WORKFORCE SOLUTIONS
HEART OF TEXAS

Administrative Offices | 801 Washington Avenue, Suite 700 Waco, TX 76701
www.hotworkforce.com

Table of Contents

3 Introduction

4 Disaster Preparedness Kit

6 Blackouts

8 Chemical Emergencies

11 Drought

14 Fires

16 Floods

18 Heat Waves

20 Hurricanes

22 Mud/Landslides

24 Terrorism

27 Thunderstorms

29 Tornadoes

31 Wildfires

33 Appendix

34 References & Resources

Though each type of emergency has its own set of issues to overcome, there is one basic safety tip that applies to all types of disasters. It is important to remember to stay calm.

Introduction

Though the events that are outlined in this plan will be overwhelming, and in some situations shocking, it is vital to your safety and the safety of those around you to remain calm in order to make your plans and decisions with a clear mind.

With this most basic recommendation being covered, you are now ready to begin reviewing the rest of the tips, suggestions, and recommendations that are outlined in this plan. It is recommended that this entire plan be reviewed before it is needed.

By reviewing its contents prior to a disaster, you will be better acquainted with the layout of each disaster's plan and will have an easier time locating information in the event of an emergency. At the very least, please review the section entitled Disaster Preparedness Kit as well as the Disaster Preparedness Kit Checklist located in the appendix. These sections can be found on pages 4 and 33 respectively.

"In a major disaster, it might be several days before vital services are restored."

Disaster Preparedness Kit

In a major disaster, it might be several days before vital services are restored. It is vital that homes, offices, and individuals are prepared for any emergency that may arise. In the event of a catastrophic disaster, emergency personnel will be overwhelmed and unable to assist all of those in need of medical attention and rescue. This makes it even more important to have all the supplies you need when stores may be closed, electricity may be out, and roads may be unavailable. The following is an overview of what your Disaster Preparedness Kit should include and how it should be prepared.

Water

At least one gallon of water per person per day for at least three days should be stored. To prepare the safest and most reliable emergency water supply, it is recommended that you purchase commercially bottled water. Keep bottled water in its original containers and do not open it until you need to use it. Be sure to observe the expiration or "use by" date.

Food

At least a three-day supply of food per person should be stored. Stock canned foods, dry mixes, and other staples that do not require refrigeration, cooking, water, or special preparation. Avoid foods that make you thirsty. Choose salt-free crackers, whole grain cereals, and canned foods with high liquid content. Include special dietary needs & be sure to include a manual can opener. Observe all expiration or "use by" dates.

Clothing

At least one complete change of clothing and shoes per person should be stored. This includes long pants, a long sleeved shirt, sturdy shoes, a hat, mitten or scarf, as well as a blanket or sleeping bag. Be sure to account for growing children and other changes.

(continued on the next page)

For a more detailed checklist of items that should be included in your kit(s), please see the appendix on page 33.

Other

The following items are recommended for inclusion with your other basic disaster supplies:

- Portable, battery powered radio & extra batteries
- Flashlight and extra batteries
- First aid kit and manual
- Sanitation and hygiene items
- Matches and waterproof container
- Whistle
- Map of the area
- Kitchen accessories and cooking utensils
- Photocopies of credit and I.D. cards, as well as insurance information
- Cash and coins
- Prescription medications, eye glasses, contact lens solutions, and hearing aid batteries
- Items for infants (ie: formula, diapers, bottles, pacifiers, etc.)
- Other items to meet your unique needs

Maintenance

It is important to maintain your supplies so that they are safe to use, if needed. Keep food in a cool, dry place and store boxed foods in tightly closed plastic or metal containers to protect from pests. Throw out any canned goods that become swollen, dented or corroded. Change stored food and water every six months and be sure to write the date you store it on all containers. Keep items in airtight plastic bags and put your entire disaster kit in one or two easy-to-carry containers.

Locations

Home

Your home kit should include at least three days of supplies. It should be kept in a designated location and ready to be taken out of your home quickly, if needed. Make sure that all members of your family know where the kit is kept. Additionally, you may want to consider having supplies for sheltering for up to two weeks.

Work

Your work/office kit should be in a single container ready to be taken out of your workplace in case of evacuation. The kit should include food and water as well as comfortable, sturdy walking shoes in case of an evacuation that requires walking long distances.

Car

Your car kit should contain food, water, first aid supplies, flares, jumper cables, and seasonal supplies. It is important to keep a car hit in case you are stranded in your vehicle.

"Blackouts may affect the same area more than once a day and may exceed an hour's duration."

Blackouts

A rolling blackout, or power outage, occurs when a power company turns off electricity to selected areas to conserve energy. These areas are selected using sophisticated computer programs and models. The blackouts are typically for one hour, then the power is restored and another area is turned off. Hospitals, airport control towers, police stations, and fire departments are often exempt from these rolling blackouts.

Blackouts may affect the same area more than once a day and may exceed an hour's duration. Unexpected blackouts can also occur and may be due to severe weather, automobile accidents, and construction. No matter what the cause, it is important to be prepared for a blackout.

Top Safety Tips for a Blackout

- Use only a flashlight for emergency lighting.
- Turn off the electrical equipment that was in use when the power went out.
- Avoid opening the refrigerator or freezer.
- Do not run a generator inside your home, office, or garage.
- If you use a generator, connect the equipment you want to power directly to the outlets on the generator.
- Listen to local radio stations for updated information.
- Due to the extreme risk of fire, do not use candles during a power outage.

Keep computer files and operating systems backed up regularly. Consider buying extra batteries and a power converter if you use a laptop computer. A power converter allows most laptops (12 volts or less) to be operated from the cigarette lighter of a vehicle. Turn off all computers, monitors, printers, copiers, scanners and other devices when they're not being used. Get a high quality surge protector for all of your computer equipment.

If you have a telephone system that requires electricity to work (such as a cordless phone or answering machine), plan for alternate communication, including having a standard telephone handset, cellular telephone, radio, or pager. Remember that some voicemail systems and remote dial-up servers for computer networks may not operate during a blackout.

(continued on the next page)

Keep your car fuel tank at least half full. Gas stations rely on electricity to power their pumps, which could result in the closure of gas pumps in your area during a blackout. Follow energy conservation measures to keep the use of electricity as low as possible, which can help power companies avoid imposing rolling blackouts.

What To Do During A Blackout

Turn off or disconnect any appliances, equipment (like air conditioners), or electronics you were using when the power went out. When power is restored, it may come back with momentary "surges" or "spikes" that can damage equipment such as computers and motors in appliances.

Leave one light turned on so you'll know when your power returns. Leave the doors of your refrigerator and freezer closed to keep your food as fresh as possible. Use the phone for emergencies only. Listening to a portable radio can provide the latest information. Only call 9-1-1 to report a life-threatening emergency.

Eliminate unnecessary travel, especially by car. Traffic signals will stop working during an outage, creating traffic congestion. Remember that equipment such as automated teller machines (ATMs) and elevators may not work during a power outage.

If it is cold outside, put on layers of warm clothing. Never burn charcoal for heating or cooking indoors. Never use your oven as a source of heat. If the power may be out for a prolonged period, plan to go to another location (relative, friend, or public facility) that has heat to keep warm.

Energy Conservation Recommendations

To conserve power to help avoid a blackout, the power industry recommends:

- In heating season, set the furnace thermostat at 68 degrees or lower. In cooling season, set the thermostat at 78 degrees or higher. Consider installing a programmable thermostat that you can set to have the furnace or air conditioning run only when you are at home.
- Turn off lights and computers when not in use. This is especially true about computer monitors. Avoid using a "screen saver" and just simply turn the monitor off when you won't be using the computer for a while. Turn the computer off completely each evening.
- Close windows when the heating or cooling system is on.
- Caulk windows and doors to keep air from leaking and replace old windows with new, energy-efficient windows.
- Clean or replace furnace and air-conditioner filters regularly.
- When buying new appliances, be sure to purchase energy-efficient models.
- Wrap your water heater with an insulation jacket, available at most building supplies retailers.
- If you have to wash clothes, wash only full loads and clean the dryer's lint trap after each use.
- When using a dishwasher, wash full loads and use the "light" cycle. If possible, use the "rinse only" cycle and turn off the "high temperature" rinse option. When the regular wash cycle is done, just open the dishwasher door to allow the dishes to air dry.
- Replace incandescent light bulbs with energy-efficient compact fluorescent lights.
- Use one large light bulb rather than several smaller ones.

For More Information

If you would like more information about rolling blackouts and how to deal with them, contact the power company that serves your area.

"Under certain conditions, chemicals can have a harmful effect on your health."

