

**MEDICAL  
EMERGENCIES**  
**WHAT YOU  
NEED TO KNOW**

FROM AMERICA'S EMERGENCY PHYSICIANS



FAMILY DISASTER PREPAREDNESS



**Family  
Disaster  
Preparedness**



American College of  
Emergency Physicians®

ADVANCING EMERGENCY CARE 

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# Family Disaster *Preparedness*

There are numerous family disasters that can occur, but many of the ways to prepare for them are similar. The American College of Emergency Physicians (ACEP) recommends that families first identify what types of disasters are common in their regions. This information can be obtained from local emergency management offices or American Red Cross chapters. Next, ACEP recommends developing a family disaster-preparedness plan that deals with each type of possible situation.

Some information from this booklet was extracted from the Family Readiness Kit, developed by the Federal Emergency Management Agency (FEMA) and organizations including ACEP, as well as from the U.S. Government's Homeland Security Department and the Centers for Disease Control and Prevention.

The advice in this publication does not contain all the information that could be provided about family disaster preparedness. For more detailed information about preparing for disasters, visit the FEMA website at [www.fema.gov/hazard/index.shtm](http://www.fema.gov/hazard/index.shtm).



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## Develop a Plan

To develop a plan, keep the following steps in mind:

- Assemble a disaster supplies kit and an evacuation box. Check with your child's school to see if you can keep a disaster supply kit for him or her there.
- Become familiar with designated evacuation routes (which are common in hurricane-prone areas). Plan one or more evacuation routes (in case alternate routes are blocked), and know the safest route to emergency shelters. Conduct family emergency drills about every six months.
- Set two or three meeting places if the family is not together when the disaster occurs and communication is disrupted (e.g., land-line phones or cell phones are not functioning).
- Learn about emergency plans in your child's school or day care center and in the community. (This includes knowing schools policy regarding sheltering in place and evacuation procedures.)
- Make sure all family members know where to go in the home to be safe.
- Make sure all family members can recognize danger signals (e.g., smoke detector alarm) and the warning signals (sirens, radio or television messages) your community uses, as well as what to do if they hear them.
- Make sure all family members know how and when to turn off gas, water and electricity.
- Keep a battery-powered radio and flashlight in a safe accessible location. Check the batteries every six months.
- Choose an out-of-state family contact, and make sure everyone knows how to contact



this person, in case you become separated in an emergency. Make sure your children know how to call for help and when to use emergency numbers.

- Place emergency phone numbers on each phone. These should include 911 or an EMS telephone number, fire department, ambulance, physician, poison control, work numbers, neighbors, gas company, Red Cross, hospital, out-of-town contact and local emergency management division.

- Make sure adults in the house know how and when to turn off household utilities.
- Develop a plan to protect your pets in an emergency.
- Know how to help the elderly and people with special needs. Keep a portable list of medications or know the pharmacy from which medications are obtained so a list can be compiled if the bottles are lost in the disaster.
- Make two copies of important documents and keep originals in a safe deposit box away from your home.
- Conduct a household inventory. Make a detailed visual or written record of all your possessions, including model and serial numbers.
- Make sure you have enough insurance coverage.
- Learn first aid and take a CPR class.



## Practice and Maintain Your Plan

- Every month — test your smoke alarms.
- Every six months — go over your family disaster plan and do escape drills. Replace stored food and water.
- Every six months, replace batteries in smoke detectors.



## In a disaster, it's important to remain calm and put your plan into action.

- Follow all government evacuation orders. Listen to local radio and television stations for updates and instructions. If you don't have a battery-powered radio, listen to your car radio.
- If told to evacuate, leave right away. Use flashlights instead of matches. Do not touch any downed power lines.
- 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 (a professional will need to turn the gas back on).
- Clean up any spilled household chemicals, gasoline or other flammable liquids immediately.
- Confine or secure your pets.
- Check on neighbors, especially elderly or disabled persons.

## If Asked to Evacuate:

- Take personal identification and evacuation box with you.
- Use routes suggested by officials.
- If safe and if advised, shut off water, gas and electricity.
- Stay away from power lines that are down.
- Take disaster supplies.
- Leave a note explaining when you left and where you are going.

## If Asked To Shelter in Place:

The following are general procedures. The actual steps involved in sheltering in place may vary.

- Gather everyone, including pets, inside, and lock doors, close windows, air vents and fireplace flues.
- Turn off forced-air systems, including heat and air conditioning, as well as exhaust fans and dryers.
- Make sure you have your disaster supply kit and first-aid kit with you.
- Choose an interior room, or one that has as few doors, air vents and windows as possible. A room with access to a water supply is best, such as a master bedroom connected to a bathroom.
- Seal all outside air sources with plastic sheeting and duct tape. Pre-cut the sheeting, if possible, and make sure it is larger than the space that it needs to cover. Position it flat against the surface.
- Monitor radio, TV or Internet reports for updates and instructions



- *Only general procedures are outlined. The actual steps involved in sheltering in place may vary, depending on the type of disaster situation at hand.*

## Family Disaster Supply Kit

An important part of family disaster preparedness planning is putting together a disaster supply kit. All family members in your household should be made aware of the items in this kit, and it should be easily accessible to everyone. In addition, your family may want to consider assembling two types of kits — one for potential emergencies or disasters that may affect your particular geographical area (such as floods, tornadoes, hurricanes) and another for a potential act of terrorism. You should store items together in a plastic tub or container that is easy to locate by all family members, and check the supply of items every six months or so, for items that may need replacement or replenishing.

## Your family disaster supply kit should include the following:

### Food, Water and Essential Medicines



- Water (one gallon per person for three days recommended)
- Non-perishable foods (replace every six months) that require no refrigeration or preparation, such as:

– Peanut butter

- Ready-to-eat canned meats, fruit, vegetables, milk and fish (10 cans per person recommended)
- Bread and crackers stored in waterproof bags or containers
- Cereal and granola bars

- Special supplies for babies (diapers, formula, powdered milk, medications) or elderly people
- Prescriptions and other medically necessary items that your family may require, including a minimal three-day supply of all prescription medicines and over-the-counter medications such as acetaminophen or ibuprofen (Keep a larger supply of any essential or daily-maintenance prescriptions on hand.)



### Evacuation Box

Store the following items in a waterproof, portable container to use at home or to take with you if you are evacuated.

