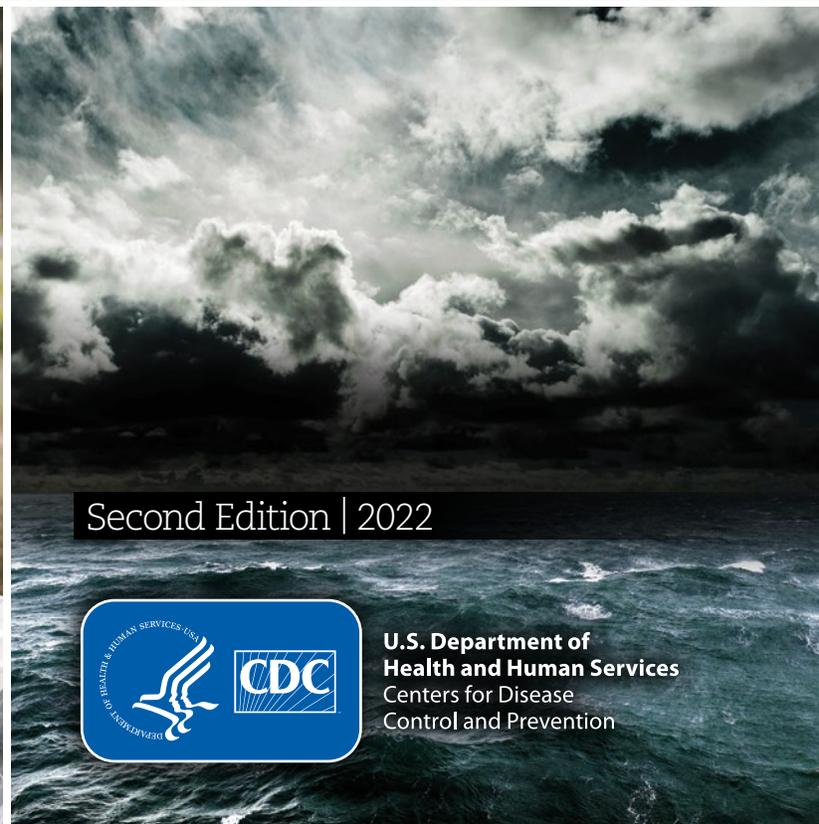




Preparedness and Safety Messaging for Hurricanes, Flooding, and Similar Disasters



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Background

The right message at the right time from the right person can save lives. The Centers for Disease Control and Prevention (CDC) Joint Information Center (JIC), as part of CDC's Incident Management System (IMS), developed a key messages document while activated for the 2017 hurricane season response, covering health concerns related to disaster response and recovery. CDC communicators worked with subject matter experts to update it during the 2022 hurricane season.

The purpose of *Preparedness and Safety Messaging for Hurricanes, Flooding, and Similar Disasters* is to provide a preparedness and response resource for all jurisdictions to use before, during, and after a response. It includes information on disaster-related challenges including food safety, carbon monoxide poisoning, waterborne diseases, and mold. Jurisdictions can use the messaging document as a resource for their communication planning. Messages can be adapted for web, press releases, media talking points, social media, fact sheets, and other communications materials.

A key message document was also created specifically for response and recovery workers—[Hurricane Key Messages for Employers, Workers, and Volunteers](#). English and other language versions (Spanish, Chinese, Vietnamese) of this document can be found on the National Institute for Occupational Safety and Health [Storm, Flood, and Hurricane Response](#) website.

Prepare Before a Hurricane or Severe Flooding

During and after a hurricane, you may need supplies to keep your family safe and healthy. Remember that a hurricane could cut off your power and water supply. You also may not be able to drive because of damage to your car. Roads may be flooded or blocked.

Make a Plan

Even if there's no risk of a hurricane or severe storm right now, make sure you and your family are prepared.

- Stock up on emergency supplies, including [personal needs](#), for your home and car. A list of items to include in an emergency supply kit is available on the Ready.gov website: <https://www.ready.gov/kit>.
- Write down emergency phone numbers and keep them in a place accessible to everyone in your household. Make a copy of these numbers to keep at work or school near every phone in your house or on the refrigerator. Program them into everyone's cell phone, too.
- Find out where the nearest shelter is and the different routes you can take to get there if you have to leave your home.
- Make sure that everyone in your family knows what warning alerts (text messages, sirens, TV broadcast) in your area sound like—and what to do if they go off.
- Tornadoes sometimes form during hurricanes. Know the safest place to shelter in case a tornado forms. Safe places include a storm cellar, a basement, or an inside room without windows on the lowest floor (such as a bathroom, closet, or center hallway). Keep in mind, during a hurricane you might also experience flooding. If you are experiencing flooding and a tornado warning at the same time, go to the lowest floor that is still dry and stay away from windows.
- If you plan to use a portable generator in the event of a power outage, ensure you have a working, battery-powered or battery backup carbon monoxide (CO) detector installed in a location where it will awaken you if it alarms while you are sleeping.
- Buy a fire extinguisher and make sure your family knows where to find it and how to use it.

For more information on how to make an emergency action plan, visit <https://www.cdc.gov/prepare-your-health/plan-ahead/>.

For information on staying safe during tornadoes, visit <https://www.cdc.gov/tornadoes/safety/stay-safe-during-a-tornado-safety.html>.

Prepare an Emergency Food Supply

A disaster can easily disrupt the food supply at any time, so plan to have at least a two-week supply of food, including pet food, at home or a three-day supply of food and pet food on hand if you plan to evacuate.

Keep foods that:

- Have a long storage life
- Require little or no cooking, water, or refrigeration, in case utilities are disrupted
- Meet the needs of babies (baby food or formula, if needed)
- Meet any specific dietary needs. For example, if you have a medical condition like diabetes, pack a diabetes-friendly emergency food kit. Include water, juice boxes (as quick-acting rescue sources of sugar), and complex carb snacks, such as nuts, peanut butter crackers, and tuna and cracker packs. This is important especially if you are using insulin.

How to Store Emergency Food

When storing food, it is not necessary to buy dehydrated or other types of emergency food.

- Check the expiration dates on canned foods and dry mixes. Home-canned food usually needs to be thrown out after a year.
- Use and replace food before its expiration date.
- Certain storage conditions can enhance the shelf life of canned or dried foods. The ideal location is a cool, dry, dark place. The best temperature is 40°F to 70°F (4°C to 21°C).
- Store foods away from ranges or refrigerator exhausts. Heat causes many foods to spoil more quickly.
- Store food away from petroleum products, such as gasoline, oil, paints, and solvents. Some food products absorb their smell.
- Protect food from rodents and insects. Items stored in boxes or in paper cartons will keep longer if they are heavily wrapped or stored in waterproof, airtight containers.

Preparing Food

Preparing food after a disaster or emergency may be difficult due to damage to your home and loss of electricity, gas, and water. Having the following items available will help you to prepare meals safely:

- Cooking utensils
- Knives, forks, and spoons
- Paper plates, cups, and towels
- A manual can- and bottle-opener
- Heavy-duty aluminum foil
- Propane gas or charcoal grill; camp stove

Fuel for cooking, such as charcoal. (CAUTION: Only use charcoal grills or camp stoves outside of your home to avoid smoke inhalation and carbon monoxide poisoning.)

For more information on food before a disaster, visit <https://www.cdc.gov/food-safety/foods/keep-food-safe-after-emergency.html>.