Chemical Emergencies

Chemicals are a natural and important part of our environment. Even though we often don't think about it, we use chemicals every day. Chemicals help keep our food fresh and our bodies clean. They help our plants grow, fuel our cars, and make it possible for us to live longer, healthier lives.

Under certain conditions, chemicals can be poisonous or have a harmful effect on your health. Some chemicals, which are safe and even helpful in small amounts, can be harmful in larger quantities or under certain conditions.

Top Safety Tips for a Chemical Emergency

You may be exposed to a chemical in 3 ways:

1. Breathing the chemical
2. Swallowing contaminated food, water, or medication
3. Touching the chemical or coming into contact with clothing or things that have touched the chemical.

Remember, you may be exposed to chemicals even though you may not be able to see or smell anything unusual.

Chemical Accidents Can Be Prevented

Many people think of chemicals as only those substances used in manufacturing processes. However, chemicals are found everywhere: in our kitchens, medicine cabinets, basements, and garages. In fact, most chemical accidents occur in our own homes and can be prevented.

Children and Poisoning

The most common home chemical emergencies involve small children eating medicines. Experts in the field of chemical manufacturing suggest keeping hazardous materials out of a child's reach could eliminate up to 75 percent of all poisonings of small children.

Keep all medicines, cosmetics, cleaning products, and other household chemicals out of sight and out of reach of children. If your child should eat or drink a non-food substance, find any containers immediately and take them to the phone. Call the Poison Control Center **(1-800-222-1222)** or **9-1-1**.

Follow their instructions carefully

Often the first aid advice found on containers may not be appropriate. Therefore, you should not give anything by mouth until you have been advised by medical professionals.

Home Product Precautions

Other home accidents can result from trying to improve the way a product works by adding one substance to another, not following directions for use of a product, or by improper storage or disposal of a chemical. The first precaution you can take is to avoid mixing common household chemical products. Some combinations of these products, such as ammonia and bleach, can create toxic gases.

A second important precaution is to always read the directions before using a new product. Some products should not be used in a small confined space to avoid inhaling dangerous vapors. Other products should not be used without gloves and eye protection to help prevent the chemical from touching your body. Read and follow all directions.

Non-food products should be stored tightly closed in their original containers so you can always identify the contents of each container and how to properly use the product. Never smoke while using household chemicals. Although you may not be able to see or smell them, vapor particles in the air could catch fire or explode.
If you should spill a chemical, clean it up immediately with some rags, being careful to protect your eyes and skin. Allow the fumes in the rags to evaporate outdoors in a safe place, then dispose of them by wrapping them in a newspaper and then placing them in a sealed plastic bag. Dispose of these materials with your trash. Keep a fire extinguisher that is labeled for A, B, and C class fires readily available.

It is also important to dispose of products properly to preserve our environment and protect wildlife. Plus, some products can be recycled and further protect our environment. Many household chemicals can be taken to your local household hazardous waste collection facility. Many facilities accept pesticides, fertilizers, household cleaners, oil-based paints, drain and pool cleaners, antifreeze, and brake fluid. If you have questions about how to dispose of a chemical, call your local environmental or recycling agency to learn the proper method of disposal.

What To Do During a Major Chemical Emergencies

A major chemical emergency is an accident that releases a hazardous amount of a chemical into the environment. Accidents can happen underground, on railroad tracks or highways, and at manufacturing plants. These accidents sometimes result in a fire or explosion, but many times you cannot see or smell anything unusual.

How You May Be Notified of a Major Chemical Emergency

In the event of a major chemical emergency, the authorities will notify you. Listen carefully to any radio or television emergency alert stations, and strictly follow instructions.

You Will Be Told

- The type of health hazard.
- The area affected.
- How to protect yourself.
- Evacuation routes (if necessary).
- Shelter locations.
- Type and location of medical facilities.
- Phone numbers to call if you need extra help.

Do not call the telephone company or 9-1-1 unless you are experiencing a possible life-threatening emergency.

Shelter in Place

One of the basic instructions you may be given in a chemical emergency is to “shelter in place”. This is a precaution aimed to keep you and your family safe while remaining in your home. If you are told to shelter in place, have everyone move indoors immediately.

While gathering individuals outdoors, you can provide a minimal amount of protection to your breathing by covering your mouth and nose with a damp cloth.

- Close all windows in your home.
- Turn off all fans, heating and air conditioning systems.
- Close fireplace dampers.
- Go to an aboveground room (not the basement) with the fewest windows and doors.
- Take your Disaster Preparedness Kit with you.
- Wet some towels and jam them in the crack under the doors.
- Tape around doors, windows, exhaust fans or vents. Use plastic garbage bags/sheeting to cover windows, outlets, and heat registers.
- If you are told there is danger of explosion, close the window shades, blinds, or curtains. To avoid injury, stay away from the windows.
- Stay in the room and listen to your radio until you are told all is safe or you are told to evacuate.

Evacuation

Authorities may decide to evacuate an area for your protection. Again, it is important to stay calm, listen carefully, and follow all instructions. If you are told to evacuate, listen to your radio to make sure the evacuation order applies to you and understand if you are to evacuate immediately or if you have time to pack some essentials. Do not use your telephone

(continued on the next page)

If you think you have been exposed to a toxic chemical, call the Poison Control Center (1-800-222-1222) or 9-1-1.

If you are told to evacuate immediately:

- Take your Disaster Preparedness Kit.
- Close and lock your windows.
- Shut off all vents.
- Lock the door.
- Move quickly and calmly.

Symptoms and Treatment of Chemical Poisoning

There are several symptoms of chemical poisoning whether by swallowing, touching, or breathing:

- Difficulty breathing.
- Changes in skin color.
- Headache or blurred vision.
- Dizziness.
- Irritated eyes, skin, and throat.
- Unusual behavior.
- Clumsiness or lack of coordination.
- Stomach cramps or diarrhea.

If you see or smell something that you think may be dangerous, or find someone who has been overcome with toxic vapors, your first job is to make sure that you don't become a victim. If you remain in a dangerous area and become injured or unconscious, you cannot help yourself or any victims.

Because chemical poisoning can be a life-threatening emergency:

1. Send someone to call **9-1-1** immediately.
2. Tell the operator the location of the emergency and the phone number from where you are calling.
3. Describe what has happened, how many people are involved, and what is being done to help.
4. Stay on the phone until the operator tells you to hang up.

First Aid Treatment for Chemical Burns

A chemical burn can be minor or life threatening. With proper treatment, the chance of infection and the damage caused by contact with the chemical can be reduced. Remove any affected clothing or jewelry from the injury. Use lots of cool running water to flush the chemical from the skin until emergency help arrives. The running water will dilute the chemical fast enough to prevent the injury from getting worse.

Use the same treatment for eye burns and remove any contact lenses. Be careful to flush the eye from the nose outward. If no large amount of clean water is available, gently brush the chemical off the skin and away from the victim and you. If the chemical is on the face, neck, or shoulders, ask the victim to close his or her eyes before brushing off the chemical. Cover the wound very loosely with a dry, sterile or clean cloth so that the cloth will not stick to the wound. Do not put any medication on the wound. Seek medical attention immediately.

If you believe you have been contaminated with a chemical, call the Poison Control Center **(1-800-222-1222)** or **9-1-1** immediately. If medical help is not immediately available, remove your clothing starting from the top and working your way down to your socks. Take care not to touch your contaminated clothing to your bare skin. Place your clothing in a plastic bag so it cannot contaminate other people or things. Take a thorough shower to wash any chemical away. Re-dress in clean clothing and go for medical help at your first opportunity.

Important Points To Remember

- The most common chemical accidents occur in our own homes and can be prevented.
- The best ways to avoid chemical accidents are to read and follow the directions for use, storage, and disposal of the product.
- Don't mix products, especially household cleaning products.
- In the event of an emergency, follow the instructions of the authorities carefully. Listen to your emergency broadcast stations on radio and TV.
- Use your phone only in life-threatening emergencies, and then call the Poison Control Center **(1-800-222-1222)** or **9-1-1** immediately.
- If you are told to "shelter in place", go inside, close all windows and vents, and turn off all fans, heating or cooling systems. Take people and pets to a safe room, seal windows and doors, and listen to emergency broadcast stations for instructions.
- If you are told to evacuate immediately, take your Disaster Preparedness Kit and leave your home quickly. Follow the traffic route authorities recommend. Don't take short cuts on the way to the shelter.
- If you find someone who appears to have been injured from chemical exposure, make sure you are not in danger before administering first aid.
- And, remember, the best way to protect yourself and others is to be prepared.

For More Information

If you would like more information about chemical emergencies & how to deal with them, contact the Poison Control Center.

