

# Evacuation and Sheltering

## **Why talk about evacuation?**

At any time of the year, at any time of the day or night, a disaster or threat of a disaster could force people to leave their homes, offices, and schools or even the community in which they live. People evacuate a dangerous place to go to a safer place, and they usually need to act in a hurry. Preparing before an emergency by learning about the community's warning systems and evacuation routes and by making evacuation plans and discussing them with household members is the best way to be ready in case an evacuation is necessary. Making plans at the last minute can be upsetting, create confusion, and cost precious time.

## **Why talk about sheltering?**

Sometimes, a disaster or threat of disaster mandates that people find shelter in their home or in whatever building they happen to be. Safe shelter requires having a safe place to go and having the time to get there. It is important to know which room to shelter in and what to do to stay safe while there. At other times, people are forced to evacuate the immediate area, or even the entire region, and to shelter at public facilities. Knowing in advance what to expect and preparing for all sheltering scenarios will make sheltering experiences safer and more comfortable.

## **What if you have pets?**

Because evacuation shelters generally do not accept pets, except for service animals, you must plan ahead to ensure that your family and pets will have a safe place to stay. Do your research early.

Contact hotels and motels outside your immediate area to check policies on accepting pets. Ask about any restrictions on number, size, and species. Ask if "no pet" policies would be waived in an emergency. Make a list of pet-friendly places and keep it handy. Call ahead for a reservation as soon as you think you might have to leave your home.

Check with friends, relatives, or others outside your immediate area. Ask if they would be able to shelter you and your animals, or just your animals if necessary. If you have more than one pet, you may have to be prepared to house them separately.

Make a list of boarding facilities and veterinary offices that might be able to shelter animals in emergencies and include 24-hour numbers.

Ask your local animal shelter if it provides foster care or shelter for pets in an emergency. This should be your last resort, as shelters have limited resources and are likely to be stretched to their limits during an emergency.



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## Evacuation

Consider your transportation options in case you have to evacuate. If you do not own or drive a car, ask your local emergency manager about plans for people without private vehicles.

If you are in an area that is being evacuated:

- Evacuate immediately if told to do so by authorities. Authorities do not ask people to leave unless they conclude that lives may be in danger.
- Listen to a local radio or television station and follow the instructions of local emergency officials. Local officials know the most appropriate advice for your particular situation.
- Wear long pants, a long-sleeved shirt, and sturdy shoes. The most common injury following disasters is cut feet.
- Lock your home. Secure your home as you normally would when leaving for an extended period.
- Take your pets with you when you leave, provided you can do so without endangering yourself.
- Use travel routes specified by local authorities. Since certain areas may be impassable or dangerous, avoid shortcuts. Do not drive through moving water. Barriers are placed for your safety; if you come upon a barrier, follow posted detour signs.

If you have only moments before leaving, grab your Disaster Supplies Kit and go. If it is impossible for you to take your Disaster Supplies Kit, at least try to take the following:

- Any pets that you can get without endangering yourself. You may not be able to come back for them later, as it may be too dangerous to return.
- First aid kit, including prescription medications, dentures, extra eyeglasses, and hearing aid batteries
- A change of clothes and a sleeping bag or blankets for each household member
- Flashlight, radio, and water
- Car keys and house keys
- Cash and personal identification

If you have time before leaving and local officials have not advised an immediate evacuation, prepare your home before evacuating. Quickly take steps to protect your home and belongings. Depending on the threat, you should:

- Bring all pets into the house and confine them to one room, if you can. If necessary, make arrangements for your pets. Pets may try to run if they feel threatened. Keeping them inside and in one room will allow you to find them quickly if you need to leave. If you have large, unusual, or numerous animals, start evacuating them or moving them to your shelter area (if you are sheltering in place) as soon as you are aware of impending danger. If you are using a horse or other trailer to evacuate your animals, move early rather than wait

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until it may be too late to maneuver a trailer through slow traffic, high winds, and heavy rain.