Prepare an Emergency Water Supply

- Store at least 1 gallon of water per day for each person and each pet for cooking and drinking. Consider storing more water than this for hot climates, for pregnant women, and for people who are sick.
- Store at least a 3-day supply of water for each person and each pet. Try to store a 2-week supply if possible.
- Observe the expiration date for store-bought water; replace water that is not store-bought every 6 months.
- Store a bottle of unscented liquid household chlorine bleach to [disinfect your water](#) and to use for general cleaning and sanitizing. Try to store bleach in an area where the average temperature stays around 70°F (21°C). Because the amount of active chlorine in bleach decreases over time due to normal decay, consider replacing the bottle each year. Over time, the amount of active chlorine in bleach starts breaking down and it becomes much less effective at disinfecting and killing germs.

Additional information on how to disinfect drinking water is available on the CDC website:

<https://www.cdc.gov/water-emergency/about/index.html>

Water Containers (Cleaning and Storage)

- Store-bought bottled water is the safest and most reliable emergency water supply.
- Use food-grade water storage containers, such as those found at surplus or camping supply stores, if you prepare an emergency water supply.
- If you are not able to use a food-grade water storage container, be sure the container you choose:
 - Has a top that can be closed tightly
 - Is made of durable, unbreakable materials (i.e., not glass)
 - If possible, use a container with a narrow neck or opening so water can be poured out.

DO NOT USE containers that previously have been used to hold liquid or solid toxic chemicals (bleach, pesticides, etc.)

Before filling with safe water, use these steps to clean and sanitize storage containers:

1. Wash the storage container with dishwashing soap and water and rinse completely with clean water.
2. Sanitize the container by adding a solution made by mixing 1 teaspoon of unscented liquid household chlorine bleach in one quart of water.
3. Cover the container tightly and shake it well so that the sanitizing bleach solution touches all inside surfaces of the container.
4. Wait at least 30 seconds and then pour the sanitizing solution out of the container.
5. Let the empty sanitized container air-dry before use OR rinse the empty container with clean, safe water that has been treated.

For proper water storage:

- Label container as “drinking water” and include storage date.
- Replace stored water that is not commercially bottled every six months.
- Keep stored water in a place with a fairly constant cool temperature.
- Do not store water containers in direct sunlight.
- Do not store water containers in areas where toxic substances such as gasoline or pesticides are present.

To learn more about how to prepare an emergency water supply, visit <https://www.cdc.gov/water-emergency/about/how-to-create-and-store-an-emergency-water-supply.html>.

Safety and Personal Care Products

Gather any medicines you might need, including prescription and nonprescription medicines like pain and fever relievers, antihistamines, and antidiarrheal medicines.

Gather safety items, including:

- First aid kit and instructions
- Battery-powered radio
- Flashlights
- Extra batteries
- Cash
- Sleeping bags or extra blankets
- Fire extinguisher

Gather personal care products, including:

- Hand sanitizer with at least 60% alcohol
- Wet cleaning cloths (like baby wipes) in case you don't have clean water
- Soap
- Toothpaste
- Tampons and pads
- Diapers

For more information on what you will need to prepare for the storm, visit <https://www.cdc.gov/hurricanes/safety/index.html>.

Prepare Your Family for the Storm

Know the difference between a hurricane “watch” and “warning”.

Listen for National Weather Service alerts on TV or radio or check for them online. There are two kinds of alerts:

- A hurricane watch means hurricane conditions (sustained winds of 74 miles per hour [mph] or higher) are possible in a stated area. Experts announce hurricane watches 48 hours before they expect tropical-storm-force winds (sustained winds of 39 to 73 mph) to start.
- A hurricane warning is more serious. It means hurricane-force winds are expected in a stated area. Experts issue these warnings 36 hours before tropical-storm-force winds are expected in the area to give people enough time to prepare for the storm.

For more information about hurricane watches and warnings, check out the [National Weather Service’s Hurricane Center](#).

If you hear that there’s a hurricane or flood watch or warning in your area, you can take steps to get ready.

Get Your Family Ready

- Go over your emergency action plan with your family. Make sure you have the supplies you need.
- Keep checking for updates about the storm via local TV and radio as well as online.
- Pay attention to warning alerts or signals (such as text message alerts, TV broadcast warnings, or sirens).
- Pack important documents (like wills or passports) with you.
- Call the hospital, public health department, or the police about special needs. If you or a loved one is older or has a disability and won’t be able to leave quickly, get advice on what to do.
- If you plan to use a portable generator in the event of a power outage, find a safe location outside, 20 feet from any door, window, or vent, to place your generator.
- Check your carbon monoxide detector’s battery. Carbon monoxide poisoning can be deadly.

For more information about how to get your family ready for a disaster, visit <https://www.cdc.gov/hurricanes/safety/index.html>.

Put Pets and Farm Animals in a Safe Place

All emergency shelters accept service animals, but keep in mind shelters and many hotels may not let you bring pets with you if you need to evacuate. Ask your local public health department if pets are allowed in shelters.

For more information about **pet safety**, visit <https://www.cdc.gov/healthy-pets/emergency-preparedness/>.

Get Your Home Ready for the Storm

- Clear your yard. Make sure there's nothing that could blow around during the storm and damage your home. Move bikes, lawn furniture, grills, propane tanks, and building material inside or under shelter.
- Cover up windows and doors outside. Use storm shutters or nail pieces of plywood to the window frames to protect your windows. This can help keep you safe from pieces of shattered glass.
- Be ready to turn off your power. If you see flooding, downed power lines, or you have to leave your home, switch your power off.
- Fill clean water containers with drinking water. You'll want to do this in case you lose your water supply during the storm. You can also fill up your sinks and bathtubs with water for washing.
- Check your carbon monoxide (CO) detector's battery to prevent CO poisoning.
- Lower the thermostat in your refrigerator and freezer to the coolest possible temperature. If your power goes out, your food will stay fresh longer.

For more information about how to get your home ready for a disaster, visit <https://www.cdc.gov/hurricanes/safety/index.html>.

Prepare Your Car for the Storm

- Fill your car's gas tank.
- Double check your car's emergency kit.
- Move cars and trucks into your garage or under cover.
- If you don't have a car, you may want to consider making plans with friends or family to get a ride if you need to evacuate.

Make an Emergency Car Kit

Always keep an emergency kit in your car in case you need to leave quickly during a hurricane. Make sure you include:

- Flares
- Jumper cables (sometimes called booster cables)
- Maps
- Tools, like a roadside emergency kit
- A first aid kit and instructions
- A fire extinguisher
- Sleeping bags or blankets
- Flashlight and extra batteries
- Having a GPS—either in your car or on your smartphone—can help during an emergency too.

For more information on how to get your car ready for a disaster, visit:

- <https://www.cdc.gov/hurricanes/safety/index.html>
- <https://www.ready.gov/car>

Evacuate or Stay at Home

If a hurricane or severe flooding is coming, you may hear an order to evacuate (leave your home).

Never ignore an order to evacuate. Even sturdy, well-built houses may not hold up against an extreme storm with strong wind and high water. Staying home to protect your property is not worth risking your health and safety.

You may also hear an order to stay at home. Sometimes, staying at home is safer than leaving.

If You Need to Evacuate

Grab your emergency supply kit and only take what you really need with you, like your cell phone, chargers, medicines, identification (like a passport or license), and cash.