- Battery-powered radio, flashlights and extra batteries
- First aid kit and manual (for contents of first aid kit, see ACEP's Home First aid Kit flyer. Personal identification, passports and copies of social security cards

- Canned food and bottled water
- Health information, such as prescription medications (one-month's supply recommended), copies of prescriptions, children's immunization records and lists of allergies
- Extra pairs of eyeglasses or contact lenses and supplies
- Emergency phone numbers
- Bank account numbers, insurance policies, a will, deeds, stocks and bonds
- Credit card account numbers and companies



- Family records (births, marriages, death certificates)
- Inventory of valuable household goods
- Map of the area (to locate shelters)
- Credit card, extra cash and change

- Mess kits or paper cups, plates and plastic utensils
- Non-electric can opener and utility knife
- Personal hygiene items
- Change of clothing, rain gear and sturdy shoes for each family member
- Blankets or sleeping bags

### Other Household Supplies

- Matches in a waterproof container
- Spare set of car keys
- Signal flare
- Whistle
- Masking or duct tape
- Plain chlorine bleach or other method to sanitize drinking water
- Plastic garbage bags
- Shut-off wrench, to turn off household gas and water
- Land-line corded telephone that does not require electricity to operate (in case electricity or cell phone service is unavailable)
- Extra batteries of various sizes, e.g. AA, AAA, C, D, 9 volt
- Hand crank charger, or other battery powered device to recharge cell phones



### Supplies for Pets

Remember that shelters can't take pets, so plan for them in case you have to evacuate. You will need:

- A two-week supply of dry and canned food
- Water (minimum half gallon per animal, per day recommended)
- Litter box supplies
- Travel crate or cage

## Disaster-Specific Tips

The following tips are for specific disasters and supplement the general disaster advice give previously. This information does not represent all the ways to prepare and respond. For more specific information, visit the FEMA website at [www.fema.gov/hazard/index.shtm](http://www.fema.gov/hazard/index.shtm).

### Earthquake

Earthquakes can strike suddenly and without warning, with devastating loss of life and property.

#### To prepare:

- Develop an earthquake plan and review and rehearse it with your family. Practice dropping to the floor and taking cover under a sturdy table or desk, while holding on and protecting your eyes by burying your face in the crook of your arm.
- Review your disaster plan with family members, caregivers and babysitters.
- As part of your plan, reserve a safe place in every room of your house — under a sturdy table, desk or along an inside wall in an area that is free of glass or anything that can fall on you.

- Keep a working fire extinguisher handy and know how to use it.
- Know where the shut-off valves are located in your home for gas, water and electricity.
- Select an out-of-the-area family contact or friend to notify in the event of a quake.
- If you live in an earthquake-prone area, secure your home and address any hazards — store breakable objects, hang heavy or unstable objects away from where people might get injured and maintain your home so there are no cracks in your foundation or ceiling. In addition, securely store pesticides and chemicals and your water heater to the wall. Secure bookcases, china hutches and other heavy, potentially mobile furniture to wall studs with bolts or other devices. Put latches on cupboards.
- Check with a building inspector or other professional about additional home foundation and structure reinforcement measures.

#### In the event of an earthquake:

- Drop to the floor and find the nearest place of secure cover, and then hold on.
- If in bed, stay put and hold on while protecting your head with a pillow.
- If outdoors, drop to the ground and stay away from buildings, tall trees, power lines and anything else that might fall on top of you.



- If in a car, slow your speed and follow the directions given above. Do not exit the vehicle until after the tremors stop, unless circumstances created by the quake place you in immediate danger.

#### After an earthquake:

- Check yourself and others for injuries; administer first aid, if necessary; call 911 or your local emergency number only if injuries appear life threatening but be aware that ambulance service may be delayed.
- Get rid of fire hazards and extinguish small fires.
- Turn off the gas if you detect an odor or if there's a chance it's leaking, especially if any fires are nearby.
- Check your home for structural or other damage; be prepared to evacuate if it appears unsafe.
- Watch television or listen to the radio for instructions and updates.
- Be prepared for aftershocks. Drop, take cover and hold onto a secure object if tremors begin again.
- Be aware that telephone service may be cut off or that circuits may be overloaded; use the phone only if caught in a life-threatening situation.

#### To prepare:

- Be familiar with the symptoms of heat cramps, heat exhaustion and heatstroke; be ready to respond if any of these symptoms are exhibited.
- Make sure your home's air-conditioning system works properly. It's best to have it checked every year before the weather gets hot.
- If your house does not have air conditioning, consider having it installed. If that is not possible, have at least one or more fans on hand to help sweat evaporate and cool your body. (Keep in mind that while electric fans may provide comfort, they will not necessarily prevent heat-related illness during periods of extreme heat.)
- Weather-strip doors and sills to keep cool air in.
- Cover windows that receive morning or afternoon sun.

***Never leave children or pets  
in closed vehicles even for  
brief periods of time.***



### Extreme Heat

Extended heat waves can be dangerous and even life-threatening for people, especially the elderly, people with chronic illnesses, the young (under age four) and those who are overweight.

#### In the event of extreme heat:

- Pay attention and respond to government warnings about extreme heat in your area.
- Stay indoors as much as possible, and avoid exerting yourself outdoors.
- If you are home, stay on the lowest floor out of the sun, where typically it's coolest. If that is not possible, go inside a cool building (e.g., shopping mall, community center, library) during the hottest hours of the day.



- Drink plenty of water and other fluids to help keep your body cool, even if you don't feel thirsty. Avoid excessive intake of caffeine and alcoholic beverages (particularly beer), which can be dehydrating.
- Eat small, light frequent meals. Avoid excessive protein or heavy foods.
- Wear light, loose-fitting warm-weather clothing; avoid layers of clothing.
- Take frequent cool showers, baths or sponge baths.
- Some prescription medications may interfere with the body's natural ability to regulate temperature or inhibit sweat production. Check with your doctor or pharmacist for these and other possible side effects.
- Never leave children in closed vehicles even for brief periods of time. Temperatures in automobiles can climb to 130 degrees F (54.4 degrees C) within minutes and can be lethal.

## Elderly

Elderly people have more trouble adjusting to sudden changes in temperature than younger people do, so be alert to their special needs. Many chronic medical conditions impair the body's normal responses to heat. Check on elderly friends and neighbors and others who are at risk of heat-related illnesses at least twice a day.

