

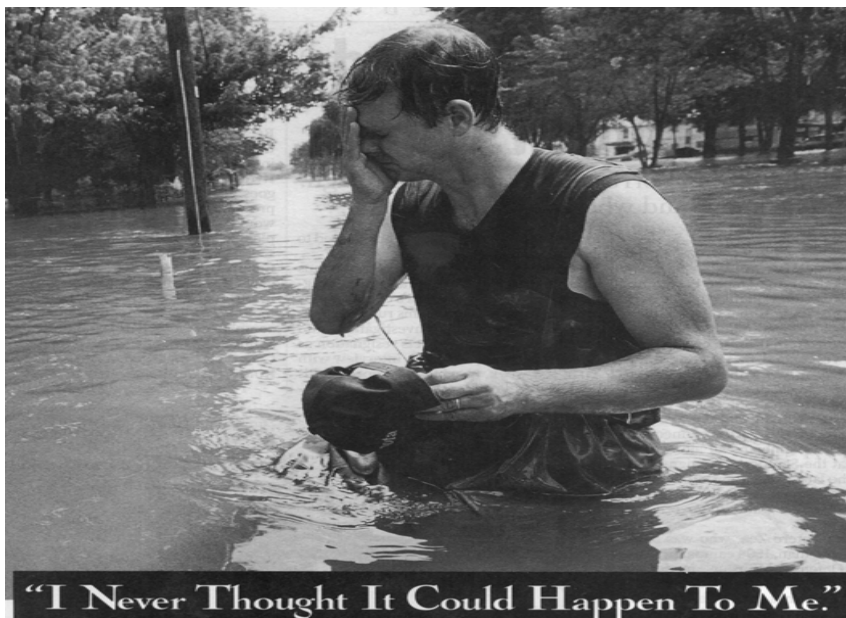
EMERGENCY PREPAREDNESS AND DISASTER RESPONSE

"...If ye are prepared, ye shall not fear."

- D & C 38:30

compiled by:

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Reference and source materials are available upon request.

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Table of Contents

topic	page no.
General Emergency and Disaster Preparations	1
General Post Emergency and Disaster Response	2
Earthquakes	3
Extreme Winter Storms	5
Floods And Mudslides	7
Heat Waves	8
Hurricanes	9
Tornadoes	10
Lightning	11
Tsunamis	11
Fires	12
Biological and Chemical Agent Dispersion	15
Protecting Yourself From Terrorism	18
Nuclear Disaster and Warfare	26
County Wide Evacuation	34
Basic Search and Rescue	36
72-hour Kit	38
Home Storage and Production	40
Emergency Water Procurement	47
Living Without Electricity	50
5 Basic Steps to Preparing for and Uncertain Future	55
Appendix A (public information sources)	56
Appendix B (how to shut off your utilities)	57
Appendix C (how to strap down your hot water heater)	58
Appendix D (a suggested home first aid kit)	59
Appendix E (miscellaneous first aid notes)	61
Appendix F (communication items)	62
Appendix G (herbal medicinal supplements and replacements)	63
Appendix H (miscellaneous items)	66
Appendix I (large quantity water filter)	67
Senior Information	68

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General Emergency and Disaster Preparations

1. Safeguard your home. Check for potential hazards.
 - a. Bolt or strap down top-heavy objects, such as bookshelves, china closets, water heaters and gas appliances, to prevent them from tipping over.
 - b. Check electrical connections and gas pipes for faulty joints and connections.
 - c. Place heavy objects on lower shelves.
 - d. Store bottled goods, glass, vases, china, and other breakables in lower or closed cabinets or drawers.
 - e. Place flammable, explosive, toxic, and corrosive materials in lower or closed cabinets or drawers and apart from each other.
 - f. Properly store and label flammable, combustible, explosive, corrosive, and hazardous materials.
 - g. Keep matches & lighters out of reach of children and away from flammable materials.
 - h. Be sure your home is bolted or anchored firmly to its foundation and structurally safe.
 - i. Keep properly rated and tagged fire extinguishers on hand. Along with your family - learn how and when to use them properly.
 - j. Store copies of important documents, such as insurance policies, deeds, property records, and birth certificates in a safe place away from your home. Store originals in a fireproof/waterproof box or safe.
 - k. Store essential and unreplaceable items in waterproof unbreakable containers.
 - l. Remove hazardous objects (i.e. mirrors, bookshelves, heavy pots, hanging plants, etc.) from sleeping areas, or just move your bed.
 - m. Install and maintain smoke and carbon monoxide detectors throughout your house and natural or propane gas detectors near your furnace and hot water heater or boiler, and other gas appliances
2. Implement preventive safety measures for you and your family members.
 - a. Become CERT (Community Emergency Response Teams) trained.
 - b. Know where, when, and how to shut off the gas or propane, electricity, and water at main switches and valves. Teach all responsible family members how and when to do this properly. (see "Appendix B").
 - b. Work out a relocation plan detailing how you will get back together if you are separated during an emergency or disaster. Include a family evacuation plan from the residence, from the neighborhood, and/or from the county.
 - 1) Discuss with your family what each person will do in case of an emergency or disaster. Be sure everyone has an assignment.
 - 2) Remember this plan should be flexible regarding time and location of each individual during any time of the day, week, or year. Take in to consideration weather problems.
 - 3) Hold occasional drills so that your family knows what to do during and after an emergency or disaster.
 - 4) Find out what to do and where to go in the case of an evacuation of your community. Learn the shortest and safest routes from your home, work, church, etc. to possible evacuations areas or centers. Take into account that you may not be able to travel in vehicles and may need to travel on foot or bicycle.
 - c. Have a complete one year minimum home storage including water, food, sanitation, medical, and fuel.
 - d. Have a 72-hour kit in an easily accessible place for every member of the home.
 - e. Keep a flashlight with fresh batteries and/or light-stick, "jump-in" clothes (a robe, sweats, or some other kind of quick put on clothes), an extra pair of shoes and prescription glasses (if you use either glasses or contacts) by your bed.
 - f. Put together a complete first aid kit and have every responsible person in your family learn how to use its contents. (see "Appendix E")
 - g. Learn basic first aid and CPR.
 - h. Find out who your block captains are and what your neighborhood emergency and disaster response procedures are.
 - i. Have an out-of-state contact telephone number that everyone can call to check-in with. It is usually easier during a disaster to call out-of-state than call within the disaster area. Remember just check-in do not tie up the phones with lengthy conversations.

General Post Emergency and Disaster Response

1. Check for injuries and administer whatever first aid you can. Do not try to move seriously injured persons unless they are in immediate danger of further serious injury.
2. Families should gather in a safe, predesignated area, to assess the physical and emotional needs of each family member.
3. As soon as possible contact your block captain, either by phone (if working) or by going to the block captain's home in person. Report on the property, physical, and medical conditions of yourself and/or family, whether they are okay, hurt mildly, needing immediate first aid, dead, or missing. Before leaving your home hang the appropriate 8½" x 11" card, flag, or ribbon on your home, as close to the front door as possible or wherever your front door used to be (depending on the condition of your home):
 - Green - all is well
 - Yellow - need help but not immediate or life threatening
 - Red - need immediate help or critical care is needed
 - Black - there is a deceased person(s) here
 - White - there is no one home (use discretionary caution about using this one)
 (The black ribbon or card should be used in conjunction with any of the other three colors.)
4. After you have reported, to your block captain, all able bodied men and women over the age of 12 not caring for small children, hurt household members, elderly, or disabled should report to the EOC (emergency operations center) for area wide assignments. An EOC should be set up with a first aid station to treat non-critical first aid emergencies and other emergency needs.
5. If you have a critical or life-threatening injury report to your block captain and then go directly to the local hospital (if available) or a critical care center in your area for treatment.
6. If your area is required to evacuate, make sure that all living household members evacuate together with members of your block and possibly neighborhood.
7. If your situation is dangerous waiting for family members or block members, leave without them but leave a note where you are going.
8. Turn on a radio or television to get the latest official information from local authorities and the locations of emergency shelters and Red Cross shelters.
9. If you are in a safe location, stay there until authorities say it is okay to leave.
10. If you have evacuated the community, do not return until authorities say it is okay to return.
11. Stay away from disaster areas unless authorities request volunteers. Do not go sightseeing.
12. Drive only when necessary. Roads and bridges may have been weakened and may collapse under the weight of a vehicle.
13. Check your utilities for damages. (see "Appendix B")
 - a. If you smell gas, turn it off at the main valve. Open all windows and doors until the smell is gone. Immediately extinguish all flames or fires and leave the building.
 - b. If you see or suspect that the electricity is shorting out or damaged, turn it off at the main switch or circuit breaker. Do not touch downed power-lines or broken appliances.
 - c. If water pipes are broken, turn the water off at the main valve.
 - d. Before using the toilets, check sewage lines to ensure they are intact.
14. If you need water and do not have any emergency water in your home storage, or it has been destroyed, see the "Emergency Water Procurement" section of this booklet.
15. Begin clean up of affected areas including dangerous breaks and spills cautiously:
 - a. Cover broken glass to prevent injury to other people.
 - b. Take all wet wood furniture outside to dry, but do not place it in direct sunlight.
16. Do not use the telephone unless it is an emergency. It is very easy to jam the telephone lines when everyone is using them at the same time. Check to make sure all of the telephones are hung up.
17. If you are in a tall building, do not use the elevators, even if they seem to be working. Use the stairwells.
18. Do not use fireplaces until the flue or chimney is checked that it is undamaged.
19. Leave buildings that have moderate or heavy damage until they are made safe.

Earthquakes

Facts about Earthquakes

1. Earthquakes are classified as great, major, moderate, or small, based on the intensity that they are registered on the "Richter Scale".
2. Earthquake classifications based on the Richter scale are shown in magnitudes below.

classifications	Richter Scale
small	5.0 - 5.9
moderate	6.0 - 6.9
major	7.0 - 7.9
great	8.0 - 8.9

3. After earthquakes more injuries and deaths are caused by panic, falling objects, landslides, fires, or floods than by the actual earthquake.
4. Earthquakes usually have aftershocks, or small tremors, which are often just as dangerous as the initial earthquake.
5. Earthquakes usually rarely last more than a few seconds.
6. Earthquakes can cause tidal waves in coastal areas.

What to do to *PREPARE FOR* an Earthquake

1. Follow procedures for "General Emergency and Disaster Preparations" (see page 1).

What to do *DURING* an Earthquake

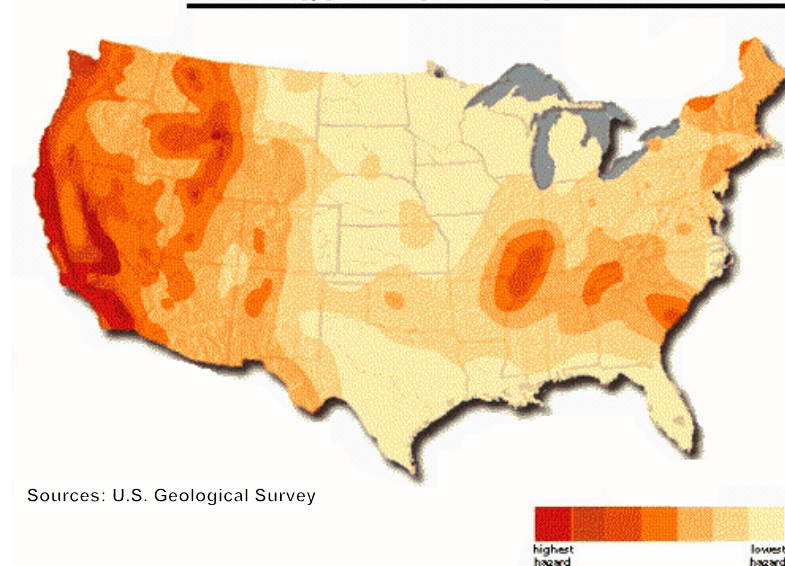
1. *Remain calm!* **Think** through the consequences of all your actions.
2. **Stop, drop, cover, and hold** on to something sturdy, where you are.
3. If you are indoors. . .
 - a. stay indoors.
 - b. take cover under a heavy desk, table, bench, archway, alongside a sturdy wall or in a narrow hallway.
 - c. stay away from and out of windows and all other forms of glass, elevators, stairwells, and doorways with doors, (doors can swing closed, causing injuries).
4. If you are outdoors. . .
 - a. stay outdoors.
 - b. move away from buildings, roofs with clay tiles, antennas, or satellite dishes, large trees, signs, power lines, and any other utility wires or buildings on stilts.
5. If you are in a crowded place. . .
 - a. stay away from overhead walkways and do not rush for a doorway.
 - b. take cover and move away from display shelves holding objects that can fall.
6. If you are in a high-rise building. . .
 - a. get under a sturdy desk or table away from windows and outside walls.
 - b. stay in the building on the same floor. An evacuation may not be necessary.
 - c. be aware that the electricity may go out and that the sprinkler systems and fire alarms may go on.

7. If you are in a moving vehicle. . .
 - a. stop as quickly and safely as possible, and stay in your vehicle.
 - b. try not to stop near power-lines, bridges, tall fences, or gas stations.
 - c. watch for road and bridge damage before proceeding.
8. Hold on to small children and pets. They scare easily and may try to run into dangerous areas or situations.
9. Do not use any open flame during or immediately after an earthquake in case there is a gas leak.

What to do *AFTER* an Earthquake

1. Prepare for aftershocks.
2. Follow procedures for "General Post Emergency and Disaster Response" (see page 2).

EARTHQUAKE SHAKING HAZARD MAP



Extreme Winter Storms

Facts about Extreme Winter Storms

1. Blocked roads and downed power lines can cause isolation and severe traffic problems.
2. Types of Winter Storm Weather
 - a. Freezing Rain - rain that freezes when it hits the ground, creating a coating of ice on roads and walkways as well as everything else.
 - b. Sleet - rain that turns to ice pellets before reaching the ground. Sleet also causes roads to freeze and become slippery.
 - c. Blizzard - falling or blowing snow accompanied by winds 35 miles per hour or more with less than 500 feet of visibility.
3. Types of Winter Storm Warnings
 - a. Winter Weather Advisory - cold, ice, and snow are expected.
 - b. Winter Storm Watch - severe winter weather, such as heavy snow or ice, is possible within the next day or two.
 - c. Winter Storm Warning - severe winter conditions have begun or are about to begin.
 - d. Blizzard Warning - Heavy snow and strong winds will produce a blinding snow, near zero visibility, deep drifts, and life-threatening wind chill.
 - e. Frost/Freeze Warning - below freezing temperatures are expected.

What to do *PREPARE FOR* the Winter Season

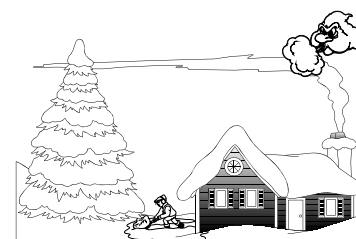
1. Always listen to the latest Weather Service warnings and bulletins on the radio and television. See "Appendix A" for official emergency radio stations.
2. Prepare for possible isolation.
 - a. If you use diesel oil as heating fuel or use propane to heat your home, always have a full tank. When winter storms set in, it is not always easy or possible for fuel trucks to get to your home.
 - b. Have emergency heating fuel and equipment enough to heat at least one room of your home for at least several weeks. If your furnace uses gas or electricity, these utilities may be cut off.
 - c. If you have a fireplace, keep a good supply of dry, seasoned firewood or coal.
 - d. Have a complete home storage program in case you get snowed in.
3. Winterize your home.
 - a. Insulate walls, sub-floors, and attics properly. Outside walls should have an insulation value of at least R-11. For attics the recommended minimum value is R-32.
 - b. Caulk and weatherstrip doors and windows and cracks.
 - c. Install storm windows or cover windows with plastic.
4. If you must to travel . . .
 - a. Check road conditions and alternate routes before traveling.
 - b. Be sure your vehicle is operating properly and has sufficient gas, antifreeze, snow-tires, and tires chains.
 - c. Winterize your vehicles: change the antifreeze, put new all season or snow tires on the vehicles, and check your windshield wiper blades.
 - d. Inform others of your schedule or traveling plans.

What to do *DURING* an Extreme Winter Storm

1. If you go outdoors, dress appropriately.
 - a. Wear several layers of loose-fitting, light-weight, warm clothing. The outer garments should be tightly woven and water repellent to guard against wind and water. Even though the temperature is warm, the wind chill factor may be several degrees lower.
 - b. Mittens allow your fingers to be close together and keep hands warmer than gloves.
 - c. Wear a hat. Most body heat is lost through the top of the head.
 - d. Cover your mouth with a scarf to protect your lungs from the cold air.
 - e. If you have to go outdoors and feel fatigued, seek warm shelter immediately.
 - f. Be especially careful when shoveling walks and driveways in the winter time. Cold temperatures and overexertion can lead to heart attacks.
2. Watch for signs of frostbite: a loss of feeling and a white, pale, waxy or flushed appearance

in fingers, toes, ear lobes, or the tip of the nose.

3. Watch for signs of hypothermia: uncontrollable shivering, memory loss, disorientation, incoherence, slurred speech, drowsiness, and exhaustion.
4. Driving Tips:
 - a. Never travel alone.
 - b. If your vehicle gets stuck or if you get trapped in your vehicle during a blizzard:
 - Stay in your vehicle until the blizzard is over unless you can see a building close by where you know you can take shelter. Blowing snow can distort distances.
 - Keep fresh air in your vehicle by keeping a downwind window partially open (1 inch) to allow circulation of air. Wet, freezing wind can very easily seal you in your vehicle and suffocate you.
 - Run the engine and heater about ten minutes each hour to keep warm. If possible, keep snow clear from the exhaust pipe.
 - Exercise a little, clap your hands, move your arms and legs, etc.
 - In extreme cold, use road maps, seat covers and padding, newspapers, or floor mats for insulation. Huddle with passengers and use your coat as a blanket. Shared body heat is more effective than individual. Use shared bodily warmth.
 - Try not to sleep. You may freeze to death. If you have to, take turns sleeping. One person should be awake at all times to watch for rescuers.
 - Be careful not to use up battery power. Balance electrical energy with needs. Do not use the radio unless necessary. At night, however, leave the dome light or a light stick on inside so rescuers can find your vehicle.
 - Turn on your hazard flashers or light flares.
 - If stranded in a remote area, spread a large colored cloth over the snow or tie one to the antenna of the vehicle to attract attention of airborne rescue units.
 - c. Carry a "winter vehicle kit." This should include but not limited to the following:
 - shovel
 - windshield scraper
 - battery-powered radio
 - extra batteries
 - flashlight and/or light sticks
 - metallic space blanket
 - emergency flares
 - water for drinking and for vehicle
 - high energy snack food such as hard tack candy or granola bars
 - non toxic emergency heat source such as Sterno fuel and matches
 - hot chocolate, soup, coffee packets
 - metal cup for heating above items
 - extra blanket or sleeping bag
 - tow chain or rope
 - jumper cables
 - road maps
 - hat and gloves
 - blanket or sleeping bag
5. If using a kerosene heater, maintain proper ventilation. Refuel the heater outside at least three feet away from flammable objects. It is best to use kerosene heaters and stove only inside a fireplace if you insist on using them indoors. Propane or butane are actually safer options.
6. If you should loose power or heating, be sure to open a faucet in the house so that the water can drip. This will help keep your pipes from freezing.
7. Do *not* do things that can make you colder such as: eating snow, drinking cold water, smoking, drinking alcohol, physical exercise that will make you sweat, or sitting, sleeping or laying on cold objects like: snow, metal, cement, or rocks.
8. Add extra vitamin-C and iron to your diet.



		Wind Speed			
t e m p e r a t u r e		10	20	30	
	40	28	18	13	
	30	16	4	-2	
	20	4	-10	-18	
	10	-9	-25	-38	
	0	-21	-39	-48	
	-10	-33	-53	-63	

Wind Chill Factor Chart

Floods And Mudslides

Facts About Floods and Mudslides

1. General
 - a. Flood waters even only a few inches deep can still sweep you off your feet.
 - b. Flash floods can develop into raging currents in a matter of a few minutes without warning or any visible sign of rainfall.
 - c. Flash floods can carry debris, mud, and rocks that are potentially dangerous.
 - d. Flooding can occur in small streams, gullies, creeks, culverts, dry streambeds, and low-lying ground that appear to be harmless in dry weather.
 - e. You do not have to live close to water to become a flood victim.
2. Types of Flood Warnings
 - a. Flood Watch - Flooding is possible.
 - b. Flash Flood Watch - Flash flooding is possible without warning. Move to higher ground.
 - c. Flood Warning - Flooding is occurring or will occur soon.
 - d. Flash Flood Warning - A flash flood is occurring. Seek higher ground on foot immediately.
 - e. Urban and Small Stream Advisory - Flooding of small streams, streets and low-lying areas is occurring. Stay clear of those areas.