- Make sure you have your emergency car kit.
- If you have time, turn off the gas, electricity, and water. Also unplug your appliances.
- Follow the roads that emergency workers recommend even if there's traffic. Other routes might be blocked.

If You Need to Stay Home

Keep monitoring local radio or TV for updates on the hurricane and/or flooding.

- Stay inside. Even if it looks calm, don't go outside. Wait until you hear or see an official message that the storm is over. Sometimes, weather gets calm in the middle of a storm but then gets worse again quickly.
- Stay away from windows. You could get hurt by pieces of broken glass during a storm. Stay in a room with no windows or go inside a closet.
- Be careful. Winds can blow debris—like pieces of broken glass and other objects—at high speeds. Flying debris is the most common cause of injury during a hurricane. You're also at a higher risk of breaking a bone or cutting yourself on loose nails, metal, or other objects.
- Be ready to leave. If emergency authorities order you to leave or if your home is damaged, you may need to go to a shelter or a neighbor's house.

For more information about emergency evacuations, visit <https://www.cdc.gov/hurricanes/safety/index.html>.

Prevent Illness After a Hurricane or Severe Storm

Floodwater Safety

Floodwater and standing water can be dangerous and can make you vulnerable to infectious diseases, chemical hazards, and injuries.

If flooding occurs:

- Get to higher ground. Get out of areas subject to flooding. This includes dips, low spots, canyons, washes, etc.
- Do not stay in the attic of your home. If the highest floor of your home becomes dangerous, get on the roof. Call 911 for help and stay on the line until the call is answered.

Stay Out of Floodwater

Floodwater can contain many things that may be harmful. We don't know exactly what is in floodwater at any given point in time. It is important to protect yourself from exposure to floodwater regardless of the source of contamination. The best way to protect yourself is to stay out of the water.

- Do not allow children to play in flooded areas.
- Do not allow children to play with toys that have been contaminated by floodwater and have not been [disinfected](#).
- Do not bathe in water that may be contaminated with sewage or toxic chemicals. This includes rivers, streams, or lakes that are contaminated by floodwater.

If you come in contact with floodwater:

- Wash the area with soap and clean water as soon as possible. If you don't have soap or water, use alcohol-based wipes or sanitizer.
- Take care of [wounds](#) and seek medical attention if necessary.
- Wash clothes contaminated with flood or sewage water in hot water and detergent before reusing them.

Don't Drive in Flooded Areas

- Don't drive in flooded areas—cars or other vehicles won't protect you from floodwater. They can be swept away or may stall in moving water.
- Floodwater can pose a drowning risk for everyone—regardless of their ability to swim. Swiftly moving shallow water can be deadly, and even shallow standing water can be dangerous for small children.
- Always follow warnings about flooded roads.

For more information on floodwater safety, visit <https://www.cdc.gov/floods/safety/floodwater-after-a-disaster-or-emergency-safety.html>.

Stay Safe in Extreme Heat

Be aware of yours and others' risk for heat stroke, heat exhaustion, heat cramps, and fainting.

Some people are more at risk of developing a heat-related illness than others. Be sure to check on people in these groups and follow tips to keep them safe:

- Older adults (aged 65+)
- People with disabilities
- People with diabetes
- People with other chronic medical conditions
- Outdoor workers
- Infants and children
- Low-income households or households without air conditioning
- Athletes
- Pets

Heat stroke is the most serious heat illness. It happens when the body can't control its own temperature and its temperature rises rapidly. Sweating fails and the body cannot cool down. Body temperature may rise to 106°F or higher within 10 to 15 minutes. Heat stroke can cause death or disability if emergency care is not given.

If air conditioning is not available in your home:

- Contact your local health department or locate an air-conditioned shelter in your area.
- Spend some time at a shopping mall or public library—even a few hours spent in air conditioning can help.
- Take cool showers or baths.
- Don't rely solely on fans to keep you cool. While electric fans might provide some comfort, when temperatures are really hot, they won't prevent heat-related illness.

For more information about how to prevent heat-related illnesses, visit <https://www.cdc.gov/extreme-heat/prevention/index.html>.

For more information about heat safety for workers, visit <https://www.cdc.gov/niosh/heat-stress/about/>.

Protect Yourself from Air Pollution

After a major storm, burning of debris, chemical releases, and other incidents can lead to poor air quality. Individuals with asthma, COPD, or heart disease and infants and children are most at risk from exposure to air pollution, but everyone can experience effects like eye, lung, or throat irritation.

When news reports, the EPA Air Quality Index, or other public announcements warn you that air pollution levels are high:

- Reduce the amount of time you spend outside and spend more time indoors, where pollution levels are usually lower.
- If you are cleaning up after storm damage, try to do indoor work when outdoor air pollution is bad and do outdoor work when pollution levels are lower, usually in the morning and evening.

- Choose easier outdoor activities (like walking instead of running) so you don't breathe as hard.
- Avoid busy roads and highways where air pollution is usually worse because of emissions from cars and trucks.

Odor

Odors, or smells, can be either pleasant or unpleasant. In general, most substances that cause odors in the outdoor air are not at levels that can cause serious injury, long-term health effects, or death. However, odors may affect your quality of life and sense of well-being.

Not everyone reacts to environmental odors the same way. In general, if you are young or female, you may be more sensitive to odors. If you don't smoke, you are usually more sensitive to odors than smokers. If you suffer from depression and anxiety disorders, or have migraines, allergies, asthma, and other chronic lung conditions, you may feel worse when you smell unpleasant odors over a long time.

You may have signs and symptoms when exposed to environmental odors, but the symptoms usually go away when the odor is gone. The most common symptoms from environmental odors are headache and nausea.

You can reduce your exposure to odors by:

- Exercising indoors during days with more environmental odors
- Staying indoors when your allergies, asthma, and/or chronic lung problems are acting up
- Leaving the area for a few hours if possible

For more information about environmental odors, visit <https://www.atsdr.cdc.gov/odors/>.

Personal Hygiene and Handwashing

Always listen to your local health officials for specific advice on whether you can use tap water for personal hygiene after a water-related emergency.

Handwashing

Keeping hands clean during an emergency helps prevent the spread of germs. During a boil water advisory or do not drink water advisory, it may be safe to wash hands with tap water. If local authorities recommend extra caution, wash your hands with soap and water that has been boiled or disinfected.

Follow these steps to make sure you wash your hands properly:

- Wet your hands with clean, running water (warm or cold), turn off the tap, and apply soap.
- Lather your hands by rubbing them together with soap. Lather the backs of your hands, between your fingers, and under your nails.
- Scrub your hands for at least 20 seconds.
- Rinse your hands well under clean, running water.
- Dry your hands using a clean towel or air dry them.

A temporary hand washing station can be created by using a large water jug that contains clean water (for example, boiled or disinfected).

Washing hands with soap and water is the best way to get rid of germs in most situations. If soap and water are not available, use an alcohol-based hand sanitizer with at least 60% alcohol. Alcohol-based hand sanitizers can quickly reduce the number of germs on hands in some situations, but sanitizers do not eliminate all types of germs.

Hand sanitizers are not effective when hands are visibly dirty.

Bathing and Showering

If you are on municipal water, listen to your local health officials for advice on whether you can bathe or shower after a water-related emergency. Sometimes water that is not safe to drink can be used for bathing, but be careful not to swallow any water or get it in your eyes.

Do not bathe in:

- water that may be contaminated with sewage or toxic chemicals
- rivers, streams, or lakes that are contaminated by flood water, human sewage, or animal waste.