## Consider Pets

- Make sure pets have plenty of water and access to shade or cooler environments.
- Be careful not to over-exert any pets during outdoor activities (especially older animals and dogs with thick fur); they can succumb to heat exhaustion and heat stroke much more quickly than humans.
- Never leave pets in a closed vehicle, even for very short periods.

## Fire

Approximately 4,000 Americans die each year in fires, and more than 20,000 are injured — often because of lack of awareness of how dangerous fires are and how quickly they spread. That's why knowing the basic facts about fires is so important.



## Fire Facts

Fire spreads quickly. It can take fewer than 30 seconds for a flicker or a flame to get completely out of hand and turn into a major fire. A house can fill with life-threatening black smoke and flames in minutes, leaving no time for making a phone call or grabbing valuables.

Smoke and toxic gases can be more threatening than flames. Most fires happen when people are asleep. Instead of being awakened, however, the poisonous gases released by the fire may make them fall into a deeper sleep. Asphyxiation, caused by the inhalation of smoke and odorless, colorless toxic gases, is the chief cause of fire deaths, exceeding burns by three to one.

Heat is deadly. Fires can generate intense heat – up to 600 degrees in minutes. This heat can scorch your lungs and melt clothing to your skin. Sometimes the heat from a fire causes everything in the room to ignite at once; this is known as “flashover.”

Fire is pitch black. Although flames from a fire are bright, they quickly produce black smoke and total darkness, making it difficult to find your way out of your house.

## Fire Prevention

- Install smoke detectors, and check them once a month. Place smoke alarms on the ceiling or high on the wall (up to 12 inches from the ceiling) on each level in your house, including outside bedrooms, at the top of open stairwells, at the bottom of enclosed stairways and just outside the kitchen.
- Consider having your local fire department inspect your home for fire hazards, prevention and safety.
- If you live in the city by a back alley, consider installing address numbers on the back of your house so emergency personnel can locate it easier.

- Keep A-B-C-type fire extinguishers in your home; check regularly and know how to use them.
- If possible, install an automatic sprinkler system in your home.
- Insulate chimneys and have them inspected yearly.
- Place spark arresters on the roof surrounding the chimney.
- Use caution when using space heaters, and make sure they are at least three feet away from upholstery, curtains and other flammable items.
- Never leave space heaters unattended.
- Call the utility company if you smell gas; they will dispatch professionals to check for leaks.



### Open Sources of Flames

- If you have a fireplace, have it swept and inspected annually to prevent buildup of creosote, which can ignite and cause your house to catch on fire. Use a fireplace screen at all times, and keep all flammable items, including rugs, away from the hearth area.
- Use caution when burning candles, particularly during large gatherings (or refrain from using them altogether, especially if children or pets are present). Never leave candles unattended, and extinguish them if you feel sleepy or are using medication that can make you drowsy.
- Keep matches and lighters away from children's reach, preferably under lock and key.
- Never smoke in bed or when drowsy. Use only deep, sturdy ashtrays, including outdoor areas, particularly for persons who smoke outside. Cigarettes and cigars should be doused with water first if being disposed of in the trash.

### Flammable Items

- Never use flammable liquids (including gasoline, kerosene and lighter fluid) indoors.
- Use only approved containers for flammable items. Store them in cool, well-ventilated areas away from sources of combustion and out of reach of children and pets.
- Never launder or store rags that have been soaked in flammable liquids after you have used them; discard only in sealed, outdoor metal containers.

### Cords and Electrical Wiring

- Ask an electrician to check your electrical wiring, especially if your house is old or if you frequently blow fuses.
- Keep extension cord use to a minimum and make sure prongs are fully plugged in.
- If you must plug in two or three items using the same outlet source, use a UL-approved multiple-plug-in unit to prevent sparks and short circuits and to protect against power surges.
- Check all cords for frayed or exposed wires.
- Make sure outlets are secured with cover plates.
- Do not run cords or wiring under rugs, over nails or in highly traveled areas.



### Cooking

- Use caution when cooking; it is the leading source of fires in homes.
- Never leave stoves or other sources of fire unattended.
- Avoid wearing long sleeves and loose-fitting clothing or accessories.
- Keep towels, pot holders and curtains away from the stove or flames.

- Make sure all cooking surfaces are free of grease.
- Take care when cooking with oil to avoid burns from spattering grease.
- Use a lid to smother any fires that erupt in cooking pans. (Never use water on a grease fire.)
- Keep a kitchen fire extinguisher handy (under the sink or in a closet).
- Turn off and check all kitchen appliances before going to bed or leaving the house.
- Never use your stove to heat your home.

- If there is smoke, get down near the floor and crawl till you reach your exit. Continue to close doors behind you to block heat, smoke and flames.
- Do not re-enter the building once you have made it out safely. Instead, call 911.

#### If there are burn or smoke-inhalation victims:

- Call 911 or your local emergency number.
- Cover burns and follow the instructions in “What To Do in a Medical Emergency.”
- Perform CPR for smoke inhalation.

### Fire Safety Tips

- Plan and practice escape routes for each room in your home with your family; make sure you have two methods of escaping every room in the house. Employ the same measures for your surroundings when traveling or staying with family and friends.
- Teach family members to stay low to the ground (where the air is less hot and toxic) and crawl along the floor in the event of fire.
- Make sure you can open all windows, and install fire-safety opening features on the inside of any window security gratings or burglar bars.
- Consider purchasing escape ladders for upper levels.

#### In the event of a fire:

- Escape first, then call for help. Time is of the essence.
- Do not use elevators; take the stairs instead, or if blocked, exit through a window.
- Carefully check closed doors (with the back of your hand only) for heat before opening them.
  - Do not open a hot door; try escaping through a window instead. If you can't exit from the window, hang a white or light-colored sheet from the window so that fire-fighters can find you.
  - Open a cool door with caution, and check for fire and smoke before escaping through it. If your escape route does not appear safe, close the door and check alternative escape routes, including windows. If the area is clear, leave immediately and close the door behind you.



### Flood

Floods are the most frequently reported natural disaster in the nation and can occur in virtually every state and territory. But not all floods are the same. Flash floods are usually considered the most dangerous, but even minor, slowly developing floods can be deadly. Flooding also often occurs after hurricanes.