What to do to *PREPARE FOR* a Flood or a Mudslide

1. Follow procedures for "General Emergency and Disaster Preparations" (see page 1).
2. Consider purchasing flood insurance if you live in a flood-prone area.

When You Receive a Flood Warning

1. Keep a battery-powered radio tuned to local emergency radio stations. See Appendix A of this booklet for a listing of emergency radio stations in your area.
2. If you are officially told to evacuate, follow the instructions the authorities give you.
3. If you do not have to evacuate, fill all available containers with water. The water supply after a flood is usually contaminated.
4. Bring outdoor yard equipment indoors or tie them down. Move essential items and expensive equipment to the upper floors of your home.
5. Prepare your windows: board them up, close storm shutters, or tape a large "X" on them to help prevent them from shattering in case they break.

What to do *DURING* a Flood or a Mudslide

1. **Remain calm! Think** through the consequences of all your actions.
2. If you are indoors . . .
 - a. stay indoors. Your home or building can be a good deflector of water and mud if necessary.
 - b. go to the highest level or the roof of the building.
 - c. do not leave your usual locale (home, work, school, etc.) because rescue crews may come looking for you.
 - d. stay away from windows and all other forms of glass.
 - e. if deep flooding is likely, allow flood waters to flow freely into your home's basement. Fill the basement yourself with clean water if you feel it will flood anyway. This will equalize the pressure on the outside of the basement walls and floors and help prevent structural damage to your home's foundation.

3. If you are driving a vehicle. . .
 - a. do not drive over flooded roads or bridges. Stay clear of swollen rivers and streams.
 - b. if your vehicle stalls in a flooded or a possible flood area, abandon the vehicle and head for higher ground.
4. If you are on foot outside. . .
 - a. head for higher ground.
 - b. move away from power lines and other utility wire systems.
 - c. stay away from flood waters. They could be contaminated.
 - d. if you must walk through a flooded area, walk where the water is not moving. Use a stick to check the firmness of the ground in front of you.
5. Place protective materials around your house so that they deflect on coming flood waters and debris and not dam or block them.
6. Hold on to small children and small pets. They scare easily and may try to run into dangerous areas or situations.

What to do *AFTER* a Flood or a Mudslide

1. Follow procedures for "General Post Emergency and Disaster Response" (see page 2).
2. Do not use foods or water that may have had contact with flood waters. They may be contaminated.
3. Before entering a flood or mud damaged building, check for structural damage.
4. Stay away from flood waters.
 - a. They may be contaminated by oil, gasoline, or raw sewage.
 - b. The water may be electrically charged from underground or downed power lines.
 - c. Moving water only six inches deep can knock you off your feet.
 - d. Wash your hands with soap & clean water if you come in contact with flood waters.
5. Be aware of where flood waters have receded. Drive only when necessary. Roads may have been weakened and may collapse under the weight of a vehicle.



Heat Waves

What to do *DURING* a Heat Wave

1. Stay indoors if possible.
2. Do not dehydrate. Drink lots of liquids and take a salt tablet if you think you are sweating too much (unless you are on a salt-restricted diet.)
3. Slow down. High temperatures and humidity sap your body of its energy and put a strain on your heart.
4. Do not overeat. A lot of food in your stomach takes even more energy to digest.
5. Dress in light-weight, light-colored clothing.
6. Make good use of fans and air-conditioners.

Hurricanes

Facts About Hurricanes

- Hurricanes are tropical cyclones with torrential rains and sustained winds of at least 74 miles per hour that blow in a counter-clockwise direction around a center "eye." Winds can exceed 155 mph.
- A storm surge is a huge wall of water that crashes into the coastline as the hurricane approaches the coast.
- Hurricanes also can produce tornadoes and cause severe flooding from heavy rains.
- Classifications of Hurricanes
 - Category One (minimal) - winds 74-95 mph
 - Category Two (moderate) - winds 96-110 mph
 - Category Three (extensive) - winds 111-130 mph
 - Category Four (extreme) - winds 131-155 mph
 - Category Five (catastrophic) - winds greater than 155 mph
- Types of Warnings
 - Hurricane Watch - A hurricane is possible within 36 hours.
 - Hurricane Warning - A hurricane is expected within 24 hours.



What to do to *PREPARE FOR* a Hurricane

- Follow procedures for "General Emergency and Disaster Preparations" (see page 1).
- Have your home inspected for compliance with local building codes. Many roofs destroyed by hurricanes were destroyed because they did not meet local building codes.
- If you live in a hurricane-prone area, you may want to consider adding hurricane insurance to your home-owners policy.

What to do *DURING* a Hurricane

- If you have a boat, moor it securely and then go to a safe place on land.
- Protect windows by boarding them up, closing storm shutters, and taping a large "X" on them to prevent them from shattering in case they break.
- Prepare to evacuate.
- If you are not told to evacuate, stay indoors during the hurricane and away from windows and upper floors.
- Do not use the telephone unless it is an emergency. It is very easy to jam the telephone lines when everyone is using them at the same time. Check to make sure all of the telephones are hung up.

What to do *AFTER* a Hurricane

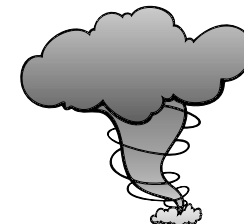
- Follow procedures for "General Post Emergency and Disaster Response" (see page 2).
- Stay away from flood waters caused by hurricanes.
 - They may be contaminated by oil, gasoline or raw sewage.
 - The water may be electrically charged from underground or downed power lines.
 - Moving water only six inches deep can knock you off your feet.
 - Wash your hands with soap and clean water if you come in contact with flood waters.

Tornadoes

Facts About Tornadoes

- Produced by powerful thunderstorms, tornadoes are by far the most violent type of storm. They can uproot trees and buildings and turn harmless everyday objects into deadly missiles.
- Tornadoes appear as rotating, funnel-shaped clouds that extend to the ground with whirling winds that can reach 260 miles per hour.
- Damage can extend in a one-mile-wide path for as far as 50 miles.
- Types of Tornado Warnings
 - Tornado Watch - Tornadoes are possible.
 - Tornado Warning - A tornado has been sighted. Take shelter immediately.
- Tornadoes are categorized according to damage and wind-speed.

category	wind-speed (miles per hour)	damage
F0	up to 72	light
F1	73 - 112	moderate
F2	113 - 157	considerable
F3	158 - 206	severe
F4	207 - 260	devastating
F5	more than 260	catastrophic



What to do to *PREPARE FOR* a Tornado

- Follow procedures for "General Emergency and Disaster Preparations" (see page 1).
- Determine where you will seek shelter, such as a basement or storm cellar. If an underground shelter is not available, identify an interior room or hallway on the lowest floor.

What to do *DURING* A Tornado

- Seek shelter immediately.
 - House or Small Building - go to the basement or cellar. If there is not a basement, go to an interior room on the lower level (closet, an interior hallway). Get under a sturdy table, hold on, and protect your head.
 - School, Nursing Home, Hospital, Factory, or Shopping Center - go to predesignated shelter areas. Interior hallways on the lowest floor are usually safest. Stay away from windows, display cases, and open spaces.
 - High-rise Building - go to a small, interior room or hallway on the lowest floor possible.
 - Vehicle, Trailer, Motor-Home or Mobile-Home - get out immediately and go to a more substantial structure. If in a vehicle, do not attempt to out-drive a tornado. They are erratic and move swiftly.
 - No Shelter Nearby - lie face down flat in the nearest ditch, ravine, or culvert with your hands shielding your head.
- Stay away from windows, doors, outside walls, tall furniture, and anything that can be thrown around.

What to do *AFTER* A Tornado

- Follow procedures for "General Post Emergency and Disaster Response" (see page 2).

Lightning



Facts About Lightning

- Lightning is an underrated hazard that occurs during thunderstorms, tornadoes, and hurricanes. When thunderstorms threaten your area, get inside a home, large building, or vehicle.
- If inside a building. . .
 - avoid bathtubs, water faucets, sinks, and other water sources. Metal pipes can conduct electricity from lightning strike.
 - avoid using the telephone except for emergencies.
- If outside. . .
 - if in a wooded area, seek shelter in a low area under a thick growth of small trees.
 - if in a open area, go to a low place such as a ravine, valley, or culvert. Be alert for flash floods.
 - do not stand under isolated trees in open areas. They are the most likely to be hit. If you feel your hair stand on end (which indicates that lightning is about to strike), drop to your knees. Bend forward, and put your hands on your knees. Do not lie flat on the ground.
 - do not stand on hilltops, in open fields, on golf courses, on beaches, or in a boat on the water. Stay low.
 - avoid isolated sheds or other small structures in open areas.
 - get away from and out of open water.
 - get away from anything metal: tractors, farm equipment, motorcycles, golf carts, bicycles, utility poles, umbrellas, boats, etc.
 - stay away from wire fences, clotheslines, metal pipes, rails, and other metallic paths which could carry lightning to you from some distance away.
- Surge protectors and lightning rods are always advisable for electric and electronic equipment if not unplugging them together.

Tsunamis

Facts About Tsunamis

- A tsunami is a series of waves that may be dangerous and destructive.
- It is the large volume and the swiftness of the water that does the damage no matter how tall the wave.

What to do to *PREPARE FOR* a Tsunami

- Follow procedures for "General Emergency and Disaster Preparations" (see page 1).
- Determine where you will seek shelter at higher ground.
- Know what tsunami warnings are and what to do when given.
- Pay attention to your surroundings and all warnings given.
- Find out if your home is in a danger area.
- Know the height of your street above sea level and the distance of your street from the coast. Evacuation orders may be based on these numbers.
- Because tsunamis can be caused by an underwater disturbance or an earthquake, people living along the coast should consider an earthquake or a sizable ground rumbling as a warning signal. A noticeable rapid rise or fall in coastal waters is also a sign that a tsunami is possibly approaching.
- Make sure all family members know how to respond to a tsunami.

What to do *DURING* A Tsunami

- Seek shelter immediately at higher ground.
- When you hear a tsunami warning, move at once to higher ground and stay there until local authorities say it is safe to return home.
- Stay away from the beach. Never go down to the beach to watch a tsunami come in. If you can see the wave you are too close to escape it.

Fires

Facts about Fires

- Fires are classified under four different fuels that can burn.
 - Class A Ordinary combustibles such as paper, cloth, wood, rubber, plastics, and many metals.
 - Class B Flammable liquids (i.e., oils, gasoline, kitchen grease, paints, solvents, etc.) and combustible liquids (i.e. charcoal, lighter, kerosene, diesel fuel, etc.). These fuels burn only at the surface because oxygen cannot penetrate the depths of the fluid.
 - Class C Electrical or energized equipment (i.e., wiring, fuse boxes, motors, power tools, appliances, televisions, etc.).
 - Class D Combustible metals (i.e., magnesium and titanium).
- To extinguish any of the above mentioned fires you need the right extinguishing agent!

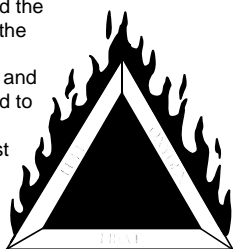
type of fire		
A ordinary materials	dry chemical	breaks chain reaction
B flammable liquids	foam or CO ₂	removes oxygen
C electrical equipment	dry chemical or Halon	break chain reaction
D combustible metals	CO ₂	removes oxygen
	dry chemical or Halon	breaks chain reaction
	special agents	usually remove the oxygen
	Do not attempt this. Let the professionals handle this.	

- It is extremely important to identify the correct type of extinguishing agent for the correct type of fire.
- There are five main types of fire extinguishers: water, dry chemical, Halon, carbon dioxide and foam.
- Fire extinguishers should be rated and approved by the State Fire Marshal and Underwriters' Laboratories. They are rated according to their effectiveness on different classes of fires and their relative strength and capacity.
- Hazardous materials cause a large threat in putting out a fire. Hazardous materials are any materials that explode or are easily ignited, corrode other materials, react adversely with water, are unstable when exposed to heat or shock, or are otherwise toxic to humans, animals, or the environment.
- Hazardous materials include explosives, oxidizers, radioactive materials, corrosives, nonflammable gas, poisons, and poisonous gases, and flammable gas and liquids.
- Hazardous materials in transit are required by law to be identified on all four sides of the vehicle by Department of Transportation (DOT), United Nations (UN), or North American (NA) diamond shaped warning placards. Each placard includes a color, symbol, name, and number, each of which indicated the type of hazard.

- Stored hazardous materials are identified by the National Fire Protection Association (NFPA) diamond system of placards. These placards are located on the outside of buildings at the entrance to the storage area.

National
Fire
Protection
Association
704
Diamond
warning
placard

10. If you see one of these diamond shaped placards near a fire treat it as a stop sign and do not attempt to go near the fire to extinguish it or even render assistance. Let the professionals handle the situation.
11. Smoke contains harmful agents that can poison you or sear your lungs.
12. Fire requires three elements:
 - a. Heat The temperature at which a material produces vapor, and the temperature at which vapors will burn. Vapors will self ignite if the temperature is hot enough.
 - b. Fuel The fuel for a fire may be a solid, liquid, or gas. The type and quantity of the fuel will determine which method should be used to extinguish the fire.
 - c. Oxygen Fires will burn vigorously in any atmosphere of at least twenty percent oxygen. Without oxygen, fuel could be heated until entirely vaporized, and still not burn.
13. To put out a fire you need to remove the fuel source. Remove one or more of the three main elements and the fire will die. Remember remove it completely not just move it to one side because given the right circumstance it could ignite again.



What to do to *HELP PREVENT AND PREPARE FOR* a Fire

1. Follow procedures for "General Emergency and Disaster Preparations" (see page 1).
2. Locate potential fire hazards and reduce their likelihood.
 - a. Electrical hazards include:
 1. The electrical octopus, avoid overloading electrical outlets.
 2. Do not run electrical cords under carpets or tape down electrical cords in high traffic areas.
 3. Replace broken or frayed electrical cords immediately.
 4. Maintain electrical appliances regularly. Remove or replace malfunctioning appliances.
 - b. Natural gas hazards include:
 1. asphyxiants which rob the body of oxygen.
 2. It is explosive. Leaking gas pipes, valves, and connections can easily be ignited.
 - c. Flammable liquid hazards include:
 1. many household products like gasoline, charcoal lighter, paint thinners, paint removers, air fresheners, deodorants, hair sprays, insecticides, furniture polish and other aerosols.



What to do *DURING* a Fire

1. *Remain calm!* **Think** through the consequences of all your actions.
2. Slowly head for the nearest exit.
3. Before opening any door feel the door to see if it is hot. If it is, there is most likely a fire behind it, so do NOT open it.
4. If you see or smell smoke stay low to the floor. That is where the purer air will be because the heat and smoke will raise toward to top of the room.
5. If you are trapped in a room filled with smoke and there is water in the room, dampen (do not soak) a towel, cloth, shirt, etc., and place it over your mouth and nose. The damp cloth will act as a temporary air filter.
6. Close all doors behind you to cut off air movement to the fire, but do NOT lock them. Someone else may need to use them.
7. If you are on the ground floor, try escaping through a window if all exits are inaccessible.
8. If you are trapped on an upper floor, do NOT try jumping out of a window. Rather, try to find something to use as a rope or ladder, such as knotting bed sheets or blankets together. Remember the sheet bend knot.
9. Turn off fans, air-conditioners, heating and cooling units.
10. Do not use elevators even if they appear to be working. Elevator shafts often act as chimney stacks for fires on lower floors.
11. If you think you can put out a small fire use whatever resources you might have on hand (i.e. fire extinguishers, wet stand-pipes, water hoses, buckets of water or sand, blankets, water from a swimming pool or spa, etc.).
 - a. Always keep you back towards your escape route and never towards the fire.
 - b. Remember when using waters hoses connected to wet stand-pipes you need to unravel the entire hose before tuning on the water. These water hoses are normally about 20 -40 feet long and can deliver up to 125 gallons of water per minute, which is enough to pin any unwary person against the wall.
 - c. When fighting a fire always chase it back to it's origination while maintaining a safe distance. Work from unburned to burned.
 - d. Always have two ways to exit a fire area or any disaster scene.
 - e. Always work using a buddy system. Do not fight fires alone.
 - f. Use safety equipment (helmet, goggles, dust mask, leather work gloves, heavy shoes, and common sense, etc.)
 - g. Never get too close to a fire.
 - h. If you cannot fight the fire get out!
 - i. Shut off all utilities that might fuel the fire, if it is safe to do so.
 - j. Never enter a basement to turn off any utility.
12. If you or your clothing get caught on fire
STOP, DROP and ROLL to put out the flames.



Biological and Chemical Agent Dispersion

Facts About Biological and Chemical Agents

1. Nerve gas and many other deadly gases cannot be sensed.
2. Some of the symptoms of nerve gas poisoning are as follows:
 - A feeling of tightness or constriction in the chest.
 - The onset of an unexplained runny nose.
 - Small, pin-point size pupils.
 - A drawing, slightly painful sensation in the eyes or unexplained dim vision.
 - Difficulty breathing.
 - Increased salivation and excessive sweating.
 - Nausea, vomiting, and abdominal cramps.
 - Generalized muscular twitching, jerking, and staggering.
 - Headaches, drowsiness, a sense of confusion, and a possible coma.
 - Death.
3. Biological agents are organisms or toxins that can kill or incapacitate people, livestock, and crops. They can be dispersed by aerosols, animal carriers, and food and water contamination.
4. Chemical agents are poisonous gases, liquids, or solids that have toxic effects on people, animals, or plants. They can be released by bombs, sprayed by aircraft and boats, and used to contaminate air, food, and water supplies.
5. In the event of a biological or chemical attack, you might be instructed to either take immediate shelter where you are and seal the premises or evacuate the area immediately. Follow the Instructions !!!
6. Become aware of the DOT warning placards used for in-transit hazardous materials



What to do *DURING* a Biological or Chemical Dispersion

1. What you should do is to evacuate the area for the amount of time that the authorities say. If an official evacuation is declared, **LEAVE IMMEDIATELY !**
2. In the event of an industrial accident or terrorist attack or other similar problem a broadcast might be made on the EAS (Emergency Alert System) following a general alert signal. It will be broadcasted on the radio, television, loudspeakers, and/or wide area broadcast systems. An example message would be as such: "Attention! Attention! A threat of (nerve gas contamination, radioactive contamination, or whatever the threat is) exists!" The direction of the cloud and the estimated time of arrival and path will be announced along with defensive action that each citizen should take.
3. If you have immediate access to a gas mask or scuba or scba equipment, use it and then proceed to evacuate. If it is not immediately available do not go looking for it. It will be to late. If you can wear you PPE (Personal Protective Equipment) which includes: long-sleeved shirt, long pants, gloves, and a gas mask, so you can be as protected as much as possible.
4. Take your 72-hour kit. Lock your home or office.
5. Use travel routes specified by local authorities—don't use shortcuts because certain areas may be impassable or dangerous.
6. Listen to local authorities. Your local authorities will provide you with the most accurate information specific to an event in your area. Staying tuned to local radio and television, and following their instructions is your safest choice.
7. There should be **no** reason to stay behind when an official evacuation order is announced. But if the situation arises that you cannot evacuate, or you are asked to "**shelter in place**" the following are listed some precautions that can be made. If you are advised by local officials to "**shelter in place**".

In-Place Sheltering

Authorities have long recognized that it would be extremely difficult to evacuate whole counties in the event of a disaster such as a bio-chemical hazard/incident or chemical spill. The population is too great with too few exit routes. Evacuation is preferable when possible, but if it isn't an option, people can do what is called "in-place sheltering" with some simple preparation. This means that a person sets up a shelter in their own home until the air-borne hazard passes, which could be in several hours or many days.



"In place sheltering" involves two types of sheltering.

- Sealing yourself indoors
- Quarantining yourself indoors

Listen for OFFICIAL information to see what kind you need to do.