If you have a get drinking water from a private well, listen to your local health authorities for advice on using your well water for showering and bathing. If the home lost power, determine if the well lost pressure. This is important even if the power is now back on. If extensive flooding has occurred or you suspect that your well water may be contaminated or your well lost pressure, contact your local, state, or tribal health department for specific advice on well testing and disinfection.

Brushing Teeth

Use only clean water to brush your teeth. Listen to local authorities to find out if tap water is safe to use for brushing your teeth.

Washing Wounds

Keep wounds clean and covered during an emergency. Open wounds and rashes that have been exposed to contaminated water can become infected.

- Avoid contact with floodwater, salt water, or brackish water if you have an open wound (including cuts and scrapes).
- Keep open wounds as clean as possible by washing well with soap and clean water.
- Cover clean, open wounds with a waterproof bandage to reduce your chance of infection.
- Seek immediate medical care if a wound develops redness, swelling, or oozing.

For more information about personal hygiene and hand washing during a disaster, visit:

<https://www.cdc.gov/water-emergency/safety/guidelines-for-personal-hygiene-during-an-emergency.html>.

Diarrheal Diseases

Eating or drinking anything contaminated by flood water can cause diarrheal disease (such as E. coli or Salmonella infection). To protect yourself and your family:

- Drink and use safe water.
- Wash your hands with soap and water during key times when germs are likely to spread, such

as after going to the bathroom, before eating or cooking, and after contact with floodwater.

» If soap and water are not available, use a hand sanitizer with at least 60% alcohol.

- Do not allow children to play in flooded areas.
- Wash children's hands with soap and water frequently (always before meals).
- Do not allow children to play with toys that have been contaminated by flood water and have not been disinfected.
- Follow guidelines for [safe diapering](#).

For information on how to prevent diarrheal diseases, visit <https://www.cdc.gov/water-emergency/safety/>.

For information on disinfecting certain nonporous toys, visit <https://www.cdc.gov/hygiene/about/when-and-how-to-clean-and-disinfect-your-home.html>.

Leptospirosis

Leptospirosis is a bacterial disease that can cause serious illnesses such as kidney or liver failure, meningitis, difficulty breathing, and bleeding. Cases of leptospirosis can increase after hurricanes or floods when people may have to wade through contaminated water or use it for drinking or bathing.

The most important way you can prevent leptospirosis is to avoid touching or drinking water that may be contaminated. If that is not possible, follow these steps to reduce your risk of leptospirosis:

- **Treat water to make it safe to drink** by boiling or using an appropriate chemical treatment, especially if it has been collected from a source that could be exposed urine from animals or contaminated by floodwater runoff.
- **Cover cuts or abrasions** with waterproof bandages or other coverings that seal out water.
- **Do not wade, swim, bathe, submerge your head in, or swallow** floodwater or any fresh water source that may contain animal urine or be contaminated by floodwater runoff.
- **Wear waterproof protective clothing, shoes or boots** near floodwater or other water or soil that may be contaminated with animal urine.
- **Prevent rodent infestation** by keeping food, water and trash in closed containers, and trapping any rodents you see.
- Avoid eating food that rodents may have had access to.

For more information on leptospirosis, visit <https://www.cdc.gov/leptospirosis/prevention/>.

Tetanus

Protection Against Tetanus

- Vaccination prevents tetanus; however, this does not last a lifetime. This means that if you were vaccinated before or had tetanus before, you still need to get vaccinated regularly to keep a high level of protection against this serious disease. Being up to date with your tetanus vaccine is the best tool to prevent tetanus.

- Tetanus vaccines are recommended for people of all ages. After a series of tetanus shots during childhood and adolescence, adults need a tetanus booster shot (Td) every 10 years. Td or the tetanus booster shot that add protection against pertussis, or whooping cough, (Tdap) can be used; getting Tdap instead of Td for one tetanus booster during adulthood is recommended to maintain protection against whooping cough.
- If you have wounds, you should be evaluated for a tetanus immunization. If you receive a puncture wound or a wound contaminated with feces, soil, or saliva, have a health care professional determine whether a tetanus booster is necessary based on individual records.

Risk of Tetanus after Exposure to Floodwater

- Exposure to floodwater does not increase the risk of tetanus. However, some people may have wounds such as punctures to the skin or nail sticks, cuts, bruises, lacerations, or scrapes (or other skin injuries) that become contaminated with floodwater, human or animal wastes, soil, dirt, or saliva.
- During evacuation and flood cleanup, emergency responders, cleanup workers, or volunteers may be at increased risk for wounds (as named above). For this reason, such workers should be sure that they are up to date with tetanus vaccination, ideally before starting evacuation or cleanup activities.
- Being up to date for tetanus vaccine can greatly simplify the treatment for any wound that might occur.

For more information about tetanus, visit <https://www.cdc.gov/tetanus/index.html>.

Wound Infections

The risk for injury during and after a hurricane and flooding and other natural disasters is high. Prompt first aid can help heal small wounds and prevent infection. Wash your hands with soap and water before and after providing first aid for a wound to help prevent infection. Use an alcohol-based hand sanitizer that contains at least 60% if soap and water are not available. Tetanus, other bacterial infections, and fungal infections are potential health threats for persons who have open wounds.

Prevent Wound Infections

Open wounds and rashes exposed to floodwater can become infected. To protect yourself and your family:

- Avoid contact with floodwater if you have an open wound.
- Cover clean, open wounds with a waterproof bandage to reduce chance of infection.
- Keep open wounds as clean as possible by washing well with soap and clean water.
- Seek immediate medical care if a wound develops redness, swelling, oozing, or if you have other signs of infection such as fever, increasing pain, shortness of breath, confusion, disorientation or high heart rate.

Take Care of Wounds

- Wash your hands thoroughly with soap and clean water, if possible.
- Avoid touching the wound with your fingers while treating it (if possible, use disposable gloves).

- Remove obstructive jewelry and clothing from the injured body part.
- Apply direct pressure to any bleeding wound to control bleeding.
- Clean the wound after bleeding has stopped.
 - » Examine wounds for dirt and foreign objects.
 - » Gently flood the wound with bottled water or clean running water (if available, saline solution is preferred).
 - » Gently clean around the wound with soap and clean water.
 - » Pat dry and apply an adhesive bandage or dry clean cloth.
- Leave unclean wounds, bites, and punctures open. Wounds that are not cleaned correctly can trap bacteria and result in infection.
- Provide pain relievers when possible.
- Check on wound every 24 hours.

When To Seek Medical Attention

Seek medical attention as soon as possible if:

- There is a foreign object (soil, wood, metal, or other objects) embedded in the wound;
- A wound is a result of an animal bite;
- A wound is the result of a puncture by a dirty object;
- The wound is infected (increased pain and soreness, swelling, redness, draining, or you develop a fever);
- You have signs of sepsis such as confusion or disorientation, shortness of breath, high heart rate, fever or shivering, extreme pain or discomfort or clammy or sweaty skin.

Other Considerations

- Expect a variety of infection types from wounds exposed to standing water, sea life, and ocean water.
- Wounds in contact with soil and sand can become infected.
- Puncture wounds can carry bits of clothing and dirt into wounds and result in infection
- Crush injuries are more likely to become infected than wounds from cuts.
- Take steps to prevent tetanus. (See tetanus section.)