A flood watch means flooding is possible in your area; stay tuned for developments and details, and elevate or move furniture and valuables to higher floors. Be prepared to possibly evacuate. If the watch is for a flash flood, know the signs of a flash flood and be ready to leave at a moment's notice.

A flood warning means that a flood is occurring or will happen very soon; be prepared to evacuate as soon as possible if instructed to do so.

If you receive a flash flood warning that pertains to you or if flooding starts in your area, evacuate and get to higher ground immediately. Do not delay; you may only have minutes or even seconds to escape.



### To prepare:

- Find out your area's risk of flooding. If you're not sure, contact your local government's emergency management office, planning and zoning department or Red Cross chapter.
- Minimize potential flood damage in advance by making sure your furnace, water heater and electric panel are in elevated areas of your home. (Consulting with a professional is advised.)
- Identify alternate routes and other means of transportation out of the immediate area.
- Have access to boots and heavy rain gear, if needed.
- Prepare a family disaster plan that includes your family disaster supply kit.
- Tune in to local weather reports on television, radio or via the Internet for the latest weather conditions and safety instructions, and when to be ready to evacuate.
- Stay away from rivers, streams and other bodies of water.
- Obey barricade signs.
- Avoid driving through floodwaters, even if shallow; your vehicle may be swept away.
- If you are caught in rapidly rising water and your car stalls, get out immediately and get to higher ground.
- Avoid wading or swimming in flood waters. You may be caught up in rapidly flowing waters, or the water may be filled with dangerous debris or electrically charged. If you must

walk through water, survey the area for any possible dangers first, and look for areas where water is not moving.

- Avoid downed power lines; they carry the risk of electric shock or electrocution.

### After a flood:

- Do not return to a flooded home or local area until local authorities tell you it is safe to do so. The flooding may have weakened roads and bridges, leaving them in danger of collapse. Downed power lines, fallen trees and floating debris may present life-threatening dangers, buildings may be unstable or uninhabitable and drinking water may not be safe.
- Be prepared to live elsewhere, using the supplies from your family disaster kit, for at least several days, and exercise caution and good judgment in your decision-making about whether or not to return home.



## Hurricane

Hurricanes are common in the southern Atlantic Ocean region, the Caribbean Sea, the Gulf of Mexico and the eastern Pacific Ocean, particularly from August through December. Originating from severe tropical storms that form hundreds of miles out to sea, hurricanes can range from mild (Category 1) to severe (Category 5), and people living in coastal communities should be hurricane-ready and prepared to evacuate when told to do so.

A hurricane watch means a hurricane is possible in your area; stay tuned for developments and details, and be prepared to possibly evacuate. Secure your property by boarding up windows with plywood or hurricane shutters. Move all outdoor furniture, plants

and anything else not tied down indoors. Consider elevating or moving furniture and valuables to higher floors, if your home is susceptible to flooding.

A hurricane warning means that a hurricane is expected in your area; be prepared to evacuate as soon as possible if instructed to do so.

### To prepare:

- Assemble a disaster supply kit that includes such items as a home first aid kit, extra set of car keys, credit card and one change of clothing per person.
- Keep on hand a three-day supply of bottled water (one gallon per person, per day), canned foods and blankets or sleeping bags in case you need to evacuate.
- Keep a battery-powered radio and flashlight in your home, with spare batteries; in a disaster situation, listen to your local radio and TV stations for updates and follow all instructions.
- Conduct a household inventory. Have a detailed visual or written record of all your possessions, including model and serial numbers.



- Store important documents in a safe deposit box away from your home. Keep valuables and copies of important papers in an evacuation box that includes health information, such as prescription medications; copies of prescriptions and children's immunization records; lists of allergies; list of emergency numbers, including telephone numbers of physicians; extra pairs of eye glasses; and a first-aid manual.
- Plan to secure your property either with storm shutters or plywood. Tape is not effective in preventing windows from breaking.

- Conduct family emergency drills. Identify places to meet in case of emergency, and know the location of and safest route to emergency shelters. Show each family member how and when to turn off water, gas and electricity. Post emergency numbers on telephones.
- Secure and make provisions for pets, or bring along pet supplies if you are evacuating your pets with you. (Remember that shelters can't take pets during hurricanes and other disasters.)
- Take first aid and CPR classes. Learning these skills and being prepared can save a life.

### In the event of a hurricane:

- Pay attention to local weather reports on television, radio or the Internet for the latest weather conditions and safety instructions. Be ready to evacuate.
- Keep a full tank of gas in your car, and have cash on hand in case the power goes out and credit cards and ATM machines can't be used.
- Turn off any propane tanks.
- Fill the bathtub or other large containers with water to use to flush toilets, if needed.
- Evacuate when called upon to do so. Secure your home by unplugging appliances and electrical equipment, and take your disaster supply kit, including your battery-powered radio, with you.

### After a hurricane:

- Do not return to a hurricane-damaged or flooded home or local area until local authorities tell you it is safe to do so.
- Avoid downed power lines; they carry the risk of electric shock or electrocution.
- Stay away from flooded areas. The flooding may have weakened roads and bridges, leaving them in danger of collapse. Downed power lines, fallen trees, disabled vehicles and building debris may present dangers; buildings may be unstable or uninhabitable and drinking water may not be safe.
- Watch for animals that may have sought refuge in unusual places, including your home — do not try to rescue them. Do not touch dead animals, which can cause disease. If you pick through debris, watch for poisonous snakes.

- Do not re-enter your home if you smell gas or you see damage to electrical wiring or water and sewer systems or to the roof or foundation. Do not turn on the lights until you know it is safe to do so.
- Be prepared to live elsewhere, using the supplies from your disaster supply kit, for at least several days, and exercise caution and good judgment in your decision-making about whether or not to return home.
- Be familiar with the signs of an approaching tornado and know what a tornado funnel cloud looks like.
- Prepare a family disaster plan and assemble a disaster supply kit. The plan should designate areas of the house to seek safety.
- Conduct periodic tornado drills with your family.
- Keep tree limbs and bushes trimmed; remove dead branches.
- If a storm is coming or is underway, monitor media outlets for the latest developments and safety instructions.



## Tornado

Tornadoes, like hurricanes, are violent and can cause widespread destruction and death. However, unlike hurricanes they are more localized, of much shorter duration and intensity (lasting only seconds or minutes as opposed to hours or even days) and can arise suddenly without any warning, thus making them difficult to anticipate or predict. Tornadoes are most common in the Midwest, Southeast and Southwest and typically occur during the warm weather months. However, they can occur anywhere at any time of year. That is why being tornado-ready is so important.