To seal yourself indoors there are some special considerations to take other than just locking the doors. IN ADVANCE, select a room in your home where you would do the in-place sheltering. An upstairs and interior room is best, as some chemical hazards are heavier than air and travel along the ground and will enter basement shelters. Then make a list and keep it handy of what you will keep in that room or put there quickly if you have to shelter there. You will need to have:

necessary:

- ☐ 200 sq. ft. (1 roll) plastic sheeting (4 mill is better than 3 mill but you can use down to 2 mil)
- ☐ 1 or 2 rolls of duct tape
- ☐ a battery powered radio or TV to check for OFFICIAL news
- ☐ important personal medications for you and your family
- ☐ a flashlight or light stick - incase you loose power - do not use candles or lanterns that burn valuable oxygen

optional:

- ☐ a port-a-potty, (5 gal. bucket lined with heavy duty lawn/leaf garbage bags and some RV/holding tank toilet chemical or a pail of dirt and a lid or plastic snap-on toilet seat.
- ☐ books, games, or other diversions (do not count on videos you will be covering your outlets)
- ☐ a FRS and/or ham radio to get information from local authorities - this does not displace official information sources - **REMEMBER** rumors are not official information.
- ☐ a telephone or cell phone
- ☐ water or something to drink
- ☐ food to munch on but not salty foods

It's better to have this planned in advance and readily accessible than to have to think it up and find it on the spot. Depending on the distance you are from the bio-chemical hazard/incident you could have as little as 5 minutes and as much time as an hour but not much more than that. Hazardous fumes, vapors and smoke follow the wind patterns. In most areas this is 2 - 3 miles per hour except around canyons and seashores then it can be anywhere from 2 to 40 miles per hour. Most people can walk 2 - 3 miles per hour. SO, if you are not in the immediate path of danger you will have time to get to a place and shelter there. So run - don't walk. To calculate where a good place is, figure any where you can normally, walk to in 5 minutes, realizing that in the event of an incident panic and chaos set in. You will need to plan on been "sealed in" your place for a minimum ONE hour in the absence of official information or longer. Mother nature does a good job of cleaning up chemical hazards/incidents using normal wind patterns and sunlight. This means that most of the dangerous levels of toxic problems sealed against for about an hour.

NOTE: You may still need to stay quarantined indoors for a much longer time just not "sealed in". Our homes cannot provide us with sufficient oxygen to seal ourselves in for long periods of time. You WILL die of asphyxiation if you try this, so don't. Besides it is next to impossible to seal an entire house in a reasonable amount of time, so choose a single room large enough with oxygen for all the intended occupants. Side note: full size dogs use twice the amount of oxygen as a full grown adult so you determine if Fido is worth saving.

- First: Turn on a radio or TV for official information.
- Second: You will need to turn off all mechanical or electrical operated air intake or air exchange to your home, business, school, or church, etc., namely your furnace (and gas main shut off) or air conditioner, chimney flue dampers and any fans. Do not take the time to get on your roof to cover vents and/or chimney openings.
- Third: Close, lock and secure your home (windows, doors, animal entries, etc.).
- Fourth:
1. Gather your family and any pets you want to save and the listed supplies into your selected room, and using the plastic sheeting and duct tape, make the room as air-tight as possible.
 2. Wet some (soaking wet) towels and jam them in the cracks under the doors. Where possible select a room large enough to maximized the amount of oxygen you will have until it is safe to come out.
 3. Cover over windows, heat vents, light switches, power sockets, fire places, baseboard gaps, light fixtures, and entire door frames with duct tape and/or plastic. It is best to have these pre-cut, well in advance to cover every opening. You can in advance, caulk some cracks and small air leaks into that room.
 4. *To determine oxygen needs and occupancy have everyone in the room in a standing position stretch their arms out fully. If they can do this with out touching anyone else's outstretched arms/fingers there is enough oxygen for one hour. (i.e. a 8 foot by 6 foot typical bathroom holds enough oxygen for 2 adults and one child under 6 years of age.*
 5. Then limit activity and oxygen usage.
 6. If the power goes out do not use lanterns or candles. This uses valuable oxygen. Light sticks or flashlights are a better source of light.
 7. Stay inside you sealed shelter until you are told, *officially*, it is safe to leave. Realize you may still need to stay indoors, quarantined, for a longer amount of time. In the absence of official information you should leave your shelter after one hours time if you have only allotted yourself an hours worth of air.

note: *Sheltering in place after a nuclear incident is different see the "Nuclear Disaster and Warfare" section of this booklet for more details.*

Quarantining yourself includes:

1. Gather your family to your home and lock all doors and window.
2. Turn on a radio or TV for official information.
3. Once you have locked yourself in do NOT open the door until you get OFFICIAL information that it is safe to leave.
4. You must guard yourself from ALL contact from all people *and* animals and some insects that have become infected. This may include those near and dear to you. Yo may have to put down your pets!

note: *Quarantining yourself does not include or involve sealing yourself in with any kind of duct tape or plastic.*

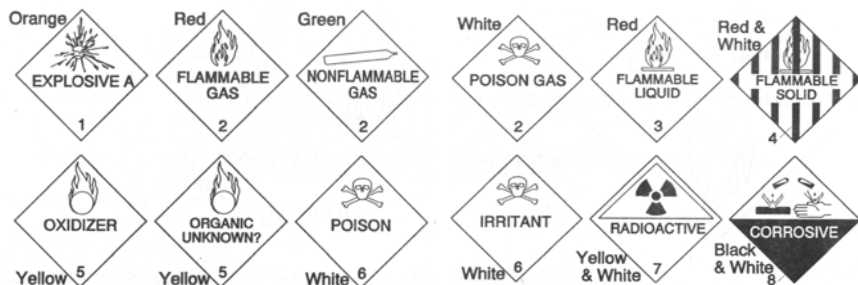
WHAT To Do *AFTER* a Biological or Chemical Dispersion

1. Follow the instructions of local and government authorities !
2. If you evacuated, do not return home until it is determined safe to do so.
3. If you feel or suspect you have been affected by the situation contact the local hospital to see if they are receiving patients, if so go get help. Some biological poisonings will require quarantine. If you are turned away by a hospital or treatment center quarantine yourself in your home for the time told to you by the authorities.
4. If you find that others have been affected you may still want to quarantine yourself for 2 weeks or longer depending on the extent of the problem.

common other biological/chemical agents			
name	suggested quarantine	symptoms / comments	treatment
Aflatoxin	2 days	liver cancer	
Anthrax (bacterium)	14 days	spores - malaise, fatigue, cough, respiratory distress, fever, cyanosis, dyspnea, diaphoresis, stridor, toxemia	antibiotics Ciprofloxacin tetracycline
Botulinum (toxin)	0 days	weakness, dizziness, dry mouth nausea, vomiting, difficulty swallowing and talking, blurred vision, drooping eyelids, progressive paralysis, cyanosis, respiratory distress	oxygen, antitoxin
Brucellosis	2 days	joint and muscle dysfunction	
Chlorine	2 days	eye and skin burns on contact, broncho-spasm, cyanosis	treat for burns, CPR artificial ventilation
Cholera	6 -7 days	toxemia, vomiting, diarrhea, dehydration, shock	re-hydration tetracycline erythromycin
Clostridium	2 days	Perfrigems - gaseous rotting of the flesh	
Plague (bacterium)	90-100 days	bubonic, septicemia, pneumonic, high fever, chills, toxemia, headache, pneumonia, hemoptysis, malaise, meningitis, dyspnea, stridor, cyanosis, respiratory failure, death	antibiotic, streptomycin doxycycline Chloramphenicol Ciprofloxacin
Q-Fever	0 days	fever, chills, headache, severe sweats, malaise, fatigue, skin rash, respiratory problems	tetracycline doxycycline
Ricin (toxin)	0 days	fever, nausea, vomiting, bloody diarrhea, abdominal cramps, difficulty breathing, kidney failure, circulatory collapse - paralysis	therapy for acute lung injury and pulmonary edema, activated charcoal, fluids, gastric lavage
Salmonella	2 days	diarrheal illness, headache, abdominal pain, nausea	re-hydration Ciprofloxacin
Small Pox (virus)	30 days	malaise, fever chills, vomiting, headache, 2-3 days later: flat red spots change to pus filled lesions on skin and mouth and throat	intravenous hydration, nutrition, pain control, antiviral drugs
Staphylococcal Enterotoxin B	2 days	SEB - fever, chills, shortness of breath, nausea, vomiting	artificial ventilation
Tularemia (bacterium)	30 days	septicemia, pneumonic, high fever, chills, headache, hemoptysis, malaise, meningitis, dyspnea, stridor, cyanosis, respiratory failure, death	antibiotics

common nerve, blood, choking and blister agents		
chemical	comments	treatment
GA	Tabun	atropine, pralidoxime, CPR. remove victim from area and wash entire body especially hair with soapy water
GB	Sarin - colorless liquid - evaporates quickly	atropine, pralidoxime, CPR, remove victim from area and wash entire body especially hair with soapy water
GD	Soman	atropine, pralidoxime, CPR, remove victim from area and wash entire body especially hair with soapy water
VX	thick oil like liquid	atropine, pralidoxime, CPR, remove victim from area and wash entire body especially hair with soapy water
H	distilled nitrogen mustard gas - blistering and burning of eyes and skin	irrigation of eyes and skin, CPR
HD, HS	mustard gas - blistering and burning of eyes and skin	irrigation of eyes and skin, CPR
HT	phosgene gas - Carbonyl Chloride	irrigation of eyes and skin, CPR
AC	Hydrogen Cyanide - lighter than air - asphyxiation	CPR, artificial ventilation
CK	Cyanogen Chloride - heavier than air - asphyxiation	CPR, artificial ventilation
MDI	Methyl Isocyanate - heavier than air - respiratory distress, skin rash, eye irritation	irrigation of eyes and skin, induce vomiting

DOT Hazardous Materials Warning Placards



Protecting Yourself From Terrorism

BEFORE

Learn about the nature of terrorism and how to protect yourself.

- Terrorists often choose targets that offer little danger to themselves and areas with relatively easy public access.
- Terrorists look for visible targets where they can avoid detection before or after an attack such as airports, large cities, major events, resorts, and high-profile landmarks.
- Learn about the different types of terrorist weapons including explosives, kidnapping, highjackings, arson, shootings, and nuclear, biological and chemical weapons.
- Prepare to deal with a terrorist incident by adapting many of the same techniques used to prepare for other crises.
- Be alert and aware of the surrounding area. The very nature of terrorism suggests that there may be little or no warning.
- Take precautions when traveling. Be aware of conspicuous or unusual behavior. Do not accept packages from strangers. Do not leave luggage unattended.
- Learn where emergency exits are located. Think ahead about how to evacuate a building, subway or congested public area in a hurry. Learn where staircases are located.
- Notice your immediate surroundings. Be aware of heavy or breakable objects that could move, fall or break in an explosion.

Preparing for a Building Explosion

The use of explosives by terrorists can result in collapsed buildings and fires. People who live or work in a multi-level building can do the following:

- Review emergency evacuation procedures. Know where fire exits are located, in a dark and dusty atmosphere.
- Keep fire extinguishers in working order. Know where they are located, and how to use them. Learn first aid and become CERT trained.
- Keep the following items in a designated place on each floor of the building:
 - portable, battery-operated am/fm radio and extra batteries
 - several flashlights and extra batteries and/or light sticks
 - first aid kit and manual
 - several hard hats, work gloves, whistle, and dust masks
 - fluorescent tape to rope off dangerous areas
 - extra water
 - a gas mask with extra filters

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. Notify the police and the building management.

After you've been notified of a bomb threat, do not touch any suspicious packages. Clear the area around the suspicious package and notify the police immediately. In evacuating a building, avoid standing in front of windows or other potentially hazardous areas. Do not restrict sidewalk or streets to be used by emergency officials. Move out of the way!

DURING

In a building explosion, get out of the building as quickly and calmly as possible.

If items are falling off of bookshelves or from the ceiling, get under a sturdy table or desk.

If there is a fire:

- Stay low to the floor and exit the building as quickly as possible.
- Cover nose and mouth with a damp cloth.
- When approaching a closed door, use the palm of your hand and forearm to feel the lower, middle and upper parts of the door. If it is not hot, brace yourself against the door and open it slowly. If it is hot to the touch, do not open the door - seek an alternate escape route.
- Heavy smoke and poisonous gases collect first along the ceiling. Stay below the smoke at all times.

AFTER

- *Remain calm* and be patient. **Think** through the consequences of all your actions.
- Follow the advice of local emergency officials.
- Listen to your radio or television for news and instructions.
- If the disaster occurs near you, check for injuries. Give first aid and get help for seriously injured people.
- Follow procedures for "General Post Emergency and Disaster Response" (see page 2).
- Confine or secure your pets.

If you are trapped in debris:

- Use a flashlight or a light stick. Try to avoid using matches - in case of a gas leak.
- Stay in your area so that you don't kick up dust. Cover your mouth with a damp (if available) handkerchief or clothing.
- 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--shouting can cause a person to inhale dangerous amounts of dust.
- Untrained persons should not attempt to rescue people who are inside a collapsed building. Wait for emergency personnel to arrive.

Chemical Agents

- Chemical agents are poisonous gases, liquids or solids that have toxic effects on peoples, animals or plants. Most chemical agents cause serious injuries or death.
- Severity of injuries depends on the type and amount of the chemical agent used, and the duration of exposure.
- Were a chemical agent attack to occur, authorities would instruct citizens to either seek shelter where they are and seal the premises or evacuate immediately. Exposure to chemical agents can be fatal. Leaving the shelter to rescue or assist victims can be a deadly decision. There is no assistance that the untrained can offer that would likely be of any value to the victims of chemical agents.

Biological Agents

- Biological agents are organisms or toxins that have illness-producing effects on people, livestock and crops.
- Because biological agents cannot necessarily be detected and may take time to grow and cause a disease, it is almost impossible to know that a biological attack has occurred. If government officials become aware of a biological attack through an informant or warning by terrorists, they would most likely instruct citizens to either seek shelter where they are and seal the premises or evacuate immediately.
- A person affected by a biological agent requires the immediate attention of professional medical personnel. Some agents are contagious, and victims may need to be quarantined. Also, some medical facilities may not receive victims for fear of contaminating the hospital population.
- Quarantining yourself in your own home might be the best solution when professional help is unavailable.

other preparedness considerations

- Be prepared—keep a gas mask handy at home, at work (especially in high-rise office buildings where the mask can help you escape in smoky or dusty conditions), and in the trunk of your car. A gas mask by your bedside is a good option.
- If you fear you have been exposed to biological agents (Anthrax, plague, Tularemia, Brucellosis, Q fever, smallpox, viral encephalitis, or hemorrhagic fever, etc.) do the following during the one to six day incubation period before symptoms arise.

NOTE: This is the authors own personal list taken from many sources of good effective planning and advice for situations in which you cannot or do not wish to recur to conventional antibiotic treatment, or when such treatment is not available. Implement these suggestions at your own risk. The author makes no medical claims or guarantees of effectiveness. Your success against these agents will vary according to exposure, the prior state of your immune system, and many other factors.

Do NOT begin antibiotic treatment until symptoms appear. Early or excessive use of antibiotics will destroy the natural bacterial flora in your intestinal tract and render your immune system less effective.

- Stop eating your normal, cooked food diet.
 - Begin a very light diet (almost light fasting) of raw fruits and vegetables and juices (no commercial products with artificial or natural sweeteners).
 - Drink a lot of water, but do not drink water from public water supplies; avoid chlorine or fluoride. It is recommended installing a water purifying system in your home before a major biological attack occurs. Once it does, there will be a run on equipment. Have several bottles of aerobic-type oxygen liquid on hand for water purification. Oxygen-based purifiers are far safer and better than chemicals or bleach.
 - Taking the following natural and herbal anti-bacterial and anti-viral capsules could help:
 - Natural Vitamin C with bio-flavonoids—1000 mg every two hours, along with natural juice or fruit. If diarrhea develops, cut dose in half. If symptoms of aches or fever begin, take hourly.
 - Raw garlic (crush into tomato juice)—one small clove every six hours.
 - Colloidal silver solution—one dropper full or 10 sprays every six hours.
 - Olive leaf extract—one capsule three times a day.
 - Echinacea—one capsule three times a day.
 - Grape seed extract (or other high-potency anti-oxidant)—one capsule six times a day.
 - Goldenseal—one capsule three times a day.
 - Use melaleuca (Tea Tree Oil) as a salve for all lesions, open wounds, or sores.
- If you begin to have symptoms, begin antibiotic treatment immediately, under the care of a physician, if available. Chances are high that despite government assurances, there may not be enough antibiotics to go around in a major biological attack, so it is important to live healthily and stockpile natural alternatives. Learn to live with alternative remedies before your life depends on them since it takes some skill and sensitivity to learn to recognize your own body's feedback signals giving you hints about what it needs. Remember, too, that natural solutions only work well when your body is NOT loaded down with food, especially junk food or cooked food, which have no live enzymes.
 - Leave any area where infection is growing. Find temporary housing in rural areas. It is best to make arrangements with friends and relatives beforehand. This is important to avoid continual exposure even to low levels of contaminants. Wear your gas mask in the car when leaving town. Don't worry about looking silly—it may save your life.
 - If you can't leave the area, follow the previous suggestions for "sheltering in place". When in public wear a gas mask as long as you can do so without undue stress. You must remove it to eat and drink, unless it has a built in water straw. Remember most gas mask cartridges are good for no more than 24 hours, usually even less than this.

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 and other threats to and/or against 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. Members of the public can:

- Develop a household disaster plan and assemble a disaster supply (72 hour) kit.
- Develop a years' supply of water, food, sanitary need, medical needs and fuel where possible.
- Become CERT and first aid trained

Guarded Condition (Blue)

This condition is declared when there is a general risk of terrorist attacks. Members of the public, in addition to the actions taken for the previous threat condition, can:

- Update their disaster supply (72 hour) 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. 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 care-givers; and
- Update the household communication plan.

High Condition (Orange)

A High Condition is declared when there is a high risk of terrorist attacks. 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 or nuclear 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.

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 your employer to determine status of work;
- Listen to the radio and TV regularly 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.
- This is a good day to take a sick day or vacation day from work.

HOMELAND SECURITY ADVISORY SYSTEM

THREAT CONDITION

SEVERE

Severe risk of terrorist attack

HOMELAND SECURITY ADVISORY SYSTEM

THREAT CONDITION

HIGH

High risk of terrorist attack

HOMELAND SECURITY ADVISORY SYSTEM

THREAT CONDITION

ELEVATED

Significant risk of terrorist attack

HOMELAND SECURITY ADVISORY SYSTEM

THREAT CONDITION

GUARDED

General risk of terrorist attack

HOMELAND SECURITY ADVISORY SYSTEM

THREAT CONDITION

LOW

Low risk of terrorist attack

Nuclear - Chemical Decontamination Kit

1	5 or 6 gallon bucket with lid	1	small bottle liquid household bleach
1 - 2	spray bottle (s)	1	tablespoon measuring spoon or soup spoon
1	bulb syringe	5 *	gallons or more of water per person (<i>minimum</i>)
2	large bath towels		
4 - 8	wash-cloths	1 *	small basin (for sponge bath)
1 pkg.	baby wipes	1 *	large basin or kiddie pool or 39 or 55 gallon size plastic yard bag
1	small bottle of liquid soap		(large enough to stand in to catch all decontaminated water)
1	small bottle of shampoo		
1 - 4	39 gallon size (1 mil) yard bag(s)	1 *	Rad or Radiac meter
1 - 4	twist ties		

*apart from "Decon Kit" but helpful and maybe necessary

Before entering your shelter after a nuclear or chemical incident you need to decontaminate your entire body.