For more information about wound care after a disaster, visit <https://www.cdc.gov/natural-disasters/communication-resources/emergency-wound-care-after-a-natural-disaster-factsheet.html>.

Food Safety After a Storm

After a disaster, throw away the following:

- Perishable food that has not been refrigerated or frozen properly due to power outages;
- Food that may have come in contact with floodwater or stormwater; and
- Food with an unusual odor, color, or texture.

Unsafe food can make you sick even if it looks and smells normal. **When in doubt, throw it out!**

If you suspect the disaster has caused damage to your home's structure, do not use your fireplace for cooking until the chimney has been inspected for cracks and damage. Sparks may escape into your attic through an undetected crack and start a fire.

During and After a Power Outage

Keep refrigerator and freezer doors closed as much as possible while the power is out.

A full freezer will keep food safe for 48 hours (24 hours if half-full) without power if you don't open the door. Your refrigerator will keep food safe for up to 4 hours without power if you don't open the door.

Food to Throw Away

Throw out the following foods:

- All perishable foods (including meat, poultry, fish, eggs, and leftovers) in your refrigerator when the power has been off for 4 hours or more.
- All perishable foods in your freezer if they have thawed.

You can safely refreeze or cook food from the freezer if the food still contains ice crystals and feels as cold as if refrigerated. Check this [FoodSafety.gov](https://www.foodsafety.gov) chart for a list of what foods you should throw out and foods you can refreeze.

After a Flood

After a flood, do the following with food and containers that may have had contact with floodwater or stormwater.

Food to Throw Away

Throw away the following foods or food containers:

- Food with an unusual odor, color, or texture.
- Food in packages that are not waterproof.
- Food in cardboard containers, including juice/milk/baby formula boxes.
- Food containers with screw caps, snap lids, crimped caps, twist caps, flip tops, and snap tops.
- Home-canned foods. They cannot be disinfected.
- Canned foods or food containers that are bulging, opened, or damaged.
- Cans or food containers that spurt liquid or foam when you open them or contain food that is discolored, moldy, or smells bad.

When in doubt, throw it out!

Clean and Sanitize Food-Contact Surfaces That Have Been Flooded

Throw out wooden cutting boards, baby bottle nipples, and pacifiers if they have come into contact with floodwater. Sanitizing methods are not effective for removing flood water contaminants from these items. Clean and sanitize dishes, utensils, and other surfaces that touch food (like refrigerator drawers or kitchen countertops) in a four-step process:

1. Wash with hot, soapy water.
2. Rinse with clean, safe water.
3. Sanitize:
 - Make a solution of 1 cup (8 ounces or 240 milliliters) of unscented household bleach in 5 gallons of clean water.
 - Soak items for 1 minute in the bleach solution (solution should completely cover the items).
 - For items that you can't put in the solution (like countertops), apply solution with cloth.
4. Allow to air dry.

Salvaging Commercially Prepared Foods

How to salvage commercially prepared food in cans and plastic or metal pouches (like flexible, shelf-stable juice packages):

1. Remove labels if possible. Note the expiration date.
2. Brush or wipe away dirt or silt.
3. Wash cans and pouches with hot, soapy water.
4. Rinse cans and pouches with clean, safe water.
5. Sanitize cans and pouches in one of two ways:
 - Place them in a solution of 1 cup (8 ounces/240 milliliters) of unscented household bleach in 5 gallons of water for 15 minutes OR
 - Put in a pot of water, bring to a boil, and continue boiling for 2 minutes.
6. Re-label cans or pouches with a marker. Include the expiration date.
7. Use food in cans or pouches as soon as possible.

For more information about how to keep food safe after a disaster, visit <https://www.cdc.gov/food-safety/foods/keep-food-safe-after-emergency.html>.

Safe Water After a Storm

Use Safe Water

If you are in a disaster or emergency, it's important that you take steps to prevent illness from unsafe water. After an emergency, especially after flooding, drinking water may not be available or safe to drink. Never use water from radiators or boilers that are part of your home heating system.

- Do not use water you suspect or have been told is contaminated to drink, wash and prepare food, make ice, make baby formula, wash dishes, brush your teeth or wash your hands.
- Use bottled, boiled, or treated water for drinking, cooking, and personal hygiene.
- Follow your state, local, or tribal health department for specific recommendations regarding boiling or treating water in your area.
- Avoid drinking alcohol. Alcohol dehydrates the body, which increases the need for drinking water.

Do Not Use Contaminated Well Water.

Floods and other disasters can damage drinking water wells and lead to aquifer and well contamination. Floodwater can contaminate well water with livestock waste, human sewage, chemicals, and other contaminants that can lead to illness when used for drinking, bathing, and other hygiene activities. Dug wells, bored wells, and other wells less than 50 feet deep are more likely to be contaminated, even if damage is not apparent.

It is safest to drink bottled water until you are certain your water is free of contaminants and safe to drink. Contact your local, state, or tribal health department for specific advice on wells and testing.

- If your water comes from a private well that has been flooded, consider following guidance for making water safe and for emergency water sources until you are certain your water is free of contaminants and safe to drink.
- If extensive flooding has occurred or you suspect a well may be contaminated, DO NOT drink the water. Use a safe water supply like bottled or treated water.
- If your home lost power, determine if the well lost pressure. This is important even if the power is now back on. Use a safe water supply like bottled or treated water.

For more information, visit <https://www.cdc.gov/water-emergency/about/how-to-disinfect-wells-after-an-emergency.html>.

Make Your Water Safe to Use

Water often can be made safe to drink by boiling, adding disinfectants, or filtering.

IMPORTANT: Water contaminated with fuel or toxic chemicals or radioactive material **will not be made safe** by boiling or disinfection. Use a different source of water if you know or suspect that water might be contaminated with fuel or toxic chemicals. If you suspect your water is contaminated with fuel or chemicals, contact your local health department for specific advice.

Boil Water

If you don't have safe bottled water, you should **boil water** to make it safe. Boiling is the surest method to make water safer to drink by killing disease-causing organisms, including viruses, bacteria, and parasites.

You can improve the flat taste of boiled water by

- Pouring it from one clean, disinfected container to another and then allowing it to stand for a few hours OR
- Adding a pinch of salt for each quart or liter of boiled water.

Steps for boiling cloudy water

- Filter it through a clean cloth, paper towel, or coffee filter OR allow it to settle.
- Draw off the clear water.
- Bring the clear water to a rolling boil for one minute (at elevations above 6,500 feet, boil for three minutes).
- Let the boiled water cool.
- Store the boiled water in clean sanitized containers with tight covers.

Steps for boiling clear water

- Bring the clear water to a rolling boil for one minute (at elevations above 6,500 feet, boil for three minutes).
- Let the boiled water cool.
- Store the boiled water in clean sanitized containers with tight covers.

Disinfectants

If you don't have clean, safe, bottled water and if boiling is not possible, you often can make water safer to drink by using a disinfectant, such as unscented household chlorine bleach, iodine, or chlorine dioxide tablets. These can kill most harmful organisms, such as viruses and bacteria. However, only chlorine dioxide tablets are effective in controlling more resistant organisms, such as the parasite *Cryptosporidium*. If the water is contaminated with a chemical, adding a disinfectant will not make it drinkable.

How to Disinfect Water Using Bleach

Bleach comes in different concentrations. Make sure you know the concentration of bleach you are using before using to disinfect drinking water. It should be on the label. Typically, unscented household liquid chlorine bleach in the United States will be between 5% and 9% sodium hypochlorite, though concentrations can be different in other countries.