A tornado watch means a tornado is possible in your area; stay tuned for developments and details. Be prepared to possibly seek shelter, preferably underground. A tornado warning means that a tornado is occurring or has been spotted in your area; take shelter immediately.

### To prepare:

- Be aware of the likelihood of a tornado in your area. If you're not sure, contact your local emergency management office, National Weather Service office or local American Red Cross chapter.

### In the event of a tornado:

- Pay attention to local radio broadcasts.
- Look for the warning signs of an approaching tornado: large hail, loud roar (like a freight train) and a dark sky.
- If you notice these signs, take shelter immediately. A basement or storm cellar are among the best places to go. If you cannot go underground, find an interior room or hallway on the lowest floor possible.
- Remain away from outside walls and corners, which attract debris.
- Stay away from windows, doors and outside walls. Do not open windows.
- Consider getting under a large piece of furniture, such as a table, and protect your head and neck.
- If you have enough advance warning and are not in a safe place (such as outdoors, in a vehicle, in a mobile home or trailer), quickly go to a structure with a firm foundation.



- If there's enough time beforehand, secure or bring in plants, patio furniture, trash cans or any other loose items that can blow away or cause damage or destruction.
- If you live in a mobile home, seek shelter in the basement of a nearby building.
- If you are outdoors, watch for flying debris, and do not go under bridges or overpasses. You are safer in low, flat locations.

#### After a tornado:

- Avoid downed power lines; they carry the risk of electric shock or electrocution.
- Do not return to a damaged home or local area until local authorities tell you it is safe to do so. The tornado may have downed trees and buildings, making roads impassible, or it may have weakened bridges, leaving them in danger of collapse. Downed power lines, fallen trees and floating debris may present life-threatening dangers, buildings may be unstable or uninhabitable and drinking water may not be safe.
- Be prepared to live elsewhere, using the supplies from your disaster supply kit, at least for several days, and exercise caution and good judgment in your decision-making about whether or not to return home.



## Regional and Worldwide Epidemics and Disasters

Many disasters have potential regional and even worldwide implications, including hurricanes, chemical and nuclear plant accidents and terrorism. In addition, pandemic illnesses and epidemics have exerted massive tolls on human lives throughout history. Consider the bubonic plague – also known as

the “Black Death” – which wiped out huge portions of the population (estimates range from 50 to 75 million worldwide) during epidemic waves that swept over Central Asia and Europe between the 14th and 18th centuries. Or the pandemic flu outbreaks of the 20th century, including the Spanish Flu of 1918-19, in which 40 to 50 million people died worldwide; the Asian Flu of 1957-58, in which nearly 70,000 people in America died; and the Hong Kong Flu of 1968, in which nearly 34,000 people died.

Today's global mobility increases the risk of spreading diseases more rapidly. Some of the most recent pandemic threats include Severe Acute Respiratory Syndrome (SARS) and the Avian flu. As public health concerns about the threats of a worldwide pandemic grow, public health organizations and hospital emergency departments are focused on being prepared to help and save as many people as possible.



### Pandemic Flu (Influenza)

Pandemic flu is a global outbreak of virulent human flu that causes serious illness and potentially many deaths. It is not the same as the yearly seasonal flu. A pandemic of influenza occurs when a new influenza A virus emerges to which people have little natural immunity, thus allowing it to spread easily through populations and across countries. It is spread from person to person through personal contact and coughing and sneezing.

The severity and unpredictability of pandemics typically disrupt the functioning of society and commerce and potentially could sicken 25 percent to 35 percent of the total population; individuals and families are advised to take proper precautions and prepare for possible illness outbreaks in advance. While currently there is no pandemic flu, the concern is that the potential for one that is devastating may be inevitable. Experts project more than 300 million people could die worldwide, possibly crippling the



health care community and national economies in a pandemic that might last for more than a year.

Preparing for a potential flu pandemic is the same in many ways as planning for a natural disaster or act of terrorism.

### To prepare (in advance) for a pandemic:

- Develop a disaster supply kit, which includes keeping a minimal two-week supply of food and water on hand. People may be advised to avoid public places, and stores may run out of supplies.
- Make sure you have an adequate and fresh supply of prescription drugs and over-the-counter medications. (Periodically check expiration dates on all medications.) Also be sure to have other health supplies on hand, including pain relievers, cold and cough medications, fluids containing electrolytes, vitamins, upset-stomach remedies, tissues and a thermometer.
- Keep a stock of filtering masks on hand, in the event you need to go out in public.
- Devise a plan with family members to ensure that everyone gets proper care in case of severe, incapacitating illness.
- Be prepared to isolate yourself and your family in the event of a severe outbreak of illness. Make advance preparations to work from home, if possible.
- Check with your child's school and your community and health facilities for their pandemic plans. Also, check to see if your employer has a pandemic plan.
- Get involved with your community's pandemic planning activities by volunteering with local groups, schools and other organizations.

### In the event of a pandemic:

- Pay attention and follow the directions of public health officials.
- If you are sick — stay home until you are better, to avoid spreading your illness to others.
- Practice good hygiene. Make sure everyone in the family washes their hands frequently with soap and hot water or an alcohol-based hand wash. Also, be sure to sanitize bathroom fixtures, door handles and other typical skin-contact surfaces frequently.
- Cover coughs and sneezes with tissues or by coughing or sneezing into the crook of your elbow (instead of your hand).



For details and government advisories, see the federal government's website at [www.pandemicflu.gov](http://www.pandemicflu.gov) or check with the Centers for Disease Control and Prevention by calling their hotline at 1-800-CDC-INFO (1-800-232-4636; TYY 1-888-232-6348.) For links to state departments of public health, see [222.cdc.gov/other.htm#states.htm](http://222.cdc.gov/other.htm#states.htm).

### Terrorism

Preparing for acts of terrorism is the same in many ways as preparing for a natural disaster. The nature of terrorism means there may be little or no warning before an attack. In any case, you and your family need the proper tools and plans in place to survive on your own for several days or even longer, and you need to be ready for the unexpected. As with other potential emergencies, you should:

- Assemble disaster supply and first aid kits and keep them freshly stocked and on hand.
- Learn first aid and take a CPR class.
- Develop a family communications plan — one that includes various scenarios.