- Carefully open and arrange your decon kit in such a way that you can reach everything and still keep all possible contamination in one localized area.
- Step into the large basin or 39/55 gallon bag so it can catch all water and decontamination coming off of your body.
- Carefully strip off all of your clothes. Yes all of them. This is not a fashion show or a time to worry about modesty rather a time to worry about saving your life. Put ALL of your clothes in a 39/55 gallon bag. You may have to cut your clothes off. Speed is an issue. The faster the better.
- Remove ALL jewelry, eyeglasses, and plastic coated pictures, identification cards, etc. you may want to save and put them aside. These to will have to be decontaminated with water so realize you will not be able to save non-plastic coated papers or cloth items.
- Shower completely with an *outside* shower or hose.
- If you do not have and outside shower or hose then do the following:
 - Open a spray bottle and fill it with water and spray your entire body head to toe with emphasis on all the hair on your body, wherever it is. Your hair must be cleaned well.
 - Take one washcloth and blot down (do not wipe the contamination into your pores) your entire body head to toe, not forgetting the genital areas and orifices, then the face then the rest of the body. Place the wash cloth in the 39/55 gallon bag.
 - Open the spray bottle again and fill it with 2 tablespoons of bleach - If it is a chemical incident. If it is nuclear incident straight water is okay. Spray your entire body again. Be careful around eyes, ears, nose, and mouth not to do this area if you are using the bleach solution. You do not need bleach in those parts.
 - Fill the small basin water and with the liquid soap, shampoo, the remaining water in the spray bottle, and a DIFFERENT wash cloth. Soap up and scrub your entire body, especially cracks and crevasses, your jewelry and id cards you want to save. You cannot save cloth or paper items.
 - Fill up your spray bottle one or more times and rinse down your body completely.
- Open the baby-wipes package and use one or more to clean around your eyes, nose, mouth and ears.
- Dry off completely and step out of the large basin or bag. Place all towels, washcloths, and other cleaning instruments into the 39/55 gallon bag.
- If it is a nuclear incident, with the Rad meter, take readings over your entire body AWAY from your decontamination basin and contaminated clothes and water. You need to bring the radiation level down to 1 R. or less. If the radiation level has not decreased continue washing until it does.
- Repeat the process if necessary using clean towels and washcloths.
- Seal up the 39/55 gallon plastic bag with the wire tie and place as far away from the shelter door as possible with out risking further contamination.
- Once you are "clean" you may enter your shelter and put on some clean clothes.

Nuclear Disaster and Warfare

Facts about nuclear disasters

- Radiation**
 - Radiation kills and is **not** perceptible to the human senses.
 - Radiation sickness and radiation poisoning are **not contagious**.
 - Radiation in perfect circumstances can last more than 20 years.
 - Radiation under normal circumstances decays or dies very fast (about 14 -21 days).
 - The most vulnerable to radiation poisoning are young children, elderly, and sick.
 - Measurement and Time Limitations
 - Radiation is measured in Roentgens (R.).
 - You receive ½ to 1 R. from the x-rays your dentist takes.
 - The human body can receive up to 400 R. and still live (see the "Radiation and Contamination Effect Chart" in this section) although after 400 R. will cause serious damage.
- Explosion**
 - Most deaths occur due to being exposed to the explosion (which includes the blast, wind, radiation, heat, and light) or due to collapsed buildings or fires. The wind caused by the blast is approximately 200 mph or more from the center of the blast out to about 12 miles.
 - Even during the worst possible time for a nuclear device to explode (a week day at noon in the middle of winter), it is estimated that only approximately 2% of the actual population would be killed in the explosion. The rest of the casualties would result from radiation sickness and injuries sustained in the days and months to follow.
 - Never** look at an explosion, it **will** blind you (within about 20 miles). The light "flash" can still be seen up to 50 miles away. Do not look at it no matter what the distance.
 - The entire detonation of a nuclear device only lasts a few seconds.
 - Radiation levels for the explosion can reach up to 5000 R. or more.
- Decontamination**
 - Decontamination of radiation contaminated objects includes washing **everything**.
 - Never** burn, boil, or dust off contaminated objects. This only puts the radiation back into the air. You cannot get rid of radiation by burning it.
 - Any contaminated object that cannot be washed properly (i.e. sponges, cakes, breads, berries, and other porous materials, etc.) should be disposed of.
- Fallout**
 - "Fallout" is dust, dirt, or particles from an explosion that have radiation molecules on or in them.
 - A public fallout shelter is a building or structure designated by the government that is said to provide ample protection from radiation and also supposedly has enough supplies in it to house, feed, and provide sanitary needs for the amount of persons allowed into the shelter, although most public fallout shelters are **not** stocked.
 - Fallout shelter building and shielding materials include: (with a protection factor (PF) of 4 and/or a shielding factor (SF) of .05)

- 36" of wheat	or	24" of rice	or
- 18" of wood	or	14" of books or magazines	or
- 9" of empty concrete blocks	or	7" of dirt, water, or gravel	or
- 5" of solid bricks or sand	or	4" of concrete, glass, or aluminum	or
- 1½" of steel or iron	or	¾" of lead	
 - You can find minimal protection in a full basement of a residential type home. (SF .5)
 - Food and water are unaffected by direct radiation, other than being cooked. However, they can still be contaminated by fallout.
 - Fallout-exposed canned or bottled food items are safe and should be washed off before being opened.
 - Fallout-exposed solid foods can be eaten, but the outer ¼ inch should be peeled or cut off and disposed of after being washed off.
 - Fallout-exposed porous foods should **never** be consumed.
 - Fallout-exposed water is okay to drink, but it should be filtered extensively first (**not** boiled) to be sure that all fallout particles are not consumed.

- f. Within the first two weeks after the last explosion, protective "fallout" clothing should be worn outside at all times and shed before entering a fallout shelter. Protective fallout clothing includes:
 - headgear or a full brimmed hat with hair completely covered
 - boots or sturdy shoes
 - heavy or thick clothing including gloves (long sleeved shirts and long pants)
 - a dust or gas mask or some other form of respiratory protection to ensure that fallout particles are not inhaled.
- g. After five weeks it is safe to be outdoors for up to 14 hours a day. There has been no real study that is available to the public that states when a person could be outdoors for up to 24 hours a day but most of us are not outside more than 4-5 hours anyway.
- h. After a nuclear disaster, before planting crops again you should wait at least 2½ weeks, scrape off or plow at least 18 inches under the top 3 to 5 inches of top soil, and then plant.

What to do to *PREPARE FOR* a nuclear disaster

1. Follow procedures for "General Emergency and Disaster Preparations" (see page 1).
2. Obtain Thyro-Block tablets or some other form of (KI) potassium-iodide or potassium-iodate.
3. Understand the warning signals given by the government and local authorities, what they mean, and how to respond to them.
 - a. The EMERGENCY ALERT SYSTEM (EAS) is broadcast over sirens, radio, television and the internet and lasts for about 10 seconds. After you hear or see this turn on your radio or television to get the **official** message from your local authorities on what to do and where to go. With this signal or message you will usually have time to evacuate the area or seek adequate shelter. **Listen to it !**
 - b. If you live in an area that has a wide area broadcast system - WABS (most major cities do) a wavering siren will sound. This usually does not give you any instructions. After you hear or see this turn on your radio or television to get the official message from your local authorities on what to do and where to go.
 - c. If you live in an area that does not have a wide area broadcast system or EAS when political tensions begin to rise be attentive to the radio and television news broadcasts as to what to do. *******REMEMBER a rumor is not a warning !*******
 - d. If you hear a rumor, do not start packing but rather find official information.
4. Nuclear detonations create EMP's (electromagnetic pulse) which burn out some electric and most electronic equipment rendering computers, televisions, stereos, ATM machines, most newer vehicles (1970 to present), etc. incapacitated. EMP's have no direct affect on living things. Although it would be difficult to protect everything, there are a few things you can do which will help before (not during) a nuclear detonation.
 - a. Unplug all electric and electronic equipment.
 - b. Disconnect all telephones, answering machines, modems, etc.
 - c. Lower or disconnect all antennas on home, handheld, and vehicle radios, shortwave, CB's, HAM radios, etc longer than 12".

What to do *DURING* a nuclear disaster

1. **Remain calm !** **Think** through the consequences of all your actions.
2. Time limitations:
 - a. **24 hours or more:** Evacuate and take your family with you BUT only if you have a safe place to go to. Remember roads will be jam-packed and you will not get far
 - b. **30 minutes to 24 hours:** Evacuate to a shelter nearby or your home, if close by, immediately. Do not wait for your family. Go!
 - c. **5 minutes to 30 minutes:** Do not evacuate. Go to the nearest fallout shelter.
 - d. **30 seconds to 5 minutes:** If you do not have time to find adequate shelter, are at work, school, or church, etc., get under a desk, behind a sturdy wall, to the basement, behind a white wall, or to the center-most part of the building and brace yourself as for an earthquake.

Before you decide to evacuate think and be sure you are able and want to get on the highways with everyone else trying to do the same. You will see massive delays and traffic.

3. If you are going to evacuate, and have time, remember to turn off all utilities, close your

- curtains, and lock your house.
4. Do **not** forget to take your 72-hour kit with you, if you can get to it in time without risking your safety or the safety of others.
5. If you do not have time to go to a shelter and you are at home, follow the instructions in this section for "Things To Do At Home In The Event Of A Nuclear Attack" .
6. Do not bring pets into any public shelter. They will **not** be allowed.
7. Do not bring pets into your own shelter or basement unless you have at least a three week food supply for them and proper sanitary measures. It is usually best to leave most pets and farm animals in a garage, shed, or barn with an ample supply of food and water. They have a tendency to survive radiation exposure much better than humans. However, do **not** leave dogs with other dogs or with any other animals or locked inside. Dogs have a tendency to go wild and will even turn on their own masters under these circumstances.
8. If you are in your vehicle and do not have time to seek proper shelter, stop your vehicle, get out, and lie on the ground face down, preferably in a ditch or culvert or behind or in some other form of protection.
9. If you are outdoors and do not have time to seek proper shelter and have no form of protection around you, lie on the ground face down.
10. If you are caught in the open stay down low until the blast is over, about three seconds. Seek indoor shelter as soon as possible. The blast wave goes out from the center of the explosion and then is sucked back in which causes the mushroom-shaped cloud. So expect two blast waves.
11. **Never** look at the blast. It **will** blind you.
12. If you can feel hear, or see the blast, you **are** in danger. There may be other blasts.

How to prepare your home basement to act as a fallout shelter

1. First of all this is a minimal protection fallout shelter and also it is **NOT** a blast shelter.
2. You will need to start with a full basement home. If you have a half, daylight, or walkout basement you will need to do extra protection on those exposed walls or parts of walls out of the ground. By starting with a full basement you use the dirt on the four sides of the basement wall as minimal protection. The main worry is overhead.
3. By filling up window wells with dirt, sand, books, or other dense materials - this will help. You can do this either from the outside or if you are out of time from the inside - on the window ledges. The glass in the windows offers no protection.
4. The next step is to build up the overhead protection. You can do this by getting under a sturdy table, workbench, bookshelves with a door across them, doors leaned against the outer basement wall, etc. and then piling on top of the structure dense materials such as materials listed in the first part (Fallout) of this section # 4c. You can do this also to main floor over the part of the basement you are in.
5. Be sure when you are done fortifying overhead that you fortify around you on all four sides. The first seven hours after each blast are the most important. This does not mean you can come out of your improvised shelter for long periods of time but if you need to stretch your legs for a minute (emphasis on the minute) you can as long as you stay in the basement.
6. Be sure that you do not seal your self in so tight that you do not have air to breath. ***This is not where you use duct tape and plastic.***
7. Remember you need to stay in your shelter for up to 14 days or longer. You will need both sanitation measures, water and food. The more you can do to prepare before a nuclear event the better - even if it is just putting needed materials and supplies in one place so they are easy to grab and use.

On the next page are a few examples from FEMA manuals on how you can build these expedient shelters. For more details on these pictures contact the author.



What to do *AFTER* a nuclear disaster

1. Begin taking Thyro-Block tablets or some other form or potassium-iodide/iodate according to the instructions on the bottle. It is actually best to start this before or as soon as you get an official warning.
2. It is recommended that if you are within the 350 mile "downwind" radius of an explosion that you stay indoors in a fallout shelter or basement for at least two weeks. This, by the way, under most probable scenarios would cover the entire U.S.A.
3. If you are outside the 350 mile "downwind" radius of an explosion, stay indoors at least 5 - 6 days and then venture out only for short periods of time only if needed.
4. As you begin to leave your shelter, do it for short periods of time only to get rid of sewage and trash.
5. As time goes by, you will be able to leave your shelter for longer periods of time. (See the "Radiation Contamination and Effect Table") Turn on a battery-powered radio for official broadcasts on what to do.
6. After 3 weeks you will need to start your life over again. Remember food production and water filtration should most likely be on the top of your priority list.
7. Most likely everything outside of protected areas will need to be washed, cleaned, or peeled. Never burn or dust off items because it only puts the fallout back into the air.
8. Exposed or contaminated dry items stored in paper bags or other dry containers should be placed in uncontaminated containers, if you plan to use them.
9. Exposed washable loose items, such as fruits and vegetables, should be washed, then cut or peel the outer 1/4 inch off.
10. Under no circumstance should exposed porous items (i.e. breads, cakes, lettuce, broccoli, berries, etc.) be eaten.
11. If you think you have fallout on you, discard your outer garments and wash your skin and hair thoroughly.
12. If you insist on going outside in a fallout-contaminated area, put on your protective clothing, as described earlier in this section. Make sure your hair is covered well. If you have long hair put it up or chop it off.
13. Gasoline and other petroleum products will most likely be scarce, so save them and use them wisely. Remember, most vehicles will probably not operate without mechanical adjustments due to the EMP.



14. As with any civil disturbance, war, or any other disaster, the "have-nots" will become ever so noticeable. Those who "have-not" usually band together to loot, steal, rape, and kill those who have more than they. The police and other protective agencies, if they exist at all, will most likely have their hands full and will not be able to offer very much assistance. Arming yourself might be a wise idea. Self protection may be a necessity, **BUT** in no way is the author of this booklet suggesting self-appointed militia or vigilantism. These groups tend to become just as bad as the bands and mobs of "have nots." Forming a neighborhood watch is probably your best alternative.

- militias NO - neighborhood watch YES -

Radiation Dosage Table	
animals & plants	maximum average amount of radiation dosage (r.)
pig, dog, cat	300
goat	350
human	400
monkey, mouse	450
sheep	540
fish	550
cow, horse, rat	630
rabbit	800
chicken	1,000
insect	5,000 +
turtle	15,000 +
bacteria, virus	100,000 +
onions	2,000
oats	3,300
barley, rye, wheat, corn	4,300
fruits, grasses	5,000
potatoes	12,000
cabbage, spinach	14,000
tomatoes	15,000

Although fallout shelters that bear signs similar to the one at the right are often abandoned and not supplied they still offer protection from fallout and radiation sources. If you find that you need to use one you can feel safe in there use but do not depend on them being stocked with any food, water, sanitary or medical supplies. So do not forget your 72-hour kit and all the food and water you can gather when looking to use a fallout shelter. Don't forget your sanitation supplies and more water.



Things to do at home in the event of an imminent nuclear attack

THIS LIST IS IN ORDER OF IMPORTANCE.

If time permits, check all of the things on the list.

If time does not permit, start from the top and work down.

Do not panic.

Think through the consequences of all your actions.

Gather your family together.

Turn on a television or battery powered radio (for official broadcasts).

Begin taking a "Thyroid Blocking Agent (Potassium Iodide - KI)" follow the instruction on the bottle.

Go to the basement or lowest or center-most part of the house or building.

Build a shelter. (if one does not already exist) - See preceding pages for sheltering materials.

Turn off the gas or propane.

Turn off the electricity.

Fill all tubs, basins, and empty containers (preferably with lids) with water.

Turn off the water.

Bring filled water containers all non-perishable foods into your shelter (enough for 3 weeks).

Bring sanitation measures and items into your shelter.

Bring clothing, bedding, and sanitary supplies into your shelter.

Close and lock all windows and doors.

Fill all basement window wells with sand, dirt, books, or any other dense material. Either from the outside or inside on the window ledge depending on how much time you have.

Turn off and cover chimneys, air conditioners, vents, etc. to prevent fallout from coming inside.

Close all drapes, curtains and blinds to reflect the flash of the blast and discourage burglars.

Go to or send one person to the nearest food store with all available cash to buy all of the non-perishable food that they can, if you do not have a food storage in place.

Disconnect or lower all antennas, over 12", and unplug all electric and electronic equipment.

Bring into your shelter an axe, pry-bars, and shovel (in case you have to dig your way out).

Bring into your shelter legal documents.

Board up all windows and doors.

Prepare your house as if you were preparing for a tornado or hurricane and an earthquake.

Pick all ripe (not green) fruit and bring into shelter for immediate consumption.

Cover all outside fuel sources (i.e. firewood, coal, etc.) with plastic or heavy canvas.

Dig a deep hole down-hill from your water sources and future garden spots for waste disposal.

Empty and unplug all refrigerators and freezers of food (either discard it or eat it) and leave it open (to prevent mildew, a can of open ground coffee will help.).

Secure all breakables, pictures, water heaters, china closets, vases, etc.

Bring in or secure all lawn furniture, toys, and equipment.

Fill all cars, trucks, ATV's, motorbikes, chainsaws, etc., with fuel.

Move an lock up cars and trucks into garages or carports, or other secured areas then disconnect and remove the battery and any C.B. or HAM radios and bring them inside.

Gather together all gardening supplies into one secure place.

Cover all furniture, carpets, and rugs with plastic or dust cloths.

Take a good bath. It may be your last for a while.

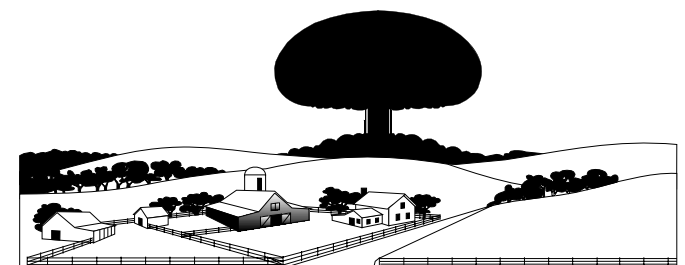
Eat a good hot meal. It may also be your last for a while.

Recheck food, water, sanitary supplies, bedding, and clothing in your shelter.



Potassium Iodate

Effects of a 1 MT nuclear blast							
distance	time	heat effects	initial radiation	wind	pressure	pressure & wind effects	
blast shelter needed	4200 feet (100 feet deep) - crater -	1 sec	10,000,000 C metal vaporized	6,800 R. +	800 mph	50 psi +	total destruction
	1.4 miles	2 sec	metal vaporizes	6,800 R.	670 mph	30 psi	massive concrete structures destroyed
	1.8 miles	5 sec	metal vaporizes	2,000 R.	470 mph	20 psi	massive concrete structures damaged
	2.0 miles	10 sec	metal vaporizes	21 R.	380 mph	15 psi	slight damage to buried shelters 6' gross damage to most buildings
	2.5 miles	12 sec	metal melts	1 R.	290 mph	10 psi	tall buildings destroyed lung injuries & skin bruises
	3.1 miles	15 sec	metal melts	.0063 R.	225 mph	7 psi	most buildings over 6 stories destroyed, power lines, trees, telephone poles, brick chimneys knocked over
	3.8 miles	20 sec	metal melts	none	160 mph	5 psi	most buildings over 2 stories destroyed - eardrum damage
	4.8 miles	25 sec	metal weakened	none	116 mph	3 psi	motor vehicles overturned box cars knocked over
fallout shelter needed	5.9 miles	30 sec	rubber & plastic melt & ignite	none	70 mph	2 psi	brick house damaged or destroyed
	8.3 miles	40 sec	wood chars & burns	none	62 mph	1 psi	wood buildings damaged flying debris
	12.0 miles	50 sec	3 rd degree burns paper & fabric ignite	none	48 mph	none	broken and cracked windows, yard furniture blown around - flying debris
	15.0 miles	80 sec	2 nd degree burns	none	5 mph	none	none
	20.0 miles	95 sec	1 st degree burns	none	none	none	none



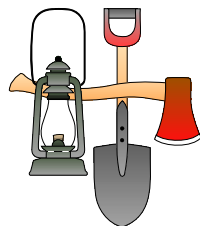
The chart on this page is for fallout affected areas only (within a 350 "downwind" mile radius of the blast). It is considered that in the areas of the actual blast (0 - 1 mile radius from the actual detonation) that there would not be any humans left alive, other than those in blast shelters. The radiation levels would be so high that those who did survive the blast would die in a very short time due to radiation exposure.