If your water is cloudy:

If your water is cloudy, filter water through a clean cloth, paper towel, or coffee filter OR allow it to settle, then draw off the clear water and follow the steps below.

If your water is clear:

1. Follow the instructions on the bleach label for disinfecting drinking water.
2. If the necessary instructions are not given, add a little less than 1/8 teaspoon (8 drops or about 0.5 milliliters) bleach for each gallon of clear water (or 2 drops of bleach for each liter or each quart of clear water).
3. Stir the mixture well.
4. Let it stand for at least 30 minutes before using.
5. Store the disinfected water in clean, sanitized containers with tight covers.

To disinfect water to control for resistant organism using chlorine dioxide tablets:

- Follow the manufacturer's instructions.
- Store the disinfected water in clean, sanitized containers with tight covers.

Filters

Many portable water filters can remove disease-causing parasites such as *Cryptosporidium* and *Giardia* from drinking water.

- If you are choosing a portable water filter, try to pick one that has a filter pore size small enough to remove both bacteria and parasites (absolute pore size of 1 micron or less). Most portable water filters do not remove bacteria or viruses.
- Carefully read and follow the manufacturer's instructions for the water filter. After filtering, add a disinfectant such as iodine, chlorine, or chlorine dioxide to the filtered water to kill any viruses and remaining bacteria.

For more information on how to make water safe in an emergency, visit <https://www.cdc.gov/water-emergency/about/index.html>.

Cleaning and Preparing Personal Water Storage Containers

Choosing a Container

When storing safe water (water that has been treated to make it safe to use), it is best to use food grade water storage containers, which do not transfer toxic substances into the water they are holding. FDA-approved food-grade storage containers can be found at surplus or camping supply stores.

If you are not able to use a food grade water storage container, be sure the container you choose:

- Has a top that can be closed tightly
- Is made of durable, unbreakable materials (i.e., not glass)

If possible, use a container with a narrow neck or opening so water can be poured out.

DO NOT USE containers that previously have been used to hold liquid or solid toxic chemicals (bleach pesticides, etc.)

Cleaning and Sanitizing a Water Storage Container Before Use

Before filling with safe water, use these steps to clean and sanitize water storage containers:

1. Wash the storage container with dishwashing soap and water and rinse completely with clean water.
2. Sanitize the container with a solution made by mixing 1 teaspoon of unscented liquid household chlorine bleach in one quart of water. Use bleach that contains 5%-9% sodium hypochlorite.
3. Cover the container and shake it well. Make sure the sanitizing bleach solution touches all inside surfaces of the container.
4. Wait at least 30 seconds and then pour the sanitizing solution out of the container.
5. Let the empty sanitized container air-dry before use OR rinse the empty container with safe water (water that has been treated).

Removing and Storing Water

Tips for removing safe water out of the container:

- If using a scoop or other device, use a clean one each time you remove safe water from the storage container to help avoid contaminating the water.
- Before scooping out the safe water, try not to touch the water or insides of the container with your hands.
- Never scoop safe water with your hands.

Tips for Storing Safe Water in a Container After Cleaning and Sanitizing

- Label container as “drinking water” and include storage date.
- Replace stored water every six months.
- Keep stored water in a place with a cool temperature (50°F-70°F).
- Do not store water containers in direct sunlight.
- Do not store water containers in areas where toxic substances, such as gasoline or pesticides, are present.

For more information on storing safe water, visit: <https://www.cdc.gov/water-emergency/about/how-to-create-and-store-an-emergency-water-supply.html>

Finding Emergency Water Sources

Other sources of clean water can be found inside and outside the home. DO NOT DRINK water that has an unusual odor or color, or that you know or suspect might be contaminated with fuel or toxic chemicals. This water cannot be made safe, so you must find a different source of water for your needs.

The following are possible sources of water:

Inside the Home

Water from your home’s water heater tank. This refers to the tank that connects to the water that comes out of your faucets and showerheads. (This is different than the tank used to supply hot water)

to radiators in older homes. In these homes, be sure to use the tap water heater tank, not the home heating system tank.)

- Melted ice cubes made with water that was not contaminated
- Water from your home's toilet tank (not from the bowl), if it is clear and has not been chemically treated with toilet cleaners such as those that change the color of the water
- Liquid from canned fruit and vegetables
- Water from swimming pools and spas can be used for personal hygiene, cleaning, and related uses, but not for drinking.

Listen to reports from local officials for advice on water precautions in your home. It may be necessary to shut off the main water valve to your home to prevent contaminants from entering pipes in your home.

Outside the Home

Rivers, streams, and lakes might be contaminated with livestock waste, human sewage, chemicals, and other contaminants which can lead to illness when used for drinking, bathing, and other hygiene activities. During flood events, well water might be contaminated as well.

Water from sources outside the home must be treated through boiling, disinfection, disinfection, or filtration. If you suspect or know the water is contaminated with toxic chemicals or fuels, it cannot be made safe and you should not drink or bathe in this water.

Possible sources of water that could be made safe by treatment include

- Rainwater
- Streams, rivers, and other moving bodies of water
- Ponds and lakes
- Natural springs

Note: DO NOT USE water that has been contaminated by fuels or toxic chemicals.

For more information:

- <https://www.cdc.gov/water-emergency/index.html>
- <https://www.cdc.gov/water-emergency/about/how-to-find-clean-water-in-an-emergency.html>
- <https://www.cdc.gov/water-emergency/about/index.html>

Medications

Some drugs require refrigeration to keep their strength, including many liquid drugs.

- When the power is out for a day or more, throw away any medication that should be refrigerated, unless the drug's label says otherwise.
- If a life depends on the refrigerated drug, but the medications have been at room temperature, use them only until a new supply is available.
- Replace all refrigerated drugs as soon as possible.

Insulin

People who need emergency diabetes assistance after a storm can call 1-800-342-2382, Mon-Fri, 9:00 AM to 7:00 PM.

In a power outage when refrigerated insulin isn't available:

- Try to keep your insulin as cool as possible, but make sure not to freeze it. Insulin that has been frozen can break down and will be less effective.
- Keep your insulin away from direct heat and out of direct sunlight, which also make it less effective.
- For up to 4 weeks, you can use insulin in opened or unopened vials that have been stored at room temperature (between 59°F and 86°F).
- Realistically, you may have to use insulin that has been stored above 86°F. If so, monitor your blood sugar regularly. If you're living in an emergency shelter, let someone in charge know if your blood sugar is too high or low, so they can get help if needed. Contact your doctor as soon as the emergency is over.

For more information about managing your insulin during an emergency, visit <https://www.cdc.gov/diabetes/articles/managing-insulin-in-emergency.html>.

Emergency Prescription Assistance Program

HHS's Emergency Prescription Assistance Program (EPAP) is a free service that helps residents get medicine, medical supplies, medical equipment and vaccines that were lost, stolen, or damaged due to a disaster. HHS activates this service after some natural disasters.

For more information about EPAP, visit www.phe.gov/epap.

Stay Safe in a Shelter or in Crowded Living Conditions

Safe Hygiene and Diapering

Follow safe hygiene and diapering recommendations when in a shelter.

In emergency situations, make sure that diaper changing practices remain hygienic to reduce the spread of germs. Even a microscopic amount of fecal matter can contain millions of germs. Learn how to practice safe and germ-free diaper changing in emergency situations.