- Be prepared to survive without electricity, phone, gasoline pumps, and ATM machines.
- Practice survival strategies, including — depending on the situation — whether to stay (“shelter in place”) or go (see sections that follow).
- Become familiar with school, work, day care and community emergency plans.
- Keep at least a three-day supply of food, water and medication on hand.
- Keep at least a half a tank of gas in your car at all times.
- Have access to alternate forms of transportation.
- Monitor news reports and obey government orders and instructions.
- Remain calm and use common sense.

### ***Additional Disaster Supply Kits and Items***

Consider assembling two kits — one with everything you might need if you had to remain in place and survive for several days, and the other, a smaller, more lightweight version that could travel with you if you had to leave quickly. Both kits should be kept in a durable, easy-to-carry bag, such as a tote bag, backpack or small carry-on suitcase.

Because many (but not all) potential terrorist attacks might involve releases of harmful substances into the air, such as smoke and particles that can cause lung damage from an explosion, or germs that



might make you sick during a biological attack, consider including the following items in your disaster supply kit(s):

- A face mask — or, if in a situation where you might need to improvise — any dense-weave fabric, such as a t-shirt, that might help filter out contaminants during an emergency. A variety of face masks, suitable for different industrial uses, are typically available in hardware stores. (However, these types of masks will not likely protect you from a chemical gas release.)



- Duct tape, heavyweight trash bags or plastic sheeting and scissors to use to seal off windows, doors and air vents, and “shelter in place,” if necessary. You may want to pre-cut and label these materials in advance, depending on your situation, to save time in an emergency.
- Extra cash (in case electronic bank machines are not working) and identification.
- A clean pair of clothes and a spare pair of shoes in case your clothes are contaminated by chemical or radiation exposure during an attack.

### ***Prepare for the Unexpected***

Because of the unpredictable and possibly multi-pronged nature of terrorism, it’s important to plan several possible courses of action, depending on the scenario that unfolds.

- Consider that you might be separated from family members. When developing your family communications plan, make sure you review how you will contact each other and what you will do in different situations. Designate a family contact, preferably someone out of town, to serve as a point of relay, and make sure everyone knows how to reach that person.
- Your decision about whether to evacuate or stay is not easy to predict and will depend on your situation and the nature of the attack. Plan for and practice what you would do

under both scenarios, with the goal of getting yourself and possibly others out of immediate danger. Expect to act fast, and try to stay level-headed and make sound decisions, knowing that you may have to do so in a state of disaster, and widespread panic. As with other emergencies, keep in mind that local authorities and media outlets may not be able to provide much immediate information. However, you should still keep checking TV, Internet and radio for news updates and instructions, whenever possible.

- Be on the lookout for a subsequent attack. Because terrorists sometimes engage in multi-pronged attacks or subsequent waves of terrorism, it is usually safest to completely leave the area following a bomb blast or other destructive incident. If you are assisting victims or attempting to leave the area after an attack, scan the scene for signs of a second wave of attack. Be wary of smoke or suspicious-looking persons or packages, and be alert to the possibility of subsequent explosions or to the possible release of biological or chemical contaminants.
- Follow orders to evacuate or seek medical treatment. Depending on the nature of the terrorist strike — a chemical or biological attack, for example — your life may depend on the immediate actions that you take.
- Some circumstances of attack may require that you stay put and avoid the uncertainty of going outside. You may be in the immediate vicinity of an accident or attack, or you may be under a “code red” or “severe” terror alert, under which shelter-in-place instructions have been given. In these situations — a chemical attack, for instance — your best chance of survival may depend on creating a barrier between yourself and potentially contaminated outside air by sealing off a room or section of a building. This plan is known as “sheltering in place.” In this scenario, you should:
  - Gather everyone, including pets, inside, and lock doors, close windows, air vents and fire-place flues.



- Turn off forced-air systems, including heat and air conditioning, as well as exhaust fans and dryers.
- Make sure you have your emergency supply and first aid kits with you.
- Choose an interior room, or one that has as few doors, air vents and windows as possible. A room with access to a water supply is best, such as a master bedroom that is connected to a bathroom. For a nuclear or radiation threat, a basement room or other below-ground, sealed-off area typically is best. For a chemical threat, the room should be as high in the building as possible so as to avoid gases that sink.
- Seal all outside air sources with plastic sheeting and duct tape. Pre-cut the sheeting, if possible, and make sure it is larger than the space that it needs to cover. Position it flat against the surface.
- Monitor radio, TV or Internet reports for updates and instructions.
- In many situations, your best course of action may be to leave as soon as possible, or you may be ordered by the government to evacuate. In these instances, make sure you have a plan in place of where to go and how various family members will get there. Be sure to keep your options open: consider several destinations in different directions, depending on the situation. Make sure you are familiar with alternate evacuation routes and be prepared to use other forms of transportation. Make sure you have ready access to your disaster supply kit, unless it may have been contaminated in the attack. If told to evacuate, take your pets (but keep in mind that public shelters may not allow pets inside). If the air appears to be contaminated,

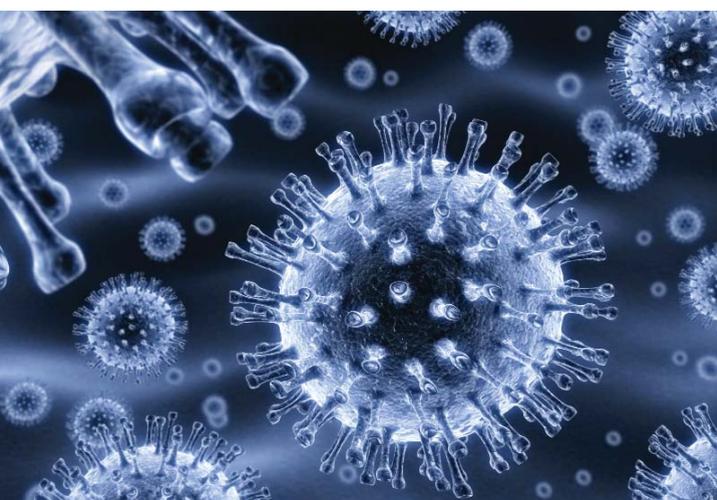


keep car windows and vents closed, and drive with your air conditioning and heater turned off.