Radiation Contamination and Effect Table of Fallout Affected Areas					
time	rads/hr.	human reaction	probability of death	time for recovery	treatment
explosion	800 - 5000+ r/hr	instant death	100 % within a few hours	none	none available due to certainty of death
2 hours after	480 - 600 r/hr	same reactions as below, plus central nervous and circulatory system shutdown	75 - 99 % within a few days	years	bone marrow transplant, sedatives, blood transfusion
7 hours after	100 - 200 r/hr	same reactions as below with death more sudden	50 - 75 % within one month	several months	bone marrow transplant, sedatives, blood transfusion
1 day after	20 - 40 r/hr	same reactions as below but more severe with more heart failures	20 - 50 % within two months	several weeks	blood transfusion, sedatives
2 days after	10 - 20 r/hr	moderate to extreme radiation sickness, hair loss, skin spots, nausea, vomiting, diarrhea, fevers, hemorrhages, fatigue, heart failure in those with weak hearts	0 - 25 % within two months	about one month	rest, antibiotics, blood cell count, water, light diet
2 weeks after	1 - 2 r/hr	moderate radiation sickness if exposed more than 3 hours a day, small amount of nausea, noticeable blood cell changes	0 %	one week	none required other than rest
3 weeks after	.5 - 1 r/hr	mild radiation sickness if exposed more than 10 hours per day, may change some blood cells	0 %	a few days	none required other than rest

County Wide Evacuation

- County wide evacuation can be necessary under various circumstances already discussed in this booklet, so it is best to know what to do if it becomes necessary so that it can be done efficiently and safely. In many counties the local authorities have put together evacuation (relocation) plans to aid the residents of those counties if it becomes necessary. Many counties do not have evacuation plans and in such have left it up to the individual cities. Most state, county and city government officials are very reluctant to believe that such an evacuation would ever be necessary and as a result are very reserved in trying to actually implement such a plan. Many state governments do have old Civil Defense Relocation Plans which could be implemented but are very out dated especially with the large population growth that has occurred since they were first drafted.
- Understand the warning signals given by the government and local authorities, what they mean, and how to respond to them.
 - The EMERGENCY ALERT SYSTEM (EAS) is broadcast over sirens, radio, television and the internet and lasts for about 10 - 20 seconds. After you hear or see this turn on your radio or television to get the official message from your local authorities on what to do and where to go. With this signal or message you will usually have time to evacuate the area or seek adequate shelter. ***Listen to it!***
 - If you live in an area that has a wide area broadcast system - WABS (most major cities do) a wavering siren will sound. This usually does not give you any instructions. After you hear or see this turn on your radio or television to get the official message from your local authorities on what to do and where to go.
 - If you live in an area that does not have a wide area broadcast system or EAS when political tensions begin to rise be attentive to the radio and television news broadcasts as to what to do. ***REMEMBER*** a rumor is ***not*** a warning!
 - If you hear a rumor, do not start packing but rather find official information.
- Who will be leaving? All citizens excepting the National Guard and other "critical care workers," which include selected police, fire, and medical personnel.
- When will you leave? You will be informed by the Emergency Alert System (EAS), a Wide-Area Broadcast System (WABS), sirens, radio, television, police and fire personnel, and/or newspaper as to when and where to go. If an evacuation is imminent be sure that your vehicle has a full tank of gas and that you have your 72-hour kit(s). If you have no forewarning do ***not*** stop to get these items, just go! ***DO NOT DELAY - REMEMBER MATERIAL ITEMS CAN BE REPLACED - LIFE CANNOT.***
- How to get there? In view of an imminent evacuation, maps will be circulated throughout the area by newspaper, mail, television and other public means. The maps correspond with where you live and where you are to go. Follow the instructions given by the maps and the authorities. Do not go to another area. Each area has already been prepared for an influx of a certain amount of people.
- What if you do not have transportation or you are physically challenged, aged, sick or confined to a bed? Obtain one of the maps that are being distributed at the time of evacuation. On the same maps there will be telephone numbers to call to get rides and/or help.

7. What can you take with you ? Take your 72-hour kit and any equipment you might have that could be used to make of shelters (such as a shovel, pick, axe, saw, etc.), camping equipment, paper money (not plastic), and legal papers (such as banking papers, property deeds and titles, insurance policies, etc.). Do **not** take firearms with you! They will be confiscated by the authorities. Do **not** take pets with you unless you take enough food and sanitary provisions for them for at least three weeks. When you get to your designated relocation area your pets will have to stay outside of all physical facilities designated for humans, so you decide whether or not to bring them along. Most pets will do okay left to themselves with plenty of food, of course. The authorities will destroy all animals not properly taken care of in the relocation areas. Take all perishable food items with you or consume them before leaving due to possible spoiling before you return.
8. What should you do with your home ? Lock up your home and close all curtains. If you have time, consider turning off your utilities.
9. What if you do not want to evacuate ? Under current State and Federal law, you cannot be forced to leave. Under martial law, however, you may be forced to do so. It does not take a whole lot of effort for the president or the governor to invoke martial law. Remember, there may be no utilities and very little protection or other services, if you stay.
10. Traffic control will be set up by the National Guard and/or the Civil Defense. They will assist you on getting on the road to your relocation area or host area. This will be traffic CONTROL. Do not attempt to find a short-cut. You will be stopped.
11. Maintain a constant state of readiness. This includes having your vehicle in top condition, with enough gas to travel at least 100 miles. A small emergency kit in the trunk of your vehicle could prove useful. This kit should include: a shovel, a blanket for every passenger, tools for the vehicle, necessary fluids to maintain the vehicle, flares, several non-perishable food items, matches, flashlight and/or light-stick, first aid kit, emergency drinking water, etc.
12. Work out a plan detailing what to do to get back together if you are separated during an evacuation. Go over with your family where to meet in case of separation.
13. Carpool with people you know. If you do not you will be forced by the authorities to carpool with people you do not know.
14. Patience and courtesy will be of utmost importance during a large-scale relocation. Thousands of vehicles will be on the road. Do not leave excess distance between you and the vehicle in front of you. Those behind you may become impatient and cause an accident in attempting to get around you.
15. Should traffic come to a stand still, stay in your vehicle and turn on your radio for official information and broadcasts. If you are stopped for a long period of time, turn off your vehicle to conserve fuel.
16. If your vehicle breaks down or runs out of fuel, move to the shoulder of the road, raise your hood and wait for assistance.
17. If your vehicle is equipped with a C.B. or HAM radio feel free to listen to it for information but talk on it only for emergency. Civil and public safety units will need clear channels during large-scale emergencies and disasters.
18. Do not abandon your vehicle in traffic unless specifically told to do so by the authorities in charge of the evacuation. If you must abandon your vehicle, for what ever reason, move it over to the side, out of traffic, as much as possible.



Basic Search and Rescue Techniques

When doing any kind of search and rescue operation there are a couple points to remember **BEFORE** you even start searching.

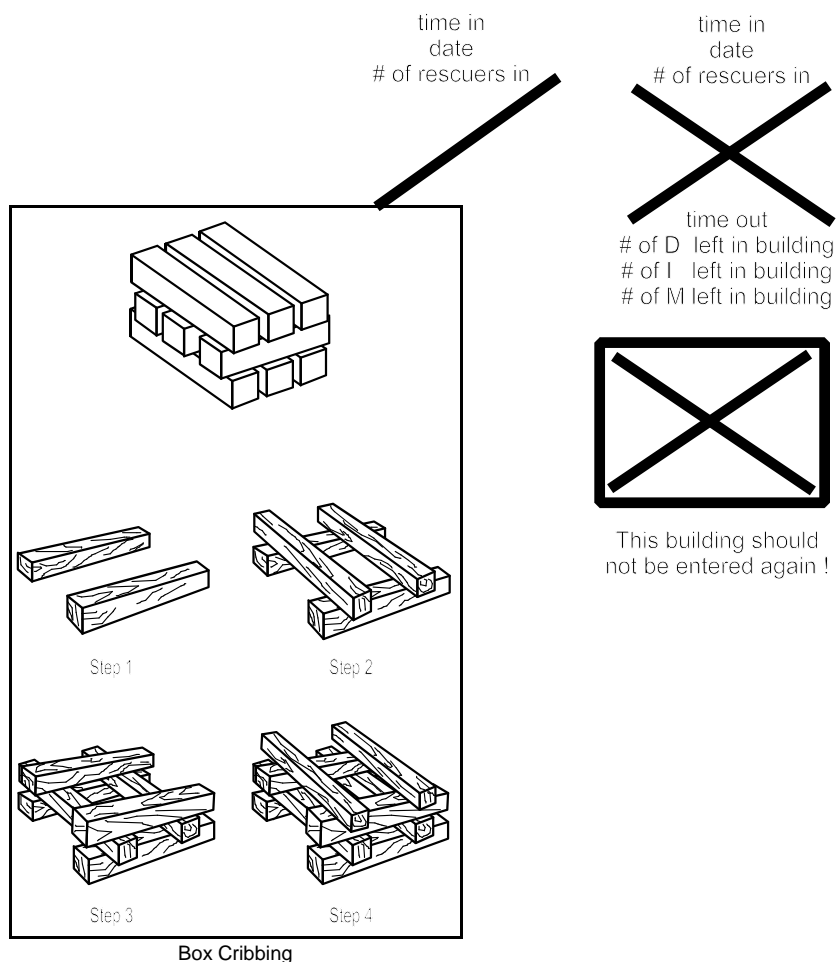
1. **You are #1.** You are not any good to anyone if you are injured or dead. Safety first! Be sure that the scene is safe for you to enter.
2. Use proper safety equipment which should include: a hard hat, goggles, dust mask or respirator work gloves, closed sturdy work shoes, flash light or light sticks for dark areas, and common sense.
3. Work with a buddy - never search alone. It is even better to work with a team of minimum 6 people. It takes 6 people to properly manage one adult on a backboard.
4. Never enter a structure that is heavily damaged. Leave it for the professionals. Secure the perimeter on the outside to ensure that no untrained people enter the structure and become victims themselves. Take notes on what you have found and alert the proper authorities.
5. Search lightly or moderately damaged structures only.
6. Obtain any necessary supplies you might need for a proper search and rescue effort. This might include: cribbing material, fire extinguishers first aid supplies, water, flashlights, ropes, ladders, prybars, axes, saws, blankets, buckets for debris removal, blankets, backboards, stretchers, etc.

During the initial search

1. Upon entering the structure mark the door or outside with half of an "X" or a "/" mark to indicate that you are inside. Also write down how many rescuers are entering the structure and the time and date entered.
2. Check the scene to ensure your safety and note safety hazards.
3. Call out in to the structure for anyone who can hear you and move themselves to come to the sound of your voice. This will eliminate you having to search for them. Remember that just because a person does not have physical injuries does not mean that they are not in shock or disoriented from the disaster. They may still need assistance.
4. Use proper systematic search techniques that include triangulation, search patterns, and stopping regularly to listen.
5. Stop and listen periodically for sounds that might indicate the location of a victim.
6. Do proper triage first **BEFORE** treating any victims. Triage includes sorting **ALL** victims according to injuries whether they are "I" immediate, "D" delayed, or "M" dead. Conduct a full head-to-toe assessment before moving on to the next victim. Tag each victim according to their condition.
7. After you have preformed triage go back and begin treating the immediate victims with life threatening injuries first. Perform basic lifesaving first aid techniques. Be careful not to focus too much on treating one injury if there are many other injuries to care for.
8. If the structure is deemed uninhabitable move victims to a safe location outside the structure until you can transport them to a better facility.
9. For victims trapped under moderately heavy objects - use proper lifting techniques to extract them.
10. For victims trapped under heavy objects - use proper cribbing techniques to extract them.
11. For victims that need transportation - use proper lifts and carries to transport them. Be sure all victims with spinal or neck injuries whether real or suspected are transported on a backboard or other similar hard surface splint and secured to it. Be sure victims are stabilized before transporting them.
12. Remove any debris necessary to free victims using proper debris removal techniques.
13. Before ending your search be sure to check all voids and cavities whether natural or created by the disaster for potential victims.

After the search & rescue operation

1. Upon leaving the structure mark the door or outside with the other half of an "X" or a "\ " mark to indicate that you have left. Also write down how many rescuers and victims are exiting the structure and how many victims (and their condition) that are being left in the structure. Write down the time and date exited.
2. Document your findings.
3. Transport any immediate victims to the local hospital, Red Cross station, critical care unit or first aid station (depending on what is available).
4. Never leave an unsafe environment.
5. Properly remove any cribbing materials used. You may need them later.
6. Report to your local CERT or emergency leader your findings before moving on to the next structure.
7. Follow any direction from your local CERT or emergency leader.
8. Gather any additional supplies you might need.
9. Take a physical and an emotional break before moving on to any further search and rescue.



72-hour Kit

Your 72-hour kit is a collection of necessities that can sustain your life for at least 72 hours and should accommodate your own personal wants and needs. It is also preferably waterproof. It should be transportable, preferably on your back or shoulder, so that you have your arms and hands free, but a suitcase, box, plastic 5 gallon bucket, or garbage can will do if nothing better can be found. The following is a suggested list of items for your kit. Items with an asterisk (*) are optional. The others are deemed essential.

FOOD / COOKING

- matches or a fire starter
- eating utensils (washable or discardable)
- mess-kit or some other form of plate, cup, & pot
- water in a unbreakable container
- non-perishable foods in unbreakable containers (MRE's, canned, dry packaged, or freeze dried)
- 3 meat portions
- 3 fruit portions
- 3 vegetable portions
- 3 milk portions
- * ½ lb. rice or dry pasta
- * 8 - 10 bullion cubes
- * 3 sugared drink mixes
- * 3 hot chocolate, coffee, or tea bags
- * individually foil wrapped sugar cubes, hard candies, or chocolate bars
- * peanut butter
- * unsalted crackers
- * cereal
- * seasonings (salt, pepper, sugar, etc.)
- * infant, diabetic, or other special foods
- * water purification tablets (iodine / Halazone)
- * Brillo pad for cleanup
- * paper towels or napkins
- * Sterno, alcohol, or other cooking fuel
- * small cooking stove
- * can opener (if using canned food)
- * dish-soap in a small non-breakable container
- * fishing line, hooks, worms, and sinkers



CLOTHING

- 1 complete change of clothing including:
 - 2 pair socks or thick stockings
 - sturdy long pants
 - long sleeve shirt or blouse
 - work gloves
 - undergarments
 - * brimmed hat
 - * extra pair of sturdy shoes
 - * 4-5 bandannas/large handkerchiefs
 - * light-weight rain poncho
 - * sewing kit with assorted safety pins
 - * goggles



SANITARY

- roll of toilet paper wrapped in plastic
- hand soap and container
- bath or hand towel
- 8 - 10 coffee filters or water filter
- 4 - 5 large trash bags
- * 4 - 5 small trash bags
- * toothbrush and container
- * toothpaste
- * laundry detergent and container
- * clothes pins
- * scrub brush
- * toiletry bag
- * small unbreakable mirror
- * deodorizer/disinfectant (bleach/Borax)
- * 2 - 3 pairs of rubber or surgical gloves
- * 6 - 8 dust masks
- * shampoo
- * comb or brush
- * feminine hygiene items
- * shaving razor
- * disposable diapers for infants or seniors
- * pre-moistened towelettes
- * cleaning solution for contacts
- * newspaper for wrapping waste
- * ½ lb. of lime for waste treatment
- * plastic bag ties or closures



MEDICAL

small first aid kit including:

- * first aid book
- * Thyro-Block (potassium iodide)
- * special medications (allergies, diabetic, heart, etc.)
- * snake bite kit
- * extra pair of eye glasses or contacts
- * contact cleaning solution
- * EMT sheers
- * aspirin, Tylenol or other pain reliever

SHELTER

sleeping bag or blanket(s)

* tube tent with 25 feet of nylon rope or some other form of light weight tent

* plastic ground cloth

* emergency space blanket

OTHER

this booklet

a backpack, box, suitcase, bucket, garbage can, or some other container to hold everything

identification

small battery powered am radio

map of state, county, city, and host area or possible relocation site

* extra shoe laces

* 25 feet nylon cord or rope

* wire saw

* hatchet, small axe, or machete

* hunting knife

* small shovel

* 1 - 2 flares

* insect repellent

* needle-nosed plies with cutting edge

* adjustable crescent wrench (for turning off gas mains)

* flashlight

* extra batteries

* 2 - 3 (8) hour light sticks

* 6 - 8 candles

* compass

* whistle

* straight razor blades

* air mattress or bed roll

* heavy-duty aluminum foil

* Xerox copies of insurance policies and other legal papers

* photos of self and family members with names, ages, hair, and eye color printed on back

* important phone numbers and addresses (include an out-of-state contact person)

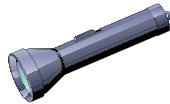
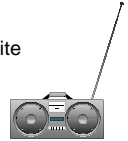
* money (at least enough in quarters to make an out-of-state phone call)

* some kind of diversion (ball, chess set, cards, crochet, book, crayons, toys, etc)

* pencils, crayons, and markers

* blank paper

* duct tape



note: The food items on the previous page are the same portions for adults and children alike. In a crisis situation, most adults consume much smaller portions while children and pregnant women consume much larger portions than normal. Although you may want to buy out the supermarket and put it in your 72-hour kit, don't! All items considered here should be in small (72-hour) quantities. Your kits should include familiar foods that you do and would actually eat and can actually carry. Also your food should not require a lot of water, refrigeration, or preparation, so canned foods and MRE's are better than dried foods. Food in your kit should be high in calories and nutrition and also suit your unique tastes, desires, and needs. Nursing mothers should consider liquid or dry formula in case they are unable to nurse. Remember to keep everything as light weight as possible so that you can carry this kit at least two miles.

Remember, water is always scarce in emergencies. If you wish to double up on something, double up on water. You can never store enough water.