For more information about safe hygiene and diapering, visit: <https://www.cdc.gov/water-emergency/communication-resources/fact-sheet-safe-and-healthy-diapering-during-emergencies.html>.

Body Lice

Body lice are parasitic insects that live on clothing and bedding. Body lice can spread under crowded living conditions where hygiene is poor. Body lice are spread through direct physical contact with a person who has body lice or through contact with infested clothing, beds, bed linens, or towels.

The following are steps that can be taken to help prevent and control the spread of body lice:

- Bathe regularly and change into properly washed clothes at least once a week; wash infested clothing at least once a week.
- Machine wash and dry infested clothing and bedding using the hot water (at least 130°F) laundry cycle and the high heat drying cycle. Clothing and items that are not washable can be dry-cleaned OR sealed in a plastic bag and stored for 2 weeks.
- Do not share clothing, beds, bedding, and towels used by a person who has body lice.

For more information about body lice, visit <https://www.cdc.gov/lice/about/body-lice.html>.

Scabies

Scabies is a skin condition caused by mites. It commonly leads to intense itching and a pimple-like skin rash that may affect various areas of the body. Scabies is contagious and can spread quickly in areas where people are in close physical contact.

Prevent scabies by avoiding skin-to-skin contact with a person who has scabies and contact with items such as clothing or bedding used by a person infested with scabies mites.

Scabies should be treated with topical creams that can kill the mites, which are available by prescription from your health care provider. In addition to the infested person, treatment is also recommended for people they have been in contact with.

Bedding, clothing, and towels used by infested persons and people they are in close contact with should be decontaminated. To disinfect items,

- Wash them in hot water and dry in a hot dryer or dry-clean.
- Store items that can't be washed in a sealed plastic bag for at least 72 hours.
- Thoroughly clean and vacuum rooms.

For more information about scabies, visit <https://www.cdc.gov/scabies/about/>.

Conjunctivitis

Conjunctivitis is contagious and can spread when people are staying in close quarters. Below is a list of ways to minimize the spread of conjunctivitis to other people.

Conjunctivitis Prevention Tips

If you have conjunctivitis, you can help limit its spread to other people by following these steps:

- Wash your hands often with soap and warm water. Wash them especially well before and after cleaning, or applying eye drops or ointment to, your infected eye. If soap and water are not available, use an alcohol-based hand sanitizer that contains at least 60% alcohol to clean hands.
- Avoid touching or rubbing your eyes. This can worsen the condition or spread it to your other eye.
- With clean hands, wash any discharge from around your eye(s) several times a day using a clean, wet washcloth or fresh cotton ball. Throw away cotton balls after use, and wash used washcloths with hot water and detergent, then wash your hands again with soap and warm water.
- Do not use the same eye drop dispenser/bottle for your infected and non-infected eyes.
- Wash pillowcases, sheets, washcloths, and towels often in hot water and detergent; wash your hands after handling such items.
- Stop wearing contact lenses until your eye doctor says it's okay to start wearing them again.
- Clean eyeglasses, being careful not to contaminate items (like hand towels) that might be shared by other people.
- Clean, store, and replace your contact lenses as instructed by your eye doctor.
- Do not share personal items, such as pillows, washcloths, towels, eye drops, eye or face makeup, makeup brushes, contact lenses, contact lens storage cases, or eyeglasses.
- Do not use swimming pools.

What to Do If You Are Around Someone with Conjunctivitis

If you are around someone with conjunctivitis, you can reduce your risk of infection by following these steps:

- Wash your hands often with soap and warm water. If soap and warm water are not available, use an alcohol-based hand sanitizer that contains at least 60% alcohol to clean hands.
- Wash your hands after contact with an infected person or items he or she uses; for example, wash your hands after applying eye drops or ointment to an infected person's eye(s) or after putting their bed linens in the washing machine.
- Avoid touching your eyes with unwashed hands.
- Do not share items used by an infected person; for example, do not share pillows, washcloths, towels, eye drops, eye or face makeup, makeup brushes, contact lenses, contact lens storage cases, or eyeglasses.

General Information about Conjunctivitis

- Conjunctivitis – or pink eye – is common in adults and children. It spreads quickly and sometimes needs medical treatment, depending on the cause.
- Several viruses and bacteria can cause conjunctivitis (pink eye). Both viral and bacterial conjunctivitis are highly contagious. Each of these types of germs can spread from person to

person in different ways. They usually spread from an infected person to others through:

- » Close personal contact, such as touching or shaking hands
- » The air by coughing and sneezing
- » Touching an object or surface with germs on it, then touching your eyes before washing your hands

Symptoms of Conjunctivitis

Classic symptoms can include:

- Pink or red color in the white of the eye(s)
- Watery eyes
- Itchy or scratchy eyes
- Discharge from the eye(s)
- Crusting of eyelids or lashes

For more information on conjunctivitis, please visit <https://www.cdc.gov/conjunctivitis/index.html>.

COVID-19

Here are some tips to help you prepare and lower the risk of infection from COVID-19 while staying safe in a shelter.

Protect Yourself and Others While in a Public Shelter

- Follow [CDC COVID-19 preventive actions](#) including washing your hands often and covering coughs and sneezes. Avoid sharing food and drink with anyone if possible.
- Follow disaster shelter policies for wearing masks and giving people space. Your actions can help protect everyone in the shelter, especially those who are at [high risk for getting very sick](#) from COVID-19.
- Tell shelter staff immediately [if you feel sick](#) when you arrive at the shelter or start to feel sick while sheltering.

Help Your Children Stay Safe While in a Public Shelter

- Teach and reinforce [everyday preventive actions](#) for keeping children healthy.
- Be a good role model—if you [wash your hands](#) often, your children are more likely to do the same.
- Help your children follow shelter policies for staying safe and healthy, including giving other families space and wearing [masks](#) if required.
- Watch your child for [any signs of illness](#) and tell shelter staff if your child may be ill.
- Try to deal with the disaster calmly and confidently, as this can provide the best support for your children. [Help children cope with emergencies](#).

Protect Your Pets While in a Public Shelter

A small number of pets worldwide, including cats and dogs, have been [reported](#) to be infected with the virus that causes COVID-19, mostly after close contact with people with COVID-19. Be careful when taking an animal into a location where it could be exposed to COVID-19.

- Treat [pets](#) as you would other human family members – do not let pets interact with people outside the household.
- [Practice good pet hygiene](#) and wash your hands before and after handling pets, their food, waste, or supplies.
- Do not put a mask on pets. Masks could harm your pet.
- Pay attention to local guidance about updated plans for evacuations and shelters, in addition to CDC’s guidance on [potential shelters for your pets](#) and service and therapy animals.

For more information about COVID-19, visit:

- <https://www.cdc.gov/covid/prevention/>
- <https://www.cdc.gov/covid/index.html>

Returning Home

Return to your flooded home only after local authorities have told you it is safe to do so.

Cleaning and Sanitizing Your Home

When returning to your home after a hurricane or flood, be aware that flood water may contain sewage and other hazards. Protect yourself and your family by following these steps:

- Keep children and pets out of the affected area until cleanup has been completed.
- Wear personal protective equipment, including rubber boots, rubber gloves, and goggles during cleanup of affected area.
- While cleaning up areas with mold damage, wear a NIOSH-approved N-95 respirator, or one that provides even more protection. Look for “N-95” on the package. Do not use N-95 respirators on children. N-95 respirators do not fit children and will not protect them. KN95 respirators are NOT as protective as N95 respirators.
- Remove and discard items that cannot be washed and disinfected (such as mattresses, carpeting, carpet padding, rugs, upholstered furniture, cosmetics, stuffed animals, baby toys, pillows, foam-rubber items, books, wall coverings, and most paper products).