- As with other disasters, you should check with schools, employers, daycare providers, community centers, apartment buildings and all relevant others to find out about their terrorism emergency plans — as part of your own readiness agenda. Talk to your neighbors, find out who has specialized equipment — such as digging equipment, a power generator or chain saw — and who might have medical expertise or knowledge. Join neighborhood watch patrols and with them devise group readiness plans in advance; have friends or relatives you can rely on for picking up and caring for children or pets in your absence; and make provisions for elderly and disabled neighbors who will likely need help during an emergency.

## Learning to Identify Potential Threats

Along with making these basic readiness plans, you should become familiar with specific potential terrorism threats so you will be better prepared to react during an attack. Of course, while there is no way to predict what might actually happen and where you and your loved ones might be if a terrorist attack were to unfold, there are a number of steps you can take to prepare for one. These steps will vary depending on the type of attack at hand. The following are the most common terrorism threats and their indicators, along with suggested lines of defense:



## Biological Attacks

These are purposeful releases, with intent to harm, of germs or other biological substances that can sicken or kill. Some biological agents must be inhaled to be



harmful; others must be absorbed through the skin or eaten, before causing harm.

Biological attacks may be contagious, as with small-pox virus, or un-contagious, as with anthrax. They also may be sudden and immediately obvious (as with anthrax) or slow to unfold — through a pattern of unusual illnesses or a spike in people seeking emergency medical care over time.

### Signs of a biological attack include:

- Many persons or animals exhibiting symptoms, falling ill or dying at the same time.
- A small number of unusual medical cases, especially in a particular area.
- Overcrowded emergency departments and clinics.

Symptoms of a biological attack vary, depending on the agent being used, and they may initially resemble symptoms of many common illnesses.

### Symptoms of a biological attack may include:

- Respiratory distress (difficulty breathing), fever, cough, nausea, tightness in the chest, heavy sweating, skin rashes, lesions, fluid buildup in the lungs (pulmonary edema), severe vomiting and diarrhea, severe dehydration, hemorrhaging, hallucinations, seizures, blood in the urine, flushed or red and painful skin, bloodshot eyes, low blood pressure, and respiratory failure leading to death.
- Any sudden illness that leads to rapid immobilization. (Seek emergency care right away.)

If you are aware of the suspicious release of a possible biological agent, be sure to flee the contaminated area quickly and cover your mouth and nose with a mask or layers of fabric that can filter the air. Completely wash your body with soap and water.

In the event of a biological attack, monitor news reports to get updates from public health officials and local authorities and listen for instructions related to medical care.

If anyone becomes sick, be aware that symptoms of many common illnesses often resemble those caused by biological agents and that the illness may or may not be a result of an attack. Take precautions and seek medical advice, but also use good judgment and common sense, the same as you would with any illness.

Be aware that many of the restrictions and precautions that would potentially be set by the government to restrict the spread of biological agents in the result of a terrorist attack would likely be similar to those activated in the event of the outbreak of a global influenza pandemic.

For more information on bioterrorism agents and diseases, see the Centers for Disease Control and Prevention website at [www.bt.cdc.gov/agent/agentlist.asp](http://www.bt.cdc.gov/agent/agentlist.asp).

## Chemical Attack

This is the purposeful release, with intent to harm, of a toxic gas, liquid or solid that has poisonous effects on people, animals and the environment.

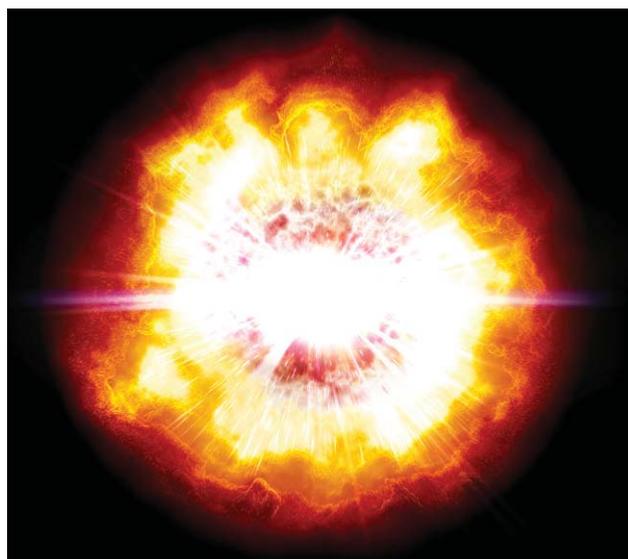
### The signs and symptoms of a chemical attack include:

- Watery eyes, twitching, choking, breathing difficulties, loss of coordination.
- Many sick or dead birds, fish or rodents.

### Actions to take in the event of a chemical attack:

- If there has been a chemical release in your area, local emergency coordinators may direct people to evacuate and go to an emergency shelter. Tune in to media outlets for details.
- If you witness what appears to be a chemical attack, try to quickly identify where the chemical is coming from, if possible, and leave the affected area immediately.
- If you suspect a chemical has been released inside a building you are in and you know where the chemical is coming from, try to find an exit in a non-contaminated area. If exiting without encountering the chemical is not possible, try to get as far away from the chemical release as possible and seal the area.

- If outdoors when a chemical attack occurs, you must quickly decide your course of action. Use your best judgment to determine the fastest way to get away from the chemical release. If you can't escape the area, it may be best to go indoors and try to shelter in place.
- If you experience the symptoms of being exposed to a chemical, immediately strip off your clothing. Any clothing that would normally be pulled over the head should be cut off the body instead of pulled over the head. Also dispose of contact lenses and wash contaminated eyeglasses. Cleanse your body thoroughly with any source of water you can find, using soap, if available. However, take care not to scrub the chemical into your skin. Seek emergency medical attention immediately.
- All contaminated clothing and related items, including contact lenses, should be placed in a plastic bag then sealed in another bag; avoid touching the items directly by using rubber gloves or tongs, tools, sticks or other objects. Alert health department or emergency personnel so they can further dispose of the items.
- For more information on chemical agents and resulting illnesses, see the Centers for Disease Control and Prevention website at [www.bt.cdc.gov/agent/agentlistchem.asp](http://www.bt.cdc.gov/agent/agentlistchem.asp).