Home Storage and Production

1. A home food storage plan can be your key to survival through some of the most difficult situations.
2. Never store items you do not like or would never use.
3. Purchase perishables in quantities no larger than the normal consumption requirements of you or your family's planned rotation period. (two years or less).
4. You can not keep a year's food supply on hand, nor successfully store canned or bottled foods without spoilage unless you faithfully follow a rotation plan.
5. Mark or date all food and other perishable items for easy identification and rotation.
6. For families who have limited budgets, it is suggested that the family list all the family needs for a complete home storage. Post the list in a conspicuous place. As monthly or weekly family needs are purchased, spend an extra five or ten dollars each time on home storage items from the list. As items are purchased, check off the items and later evaluate the list as a family. Family participation is the key. Buy basic supplies first so you will have at least survival amounts on hand while you are building your storehouse of other products. When a good sale comes along buy an extra of that item. If you only buy sales items, you will not only get more for your money, but you will have more money to spend on other items. When you buy one item for yourself buy one for your food storage. Make sure food storage is part of your budget. Ask you family to give you food storage items for Christmas and birthdays.
7. For people with limited storage space for home storage, let your imagination run wild. 50 lb. cans of food can be cleverly covered and act as night or television stands. Do not forget the space under the bed, sinks, couches, stairs, empty suitcases, etc. Remember that extra set of shelves you always wanted, why not make it out of food storage cans?
8. Propane, Sterno, fondue pots, candle warmers, and chafing dishes can be used indoors for emergency cooking as long as it is ventilated. If propane is not available white gas camp stoves, charcoal, kerosene, and wood can be substituted but should only be used outdoors or in a fireplace. Most canned food can be heated right in the can but be sure to remove the label and open the can before heating it.
9. On the following page it is suggested that you store 14 gallons of water per person. Although this is way below the amount you should really store, this amount is suggested as an amount that would get each person through the first two weeks of almost any disaster (other than nuclear situations) and then leave you time during those weeks to hunt for additional water.
10. Food items should be stored in cool, dark, and dry or well ventilated places and should be covered and air tight at all times. Inspect you food items regularly for spoilage. Heat decreases storage time. The best temperature range is above 32°F. and below 70°F., 35 - 45 °F is the best range. The average temperature in your storage area subtracted from 90 will give you the number of months in which you should rotate your food.
11. Always obtain top grade food whenever possible and store it away from other products that may affect the flavor of the food.
12. When storing food items use metal, glass or heavy gaged plastic food grade (preferably unbreakable) containers with air tight lids. Do not use trash bags for food storage. They have been chemically treated and are unsuitable for food storage. Do not stack breakable storage containers.
13. Do not place food storage items on or against dirt or cement floors or walls. If you must put them near a dirt or cement floor or wall place a piece of wood between the floor or wall and the food storage container. Sweating concrete will damage food supplies.
14. If you have pets, do not forget to include a years supply of pet food and sanitary supplies.
15. Store some of your dry food in 20-30 lb. containers. These are moved easily and these smaller amounts will be used up in a short period of time, thus reducing chance of infestation by insects and/or rodents. It also provides a way to use food without exposing large quantities to the environment during use periods.

a suggested list for a complete home storage

item or product	average adult requirement 1 year	average child requirement 1 year	rotation period
main staples:			
water (2 weeks supply)	at least 14 gallons per person or more		6 months
wheat *	300 lbs.	150 lbs.	indefinite
flour, cornmeal	100 lbs	50 lbs	5 years
dry milk (non-fat)	100 lbs.	100 lbs.	2 years
sugar, honey	100 lbs.	50 lbs.	indefinite
iodized salt	5 lbs.	5 lbs.	indefinite
shortening, cooking oils	20 lbs. or 3 gal.	18 lbs. or 2½ gal.	2 years
other grains: rice, oats, corn, barley, etc.	50 lbs.	35 lbs.	2 years
legumes: dried peas, soybeans, lentils, dried beans, etc.	90 lbs.	50 lbs.	indefinite
other items:			
baking powder	2 lbs.	1 lb.	3 years
dry yeast	2-1 lb. packages	1-1 lb. packages	6 months
dry eggs	3 # 10 cans	3 # 10 cans	2 years
baking soda	1 lb.	½ lb.	indefinite
vitamins & mineral supplements	365 tablets	365 tablets	1 year
peanut butter	4 - 18 oz. bottles	4 - 18 oz. bottles	2 years
dried vegetables: potatoes, onions, etc.	20 lbs.	15 lbs.	18 months
dried fruits: raisins, apricots, prunes, etc.	24 lbs.	20 lbs.	2 years
canned meats & fish	20 - 6 oz. cans	20 - 6 oz. cans	2 years
canned vegetables	50 quarts	30 quarts	2 years
canned tomatoes and/or sauces	5 pints	3 pints	2 years
canned fruits	50 quarts	30 quarts	2 years
canned juices	12 quarts	12 quarts	2 years
gelatins	20 packages	10 packages	18 months
soups: canned or dried	20 - 10 oz. cans or packages	15 - 10 oz. cans or packages	2 years
boxed mixes and prepared foods: cereals, cakes, etc.	24 boxes	12 boxes	1 year
mayonnaise	3 bottles	1 bottle	indefinite
pasta: macaroni, spaghetti, etc.	20 lbs.	15 lbs.	1 year
seasons & spices	as desired		3 years

item or product	average adult requirement 1 year	average child requirement 1 year	rotation period
vanilla	as desired		2 years
cocoa	1 lb.	1 lb.	2 years
vinegar	2 quarts	1 quart	2 years
corn starch	½ box	½ box	1 year
bouillon cubes or granules	2 bottles	1 bottle	1 year
molasses	½ gallon	½ gallon	2 years
jams / jellies	3 pints	3 pints	1 year
hard candies	1 package	1 package	2 years
nuts	5 lbs.	3 lbs.	2 years
hot chocolate, tea, or coffee	as desired		2 years

* For people who do not eat bread or wheat products stock up on other grains that you do eat. Remember that although you may not eat wheat, it is a good cash product due to the fact that it stores indefinitely, if stored properly. If you live in an area (like the Pacific) where the majority of people do not eat bread or wheat products, storing wheat as a cash product is not a good idea. Try maybe storing rice or another grain. Just remember that other processed grains have limited storage life.

nitrogen packed dehydrated and dried foods shelf life stored at 68 degrees or less				
product	shelf life *	unconstituted serving size **	lbs. per #10 can	servings per #10 can
almonds	7 years			
barley	8 years			
beans (dry)	10 years		5	
beans (green)	8 years	½ cup		46
bouillon (beef or chicken)	5 years	1 cup		300
broccoli	8 years	½ cup		25
carrots (diced)	8 years	½ cup	2 ½	75
cereal (six or nine grain)	8 years			
cheese (powdered)	3 years	¼ cup		130
cocoa	5 years			
corn (sweet)	8 years	½ cup		35
cornmeal	8 years	2 cups		
eggs (mix, whole, or whites)	5 years	3 ounces		64
flour (white)	7 years	2 cups	4	
fruit cocktail (dried)	8 years			
fruit drink mix	10 years	3 Tbl.	6 ½	100
fruit slices (apple, banana, etc.)	8 years		1 ½	
hash-brown potatoes	3 years	½ cup		18
macaroni	8 years	½ cup	3 ½	23
margarine or butter (powdered)	5 years	1 Tbl.		176
milk (instant & non-instant)	8 years	½ cup	4 ½	16

nitrogen packed dehydrated and dried foods shelf life stored at 68 degrees or less				
product	shelf life *	unconstituted serving size **	lbs. per #10 can	servings per #10 can
mushrooms (dehydrated)	8 years			
oats (regular)	8 years	⅔ cup	3	24
onions (chopped)	8 years	1 Tbl.	2 ½	260
peanut butter powder	2 years	2 Tbl.		42
peas (split)	10 years	½ cup		42
peas (sweet)	8 years	½ cup		42
popcorn (popped)	8 years	3 cups		150
potatoes (flakes, pearls, & slices)	3 years	¼ cup	3 ¼	30
pudding	1 years	¼ cup	5	60
raisins	8 years			
rice (brown)	2 years	½ cup	6	
rice (white)	10 years	½ cup	6	
salt	indefinite	1 teaspoon	6	660
shortening powder	5 years	1 ounce		42
soup base (creamy)	5 years	½ cup		
soup mix	8 years	½ cup	5 ¼	67
spaghetti	8 years	½ cup	4 ½	23
sugar	indefinite	1 teaspoon	6	660
tomato powder	8 years	1 ounce		42
TVP meats (beef, chicken, etc.)	20 years	¼ cup	4	33
TVP meats (sloppy joe mix, taco)	20 years	¼ cup	5	60
vegetable stew mix	8 years	½ ounce		56
wheat *	indefinite	2 cups	6	

- Please note that the shelf life for nitrogen packed dehydrated or dried foods is longer than normal shelf life of stored or canned items.

** Serving size information is unconstituted (or as it comes in the can), not the actual reconstituted serving size.

For an update on missing shelf life, lbs. per # 10 can, and servings per # 10 can, contact the author. This missing data was unavailable at the time of printing but may become available soon hereafter.

other suggested items

aluminum foil (heavy duty) & plastic wrap
 ammonia
 aprons
 ascorbic acid
 axe, chainsaw, splitters, & wood saw
 baby toys
 baby supplies (diapers, bottles, wipes, etc.)
 bar soap & shampoo
 barbecue spatulas, grills, forks, tongs, etc.
 batteries
 blankets & bedding
 bleach, liquid & powder
 borax
 bottle & can openers
 broom, carpet sweeper, dust pan, mop heads
 buckets with tight fitting lids
 camping equipment
 candles & candle holders
 canned heat (Sterno or alcohol)
 canning jars, rings, & lids
 cast iron Dutch ovens, skillets & griddles
 charcoal briquettes & lighter fluid
 cheesecloth & burlap sacks
 combs & brushes
 construction tools (hammer, saw, level, etc.)
 cooking & eating utensils
 deodorants
 dish soap & dish cloths
 disinfectants & alcohol
 duct & masking tape
 extra eye glasses or contact cleaning solutions
 extra set of clothing & coats for everyone
 feminine hygiene needs
 fire extinguishers (class ABC)
 firearms & ammunition
 firewood (at least 2 cords) or coal
 fishing & hunting supplies & equipment
 first aid kits & special medications
 flashlights & extra bulbs and/or light-sticks
 games for children & adults
 garbage bags & liners (plastic in assorted sizes)
 garbage cans with tight fitting lids
 garden hose for siphoning & fire control
 garden tools (rake, shovel, hoe, wheel barrow etc)
 gas masks and/or dust masks
 gloves & hats (both winter & work)
 hand pump & siphons
 household cleaning supplies
 ice chest
 insect repellants & traps
 kitty litter
 laundry detergent
 life jackets (for flood prone areas)
 lime (chlorinated)
 lumber
 lye
 matches & fire starters
 measuring spoons, cups & droppers
 mouse & rat traps & poison (pest control)
 MRE's (meals ready to eat)
 nails, screws, nuts, & bolts
 napkins & paper towels
 newspapers for first aid splits & wrapping waste
 nursing needs
 paper & plastic bags with twist ties
 paper plates
 paper for writing
 pencils & pens
 pet food & sanitary supplies & leashes
 plastic pails with tight lids or gamma seals
 plastic sheeting (heavy duty)
 port-a-potty or bucket with tight fitting lid
 pots & pans (fire safe) - Dutch ovens
 potting soil & seed starting containers
 power generator & power cords
 propane or kerosene fuel
 propane or kerosene lanterns & stoves
 push lawn mower & sickles
 radiation monitoring equipment (dosimeter)
 radio (am/fm battery &/or solar powered)
 rags
 rope, string, bailing wire, & twine
 seed sprouting kit
 seeds for planting & fertilizer
 sewing needles, thread, notions & fabric
 shaving needs
 short wave, CB or HAM radio
 sleeping bags & tents
 split wood or coal for heating
 sponges & scouring pads
 straight razor blades
 Thermos jugs & coolers
 Thyro-Block (potassium iodide) tablets
 toilet & facial tissue (about 100 rolls per person)
 toothpaste & toothbrushes & denture care
 towels & wash cloths
 wash tubs or basins
 water filters & filtration units
 water purification tablets (Halazone)
 wax paper
 wheat grinder (hand - non-electric)
 windup alarm clocks

MRE shelf life	
temperature	shelf life (months)
120°	1
100°	18
90°	30
80°	48
70°	55
60°	84

CANNING NOTES

1. Do not add liquid to meats packed raw.
2. Pack meats loosely - 1 ½" from top of jar.
3. All meats, poultry, fish, and vegetables must be heated at boiling temperature in an open pot for 15 minutes (corn and greens 20 minutes) before tasting or serving.
4. For half pint jars use the same processing times recommended for pint jars.
5. For high altitude add 1 minute for each 1,000 feet if time is 20 minutes or less; and 2 minutes for each 1,000 feet if time is more than 20 minutes - increase pressure in pressure cooker 1 pound for each 2,000 feet (times remain the same).
6. Water can be "canned" in canning bottles or jars and processed for 20 minutes.
7. Re-pack all of your glass food storage "canned" items in their original boxes or if you put them on shelves put cardboard between them to insure non-breakage during an earthquake. Also either tie wires or nail boards across the front of your shelves to prevent the bottles from falling off the shelves during an earthquake.
8. About 2 to 5 % of food value is lost each year in canned foods, even stored under ideal conditions.
- 9.



dissolved



syrup chart		
	sugar	water
thin	1 cup	3 cups
medium	1 cup	2 cups
heavy	1 cup	1 cup

boil water and sugar until

food storage in Mylar bags
buckets and #10 cans

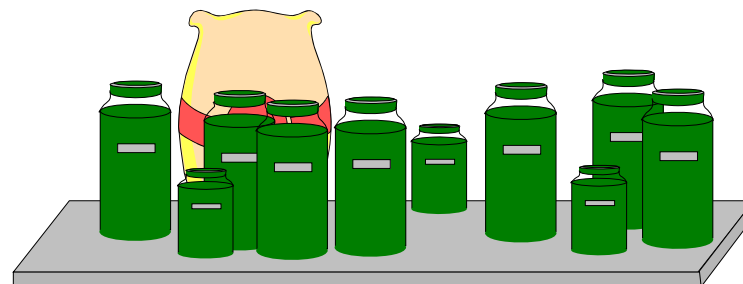
hand grain grinder

approximate yields		
food	fresh	canned
apples	1 bushel (48 lbs.)	16 to 20 quarts
berries	24 quart crate	12 to 18 quarts
peaches	1 bushel (48 lbs.)	18 to 24 quarts
pears	1 bushel (50 lbs.)	20 to 26 quarts
tomatoes	1 bushel (53 lbs.)	15 to 20 quarts
beans, lima	1 bushel (30 lbs)	6 to 8 quarts
beans, green	1 bushel (30 lbs.)	15 to 20 quarts
beets	1 bushel (52 lbs.)	17 to 20 quarts
corn	1 bushel (36 lbs.)	8 to 9 quarts
peas	1 bushel (30 lbs.)	12 to 15 quarts

Canning Time Tables

Pressure Cooker				Boiling Water Bath		
vegetables or meats	pts.	qts.	lbs.	fruits	pts.	qts.
asparagus	30	40	10	apples (hot pack)	20	20
beans, green	20	25	10	apple juice (boiling)	5	5
beans, lima	40	50	10	applesauce (hot pack)	15	20
beets	30	35	10	apricots	25	30
carrots	25	30	10	berries	15	20
corn, cream style (hot pack)	85	-	10	cherries	25	25
corn whole kernel	55	85	10	figs (hot pack add lemon juice)	45	50
greens (hot pack)	70	90	10	fruit purees (hot pack)	15	15
mushrooms	45	-	10	grapes	15	20
okra	25	40	10	grapefruit, orange sections	10	10
peas	40	40	10	grape juice (boiling)	5	5
peppers	35	-	10	nectarines	25	30
potatoes (hot pack)	35	40	10	peaches	25	30
pumpkin (cubed only)	55	90	10	pears (hot pack)	20	25
squash (cubed only)	55	90	10	pineapple (hot pack)	15	20
sweet potatoes (wet pack)	55	90	10	plums	20	25
				rhubarb (hot pack)	15	15
fish	100	-	10	tomatoes, quartered (hot pack)	35	45
lamb, veal, beef,	75	90	10	tomatoes, half or whole (raw pack)	85	85
pork, chicken	75	90	10	tomatoes, juice (boiling)	35	40

Canning figures are in minutes for pints and quarts.



Emergency Water Procurement

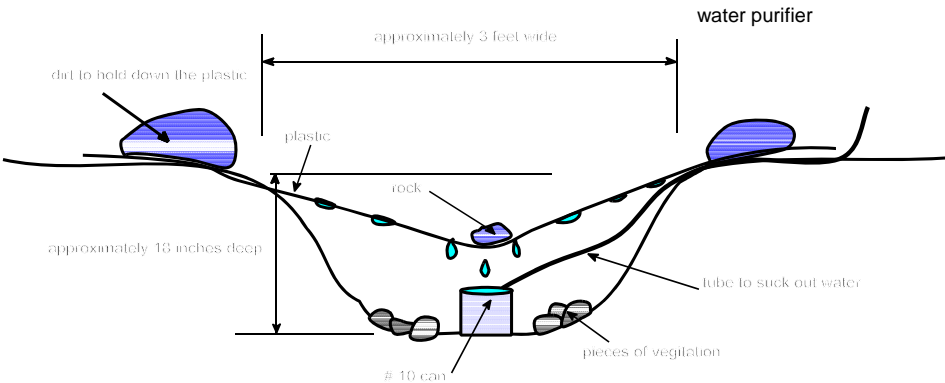
1. Emergency water should be already part of your home storage program.
2. Water can be found in most homes and offices in the hot water tank or boiler. There is usually a drain plug at the bottom of the tank. Be sure to turn off the gas or electricity to the unit and not turn it back on again with out water in it.
3. Water can also be drained out of the plumbing system by shutting off the main valve to seal the water already in the system (and avoid contamination) then opening all the faucets in the upper part of the building to allow air to enter the pipes and allowing the remaining water to drain to lowest faucet in the building.
4. Water for sanitary purposes can be stored in 2 liter soda pop bottles, Mylar bags, nylon containers, or other hard or heavy plastic containers (not milk jugs, they deteriorate with time). Water storage containers should be rotated regularly (at least every year if not every 6 months). Glass containers work well for water storage but are very susceptible to breakage, so pack cardboard around them. Water can be "canned" in canning bottles or jars and processed for 20 minutes. Avoid using any kind of non-treated metal container. The containers you use should have been designated, preferably by the FDA, for food or beverage at one time. 55 gallon water storage drums are ideal but weigh about 440 lbs. when filled, so do not forget a pump or spigot to get the water out.
5. Water can also be found in canned foods, soda pop, other canned or bottled beverages.
6. Water can also be obtained from the toilet tank reservoir, **not** the bowl. If you use toilet bowl cleansers that you put into the tank only use the water for sanitary purposes and not consumption.
7. Water can also be taken from outside snow, rainwater canals, streams, lakes, rivers, swimming pools, wells, water beds, solar panels and collectors, solar stills, melting ice cubes, fish tanks, etc. for sanitary purposes. It should be treated thoroughly before using for human consumption. Water taken from swimming pools should not be used for consumption due to the very high content of chlorine already in the water.
8. When water is mixed with radioactive fallout contaminated particles should then be filtered extensively and **never** boiled before it is used. Most government agencies claim that water with 0.9 r. of radiation level is safe to drink. Personal discretion should be used. The author of this booklet does not recommend the consumption of any radioactive particles in contaminated water no matter what the radiation level is.
9. In the event of an earthquake, floods, civil disturbance, or war, wells, rivers, streams, public water systems, lakes, etc. are frequently poisoned or contaminated. It is best not to use these water sources until they have been checked out. All contaminated water should be treated thoroughly before using for human consumption.
10. Water can be drained off a roof into a clean garbage can or cistern and then left to settle, skimmed and then filtered, before using.
11. After treating water by any method, it is best to let it stand for up to one half an hour after it is extensively filtered and then skim off any floating particles and do not consume any particles that have settled to the bottom.
12. You can survive several weeks without eating food. You can only survive several days without water. The human body uses about one-half gallon per day under normal circumstances but can survive on as little as one quart per day (two quarts per day if it is hot) without total exhaustion and dehydration.
13. Fish tank charcoal filters work great for filtering water for human consumption.
14. In an emergency situation never ration water, rather consume the required amount (at least one quart a day with food, preferable two) and then look for more tomorrow. You can conserve your water best by minimizing your activities, salt intake, and staying cool.
15. Do not store water in empty bleach containers. This increases the possibility of accidentally drinking full strength bleach. Also, after time the water stored in bleach containers becomes toxic.
16. When choosing a liquid bleach to purify your water look for one that states that it contains 5.25% sodium hypochlorite as its only active ingredient and no soap. Seal all water containers tight and store them in a cool, dark dry, well ventilated place. For water bed water storage place two ounces of bleach per 100 gallons.

amount of bleach to use when purifying water

amount of water	clear water	cloudy water
1 quart	2 drops	4 drops
1 gallon	8 drops	16 drops
5 gallons	½ teaspoon	1 teaspoon
55 gallons	5 ½ teaspoons	11 teaspoons



HOW TO MAKE A SOLAR STILL TO DISTILL WATER



Dig a hole about 18 inches deep and 3 feet wide. Put a large can in the bottom with a plastic tube or hose from the can out of the hole. Place vegetation in the bottom of the hole to induce moisture. Cover the hole with clear plastic mounding dirt on the sides of the hole to hold the plastic in place. Place a small rock in the middle of the hole, over the can, on top of the plastic so that the condensation that will form in the hole on the underside of the plastic will run towards the middle and drip into the can. Check every several hours during the heat of the day for water in the can.

METHODS OF EMERGENCY DISINFECTION AND PURIFICATION

Boiling: Vigorous boiling for ten minutes will kill any disease-causing microorganisms present in water. The flat taste of boiled water can be improved by pouring it back and forth from one container to another (called aeration), by allowing it to stand for a few hours, or by adding a small pinch of salt for each quart of water boiled. Adding Kool-Aid, tea or some other instant drink mix will also help improve taste. Water can also be filtered through layers of clean linen, nylon, cheesecloth or coffee filters.

Chemical treatment: When boiling is not practical, chemical disinfection should be used. The two chemicals commonly used are chlorine and iodine. Chlorine and iodine are somewhat effective in protecting against exposure to Giardia, but may not be effective in controlling Cryptosporidium. Therefore, use iodine or chlorine only to disinfect well water (as opposed to surface water sources such as rivers, lakes, and springs), because well water is unlikely to contain these disease causing organisms. Chlorine is generally more effective than iodine in controlling Giardia, and both disinfectants work much better in warmer water.

Chlorine Methods:CHLORINE BLEACH:

Common household bleach contains a chlorine compound that will disinfect water. The procedure to be followed is usually written on the label. When the necessary procedure is not given, find the percentage of available chlorine on the label and use the information in the following tabulation as a guide.