- Put your Disaster Supplies Kit in your vehicle, or by the door if you are being picked up or may be leaving on foot. In some disaster situations, such as tsunami or wildland fire, it is better to leave by foot than wait for transportation. Carry what you can, selecting the items most essential to your health and safety.
- Tell your out-of-town contact in your Family Disaster Plan where you are going and when you expect to get there. Relatives and friends will be concerned about your safety. Letting someone know your travel plans will help relieve the fear and anxiety of those who care.
- Bring things indoors. Lawn furniture, trash cans, children's toys, garden equipment, clotheslines, hanging plants, and any other objects that may be blown around or swept away should be brought indoors.
- Look for potential hazards. Look for coconuts, unripened fruit, and other objects in trees around your property that could blow or break off and fly around in strong winds. Cut these objects off and store them indoors until the storm is over. If you have not already cut away dead or diseased branches or limbs from trees and shrubs, leave them alone. Local rubbish collection services will not have time before a major storm to pick anything up.
- Turn off electricity at the main fuse or breaker, and turn off water at the main valve.
- Leave natural gas on, unless local officials advise otherwise, because you will need it for heating and cooking when you return home. If you turn gas off, a licensed professional is required to turn it back on, and it may take weeks for a professional to respond.
- Turn off propane gas service valves. Propane tanks often become damaged or dislodged in disasters.
- If strong winds are expected, cover the outside of all the windows of your home. Use shutters that are rated to provide significant protection from windblown debris, or put pre-fit plywood coverings over all windows.
- If flooding is expected, consider using sand bags to keep water away from your home. It takes two people about one hour to fill and place 100 sandbags, giving you a wall one-foot (0.3-meter) high and 20-feet (6-meters) long. Make sure you have enough sand, burlap or plastic bags, shovels, strong helpers, and time to place them properly.

## **What to Do if Evacuation Is Necessary Because of a Storm**

If you are advised to evacuate or if you think it is appropriate to evacuate, you should:

- Leave as soon as possible, preferably in daylight. Avoid flooded roads and watch for washed-out bridges. Evacuation will probably take longer than expected. Give yourself plenty of time.
- Secure your home by unplugging appliances and turning off the electricity and the main water valve. This will reduce potential damage to your appliances from power surges and to your home.
- Tell someone outside the storm area where you are going—(the out-of-town

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contact you identified in your Family Disaster Plan). Relatives and friends will be concerned about your safety. Letting someone know your travel plans will help relieve their fear and anxiety.

- If time permits and you live in an identified surge zone or area prone to flooding, move furniture to a higher floor. Moving valuable furnishings helps reduce the potential for damage.
- Bring your Disaster Supplies Kit, including warm protective clothing. People frequently arrive at shelters or hotels with nothing. Having these items with you will make you more comfortable. While shelters provide a safe place to stay and food, specialty items for infants and individuals on restricted diets may not be available. It may be several days before permission is given by local authorities to reenter an evacuated area.
- Lock your home and leave. There may be individuals evacuating after you, or returning before you. Police may be busy with storm-related emergencies and not able to patrol neighborhoods as usual.

## Sheltering

Taking shelter, having a safe place to go and having the time to get there, are often critical in protecting yourself and your household in times of disaster. Sheltering can take several forms. Sheltering-in-place is appropriate when conditions require that you take protection in your home, place of employment, or other location where you are when a disaster strikes.

How and where to shelter-in-place depend entirely on the emergency situation. For instance, during a tornado warning you should go to an underground room or a "wind safe" room, if such a room is available. During a chemical release, on the other hand, you should take shelter in a room above ground level. Because of these differences, short-term in-place shelter is described in the Disaster Guides dealing with specific hazards.

### How to Shelter-in-Place (Chemical or Nuclear Incident)

- In case of a chemical attack, take shelter on an upper floor in an interior space without windows if possible. Seal the space using plastic sheeting and duct tape. Ten square feet of floor space per person will provide sufficient air to prevent carbon dioxide buildup for up to five hours.
- In case of nuclear attack, take shelter from fallout radiation below ground in an interior space without windows if possible. Put as much heavy, dense material between you and the outside as possible.

Shelter-in-place applies to several types of terrorist attacks, but details will vary. For example, you would use duct tape and plastic sheeting to seal an internal room against chemical agents. For sheltering against radiation dispersed by a radiological

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dispersion device (RDD or “dirty bomb”) or radioactive fallout particles after a nuclear explosion, you would normally prefer a basement shelter to a higher floor; duct tape and plastic would help keep radioactive dust out, but primary protection from radioactive particles would be achieved by applying the principles of mass, distance, and time.

If officials advise people in a specific area to shelter-in-place because of a short-term chemical release, households should have the following in the shelter-in-place room:

- Plastic sheeting pre-cut to fit room openings. (Cut the plastic a minimum of 6 inches wider than each opening. The thickness of the plastic should be 4 to 6 millimeters or greater.)
- Duct tape and scissors. (The thickness of the duct tape should be 10 millimeters or greater.)

A shelter-in-place room should be an interior room, preferably one without windows, that you can seal to block out air that may be contaminated by the short-term release of hazardous chemical agents. The room should be above the ground-level floor. In the case of a chemical threat, an above-ground location is preferable because some agents are heavier than air and may seep into basements even if the windows are closed.