## Explosion

This is the purposeful detonation, with intent to harm, of a combustible or explosive substance. Such incidents include:

- Conventional explosives, often characterized by loud explosions, blasts, balls of flame,



smoke and possibly shrapnel (bullets or other sharp objects that get propelled with the intent of causing injury or death during an explosion).

- Nuclear blasts, which typically involve an explosion or fireball accompanied by intense heat and light, a damaging wave of pressure and the dispersion of contaminating radioactive material into the air, water and ground across a widespread area. A mushroom cloud may be observed from a distance. These also typically involve widespread death and destruction and can wipe out entire cities. In addition, fallout and radiation exposure can affect a much wider area, causing delayed illness and deaths over many years through cancer and acute radiation syndrome.
- Radiation threats or “dirty bomb” explosions, which involve using common explosives to disperse radioactive materials over a localized area or the contamination of the food or water supply with radioactive materials. (Nuclear or atomic bombs are not used.) Introducing radioactive material into the food or water supply would likely pose little threat of contamination or illness; the bigger concern would be the widespread fear such an act would likely create. In the case of a dirty bomb, the blast area may be small with only localized injuries and deaths; however, the danger is in the presence of radiation plumes, which may not be immediately identifiable or easily tracked until professional technicians arrive and have time to assess the area for exposure levels. Exposure to radiation can cause a greater risk of developing cancer later in life.

#### **In a conventional explosion, you should:**

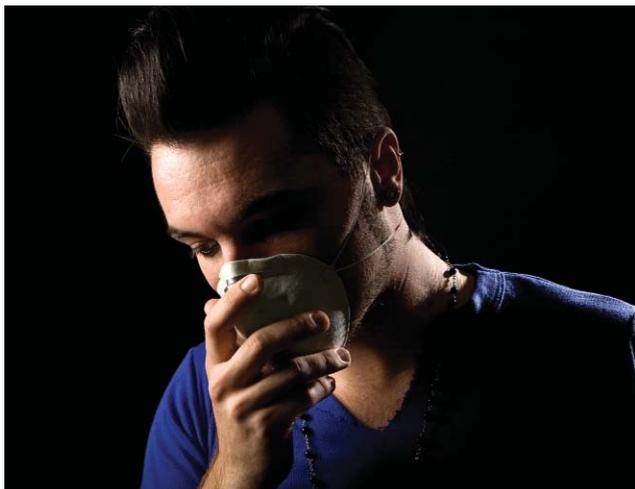
- Take cover, scan and assess the situation for further explosions or other possible dangers and exit the area immediately.
- Check yourself for any injuries, and seek immediate medical attention if you have life-threatening wounds.

- Be alert to possible secondary explosions or the employment of additional terrorism devices, especially as rescue workers arrive; scan exits, the immediate surrounding area and nearby thoroughfares.
- Avoid crowds, unattended vehicles and damaged buildings.
- Call 911 only if emergency workers have not yet arrived.
- Assist others who are injured or need help in leaving the area.
- Follow your family, school or job disaster plan.
- If you seek medical attention on your own, try to go to a hospital away from the incident, since it is less likely to be busy.
- Take a shower as soon as possible after being in the vicinity of an explosion to avoid the possibility of exposure to potentially harmful dust and other contaminants.

#### **Seek medical attention for the following:**

- Uncontrolled bleeding.
- Breathing difficulties.
- Chronic cough.
- Difficulty walking, standing up or using a limb.
- Pain in the stomach, back or chest.
- Severe headache.
- Dizziness or cognitive impairments.
- Blurred vision or stinging, burning eyes.
- Dry mouth.
- Severe vomiting or diarrhea.
- Rash or burning skin.
- Trouble hearing.
- Injuries that increase in pain, redness or swelling.
- Injuries that do not begin to heal after 24 to 48 hours.

In a nuclear blast, you should immediately take cover, preferably below ground, or behind natural barriers (e.g. hills, levees) to protect from the aftermath of the explosion and the pressure wave. The Department of Homeland Security recommends that you employ shielding, distance and time to limit your exposure to the radiation source. A thick shield will help protect you from damaging radiation and fallout, and greater distance and minimized time being exposed will also help reduce your risk. Follow instructions from public



health officials, who will advise whether it would be best to “shelter in place” or “evacuate” in the unique situation at hand.

If you opt to shelter in place, keep in mind that the safest place in most buildings during an emergency involving radiation or radioactive materials is a centrally located room or basement. This area should have as few windows as possible, and all air-circulating units should be turned off and outside sources of air sealed with duct tape and plastic.

**If outside before entering the shelter, remove contaminated clothing and leave them outside (preferably in a plastic bag), then wash thoroughly before entering with soap and water.**

- Tune in to media reports to find out whether a radiation plume is passing over.
- Ventilate the area after a few hours (to prevent suffocation).
- If you experience symptoms of radiation exposure, including nausea, vomiting, diarrhea and swelling and redness of the skin, seek medical attention. (You will only experience these symptoms if exposed to high levels of radiation. Low-level radiation exposures will not produce any symptoms; however, there is the danger of developing cancer later in life.)

In a radiation threat or “dirty bomb” explosion, you should respond like you would in a nuclear explosion. If you are in the immediate vicinity of a detonated dirty bomb:

- Cover your nose and mouth with a mask or cotton cloth to minimize your risk of breathing in radioactive dust or smoke.

- Don’t touch any objects in or around the explosion area; they likely will be radioactive.
- Immediately get into a building with intact walls and windows to shield yourself from radiation outside.
- Once inside, strip off your outer layer of clothing and seal it and the rag you used to cover your mouth in a plastic bag.
- Put the bag in a secure place and give it to authorities when they arrive.
- Wash yourself with soap and water. Be sure to include your hair. Washing and removing clothes will remove up to 90 percent of radioactive dust.

**If you are in an area threatened by dirty bomb radiation:**

- If sheltering in place, put a barrier (preferably an underground one) between yourself and the potential radiation.
- If evacuating, get out of and far away from the area as quickly as possible.



- Use your best judgment in employing shielding, distance and time.
- If you suspect you’ve been exposed to radiation, remove clothing, wash and follow decontamination procedures described previously.
- For more information on sheltering in place following nuclear blasts or radiation emergencies, see the Centers for Disease Control and Prevention website at [www.bt.cdc.gov/radiation/shelter.asp](http://www.bt.cdc.gov/radiation/shelter.asp).





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