"…where drought conditions exist, officials may recommend measures to restrict use of water."

Drought

Many people have asked for tips on conserving water for environmental reasons, as well as when drought conditions threaten. The following tips were developed by a coalition of specialists on water conservation in Florida, and are also consistent with the recommendations that were developed through the National Disaster Education Coalition's "Drought Forum":

Top Safety Tips for a Drought

Indoor Use

General

- Never pour water down the drain when there may be another use for it. Use it to water your indoor plants or garden.
- Make sure your home is leak-free. When you are certain that no water is being used in your home, take a reading of the water meter. Wait 30 minutes and then take a second reading. If the meter reading changes, you have a leak.
- Repair dripping faucets by replacing washers. One drop per second wastes 2,700 gallons of water per year.

Bathroom

- Check for toilet leaks by adding food coloring to the tank. If you have a leak, the color will appear in the bowl within 30 minutes. (Flush immediately to avoid stains).
- If the toilet handle frequently sticks in the flush position letting water run constantly, replace or adjust it.
- Consider purchasing a low-volume toilet that uses less than half the water of older models. In many areas, law requires low-volume units.
- Take shorter showers.
- Replace your showerhead with an ultra-low-flow version.
- Place a bucket in the shower to catch excess water for watering plants.
- In the shower, turn the water on to get wet; turn off to lather up; then turn the water back on to rinse. Repeat when washing your hair.
- Don't let the water run while brushing your teeth, washing your face or shaving.
- Avoid flushing the toilet unnecessarily. Dispose of tissues, insects, and other similar waste in the trash rather than the toilet.

Kitchen

- Operate automatic dishwashers only when they are fully loaded. Use the "light wash" feature, if available, to use less water.
- When hand washing dishes, save water by filling two containers: one with soapy water and the other with rinse water containing a small amount of chlorine bleach.
- Most dishwashers can clean soiled dishes very well, so dishes do not have to be rinsed before washing. Just remove large particles of food, and put the soiled dishes in the dishwasher.
- Store drinking water in the refrigerator. Don't let the tap run while you are waiting for water to cool.
- Do not use running water to thaw meat or other frozen foods. Defrost food overnight in the refrigerator, or use the defrost setting on your microwave.
- Do not waste water waiting for it to get hot. Capture it for other uses such as plant watering or heat it on the stove or in a microwave.
- Clean vegetables in a pan filled with water rather than running water from the tap. Re-use the water that vegetables are washed in for cleaning or watering your plants.
- Kitchen sink disposals require lots of water to operate properly. Start a compost pile as an alternate method of disposing of food waste or simply dispose of food in the garbage.

Laundry

- Operate automatic clothes washers only when they are fully loaded or set the water level for the size of your load.

Long-Term Indoor Conservation

- Retrofit all household faucets by installing aerators with flow restrictors.
- Consider installing an instant hot water heater on your sink
- If you are considering installing a new heat pump or air-conditioning system, the new air-to-air models are just as efficient as the water-to-air type and do not waste water.
- Install a water-softening system only when the minerals in the water would damage your pipes. Turn the softener off while on vacation.
- When purchasing a new appliance, choose one that is more energy and water efficient.

Top Safety Tips for a Drought

Outdoor Use

General

- If you have a well at home, check your pump periodically. If the pump turns on and off while water is not being used, you have a leak.

Car Washing

- Use a shut-off nozzle on your hose that can be adjusted down to a fine spray, so that water flows only as needed. When finished, turn it off at the faucet instead of at the nozzle to avoid leaks. Check hose connectors to make sure plastic or rubber washers are in place to prevent any leaks.
- Consider using a commercial car wash that recycles water. If you wash your own car, park on the grass so that you will be watering it at the same time.

Lawn Care

- Don't over water your lawn. Lawns only need to be watered every five to seven days in the summer, and every 10 to 14 days in the winter. A heavy rain eliminates the need for watering for up to two weeks. Most of the year, lawns only need one inch of water per week. Buy a rain gauge so that you can better determine when to water.
- Water in several short sessions rather than one long session. This will allow your lawn to better absorb moisture. For example, water in ten-minute sessions spaced 30 minutes apart, rather than one straight 30-minute session.
- Position sprinklers so water lands on the lawn and shrubs &not on paved areas.
- Avoid sprinklers that spray a fine mist. Most of the mist evaporates before it reaches the lawn.
- Check sprinkler systems as well as any timing devices regularly to be sure they operate properly.
- Raise the lawn mower blade to at least three inches, or to its highest level. A higher cut encourages grass roots to grow deeper, shades the root system, and holds soil moisture.
- Avoid over-fertilizing your lawn. Applying fertilizer increases the need for water. Apply fertilizers that contain slow-release, water-insoluble forms of nitrogen.
- Use a broom or blower instead of a hose to clean leaves and other debris from your driveway or sidewalk.
- Do not leave sprinklers or hoses unattended. A garden hose can pour out 600 gallons or more in only a few hours. Use a bell timer to remind yourself to turn sprinklers off.

Pool

- If you have a swimming pool, consider installing a new water-saving pool filter. A single back-flushing with a traditional filter uses 180 to 250 gallons of water.
- Cover pools and spas to reduce the evaporation of water.

Long-Term Outdoor Conservation

- Plant smart. Plant native and/or drought-tolerant grasses, ground covers, shrubs, and trees. Once established, they do not need water as frequently and usually will survive a dry period without watering. They also require less fertilizer or herbicides.
- Install irrigation devices that are the most water efficient for each use. Micro and drip irrigation as well as soaker hoses are examples of efficient devices.
- Use mulch to retain moisture in the soil. Mulch also helps control weeds that compete with landscape plants for water.
- Avoid purchasing recreational water toys that require a constant stream of water.
- Avoid installing ornamental water features (i.e. fountains) unless they use recycled water.

What to do During a Drought

In some communities where drought conditions exist, officials may recommend measures to restrict use of water. These recommendations may include such procedures as watering lawns and washing cars on odd or even days of the week, at night, or on weekends. The restrictions may limit hours or prohibit use of water and may require hand watering instead of using sprinkler systems that use much more water. You should check with your local authorities or water utility for information on water restrictions that may be imposed in your area.

For More Information

If you would like more information about droughts and how to deal with them, contact the water company that serves your area.

"Each year, more than 4,000 Americans die… in fires that could have been prevented."

Fires

Each year, more than 4,000 Americans die and more than 25,000 are injured in fires, many of which could be prevented. Direct property loss due to fires is estimated at $8.6 billion annually. To protect yourself, it is important to understand the basic characteristics of fire.

Heat and smoke from fire can often times be more dangerous than flames. Fire produces poisonous gases that make you disoriented and drowsy. Instead of being awakened by a fire, you may fall into a deeper sleep. Asphyxiation is the leading cause of fire deaths, exceeding burns by a three-to-one ratio.

Top Safety Tips for a Fire

Make Your Home "Fire Safe"

- Install a smoke alarm outside each sleeping area and on each additional level of your home.
- If people sleep with doors closed, install smoke alarms inside sleeping areas, too.
- Use the test button to check each smoke alarm once a month. When necessary, replace batteries immediately. Replace all batteries at least once a year.
- Vacuum away cobwebs and dust from your smoke alarms monthly.
- Smoke alarms become less sensitive over time. Replace your smoke alarms every ten years.
- Consider having one or more working fire extinguishers in your home. Get training from the fire department on how to use them.
- Consider installing an automatic fire sprinkler system in your home.

Plan Your Escape Routes

- Determine at least two ways to escape from every room of your home.
- Consider escape ladders for sleeping areas on the second or third floor. Learn how to use them and store them near the window.
- Select a location outside your home where everyone would meet after escaping.
- Practice your escape plan at least twice a year.

What to do During a Fire

Escape Safely

- Once you are out, stay out. Call the fire department from a neighbor's home.
- If you see smoke or fire in your first escape route, use your second way out. If you must exit through smoke, crawl under the smoke to your exit.
- If you are escaping through a closed door, use the back of your hand to feel the top of the door, the doorknob, and the crack between the door and doorframe before you open it. Never use the palm of your hand or fingers to test for heat - burning those areas could impair your ability to escape a fire (i.e. ladders & crawling).

(continued on the next page)

- If the door, doorknob, or doorframe are warm, use your second way out.
- If smoke, heat, or flames block your exit routes, stay in the room with the door closed. Signal for help using a bright-colored cloth at the window. If there is a telephone in the room, call the fire department and tell them where you are.

During a Fire

If your clothes catch on fire, you should:

- Stop, drop, and roll until the fire is extinguished. Running only makes the fire burn faster.