Available Chlorine (Drops per Quart of Clear Water)

1% -- (10)
4-6% -- (2)
7-10% -- (1)

(If strength is unknown, add ten drops per quart of water. Double amount of chlorine for cloudy or colored water)

The treated water should be mixed thoroughly and allowed to stand for 30 minutes. The water should have a slight chlorine odor; if not, repeat the dosage and allow the water to stand for an additional 15 minutes. If the treated water has too strong a chlorine taste, it can be made more pleasing by allowing the water to stand exposed to the air for a few hours or by pouring it from one clean container to another several times.

GRANULAR CALCIUM HYPOCHLORITE - (SWIMMING POOL CHLORINE)

Add and dissolve one heaping teaspoon of high-test granular calcium hypochlorite (approximately ¼ ounce) for each two gallons of water. The mixture will produce a stock chlorine solution of approximately 500 mg/L, since the calcium hypochlorite has an available chlorine equal to 70 percent of its weight. To disinfect water, add the chlorine solution in the ratio of one part of chlorine solution to each 100 parts of water to be treated. This is roughly equal to adding 1 pint (16 oz.) of stock chlorine to each 12.5 gallons of water to be disinfected. To remove any objectionable chlorine odor, aerate the water as described above.

CHLORINE TABLETS

Chlorine tablets containing the necessary dosage for drinking water disinfection can be purchased in a commercially prepared form. These tablets are available from drug and sporting goods stores and should be used as stated in the instructions. When instructions are not available, use one tablet for each quart of water to be purified.

TINCTURE OF IODINE

Common household iodine from the medicine chest or first aid kit may be used to disinfect water. Add five drops of 2 percent United States Pharmacopeia (U.S.P.) Tincture of iodine to each quart of clear water. For cloudy water add ten drops and let the solution stand for at least 30 minutes.

IODINE TABLETS

Commercially prepared iodine tablets containing the necessary dosage for drinking water disinfection can be purchased at drug and sporting goods stores. They should be used as stated. When instructions are not available, use one tablet for each quart of water to be purified.

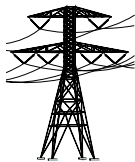
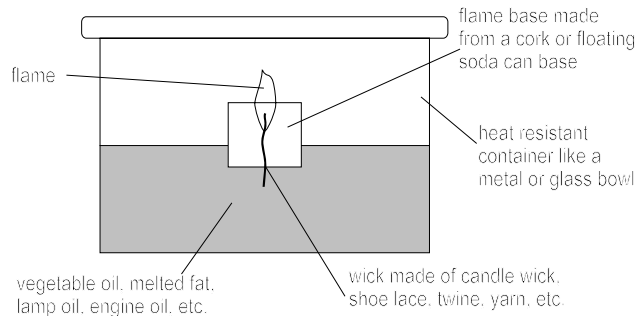
WATER TO BE USED FOR DRINKING, COOKING, MAKING ANY PREPARED DRINK, OR BRUSHING TEETH SHOULD BE PROPERLY DISINFECTED.

Living Without Electricity

This section has been added as an after thought due to the increased worries from the general public about assorted futuristic possible problems, as well as other events already discussed in this booklet, that might leave people living without electricity for an extended period of time.

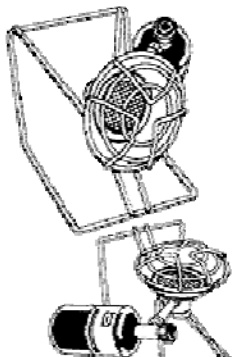
1. Undoubtably your whole life style will change, due to the fact that most of our jobs and lifestyles depend on electricity. Food, potable water, medical supplies and services, and fuel for vehicles and heating, will become very scarce almost immediately. Police, fire and other services will be put to the ultimate test. Most likely you can count on seeing martial law invoked. Setting up a Neighborhood Watch (not a militia) is a very good idea.
2. Some basic suggestions for preparation are as such:
 - a. Not knowing the length or outcome of any power outage it is always wise to use batteries, food, medical, and sanitation supplies with caution and prudence. Plan for the worst and hope for the best. Worst case scenario would that you could be without electricity for several months or years.
 - b. Plan ahead with an adequate one or two years supply of food, water, medical, sanitation, clothing, heating, and other supplies. "Those who fail to plan - plan to fail".
 - c. Some suggested items, in addition to your "normal" emergency year supply might be the following:
 1. horse, mule, bicycle, wagon, and/or wheel barrow - for transportation
 2. lots of extra batteries (consider a solar battery charger & Ni-cad batteries)
 3. power generator with extra fuel and power cords
 4. battery powered am/fm, HAM, FRS, and/or C.B. radios
 5. water filtration devices, buckets, hoses, filters, and siphons
 6. alternative cooking, lighting, and heating fuels and equipment
 7. lots of warm blankets, sleeping bags, winter clothing, etc.
 8. solar panels, invertors and deep cycle batteries.
 - d. Cooking can be very easily adapted to cooking with wood over a fire in a fireplace, barbecue, Dutch-oven, or other alternative methods. Use caution in cooking indoors without proper ventilation, especially when using: wood, kerosene, white gas, and propane. When ever possible, try cooking outdoors for safety sake alone. **Never** build a wood or coal fire in a fireplace built for natural gas only, you will asphyxiate yourself with the smoke and fumes. Propane, white gas, and kerosene heaters being used indoors should be placed well inside a wood burning fireplace or by an open window for proper ventilation. If a wood burning fireplace is not available do not use these items indoors.
 - e. Rationing food and water is a wise idea during an extended power outage, but **do not** ration it below a healthy normal daily dietary intake. Most of us over eat as it is and so food rationing will do most of us good. Being without electricity and the aftermath that follows will be already a physical challenge. You will need the strength from a balanced diet to help carry you through.
 - f. With the onset of a power outage use up the foods in your refrigerator first, freezer second and last of all your canned and boxes items.
 - g. For those living on farms, horses and mules will become a extremely valuable asset. Be sure your horse drawn carriages and wagons are in good working order now.
 - h. It would be best to clean out your chimney, fireplace, wood burning stove, etc. now. Without electricity you probably will not have gas service either to be able to heat your home and cook with.
 - i. For those who require electricity for special medical needs, plan now for other options. If planning on using power generators be sure to store an ample amount of fuel and power cords. Remember the law only allows you to store so much fuel. Check with your local officials to determine the amount allowable and how to store it.
 - j. For those who have critical information on computers and other electronic media, consider backup power supplies. Although these backup power supplies usually only last a few minutes. It should give you enough time to save or backup everything critical until electricity is restored again.

- k. Should you lose running water service during an extended power outage turn the water off in your house where it enters the house. This will prevent back-flow and contamination of the water supply in your house. See the previous section for obtaining emergency water.
- l. Emergency candles and lighting can be made with lamp oil, vegetable oil, melted fat or lard, or engine oil. Find a heat resistant container and place the oil inside. Make a wick out of a string, piece of twine, shoelace, or thin strip of twisted cloth. Find something that will float like a cork, soda can bottom and make a small hole in it. Thread the wick through it so that part of it is in the oil and the other part is able to be lit. Light and use. Be careful not to spill or tip over or place in a location where it can be. Do NOT use gasoline, kerosene or any other highly flammable liquid.

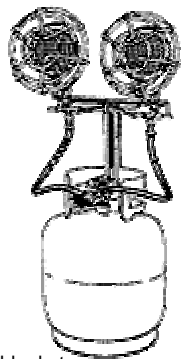


electrical generation application chart				
item	continuous watts *	surge watts *		
electric water heater	4000	4000	deep freezer	2000 - 3000
electric stove (1 element)	1500	none	am/fm radio	100 - 800
furnace fan	600 - 1200	1800 - 3000	C.B./HAM radio	50 - 200
electric chain saw	1200	2000 - 4000	light bulb	50 none
electric skillet / toaster	1200	1500		25 - 100 none
space heater	1200	none	*note: these wattage figures are approximates	
toaster	1100	none		
water well pump (½ HP)	1000	3000		
broiler	1000	1500		
coffee maker	1000	none		
stereo	1000	none	When determining what size generator to use, do not forget to take in to account surge wattage needs. The generator must have enough power to handle the continuous wattage as well as the surge (or startup).	
electric oven	1000	1400 - 1600		
washing machine	900	none		
sump pump (½ HP)	700	2100		
microwave oven	700 - 800	1000 - 1100		
gas clothes dryer		700	Any appliance that uses a compressor such as a refrigerator, freezer, etc. needs to calculate surge watts.	
	700			
sump pump	600	1500		
circular saw	500 - 1000	900 - 1500		
hand drill (½")	250 - 1000	450 - 1000		
vacuum cleaner	600	750	To calculate surge power wattage needs. Find the plate on your electrical appliance that tell the amps that is used, multiply that by the current being used (volts) then multiply that by 2.5 (example a typical refrigerator uses 8.5 amps x 120 volts x 2.5 = 2550 surge watts).	
garage door opener (¼ HP)	550	1650		
weed trimmer	500	1000		
hedge trimmer	450	900		
electric blanket	400	none		
computer	400 - 600	none	To be able to run 1200 continuous watts of electricity it is recommended that a 1800 pulse or surge watt generator with a minimum one gallon fuel tank be used. A 5000 watt generator is ideal.	
blender	350	1000		
color television	300	none		
slow cooker (crock pot)	200	none		
fan	200	600		
12V DC battery charger	120	none		

alternative heating and lighting suggestions



single burner gas heaters
dual burner gas heater



blankets



sleeping bags



wood/coal burning stoves



flashlights



candles



Do not forget lots of dry matches.

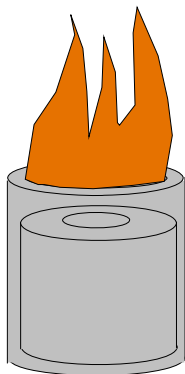


lantern

alternative heating and lighting suggestions



light (cyalume) sticks



alcohol stove

Take a quart size new paint can and stuff a roll of toilet paper without the cardboard core down inside. Fill the remaining space in the can with rubbing alcohol (about a pint and a half) and light. To put out the flame simple place the paint can lid on the can to smother the flame. This puts out a hot enough flame to cook over and heat a small room and a fair amount of light.

alternative electrical suggestions



generators and power cords



solar batteries and battery chargers

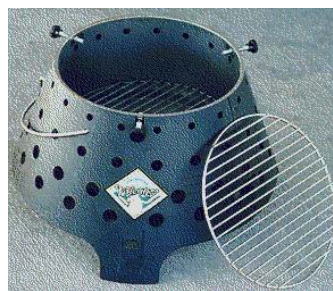
12 volt electrical converters



wind mills



alternative cooking suggestions



cast iron (Dutch) ovens and skillets

volcano stove



LID LIFTER

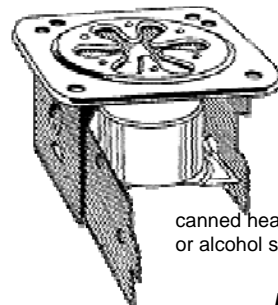
LID STAND



hibachi style barbeque grills



propane gas stoves

canned heat
or alcohol stoves

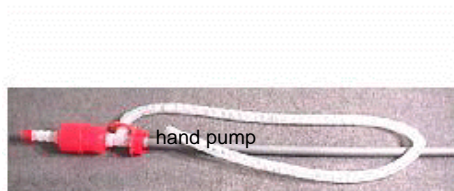
5 Basic Steps

... 5 basic steps in preparing for an uncertain future

To survive an initial major disaster or hardship it is suggested that you have the following basic items of physical preparation:

1- Water

Store 50 gallons of water per household or 14 gallons per person which ever is greater. This will get you through the initial stage until you can find other means of water.
(i.e. canals, snow, wells, rivers, lakes, waterbeds, aquariums, water heaters, roof tops etc.)
Water should be your first consideration in as much as you can live without food for a short period of time but not without water.

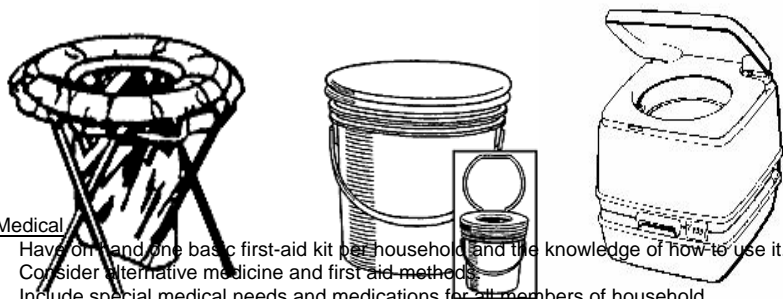


2- Food

Have on hand a one years basic food supply for every person in the household.
Do not forget special dietary needs of the young, the elderly, and the sick.

3- Sanitation Needs

Come up with some kind of provisional toilet.
Consider alternative methods of cleanup with or without water.
(This water is not part of the above 50 gallons).
Acquire pest control devices and methods.



4- Medical

Have on hand one basic first-aid kit per household and the knowledge of how to use it.
Consider alternative medicine and first aid methods.
Include special medical needs and medications for all members of household.

5- Fuel

Provide a provisional way of keeping warm that is not dependant on electricity or natural gas (i.e. extra blankets, sleeping bag, coats, gloves, hats, space heaters, wood for fireplace, generators, etc. Remember in most counties you cannot store more than 25 gallons of flammable liquid legally without a permit. Flammable liquids include: gasoline, kerosene, paint thinner, rubbing alcohol, etc. but does not include flammable gases such as propane and butane. These limits do not apply to that stored in cars, trucks, ATV's, chainsaws, lawn mowers, etc.

Appendix A

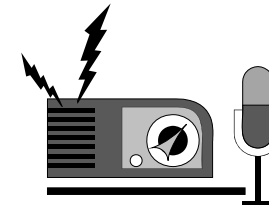
sources of public emergency information in Utah

Salt Lake, Utah, Davis and Weber counties

KSL 1160 AM, 102.7 FM, or channel 5 on the television

other places in Utah

KBYU	89.5 FM	Utah county
KYKN	103 FM	Juab county
KVEL	920 AM	Uintah county
DDXU	1450 AM	Washington county
KURA	1450 AM	Grand county
KOAL	1230 AM	Carbon county
KSVC	980 AM	Sanpete county
KSUB	590 AM	Iron county
KUTA	790 AM	San Juan county



anywhere in the U.S.A. on a C.B. channel 9

Consider getting your HAM radio licence. The usefulness of this is unlimited in any emergency situation

family service radio

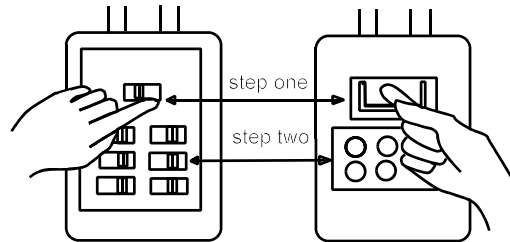
frequency 462.5625	channel 1
frequency 462.5875	channel 2
frequency 462.6125	channel 3
frequency 462.6375	channel 4
frequency 462.6625	channel 5
frequency 462.6875	channel 6
frequency 462.7125	channel 7
frequency 467.5625	channel 8
frequency 467.5875	channel 9
frequency 467.6125	channel 10
frequency 467.6375	channel 11
frequency 467.6625	channel 12
frequency 467.6875	channel 13
frequency 467.7125	channel 14

Be sure to store extra batteries. Consider also solar battery chargers and Ni-Cad rechargeable batteries.

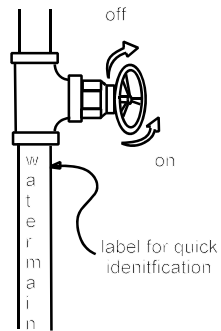
Appendix B

how to shut off your utilities

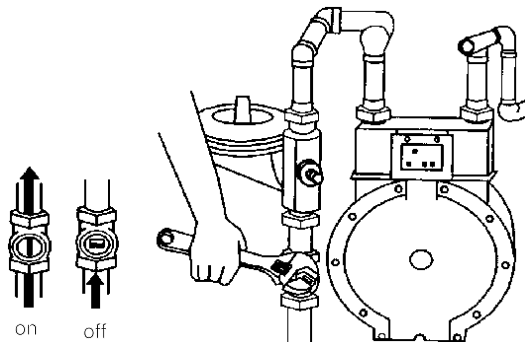
electrical shut offs



water shut-off

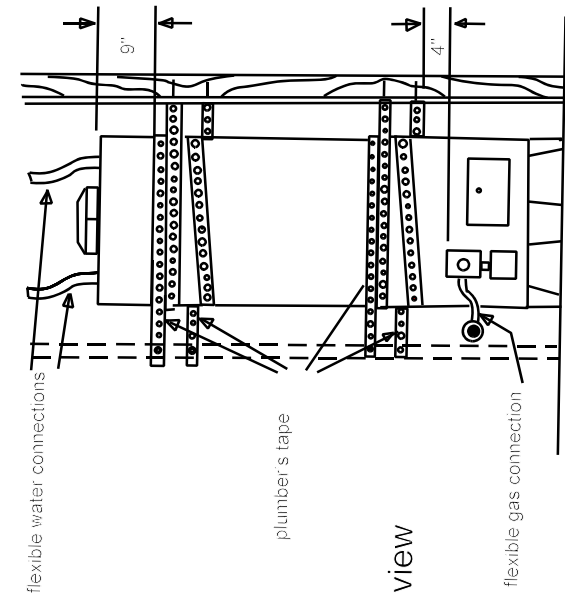


gas meter and shut-off valve

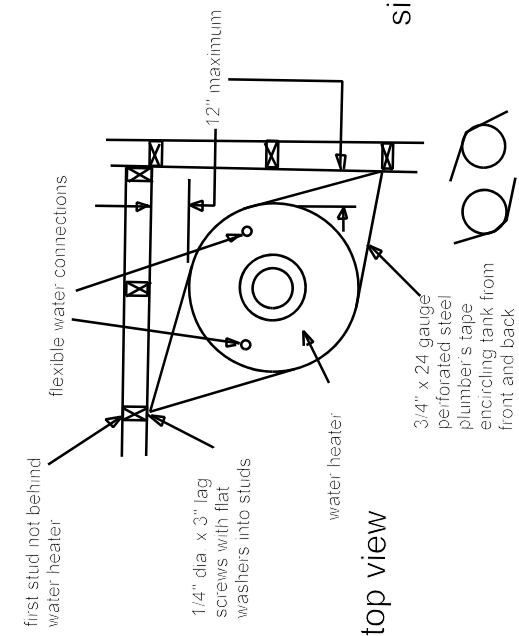


have a wrench stored in a specific location where it will be immediately available

Appendix C



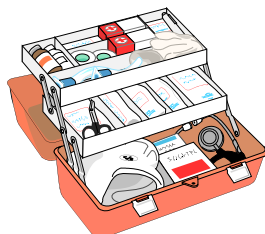
side view



Appendix D

a suggested home first aid kit component list:

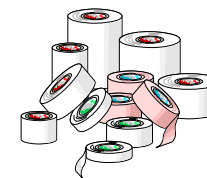
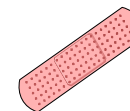
- 1 AMA (or Red Cross) First Aid guide
- 8 pr. latex or rubber gloves
- 2 pkgs. packaged sterile water
- 1 pencil
- 1 marker
- 1 small note pad
- 2 8 hour light sticks
- 2 30 min. light sticks
- 1 56" x 84" thermal shock (space) blanket
- 1 small penlight flashlight
- 2 extra batteries
- 4 quarters (25 cent coins)
- 5 straight razor blades
- 1 disposable razor
- 10 large safety pins
- 1 bar Ivory or non allergenic soap
- 1 bottle 4 oz. baking soda and salt mixture for shock
- 5 ammonia inhalants
- 1 pkg. 10 count alcohol towelettes or swabs
- 1 pkg. 10 count antiseptic towelettes
- 1 rescue breathing tube or barrier
- 1 thermometer
- 6 sterile tongue depressors
- 1 plastic spoon
- 1 pr. tweezers
- 1 pr. EMT sheer (scissors)
- 1 scrub brush
- 1 book of matches
- 1 4" candle
- 20 cotton tip swabs
- 1 pkg. ½ oz. absorbent cotton
- 2 2" x 5 yds. elastic roller (Ace) bandages
- 2 3" x 5 yds. elastic roller (Ace) bandages
- 2 triangular bandages
- 10 2" x 2" gauze pads
- 10 3" x 3" gauze pads
- 10 4" x 4" gauze pads
- 4 1" x 5 yds. stretch gauze bandages (Kerlex)
- 2 2" x 5 yds. stretch gauze bandages (Kerlex)
- 2 3" x 5 yds. stretch gauze bandages (Kerlex)
- 3 4" x 5 yds. stretch gauze bandages (Kerlex)



FIRST AID

a suggested home first aid kit component list (continued):

- 20 ¾" x 3" adhesive bandages (band-aid)
- 20 1" x 3" adhesive bandages (band-aid)
- 5 fingertip adhesive bandages (band-aid)
- 5 butterfly closures
- 5 knuckle bandages
- 1 eye patch
- 1 ½" x 5 yds. adhesive tape
- 1 1" x 5 yds. adhesive tape
- 1 2" x 5 yds. adhesive tape
- 2 cold packs
- 1 heat pack
- 1 bulb syringe
- 1 snake bite kit
- 1 bottle 4 oz. eye wash
- 1 bottle 1 oz. tetrahydrozoline HCl (Visine)
- 1 tube 1 oz. first aid cream
- 1 tube 1 oz. petroleum jelly (Vaseline)
- 1 tube 1 oz. burn ointment (Silvadine)
- 5 tubes ½ oz. skin disinfectant (Betadine)
- 1 tube 1 oz. antibiotic ointment (Neosporin)
- 1 bottle 2 oz. antacid (Maalox)
- 1 bottle 50 count water purification tablets (Halazone)
- 1 bottle 14 count Potassium Iodide (Thyro-Block) - for nuclear emergencies
- 1 bottle 1 oz. Ipecac syrup
- 1 bottle 12 count nasal decongestant (Sudafed)
- 1 bottle 12 count antihistamine (Benadryl)
- 1 bottle 12 count ibuprofen (Motrin)
- 1 bottle 12 count acetaminophen (Tylenol)
- 1 bottle 12 count aspirin
- 1 bottle 8 oz. Pepto-Bismol
- 1 bottle 2.5 oz. topical antihistamine (Caladryl)
- various assorted splints
- 1 Sunday (thick) edition of newspaper for splints wrapping waste etc.
- 1 tin Bag Balm antiseptic ointment
- various assorted prescription medications needed by members of household
- 1 roll duct tape
- 1 bottle eye contact cleanser (if you use contacts)
- 1 pair extra eye glasses (if you use eye glasses)



Do not forget if you have small children or infants to include medicines for them. Also you may want to include any special medications that you need on prescription or otherwise.

