuation and sheltering) for potential terrorist actions including chemical, biological, and radiological attacks;
- Avoid high profile or symbolic locations; and
- Exercise caution when traveling.

Severe Condition (Red). A Severe Condition reflects a severe risk of terrorist attacks. Under most circumstances, the protective measures for a Severe Condition are not intended to be sustained for substantial periods of time. In addition to the protective measures in the previous threat conditions, federal departments and agencies also will consider the following general measures:

- Increase or redirect personnel to address critical emergency needs;
- Assign emergency response personnel and pre-position and mobilize specially trained teams or resources;
- Monitor, redirect, or constrain transportation systems; and
- Close public and government facilities not critical for continuity of essential operations, especially public safety.

Members of the public, in addition to the actions taken for the previous threat conditions, can:

- Avoid public gathering places such as sports arenas, holiday gatherings, or other high risk locations;
- Follow official instructions about restrictions to normal activities;
- Contact employer to determine status of work;
- Listen to the radio and TV for possible advisories or warnings; and
- Prepare to take protective actions such as sheltering-in-place or evacuation if instructed to do so by public officials.

Disaster Public Education Websites

Federal Emergency Management Agency	www.fema.gov
U.S. Fire Administration	www.usfa.fema.gov
Citizen Corps	www.citizencorps.gov
Department of Commerce	www.doc.gov
Department of Health and Human Services	www.hhs.gov
Department of Energy	www.energy.gov
U.S. Department of Agriculture	www.usda.gov
Department of Justice	www.justice.gov
Department of Interior	www.doi.gov
Environmental Protection Agency	www.epa.gov
U.S. Postal Service	www.usps.gov
National Oceanic and Atmospheric Administration	www.noaa.gov
National Weather Service	www.nws.noaa.gov
U.S. Geological Survey	www.usgs.gov
Centers for Disease Control and Prevention	www.cdc.gov
Food and Drug Administration	www.fda.gov
Nuclear Regulatory Commission	www.nrc.gov
American Red Cross	www.redcross.org
National Fire Protection Association	www.nfpa.org
Institute for Business and Home Safety	www.ibhs.org
Humane Society of the United States	www.hsus.org/disaster

For More Information visit FEMA online at <http://www.fema.gov/library> or call FEMA's Distribution Center at 1-800-480-2520. FEMA can be reached via mail at Federal Emergency Management Agency, P.O. Box 2012, Jessup, MD 20794-2012.