Cool Door

If a door is cool, open it slowly and ensure fire and/or smoke is not blocking your escape route. If your escape route is blocked, shut the door immediately and use an alternate escape route, such as a window. If clear, leave immediately through the door and close it behind you. Be prepared to crawl. Smoke and heat rise. The air is clearer and cooler near the floor.

What to do After a Fire

The following are guidelines for different circumstances in the period following a fire:

- If you are with burn victims, or are a burn victim yourself, call 9-1-1. Cool and cover burns to reduce chance of further injury or infection.
- If you detect heat or smoke when entering a damaged building, evacuate immediately.
- If you are a tenant, contact the landlord.
- If you have a safe or strong box, do not try to open it. It can hold intense heat for several hours. If the door is opened before the box has cooled, the contents could burst into flames.

For More Information

If you would like more information about fires and how to deal with them, contact the fire department that serves your area.

"Be aware of flood hazards no matter where you live… Every state is at risk of this hazard."

Floods

Floods are one of the most common hazards in the United States. Flood effects can be local, impacting a neighborhood or community, or very large, affecting entire river basins and multiple states.

Some floods develop slowly, sometimes over a period of days. Flash floods can develop quickly, sometimes in just a few minutes and without any visible signs of rain. Flash floods often consist of a dangerous wall of roaring water that carries rocks, mud, and other debris and can sweep away most things in its path.

Be aware of flood hazards no matter where you live and especially if you live in a low-lying area, near water, or downstream from a dam. Even very small streams, gullies, creeks, culverts, dry streambeds, or low-lying ground that appear harmless in dry weather can flood. Every state is at risk of this hazard.

Top Safety Tips for Floods

Know What to Expect

- Know your area's flood risk. If you're unsure, call your local Red Cross chapter, emergency management office, or planning and zoning department.
- If it has been raining hard for several hours, or steadily raining for several days, be alert to the possibility of a flood.
- Listen to local radio or TV stations for flood information.

Floods Can Take Minutes or Days to Develop

- A flood watch means a flood is possible in your area.
- A flood warning means flooding is already occurring or will occur soon in your area.
- A flash flood warning means a flash flood is occurring or will be very soon.

What to do During a Flood

When a Flood WATCH is Issued

- Move your furniture and valuables to higher floors of your home.
- Fill your car's gas tank in case an evacuation notice is issued.
- Be alert to signs of flash flooding and be ready to evacuate on a moment's notice.

When a Flood WARNINIG is Issued

- Listen to local radio and TV stations for information and advice. If told to evacuate, do so as soon as possible.

When a Flash Flood WARNING is Issued

- Evacuate immediately. You may have only seconds to leave.
- Move to higher ground away from rivers, streams, creeks, and storm drains. Do not drive around barricades, they are there for your safety.
- If your car stalls in rapidly rising waters, abandon it immediately and climb to higher ground.

Take Protective Measures

If you must prepare to evacuate, you should do the following:

- Secure your home. If you have time, bring in outdoor furniture. Move essential items to an upper floor
- Turn off utilities at the main switches or valves if instructed to do so. Disconnect electrical appliances. Do not touch electrical equipment if you are wet or standing in water.

If you have to leave your home, remember these evacuation tips:

- Do not walk through moving water. Six inches of moving water can make you fall. If you have to walk in water, walk where the water is not moving. Use a stick to check the firmness of the ground in front of you.
- Do not drive into flooded areas. You and the vehicle can be quickly swept away.

Driving Flood Facts

The following are important points to remember when driving in flood conditions:

- Six inches of water will reach the bottom of most passenger cars causing loss of control and possible stalling.
- A foot of water will float many vehicles.
- Two feet of rushing water can carry away most vehicles including sport utility vehicles (SUV's) and pick-ups.

What to do After a Flood

- Listen for news reports to learn whether the community's water supply is safe to drink.
- Avoid floodwaters. Water may be contaminated by oil, gasoline, or raw sewage. Water may also be electrically charged from underground or downed power lines.
- Avoid moving water.
- Be aware of areas where floodwaters have receded. Roads may have weakened and could collapse under the weight of a car.
- Stay away from downed power lines and report them to the power company.
- Return home only when the proper authorities indicate it is safe.
- Stay out of any building if it is surrounded by floodwaters.
- Use extreme caution when entering buildings. There may be hidden damage, particularly in foundations.
- Service damaged septic tanks, cesspools, pits, and leaching systems as soon as possible. Damaged sewage systems are serious health hazards.
- Clean and disinfect everything that got wet. Mud left from floodwater can contain sewage and chemicals,

For More Information

If you would like more information about floods and how to deal with them, contact the U.S. Geological Survey.

"Heat can cause serious health problems and even death."

Heat Waves

Heat can cause serious health problems and even death by pushing the human body beyond its limits. In extreme heat and high humidity, evaporation is slowed and the body must work harder to maintain a normal temperature.

Most heat disorders occur because the victim has been overexposed to heat or has over-exercised for his or her age and physical condition. Older adults, young children, and those who are sick or overweight are more likely to succumb to extreme heat.

Conditions that can induce heat-related illnesses include stagnant atmospheric conditions and poor air quality. Consequently, people living in urban areas may be at greater risk from the effects of a prolonged heat wave than those living in rural areas. Also, asphalt and concrete store heat longer and gradually release heat at night, which can produce higher nighttime temperatures. This is known as "urban heat island effect."

Top Safety Tips for a Heat Wave

Know What These Terms Mean

- Heat wave: Prolonged period of excessive heat and humidity. The National Weather Service steps up its procedures to alert the public during these periods of excessive heat and humidity.
- Heat index: A number in degrees Fahrenheit (F) that tells how hot it really feels when relative humidity is added to the actual air temperature. Exposure to full sunshine can increase the heat index by 15 degrees F.
- Heat cramps: Heat cramps are muscular pains and spasms due to heavy exertion. Although heat cramps are the least severe, they are an early signal that the body is having trouble with the heat.
- Heat exhaustion: Heat exhaustion typically occurs when people exercise heavily or work in a hot, humid place where body fluids are lost through heavy sweating. Blood flow to the skin increases, causing blood flow to decrease to the vital organs. This results in a form of mild shock. If not treated, the victim may suffer heat stroke.

(continued on the next page)

- Heat stroke: Heat stroke is life-threatening. The victim's temperature control system, which produces sweating to cool the body, stops working. The body temperature can rise so high that brain damage and death may result if the body is not cooled quickly.
- Sunstroke: Another term for heat stroke.

Symptoms and Treatment of Heat Emergencies

Sunburn

Skin redness and pain, possible swelling, blisters, fever, headaches. Take a shower using soap to remove oils that may block pores, preventing the body from cooling naturally. Apply dry, sterile dressings to any blisters, and get medical attention.

Heat Cramps

Painful spasms, usually in leg and abdominal muscles, with heavy sweating. Get the victim to a cooler location. Lightly stretch and gently massage affected muscles to relieve spasms. Give sips of up to a half glass of cool water every 15 minutes. Do not give liquids with caffeine or alcohol. Discontinue liquids, if victim is nauseated.

Heat Exhaustion

Heavy sweating but skin may be cool, pale, or flushed. Weak pulse. Normal body temperature is possible, but temperature will likely rise. Fainting or dizziness, nausea, vomiting, exhaustion, and headaches are possible. Get victim to lie down in a cool place. Loosen or remove clothing. Apply cool, wet clothes. Fan or move victim to air-conditioned place. Give sips of water if victim is conscious. Be sure water is consumed slowly. Give half glass of cool water every 15 minutes. Discontinue water if victim is nauseated. Seek immediate medical attention if vomiting occurs.

Heat Stroke (a severe medical emergency)

High body temperature (105+); hot, red, dry skin; rapid, weak pulse; and rapid shallow breathing. Victim will probably not sweat unless victim was sweating from recent strenuous activity. Possible unconsciousness. Call 9-1-1 or emergency medical services, or get the victim to a hospital immediately. Delay can be fatal. Move victim to a cooler environment. Removing clothing Try a cool bath, sponging, or wet sheet to reduce body temperature. Watch for breathing problems. Use extreme caution. Use fans and air conditioners.

What to do During a Heat Wave

If a Heat Wave Is Predicted or Happening

- Slow down. Avoid strenuous activity. If you must do strenuous activity, do it during the coolest part of the day, which is usually in the morning between 4:00 a.m. and 7:00 a.m.
- Stay indoors as much as possible. If air conditioning is not available, stay on the lowest floor and out of the sunshine. Try to go to a public building with air conditioning each day for several hours. Remember, electric fans do not cool the air, but they do help sweat evaporate, which cools your body.
- Wear lightweight, light-colored clothing. Light colors will reflect away some of the sun's energy.
- Drink plenty of water regularly and often.
- Drink plenty of fluids even if you do not feel thirsty.
- Avoid drinks with alcohol or caffeine in them.
- Eat small meals and eat more often. Avoid foods that are high in protein, which increase metabolic heat.
- Avoid using salt tablets unless directed to do so by a physician.