Guidelines for sheltering-in-place are based on the need to shelter for only a few hours—more than sufficient time for a short-term release of airborne agents to dissipate. Ten square feet of floor space per person will provide sufficient air to prevent carbon dioxide build-up for up to five hours, assuming each person is resting and breathing at a normal rate.

## **During a Chemical Attack**

The following are guidelines for what you should do in a chemical attack. If you are instructed to remain in your home or office building, you should:

- Close and lock all windows and exterior doors.
- Turn off all ventilation, including furnaces, air conditioners, vents, and fans.
- Go to shelter in an internal room and take your Disaster Supplies Kit. Be sure you have a working battery-powered radio.
- Seal the room with duct tape and plastic sheeting. Use duct tape with a minimum thickness of 10 millimeters and pre-cut plastic sheeting with a thickness of 4 to 6 millimeters or greater to seal all cracks around doors, windows, and vents, and all wall plugs, switch plates, and cables.
- If you are told there is danger of explosion, close the window shades, blinds, or curtains.
- Call your emergency contact. Ideally your room will have a hard-wired telephone. Cellular telephone service may be overwhelmed or damaged during an emergency. You will need a working phone if you have to report a life-threatening emergency.
- Keep listening to your radio or television until you are told all is safe or you are

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told to evacuate. Local officials may call for evacuation in specific areas at greatest risk in your community.

At home:

- Close the fireplace damper.
- Bring your pets with you, and be sure to bring additional food and water for them.

If you are caught in an unprotected area, you should:

- Move away immediately.
- Get upwind of the contaminated area.
- Find shelter as quickly as possible.

## Factors for Protection From Radioactive Fallout

The three factors for protecting oneself from radioactive fallout are distance, shielding, and time.

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

To prepare for a nuclear explosion, you should:

- Modify your Disaster Supplies Kit so it is adequate for up to two weeks.
- Find out from officials if any public buildings in your community have been designated as fallout shelters. If none have been designated, make your own list of potential fallout shelters near your home, workplace, and school. These places would include basements or the windowless center area of middle floors in highrise buildings, as well as subways and tunnels.
- If you live in an apartment building or high-rise, talk to the manager about the safest place in the building for sheltering and about providing for building occupants until it is safe to go out.

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

- Blast shelters are specifically constructed to offer some protection against blast pressure, initial radiation, heat, and fire; but even a blast shelter could not withstand a direct hit from a nuclear explosion.

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- Fallout shelters do not need to be specially constructed for protecting against fallout. They can be any protected space, provided that the walls and roof are thick and dense enough to absorb the radiation given off by fallout particles.

## Emergency Sanitation

In many shelters during an emergency, people will need to use improvised, emergency toilets if the water supply has been cut off. These kinds of toilets consist of any watertight container with a snug-fitting cover.

- Use a garbage container, pail, or bucket.
- If the container is small, keep a large container (also with a cover) available for waste disposal.
- If possible, line both containers with plastic bags.
- Every time the emergency toilet is used, pour or sprinkle a small amount of regular household disinfectant, such as creosol or chlorine bleach, into the container to reduce odors and germs.
- After each use, replace the lid.

## Using HEPA Filters

HEPA filters may be useful in biological attacks. If you have a central heating and cooling system in your home with a HEPA filter, leave it on if it is running or turn the fan on if it is not running. Moving the air in the home through the filter will help remove the agents from the air. If you have a portable HEPA filter, take it with you to the internal room where you are taking shelter and turn it on.

If you are in an apartment or office building that has a modern central heating and cooling system, the system's filtration should provide a relatively safe level of protection from outside biological contaminants.

HEPA filters will not filter chemical agents.

## Long-Term Sheltering at Home

Taking shelter may also be longer term, as when you stay in your home for several days without electricity or water services following a winter storm. "Shelter" also refers to a place where people displaced by a disaster are housed and fed by an organization like the American Red Cross. The following information pertains to long-term, in-place sheltering.

Sometimes, disasters make it unsafe for people to leave their residences for extended periods. Winter storms, floods, and landslides may isolate individual households and make it necessary for each household to take care of its own needs until the disaster abates, such as when snows melt and temperatures rise, or until

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rescue workers arrive.

Your household should be prepared to be self-sufficient for at least three days if cut off from utilities and from outside supplies of food and water. Being prepared for two weeks is safer.

If you are sheltering at home, you should:

- Stay in your shelter until local authorities say it is safe to leave. The length of your stay can range from a few hours to two weeks.
- Maintain a 24-hour communications watch. Take turns listening to local radio or television stations. Listen to battery-operated radio or television for local news updates for short periods of time to preserve the batteries.

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