Appendix E

miscellaneous first aid notes - CPR -

CHEST COMPRESSION

Place the victim on his/her back and on a firm surface.
Place the heel of hand on the center of chest over lower half of breastbone with fingers off chest.
Place second hand on top of first.
Press straight down using your weight to compress chest 1½" - 2"
Release pressure but DO NOT remove hand from the chest.
Repeat

ADULT 60/minute

CHILD 80/minute heel of one hand or tip of fingers

INFANT 80/minute tip of fingers compress MIDPOINT of breastbone



EMERGENCY BREATHING

(Once you start do not stop until the victim is revived or trained emergency responder takes over or you are just to exhausted to continue.)

Open air passage clearing all obstructions.
Tilt the head back by lifting up on the chin and press down on the forehead.
Open the victim's mouth by pressing down on chin with your thumb.
Take a deep breath and open your mouth wide.
Pinch the victim's nose closed.
Seal your lips over the victim's mouth.
Breathe into the victim's mouth - his/her chest must rise.
Remove your mouth and allow the victim to exhale.
Repeat every 5 seconds.
After three breaths check the pulse and pupils of eyes.
Continue until the victim is revived, you are relieved by a professional, or you are to exhausted to continue.



BREATH AND CHEST COMPRESSION

(2 rescuers) 5 compressions & 1 breath

(1 rescuer) 14 compressions & 2 breaths



Appendix F

communication items

Morse Code

alpha	● —	one	● — — —	When signaling with Morse
bravo	— ● ● ●	two	● ● — —	Morse code a dash is two
Charlie	— ● — ●	tree	● ● ● —	seconds and a dot is half
delta	— ● ●	fo-war	● ● ● ● —	a second.
echo	●	fife	● ● ● ● ●	
foxtrot	● ● — ●	six	— ● ● ● ●	
golf	— — ●	seven	— — ● ● ●	
hotel	● ● ● ●	eight	— — — ● ●	
India	● ●	niner	— — — — ●	
Juliet	● — — —	zero	— — — — —	
kilo	— ● —			
lima	● — ● ●			
mike	— —			
November	— ●			

ground to air signals

Oscar	— — —	I	require a doctor
papa	● — — ●	I I	require medical supplies
Quebec	— — ● —	←	traveling in this direction
Romeo	● — ●	Y	affirmative
sierra	● ● ●	N	negative
tango	—	F	need food and or water
uniform	● ● —	□	need map & compass
victor	● ● ● —	△	it is safe to land here
whiskey	● — —	X	unable to proceed
x-ray	— ● ● —	L L	all is well
Yankee	— ● — —	L	need fuel and oil
Zulu	— — ● ●	J L	not understood

Ground to air
signals should
be 25 feet long.

10 - Codes

10-1	receiving poorly	10-27	I am moving to channel	10-71	proceed w/ transmission in sequence
10-2	receiving well	10-28	identify your station	10-77	negative contact
10-3	stop transmitting	10-29	time is up for contact	10-82	reserve room for
10-4	OK, message received	10-32	I will give you a radio check	10-84	my telephone number is
10-5	relay message	10-33	EMERGENCY TRAFFIC	10-85	my address is
10-6	busy, stand by	10-34	trouble at this station	10-92	talk closer to mike
10-7	out of service, leaving air	10-35	confidential information	10-93	check my frequency on this channel
10-8	in service, subject to call	10-36	correct time is	10-94	please give me a long count
10-9	repeat message	10-37	wrecker needed at	10-99	mission completed, all units secure
10-10	transmission completed, standing by	10-38	ambulance needed at	10-200	Police needed at
10-11	talking too rapidly	10-39	your message is delivered		
10-12	visitors present	10-41	please turn to channel		
10-13	advise weather/road conditions	10-42	traffic accident at		
10-16	make pick up at	10-43	traffic tie up at		
10-17	urgent business	10-44	I have a message for you		
10-18	anything for us ?	10-45	all units within range please report		
10-19	nothing for you, return to base	10-50	break channel		
10-20	my location is	10-60	what is next message		
10-21	call by telephone	10-62	unable to copy, use phone		
10-22	report in person to	10-63	net directed to		
10-23	stand by	10-64	net clear		
10-24	completed last assignment				
10-25	can you contact	10-65	awaiting your next message/assignment		
10-26	disregard last information	10-67	all units comply		
		10-70	fire at . . .		

Appendix G

herbal medicinal supplements and replacements

precautions:

Consult someone of the healing arts and or a Practitioner, or a Doctor of natural medicine for dosages and application of the herbs below.

Do not use anise if you are pregnant.

Do not use boneset if you are pregnant or nursing

Do not use chaparral if you have gland or kidney problems.

Do not use ephedra if you are pregnant, suffer with asthma, hypertension or a heart condition.

Do not give ginseng or meadowsweet to small children.

Do not use golden seal if you suffer from diabetes, glaucoma, heart disease, high blood pressure or have a stroke history.

Do not use licorice root if you suffer from hypertension.

Do not take meadowsweet if you have a cold, the "flu" or influenza.

Do not use St. John's Wort if you are presently taking a prescription Anti-depressant, and or if you

suffer from Rosacea, or spending a lot of time in the sun.

Do not take tea tree oil internally.

ailment	herbs
abscesses	garlic, Fenugreek seed as a poultice, Lobelia
antibiotic	barberry, Echinacea, garlic
antiseptic	aloe vera, chamomile, comfrey, chaparral, Echinacea, garlic, St. Johns wort
appendicitis	lobelia tincture, grated ginger, lobelia, mullein & slippery elm poultice
arthritis	alfalfa, Bistort, boneset, chamomile, chaparral, Chondroitin, Echinacea, Evening Primrose Oil, ginger, Glucosamine Sulfate, meadowsweet, baths of comfrey, distilled water
asthma	alfalfa, chickweed, ephedra, garlic, peppermint, Ma Huang
athlete's foot	Clorox, goldenseal, marigold, tea tree oil
bad breath	alfalfa, chaparral, parsley, thyme
bee sting	baking soda paste, plantain ointment
bleeding (to stop the...)	cayenne
blisters	Aloe Vera, Calendula, St. John's wort
blood poisoning	Echinacea
blood purifier	rhubarb
boils	alfalfa, Echinacea
bones (broken)	BF&C, comfrey tea and bath
bronchitis	anise, coltsfoot, Echinacea, marshmallow, N-Acetyl Cysteine
bruises	arnica, Goldenseal
burns	aloe vera, chamomile, comfrey, Echinacea, marshmallow, St. John's wort
canker sores	goldenseal, marigold
cancer	alfalfa, chaparral, Echinacea
chapped lips	goldenseal, marigold
chicken pox	Echinacea
cleansing (bowels)	Fen LB
(liver & gall bladder)	barberry
(kidneys & bladder)	Juni-Pars
(bloodstream)	red clover
colds	cayenne, Echinacea, garlic, ginger, ginseng, licorice root, St. John's wort, apple cider vinegar baths

herbal medicinal supplements and replacements (continued)

colic	raspberry tea, thyme
congestion	anise, black mustard, coffee. ephedra, eucalyptus, saline irrigation
	slippery elm, valerian tea, mullein oil
constipation	barberry, psyllium, cascara sagrada
cough	anise, coltsfoot, ginseng, licorice root, slippery elm, valerian
cramps	honeysuckle
cuts (minor)	aloe vera, chamomile, comfrey, chaparral, Echinacea, garlic, St. John's wort
cuts (major wounds)	aloe vera, BF&C ointment, comfrey, Echinacea, garlic, slippery elm
cuts (wound cleansing)	goldenseal, marigold, marshmallow
depression	cloves tea, St. John's wort, Taurine, 5HTP, DL-Phenylalanine
diarrhea	barberry, blackberry, charcoal, folic acid, garlic, goldenseal
dizziness	ginkgo
dysentery	garlic, goldenseal
earache & infection	Echinacea, garlic, goldenseal, silcea, lobelia, mullein oil
eczema	goldenseal, marigold, sulfur
enema (to make a ...)	catnip tea
energy (pick-me-up)	ginseng
eye irritation	barberry, goldenseal, marigold
fever	boneset, meadowsweet, thyme
flu (influenza)	boneset, cayenne, Echinacea, garlic
fluid retention	alfalfa, B-6, Carbamide
food poisoning	barberry, chamomile, Echinacea, ginseng, garlic
gall stones	dandelion
gangrene	marshmallow
genital herpes	lemon balm wash, Lysine
gingivitis	baking soda, bloodroot
gland reduction	bladderwrack
gout	rhubarb
hay-fever	alfalfa, ephedra
headache (minor)	chamomile tea
headache (migraines)	black mustard, feverfew, peppermint, thyme
heartburn	ginger tea
heart disease	alfalfa, cayenne, feverfew, garlic, ginger, ginseng, meadowsweet, Hawthorne berry syrup, psyllium, pepper
	elder, goldenseal, witch hazel, St. John's wort
hemorrhoids	barberry, garlic, Hawthorne
high blood pressure	alfalfa, barberry, cayenne, feverfew, garlic, ginger, ginseng, psyllium
high cholesterol	boneset, Echinacea, garlic, goldenseal
Hawthorne	ginkgo
immune system	chamomile, ginger, peppermint
impotence	Echinacea, garlic, ginger, goldenseal, St. John's wort
indigestion	BF&C, cayenne ointment
infection	comfrey, Echinacea
inflammation	B-1, chamomile tea mist
insect bite	chamomile, cloves tea, hops, linden, sage
insect repellent	chaparral
insomnia	Echinacea
kidney problems	Echinacea, chickweed bath
malaria	ginkgo
measles	garlic
memory problems	anise, black cohosh, red clover
meningitis	anise, ephedra, feverfew, goldenseal, lobelia tincture, yarrow
menopause discomfort	ginger
menstrual problems	
motion sickness	

herbal medicinal supplements and replacements (continued)

milk production	anise
mononucleosis	garlic
morning sickness	ginger tea
mumps	Echinacea
muscle (sore)	BF&C ointment
nasal congestion	anise, Echinacea, ephedra
nausea	cloves tea, ginger, peppermint
nervousness	hops, skullcap
nursing problems	fennel seed tea
pain	cayenne, lobelia tincture, meadowsweet
pain (due to broken bones)	BF&C ointment, cayenne ointment, lobelia
parasites (internal)	garlic
phlegm	thyme
pink eye	herbal Eyebright
pneumonia	enema, cold sheet treatment, garlic paste, cayenne, & yarrow tea
poison ivy, oak, sumac	aloe vera, dried chamomile, hounds tongue, mullein, plantain
pregnancy	red raspberry leaf tea
premature labor	ginger root bath
	red raspberry leaf, false unicorn, vitamin E, cramp bark, wild yam & lobelia combination
premenstrual syndrome	fish oil, flax seed oil, black currant seed oil
psoriasis	Echinacea
radiation therapy	garlic
rheumatism	bladderwrack, hops, peppermint
ringworm	golden seal, marigold
scar tissue healing	calendula gel
scarlet fever	Echinacea
snake bite	Echinacea
sprains	arnica
strep throat	usnea tincture
stress	chamomile, ginseng, valerian
stinging nettle	hounds tongue, mullein, plantain
stomach (upset)	alfalfa, aloe (internal), anise, boneset, chamomile, red raspberry tea
	aloe vera
sunburn	Juni-Pars, plantain ointment
swelling	blackberry, golden seal tea, marshmallow, slippery elm
throat (sore)	ginkgo
tinnitus	garlic
tonsillitis	cloves oil, peppermint
toothache	chaparral
tooth decay	valerian
tranquilizer	garlic
tuberculosis	barberry, red clover
tumor reduction	alfalfa, aloe (internal), licorice root, marshmallow
ulcers	anise, coltsfoot
upper respiratory	alfalfa, barberry, cranberry, garlic, golden seal, St. John's wort
urinary tract infection	Pau D' Arco , St. John's wort
vaginitis	boneset, goldenseal, vitamin C
viral infection	garlic
wart shrinking	burdock root tea, dandelion greens tea
water retention	bladderwrack, chickweed, Coryanthes, ephedra, Ma Huang
weight control	garlic, camphor (topically), mustard poultice with onion
whooping cough	barberry, chamomile, Echinacea, garlic, golden seal,
yeast infection	Pau D' Arco, tea tree oil

Appendix H

miscellaneous items**NOTES ON FOOD RATIONING AND DISTRIBUTION IN CRISIS SITUATIONS**

food item	adult ration *	child ration *	infant ration *
bread or rice	½ lb	¼ lb	¼ lb
beans or meat	¼ lb	¼ lb	none
vegetable	¼ lb	¼ lb	¼ lb
fruit	¼ lb	¼ lb	¼ lb
juice or milk	1 cup	1 cup	1 cup
water	2 cups	1 cup	1 cup

* ration size is a per meal not per day amount

infant ages 0 - 2 years

child ages 2 - 12 years

adult ages 12 years on up

Strict rationing policies need to be enforced when there exists food shortages of possibilities of such.

Rations should be distributed three times daily.

Nursing mothers should be given double rations of beans and meat, and fluids.

Rationing amounts should never be below substandard health levels.

to make black or gun powder:

black power-

charcoal 15%, saltpeter 75%, sulfur 10%

gun powder-



mix and grind the three elements together, press in to cakes

break in to desired grain size

glaze grains to break off points

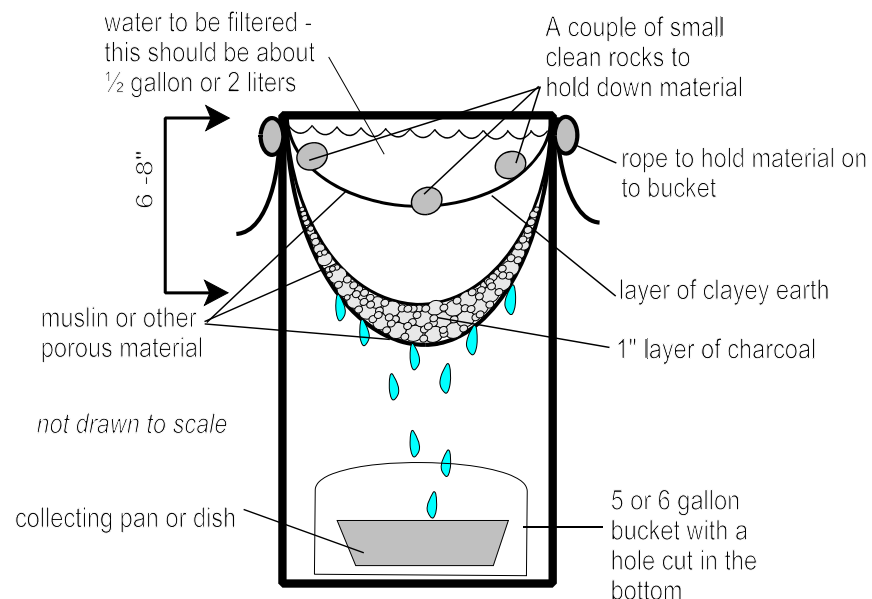
dry

Saltpeter (potassium nitrate) can be found around limestone deposits or caves. It is usually in the form of crystalline powder or white crystals and has a cool salty taste.

Appendix I

Large Quantity Water Filter

Drape a piece of muslin or linen or a clean sheet over a 5 or 6 gallon bucket with a 10 inch dip in the center. Make a hole in the bottom of the bucket to be able to retrieve the collecting pan when it is full of water. Tie a rope around the top of the bucket to hold the material in place. Place about a 1" layer of pre-washed activated charcoal in the bucket on top of the material. Drape another piece of material into the bucket on top of the charcoal layer. Place a 6 to 8 inch layer of clayey earth on top of the second material layer. Drape a third piece of material over the dirt and place a few clean stones on top of the material to keep it from floating. Slowly pour water into the bucket over the earth and charcoal layers. Let the water filter through to the collecting pan underneath. Many linens or sheets can get threadbare. Try to find a material to use that has a tight weave, if you cannot, double or triple your material. You may find, if you are using dusty charcoal, that the first couple of batches that goes through the filter are quite dark. If this is so, re-filter the water until the water runs clean and then start using that water - or wash the charcoal before using it. If the filtering process becomes too slow remove the top piece of material and rinse it off and then replace it on the bucket.



Emergency Preparedness Seminar's Presented by the Author

<u>seminar name</u>	<u>level</u>	<u>duration</u>
1. 5 Basic Steps to Preparing for an Uncertain Future	basic	2 hours
2. CERT - Community Emergency Response Teams	basic	21 hours
3. Terrorism & Nuclear, Biological, & Chemical Safety and Protection (sheltering in place)	basic	1 hour
4. Emergency Preparedness in the Home	basic	1½ hours
5. Emergency Preparedness in the Office	basic	1½ hours
6. Emergency Preparedness at School - for teachers & students	basic	1½ hours
7. Emergency Preparedness in the Home	advanced	3 hours
8. Emergency Preparedness in the Office	advanced	3 hours
9. Emergency Preparedness at School - for teachers only	advanced	3 hours
10. Emergency Preparedness in the Community	advanced	3 hours
11. Emergency Preparedness for Church leaders (includes setting up an emergency response grid)	advanced	4 - 8 hours
12. Emergency Preparedness for Church Members	advanced	3 hours
13. Living Without Electricity and Other Modern Conveniences	advanced	2 hours
14. Earthquakes, Floods, and Hazardous Materials	advanced	1½ hours
15. Fires and Fire Safety	advanced	1 hour
16. 72-hour kits for Everyone	advanced	1 hour
17. Basic First Aid Skills - class only	basic	1 hour
18. Basic First Aid & CPR Skills - hands on	basic	8 hours
19. Advanced First Aid Skills - hands on	advanced	6 hours
20. Emergency Medical Treatment Under Extreme Circumstances	advanced	4 hours
21. Basic Search and Rescue	basic	1 hour
22. Advanced Search and Rescue	advanced	2 hours
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24. Building Fallout Shelters - class room only (participants should arrange for additional construction time with instructor)	advanced	2 hours
25. Home Storage, Canning and Freezing - hands on (taught only during canning season)	basic	2 hours
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27. Wilderness Survival - hands on	advanced	2 days
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for more information about any of these seminars please contact:

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