For More Information

If you would like more information about heat waves and how to deal with them, contact the Red Cross chapter that serves your area.

"Hurricanes can cause catastrophic damage to coastlines and several hundred miles inland."

Hurricanes

A hurricane is a type of tropical cyclone, the generic term for a low pressure system, that generally forms in the tropics. A typical cyclone is accompanied by thunderstorms. All Atlantic and Gulf of Mexico coastal areas are subject to hurricanes or tropical storms. Parts of the Southwest United States and the Pacific Coast experience heavy rains and floods each year from hurricanes spawned off of Mexico. The Atlantic hurricane season lasts from June to November, with the peak season lasting from mid-August to late October.

Hurricanes can cause catastrophic damage to coastlines and several hundred miles inland. Winds can exceed 155 miles per hour and can also spawn tornadoes and microbursts, create storm surges along the coast, and cause extensive damage from heavy rainfall.

Top Safety Tips for Hurricanes

Hurricanes are classified into five categories based on their wind speed, central pressure, and damage potential. Category Three and higher hurricanes are considered major hurricanes, though Categories One and Two are still extremely dangerous and warrant your full attention.

Category 1

74-95 MPH winds. Minimal damage: unanchored mobile homes, vegetation, and signs. 4-5 foot storm surge.

Category 2

96-110 MPH winds. Moderate damage: all mobile homes, roofs, small crafts, and flooding. 6-8 foot storm surge.

Category 3

111-130 MPH winds. Extensive damage: small buildings, low-lying roads cut off. 9-12 foot storm surge.

Category 4

1131-155 MPH winds. Extreme damage: roofs destroyed, trees down, roads cut off, mobile homes destroyed, beach homes flooded. 13-18 foot storm surge.

Category 5

More than 155 MPH winds. Catastrophic damage: most buildings destroyed, vegetation destroyed, major roads cut off, homes flooded. Storm surge greater than 18 feet.

What to do During a Hurricane

When a Hurricane WATCH is Issued

- Prepare to bring inside any lawn furniture, outdoor decorations or ornaments, trashcans, hanging plants, and anything else that can be picked up by the wind.
- Prepare to cover all of the windows of your home or office. If shutters have not been installed, use precut plywood as described above. Note: Tape does not prevent windows from breaking, so taping windows is not recommended.
- Fill your car's gas tank.
- Check batteries and stock up on canned food, first aid supplies, drinking water, and medications.

When a Hurricane WARNING is Issued

- Listen to the advice of local officials and leave if they tell you to do so.
- Complete preparation activities.
- If you are not advised to evacuate, stay indoors, away from windows.
- Be aware that the calm "eye" is deceptive and the storm is not over. The worst part of the storm will happen once the eye passes over and the winds blow from the opposite direction. Trees, shrubs, buildings, and other objects damaged by the first winds can be broken or destroyed by the second winds.
- Be alert for tornadoes. Tornadoes can happen during a hurricane and after it passes over. Remain indoors, in the center of your home, in a closet or bathroom without windows.

Know What These Terms Mean

- Watch- Hurricane conditions are possible in the specified area of the WATCH, usually within 36 hours.
- Warning- Hurricane conditions are expected in the specified area of the warning, usually within 24 hours.

Prepare a Personal Evacuation Plan

- Identify ahead of time where you could go if you are told to evacuate. Choose several places.
- Keep the telephone numbers of these places handy as well as a road map of your surrounding area. You may need to take alternative or unfamiliar routes if major roads are closed or clogged.
- Listen to local radio or TV stations for evacuation instructions. If advised to evacuate, do so immediately.
- Take these items with you when evacuating:
  - Prescription medications and medical supplies;
  - Bedding and clothing, including sleeping bags and pillows
  - Bottled water, battery-operated radio and extra batteries, first aid kit, flashlight
  - Car keys and maps
  - Documents, including driver's license, Social Security card, proof of residence, insurance policies, wills, deeds, birth and marriage certificates, tax records, etc.

Prepare for High Winds

- Install hurricane shutters or purchase precut 1/2" outdoor plywood boards for each window of your home. Install anchors for the plywood and predrill holes in the plywood so that you can put it up quickly.
- Make trees more wind resistant by removing diseased and damaged limbs, then strategically removing branches so that wind can easily blow through.

For More Information

If you would like more information about hurricanes and how to deal with them, contact the National Hurricane Center.

"Landslides & Mudslides can occur in all U.S. states and territories."

Mud/Landslides

Landslides occur in all U.S. states and territories. In a landslide, masses of rock, earth, or debris move down a slope. They may be small or large and slow or rapid. Storms, earthquakes, volcanic eruptions, fires, and human modification of land can all activate landslides. Mudflows are rivers of rock, earth, and other debris saturated with water. They develop when water rapidly accumulates in the ground, during heavy rainfall or rapid snowmelt, changing the earth into a flowing river of mud or "slurry".

Some landslides move slowly and cause damage gradually, whereas others move so rapidly that they can destroy property and take lives suddenly and unexpectedly. Landslides are typically associated with periods of heavy rainfall or rapid snow melt and tend to worsen the effects of flooding that often accompanies these events. In areas burned by forest and brush fires, a lower threshold of precipitation may initiate landslides.

Top Safety Tips for a Mud/Landslide

- Do not build near steep slopes, close to mountain edges, near drainage ways, or in natural erosion valleys.
- Get a ground assessment of your property.
- Consult an appropriate professional expert for advice on corrective measures.
- Minimize home hazards by having flexible pipe fittings installed to avoid gas or water leaks, as flexible fittings are more resistant to breakage (only the gas company or professionals should install gas fittings).

What to do During a Mud/Landslide

Recognize Landslide Warning Signs

- Changes occur in your landscape such as patterns of storm-water drainage on slopes (especially the places where runoff water converges) land movement, small slides, flows, or progressively leaning trees.
- Doors or windows stick or jam for the first time.
- New cracks appear in plaster, tile, brick, or foundations.
- Outside walls, walks, or stairs begin pulling away from the building.
- Slowly developing, widening cracks appear on the ground or on paved areas such as streets or driveways.
- Underground utility lines break.
- Bulging ground appears at the base of a slope.
- Water breaks through the ground surface in new locations.
- Fences, retaining walls, utility poles, or trees tilt or move.

(continued on the next page)

- A faint rumbling sound that increases in volume is noticeable as the landslide nears.
- The ground slopes downward in one direction and may begin shifting in that direction under your feet.
- Unusual sounds, such as trees cracking or boulders knocking together, might indicate moving debris.
- Collapsed pavement, mud, fallen rocks, and other indications of possible debris flow can be seen when driving. Embankments along roadsides are particularly susceptible to landslides.

During a Landslide or Debris Flow

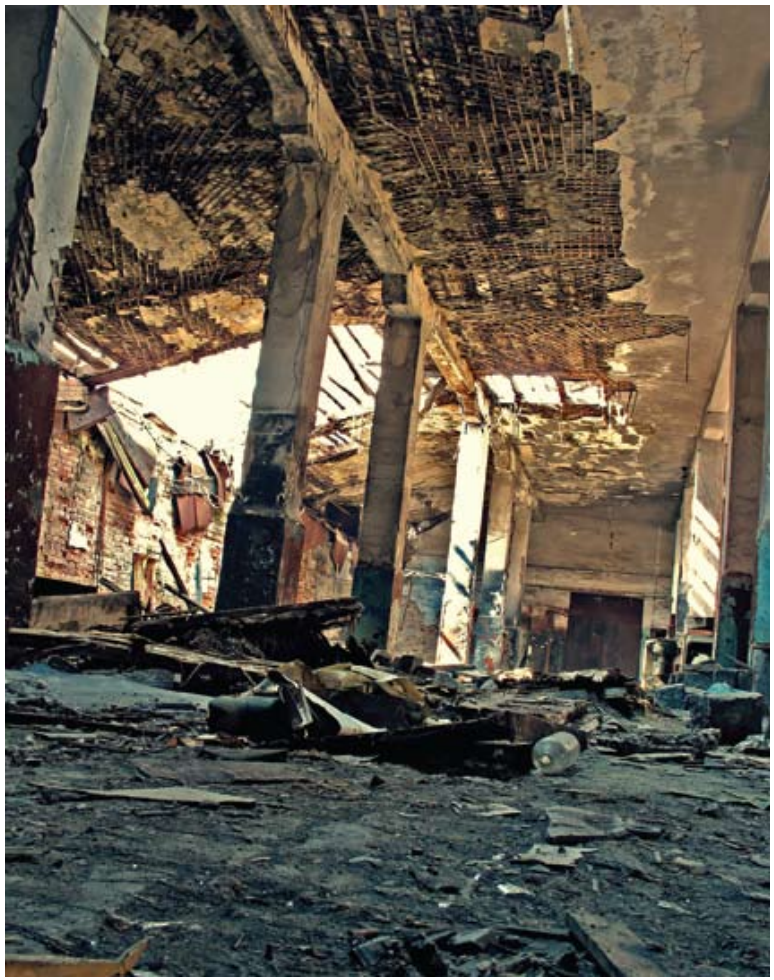
- Move away from the path of a landslide or debris flow as quickly as possible.
- Curl into a tight ball and protect your head if escape is not possible.

What to do After a Mud/Landslide

- Stay away from the slide area. There may be danger of additional slides.
- Check for injured and trapped persons near the slide without entering the direct slide area. Direct rescuers to their locations.
- Watch for associated dangers such as broken electrical, water, gas, and sewage lines and damaged roadways and railways.
- Replant damaged ground as soon as possible since erosion caused by loss of ground cover can lead to flash flooding and additional landslides in the near future.
- Seek advice from a geotechnical expert for evaluating landslide hazards or designing corrective techniques to reduce landslide risk.

For More Information

If you would like more information about mud/landslides and how to deal with them, contact the U.S. Geological Survey.



"There are things you can do to prepare for the unexpected…"

Terrorism

Devastating acts, such as the terrorist attacks on the World Trade Center and the Pentagon, have left many concerned about the possibility of future incidents in the United States and their potential impact. There are things you can do to prepare for the unexpected and reduce the stress that you may feel now and later should another emergency arise. Taking preparatory action can reassure you and those around you that you can exert a measure of control, even in the face of such events.

Top Safety Tips for a Terrorism Attack

Finding out what can happen is the first step. Once you have determined the events possible and their potential in your community, it is important that you discuss them with your family or colleagues. Develop a disaster plan together.

1. Create an emergency contact plan. Choose an out-of-town emergency contact your household or office will call or e-mail to check on each other should a disaster occur. Your selected contact should live far enough away that they would be unlikely to be directly affected by the same event, and they should know they are the chosen contact. Inform your contact that if telephones are not working, they need to be patient and try again later or try e-mail. Many people flood the telephone lines when emergencies happen but e-mail can sometimes get through when calls don't.

2. Establish a meeting place. Having a predetermined meeting place away from your home or office will save time and minimize confusion should your home or office be affected or the area evacuated. You may even want to make arrangements to stay with a family member or friend in case of an emergency. Be sure to include any pets in these plans, since pets are not permitted in shelters and some hotels will not accept them.

3. Assemble a Disaster Preparedness Kit. If you need to evacuate your home or are asked to "shelter in place," having some essential supplies on hand will make you more comfortable. Prepare a disaster supplies kit in an easy-to-carry container such as a duffel bag or small plastic trash can. See the overview for creating a Disaster Preparedness Kit on page 4 or the Disaster Preparedness Kit checklist found in the appendix on page 33.

4. Check on the school emergency plan of any school-age children you may have. You need to know if they will keep children at school until a parent or designated adult can pick

(continued on the next page)

them up or send them home on their own. Be sure that the school has updated information about how to reach parents and responsible caregivers to arrange for pickup. In case you are unable to pick up your child, ask what type of authorization the school may require to release a child to someone you designate. During times of emergency the school telephones may be overwhelmed with calls.

What to do During a Terrorism Attack

- Remain calm and be patient.
- 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.
- If the disaster occurs near your home while you are there, check for damage using a flashlight. Do not light matches or candles or turn on electrical switches. Check for fires, fire hazards and other household hazards. Sniff for gas leaks, starting at the water heater. If you smell gas or suspect a leak, turn off the main gas valve, open windows, and get everyone outside quickly.
- Shut off any other damaged utilities.
- Confine or secure your pets.
- Call your emergency contact. Do not use the telephone again unless it is a life-threatening emergency.
- Check on your neighbors, especially those who are elderly or disabled.

What Could Happen

As we learned from the events of September 11, 2001, the following things can happen after a terrorist attack:

- There can be significant numbers of casualties and/or damage to buildings and the infrastructure.
- Heavy law enforcement involvement at local, state, and federal levels follows a terrorist attack due to the event's criminal nature.
- Health and mental health resources in the affected communities can be strained to their limits, maybe even overwhelmed.
- Extensive media coverage, strong public fear, and international implications and consequences can continue for a prolonged period.
- Workplaces and schools may be closed and there may be restrictions on domestic and international travel.
- You, your household, or your office may have to evacuate an area, avoiding roads blocked for your safety.
- Clean up may take many months.

Evacuation

If local authorities ask you to leave your home, they have a good reason to make this request, and you should heed the advice immediately. Listen to your radio or television and follow the instructions of local emergency officials and keep these simple tips in mind:

1. Wear long-sleeved shirts, long pants, and sturdy shoes so you can be protected as much as possible.
2. Take your Disaster Preparedness Kit.
3. Take your pets with you; do not leave them behind. Because pets are not permitted in public shelters, follow your plan to go to a relative's or friend's home, or find a "pet-friendly" hotel.
4. Lock your home or office.
5. Use travel routes specified by local authorities. Don't use shortcuts. Certain areas may be impassable & dangerous.
6. Stay away from downed power lines.

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.

If you're sure you have time:

- Call your emergency contact to tell them where you are going and when you expect to arrive.
- Shut off water and electricity before leaving, if instructed to do so. Leave natural gas service ON unless local officials advise you otherwise. You may need gas for heating and cooking and only a professional can restore gas service in your home once it's been turned off. In a disaster situation, it could take weeks for a professional to respond.

Shelter in place

One of the basic instructions you may be given in a chemical emergency is to "shelter in place". This is a precaution aimed to keep you and your family safe while remaining in your home. If you are told to shelter in place, have everyone move indoors immediately.

While gathering individuals outdoors, you can provide a minimal amount of protection to your breathing by covering your mouth and nose with a damp cloth.

- Close all windows in your home.
- Turn off all fans, heating and air conditioning systems.
- Close fireplace dampers.

(continued on the next page)

- Go to an aboveground room (not the basement) with the fewest windows and doors.
- Take your Disaster Preparedness Kit with you.
- Wet some towels and jam them in the crack under the doors.
- Tape around doors, windows, exhaust fans or vents. Use plastic garbage bags/ sheeting to cover windows, outlets, and heat registers.
- Go to an interior room without windows that's above ground level.
- Go to an interior room without windows that's above ground level. In the case of a chemical threat, an above-ground location is preferable because some chemicals are heavier than air, and may seep into basements even if the windows are closed.
- Using duct tape, seal all cracks around the door and any vents into the room.
- If you are told there is danger of explosion, close the window shades, blinds, or curtains. To avoid injury, stay away from the windows.
- Stay in the room and listen to your radio until you are told all is safe or you are told to evacuate.

First Aid

If you encounter someone who is injured, apply the emergency action steps: Check-Call-Care. Check the scene to make sure it is safe for you to approach. Then check the victim for unconsciousness and life-threatening conditions. Someone who has a life-threatening condition, such as not breathing or severe bleeding, requires immediate care by trained responders and may require treatment by medical professionals. Call out for help. There are some steps that you can take, however, to care for someone who is hurt, but whose injuries are not life threatening.

Control Bleeding

- Cover the wound with a dressing, and press firmly against the wound (direct pressure).
- Elevate the injured area above the level of the heart if you do not suspect that the victim has a broken bone.
- Cover the dressing with a roller bandage.
- If the bleeding does not stop:
    - Apply additional dressings and bandages.
    - Use a pressure point to squeeze the artery against the bone.

Provide care for shock.

Care for Shock

- Keep the victim from getting chilled or overheated.
- Elevate the legs about 12 inches (if broken bones are not suspected).
- Do not give food or drink to the victim.

Tend Burns

- Stop the burning by cooling the burn with large amounts of water.
- Cover the burn with dry, clean dressings or cloth.

Care for Injuries to Muscles, Bones and Joints

- Rest the injured part.
- Apply ice or a cold pack to control swelling and reduce pain.
- Avoid any movement or activity that causes pain.
- If you must move the victim because the scene is becoming unsafe, try to immobilize the injured body part to keep it from moving.

Be Aware of Biological/Radiological Exposure

Listen to local radio and television reports for the most accurate information from responsible governmental and medical authorities on what's happening and what actions you will need to take.

Reduce Any Care Risks

The risk of getting a disease while giving first aid is extremely rare. However, to reduce the risk even further:

- Avoid direct contact with blood and other body fluids.
- Use protective equipment, such as disposable gloves and breathing barriers.
- Thoroughly wash your hands with soap and water immediately after giving care.

For More Information

If you would like more information about terrorism attacks and how to deal with them, contact the U.S. Department of Homeland Security.

"In the United States, an average of 300 people are injured each year by lightning during thunderstorms."

Thunderstorms

All thunderstorms are dangerous. In the United States, an average of 300 people are injured and 80 people are killed each year by lightning during thunderstorms. Although most lightning victims survive, people struck by lightning often report a variety of long-term, debilitating symptoms.

Other associated dangers of thunderstorms include tornadoes, strong winds, hail, and flash flooding. Flash flooding is responsible for more fatalities (more than 140 annually) than any other thunderstorm-associated hazard.

Dry thunderstorms that do not produce rain that reaches the ground are most prevalent in the western United States. Falling raindrops evaporate, but lightning can still reach the ground and can start wildfires.

Top Safety Tips for a Thunderstorm

The following are facts about thunderstorms:

- They may occur singly, in clusters, or in lines.
- Some of the most severe occur when a single thunderstorm affects one location for an extended time.
- Thunderstorms typically produce heavy rain for a brief period, anywhere from 30 minutes to an hour.
- Warm, humid conditions are highly favorable for thunderstorm development.
- About 10 percent of thunderstorms are classified as severe, meaning one that produces hail at least three-quarters of an inch in diameter, has winds of 58 miles per hour or higher, or produces a tornado.

The following are facts about lightning:

- Lightning's unpredictability increases the risk to individuals and property.
- Lightning often strikes outside of heavy rain and may occur as far as 10 miles away from any rainfall.
- "Heat lightning" is actually lightning from a thunderstorm too far away for thunder to be heard.
- Most lightning deaths and injuries occur when people are caught outdoors in the summer months during the afternoon and evening.
- Your chances of being struck by lightning are estimated to be 1 in 600,000, but that number can be reduced even further by following safety precautions.
- Lightning strike victims carry no electrical charge and should be attended to immediately.

Before Thunderstorms and Lightning

- Remove dead or rotting trees and branches that could fall and cause injury or damage during a severe thunderstorm.
- Remember the 30/30 lightning safety rule: go indoors if, after seeing lightning, you cannot count to 30 before hearing thunder. Stay indoors for 30 minutes after hearing the last clap of thunder.

What to do During a Thunderstorm

The following are guidelines for what you should do if a thunderstorm is likely in your area:

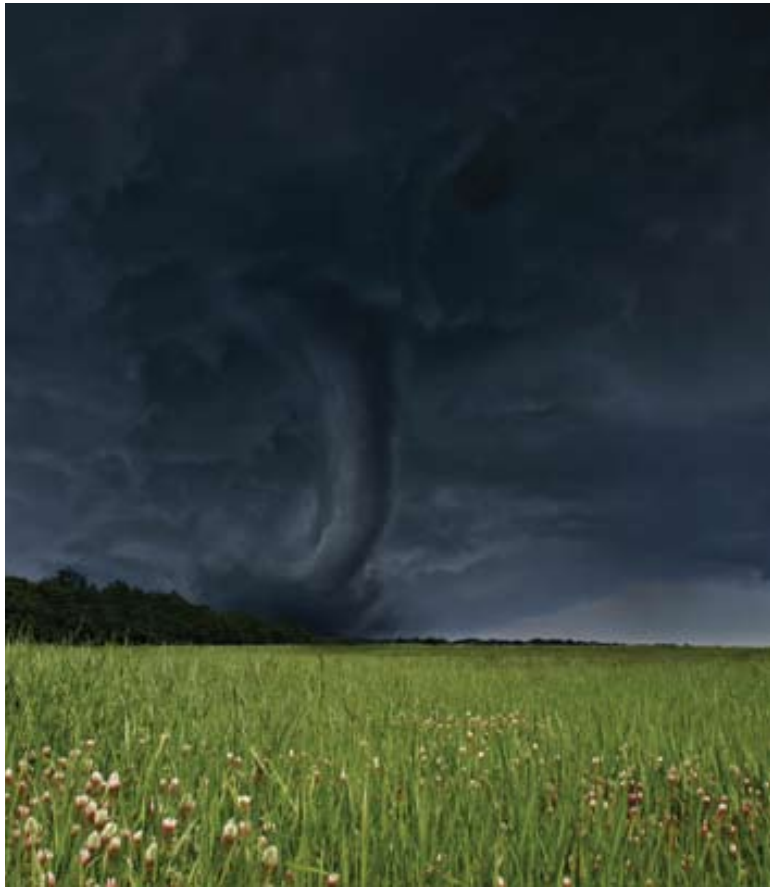
- Postpone outdoor activities.
- Get inside a home, building, or hard top automobile (not a convertible). Although you may be injured if lightning strikes your car, you are much safer inside a vehicle than outside.
- Secure outdoor objects that could blow away or cause damage.
- Shut windows and secure outside doors. If shutters are not available, close window blinds, shades, or curtains.
- Avoid showering or bathing. Plumbing and bathroom fixtures can conduct electricity.
- Use a corded telephone only for emergencies. Cordless and cellular telephones are safe to use.
- Unplug appliances and other electrical items such as computers and turn off air conditioners. Power surges from lightning can cause serious damage.

Avoid the Following:

- Natural lightning rods such as a tall, isolated tree in an open area
- Hilltops, open fields, the beach, or a boat on the water
- Isolated sheds or other small structures in open areas
- Anything metal–tractors, farm equipment, motorcycles, golf carts, golf clubs, bicycles, etc.

For More Information

If you would like more information about thunderstorms and how to deal with them, contact the National Severe Storms Laboratory.



"Tornadoes are nature's most violent storms…Every state is at some risk of this hazard."

Tornadoes

Tornadoes are nature's most violent storms. They develop from thunderstorms occuring in warm, moist air and can cause fatalities and devastate a neighborhood in seconds. A tornado appears as a rotating, funnel-shaped cloud that extends from a thunderstorm to the ground with winds that can reach 300 miles per hour. Damage paths can be in excess of one mile wide and 50 miles long. Every state is at some risk from this hazard.

Some tornadoes are clearly visible, while others are obscured by rain or nearby low-hanging clouds. Occasionally, tornadoes develop so rapidly that little, if any, advance warning is possible.

Before a tornado hits, the wind may die down and the air may become very still. A cloud of debris can mark the location of a tornado even if a funnel is not visible. Tornadoes generally occur near the trailing edge of a thunderstorm. It is not uncommon to see clear, sunlit skies behind a tornado.

Top Safety Tips for a Tornado

The Following are Facts About Tornadoes

- They may strike quickly, with little or no warning.
- They may appear nearly transparent until dust and debris are picked up or a cloud forms in the funnel.
- The average tornado moves Southwest to Northeast, but tornadoes have been known to move in any direction.
- The average forward speed of a tornado is 30 MPH, but may vary from stationary to 70 MPH.
- Tornadoes can accompany tropical storms and hurricanes as they move onto land.
- Waterspouts are tornadoes that form over water.
- Peak tornado season in the southern states is March through May; in the northern states, it is late spring through early summer.
- Tornadoes are most likely to occur between 3 p.m. and 9 p.m., but can occur at any time.

Know the Terms

Familiarize yourself with these terms to help identify a tornado hazard:

Tornado Watch-Tornadoes are possible. Remain alert for approaching storms. Watch the sky and listen to your local radio or television station.

Tornado Warning- A tornado has been sighted or indicated by weather radar. Take shelter immediately.

What to do During a Tornado

If you are under a tornado warning, seek shelter immediately.

If You are in a Structure

Go to a safe room, basement, storm cellar, or the lowest building level. If there is no basement, go to the center of an interior room on the lowest floor level and keep away from corners, windows, doors, and outside walls. Put as many walls as possible between you and the outside. Get under a sturdy table and use your arms to protect your head and neck.

If You are in a Vehicle/Trailer

Get out immediately and go to the lowest floor of a sturdy, nearby building or a storm shelter. Mobile homes, even if tied down, offer little protection from tornadoes. Never try to outrun a tornado in urban or congested areas in a car or truck. Instead, leave the vehicle immediately for safe shelter.

If You are Outside with no Shelter

Lie flat in a nearby ditch or depression and cover your head with your hands. Be aware of the potential for flooding. Do not get under an overpass or bridge. You are safer in a low, flat location. Watch out for flying debris. Flying debris from tornadoes causes most fatalities and injuries.

Before a Tornado

- Listen to radio or television newscasts for the latest information.
- Look for approaching storms.
- Look for the following danger signs:
  - Dark, often greenish sky.
  - Large hail.
  - A large, low-lying cloud.
  - Loud roar, similar to a freight train.

If you see approaching storms or any of the danger signs, be prepared to take shelter immediately.

Preparing a Safe Room

Extreme windstorms in many parts of the country pose a serious threat to buildings and their occupants. The purpose of a safe room is to provide a space where you can seek refuge and that provides a high level of protection. You can build a safe room in one of several places in your home or office.

- Your basement.
- Atop a concrete slab-on-grade foundation or garage floor.
- An interior room on the first floor.

Safe rooms built below ground level provide the greatest protection, but a safe room built in a first floor interior room can also provide the necessary protection. Belowground safe rooms must be designed to avoid accumulating water during heavy rains that often occur during severe windstorms.

- A safe room must be built to withstand high winds and flying debris, even if the rest of the residence is severely damaged or destroyed.
- The safe room must be adequately anchored to resist overturning and uplift.
- The walls, ceiling, and door of the shelter must withstand wind pressure and resist penetration by windborne objects and falling debris.

For More Information

If you would like more information about tornadoes and how to deal with them, contact the National Severe Storms Laboratory.

"Wildfires often begin unnoticed and can spread very quickly…"

Wildfires

More and more people are relocating to woodland settings in or near forests, rural areas, or remote mountain sites. These areas allow homeowners to enjoy the beauty of the environment. However, this type of environment can also translate to the very real danger of wildfire. Wildfires often begin unnoticed and spread quickly, igniting brush, trees, and homes. Reduce your risk by preparing now before wildfire strikes your home or office.

Top Safety Tips for a Wildfire

- Contact your local fire department, health department, or forestry office for information on fire laws. Make sure that fire vehicles can get to your home and office. Clearly mark all driveway entrances and display your address.
- Report hazardous conditions that could cause a wildfire.
- Teach children about fire safety. Keep matches out of their reach.
- Post fire emergency telephone numbers near your home or office phones so that they can be easily found.
- Plan several escape routes away from your home or office by car and by foot.

Protect Your Home or Office Building

- Regularly clean roof and gutters.
- Inspect chimneys at least twice a year and clean them at least once a year.
- Consider installing protective shutters or heavy fire-resistant drapes.
- Keep handy household items that can be used as fire tools: a rake, axe, handsaw or chainsaw, bucket, and shovel.

Before Wildfire Threatens

- Design and landscape your home or office with wildfire safety in mind.
- Select materials and plants that can help contain fire rather than fuel it.
- Use fire resistant or non-combustible materials on the roof and exterior structure of your home or office.

Create a 30- to 100-Foot Safety Zone Around Your Home or Office

- Rake leaves, dead limbs, and twigs. Clear all flammable vegetation.
- Remove leaves and rubbish from under structures and dispose of them properly.
- Ask the power company to clear branches from power lines.
- Remove vines from the walls of your home or office.
- Clear a 10-foot area around propane tanks and barbecues.
- Follow your local burning regulations.

(continued on the next page)

- Store gasoline, oily rags, and other flammable materials in approved safety cans. Place cans in a safe location away from the base of buildings.
- Stack firewood at least 100 feet away and uphill from your home.

Plan Your Water Needs

- Identify and maintain an adequate outside water source such as a small pond, cistern, well, swimming pool, or hydrant.
- Have a garden hose that is long enough to reach any area of your home or office as well as any other structures on the property.
- Consider obtaining a portable gasoline-powered pump in case electrical power is cut off.

What to do During a Wildfire

- Listen to the radio for reports and evacuation information and follow the instructions of local officials.
- Back your car into the garage or park it in an open space facing the direction of escape. Shut doors and roll up windows and leave the key in the ignition. Close any garage windows and doors but leave them unlocked.
- Arrange temporary housing at a friend or relative's home outside the threatened area.

If Advised to Evacuate, Do So Immediately

- Wear protective clothing: sturdy shoes, cotton or woolen clothing, long pants, a long-sleeved shirt, gloves, and a handkerchief to protect your face.
- Take your Disaster Preparedness Kit.
- Lock your home.
- Tell someone where you are going and what time you expect to be arriving.
- Choose a route away from fire hazards. Watch for changes in the speed and direction of fire and smoke.

If You're Sure You Have Time, Take Steps to Protect Your Home or Office

Inside:

- Close windows, vents, doors, Venetian blinds or non-combustible window coverings, and heavy drapes. Remove any lightweight curtains.
- Shut off gas at the meter and turn off pilot lights.
- Open fireplace damper and close fireplace screens.
- Move flammable furniture into the center of your home or office away from windows and sliding-glass doors.
- Turn on a light in each room to increase the visibility of your home or office in heavy smoke.

Outside:

- Seal attic and ground vents with pre-cut plywood or commercial seals.
- Turn off propane tanks.
- Place combustible patio furniture inside.
- Connect the garden hose to outside taps.
- Place lawn sprinklers on the roof and near above-ground fuel tanks. Wet the roof.
- Wet or remove shrubs within 15 feet of the home.
- Gather fire tools.

For More Information

If you would like more information about wildfires and how to deal with them, contact the fire department that serves your area.

Appendix

Disaster Preparedness Kit Checklist

First Aid Supplies

- [ ] Adhesive bandages, various sizes
- [ ] Conforming roller gauze bandage
- [ ] Sterile gauze pads
- [ ] Waterless hand sanitizer
- [ ] Antiseptic wipes
- [ ] Medical grade, non-latex gloves
- [ ] Tongue depressor
- [ ] Adhesive tape
- [ ] Antibacterial ointment
- [ ] Cold pack
- [ ] Small scissors
- [ ] Tweezers
- [ ] Assorted sizes of safety pins
- [ ] Cotton balls
- [ ] Thermometer
- [ ] Sunscreen
- [ ] First aid manual

Non-Prescription and Prescription Medicine Kit Supplies

- [ ] Aspirin and non-aspirin pain reliever
- [ ] Anti-diarrhea medication
- [ ] Antacid
- [ ] Laxative
- [ ] Vitamins
- [ ] Prescriptions
- [ ] Extra eyeglasses/contact lenses

Sanitation and Hygiene Supplies

- [ ] Washcloth and towel
- [ ] Soap/hand sanitizer
- [ ] Heavy-duty plastic garbage bags
- [ ] Toilet paper
- [ ] Mirror

Equipment and Tools

- [ ] Battery operated radio and extra batteries
- [ ] Flashlight and extra batteries
- [ ] Signal flare
- [ ] Matches in a waterproof container
- [ ] Duct tape
- [ ] Plastic sheeting
- [ ] Whistle
- [ ] Compass
- [ ] Work gloves
- [ ] Needles and thread
- [ ] Manual can opener
- [ ] All-purpose knife

Food and Water

- [ ] Water
- [ ] Ready-to-eat meals
- [ ] Canned or boxed juices and soup
- [ ] Special foods for infants or dietary needs

Clothes and Bedding Supplies

- [ ] Complete change of clothes
- [ ] Sturdy boots or shoes
- [ ] Rain gear
- [ ] Hat and gloves
- [ ] Extra socks
- [ ] Thermal underwear
- [ ] Blankets/sleeping bags and pillows

Documents and Keys

- [ ] Personal identification
- [ ] Cash and coins
- [ ] Credit cards
- [ ] Extra set of house and car keys
- [ ] Copies of the following:
  - Birth certificates
  - Marriage certificates
  - Driver's licenses
  - Social Security cards
  - Passports
  - Wills
  - Deeds
  - Insurance policies
  - Immunization records
  - Emergency contact list & phone #'s
  - Map of the area

References & Resources

References

American Red Cross,
www.redcross.org

Federal Emergency Management Agency,
ww.fema.gov

Resources

Disaster Preparedness for Pets
The Humane Society of the United States,
http://www.hsus.org/hsus_field/hsus_disaster_center/resources/disaster_preparedness_for_pets.html

U.S. Geological Survey
http://www.usgs.gov

Poison Control Center
1-800-222-1222

National Hurricane Center
http://www.nhc.noaa.gov

U.S. Department of Homeland Security
http://www.dhs.gov

National Severe Storms Laboratory
http://www.nssl.noaa.gov

Produced by Pat Davis Design Group, Inc. www.pddesign.com