Remove and discard drywall and insulation that has been contaminated with sewage or floodwater. This should include materials that are located a foot higher than the high water line.

- Thoroughly clean all hard surfaces (such as flooring, concrete, molding, wood and metal furniture, countertops, appliances, sinks, and other plumbing fixtures) with hot water and laundry or dish detergent.
- After completing the cleanup, wash your hands with soap and clean water.
- Wash all clothes worn during the cleanup in hot water and detergent. These clothes should be washed separately from uncontaminated clothes and linens.
- Wash clothes contaminated with flood or sewage water in hot water and detergent. It is recommended that a laundromat be used for washing large quantities of clothes and linens until your onsite wastewater system has been professionally inspected and serviced.
- Seek immediate medical attention if you become injured or ill.

Disinfect Toys

Remember that anything that has had contact with floodwater could carry germs. To keep your kids safe, make sure their toys are clean. Some toys cannot be cleaned, particularly those that have been in floodwater. When in doubt, throw toys out.

- Make a cleaning fluid by mixing 1 cup of bleach in 5 gallons of water and wash off toys carefully with your cleaner.
- If you have dishwasher-safe toys, they can be cleaned in a commercial dishwasher that has a dry cycle or a final rinse that exceeds 113°F for 20 minutes or 122°F for 5 minutes or 162°F for 1 minute.
- Once toys are cleaned, let them air dry.
- Stuffed animals or cloth toys that were wet with floodwater should be thrown out.

For more information about how to safely return home after a disaster, visit <https://www.cdc.gov/natural-disasters/safety/>.

Mold

After natural disasters such as hurricanes, tornadoes, and floods, excess moisture and standing water contribute to the growth of mold in homes and other buildings. When returning to a home that has been flooded, be aware that mold may be present and may be a health risk for your family.

If there is mold growth in your home, you should clean up the mold and fix any water problem, such as leaks in roofs, walls, or plumbing. Controlling moisture in your home is the most critical factor for preventing mold growth. Keep children and pets out of the affected area until cleanup has been completed.

Recognizing mold

You may recognize mold by:

- **Sight.** Are the walls and ceiling discolored, or do they show signs of mold growth or water damage?
- **Smell.** Do you smell a bad odor, such as a musty, earthy smell or a foul stench?

People at Greatest Risk from Mold

- People with asthma, allergies, or other breathing conditions may be more sensitive to mold.
- People with a weakened immune system, including people receiving treatment for cancer, people who have had an organ or stem cell transplant, and people taking medicines that suppress the immune system, are more likely to get a serious illness from mold.
- If you have a breathing problem like asthma, a weakened immune system, or are pregnant avoid entering a building with mold damage.
- Children should not take part in disaster cleanup work.
- Children and adults with asthma or a weakened immune system should stay out of buildings with mold growth.
- For healthy children and adults mold exposure can lead to cough, wheeze, eye and skin irritation, and runny or stuffy nose.

Possible Health Effects of Mold Exposure

- People who are sensitive or allergic to mold may experience problems like asthma attacks, wheezing, stuffy nose, and irritated eyes and skin.
- Mold exposure can lead to severe infections in people with a weakened immune system.
- If you or your family members have health problems after exposure to mold, contact your doctor or other health care provider.

Safely Preventing Mold Growth

- Clean up and dry out the building as quickly as you can.
- Open doors and windows.
- Use fans to dry out the building. Position fans to blow air out doors or windows. Do not point fans directly at mold—doing so will spread mold.
- When in doubt, take it out! Remove all porous items that have been wet for more than 48 hours and that cannot be thoroughly cleaned and dried. These items can remain a source of mold growth and should be removed from the home. Porous, non-cleanable items include carpeting and carpet padding, upholstery, wallpaper, drywall, floor and ceiling tiles, insulation material, some clothing, leather, paper, wood, and food.
- Removal and cleaning are important because even dead mold may cause allergic reactions in some people.
- To prevent mold growth, clean wet items and surfaces with detergent and water.
- Homeowners may want to temporarily store items outside of the home until insurance claims can be filed.

Cleaning Up Mold

To remove mold growth from hard surfaces use commercial products, soap and water, or a bleach solution of no more than 1 cup of household laundry bleach in 1 gallon of water. Follow the manufacturers' instructions for use (see product label). Use a stiff brush on rough surface materials such as concrete.

When removing mold:

- Never mix bleach with ammonia or other household cleaners. Mixing bleach with ammonia or other cleaning products will produce dangerous, toxic fumes.
- Open windows and doors to provide fresh air.
- Wear rubber boots, rubber gloves, and goggles during cleanup of affected area.
- If the area to be cleaned is more than 10 square feet, consult [guidance](#) by the U.S. Environmental Protection Agency (EPA).
- Always follow the manufacturer's instructions when using bleach or any other cleaning product.

Protect your nose and mouth against breathing in mold

- Before you enter a building with mold damage, wear at least a NIOSH-approved N-95 respirator, which you can buy at a home supply store.
- If you plan to spend a lot of time removing moldy belongings or doing work like ripping

out moldy drywall, wear a half-face or full-face respirator. Make certain that you follow instructions on the package for fitting the mask respirator tightly to your face.

- N-95 respirators are only approved for filtering out dust in the air (for example, from sweeping, sawing, and mold removal). This type of respirator will not protect you against chemicals or gases in the air, such as cleaning products or carbon monoxide.

For more information about to safely enter and clean up a property with mold, visit <https://www.cdc.gov/mold-health/communication-resources/guide-to-mold-cleanup.html>.

Clean up Safely Outside the Home

- Keep children and pets out of the affected area until cleanup has been completed.
- Have your onsite waste-water system professionally inspected and serviced if you suspect damage.
- Wash all clothes worn during the cleanup in hot water and detergent. These clothes should be washed separately from uncontaminated clothes and linens.
- After completing the cleanup, wash your hands with soap and clean water.
- Seek immediate medical attention if you become injured or ill.

For more information about cleaning up safely, visit <https://www.cdc.gov/natural-disasters/safety/>.

Solid Waste Management and Debris Removal

Solid waste results from various sources, such as animal wastes, hazardous wastes, industrial and non-infectious medical wastes, food wastes, mineral waste, and nonhazardous waste.

Follow the tips below when cleaning up solid waste and debris:

- Wear appropriate personal protective equipment (i.e., hard hats, goggles, N95 masks, heavy work gloves, waterproof boots with steel toe and insole, earplugs, long-sleeved shirt, and long pants).
- Stay safe in hot weather by taking breaks in shaded areas, drinking water and nonalcoholic fluids often, and wear light and loose-fitted clothing.

After an emergency, federal, state, and local personnel will be working to establish debris-management programs, including household hazardous waste collection and disposal programs. These efforts may take days or weeks to come to all communities. In the meantime, exercise caution and report concerns to local environmental, health, and waste disposal authorities.

For more information about solid waste management, visit <https://www.cdc.gov/natural-disasters/safety/guidelines-for-protecting-yourself-from-chemicals-after-a-disaster.html>.

For more information about what to wear when cleaning up debris and household waste, visit <https://www.cdc.gov/natural-disasters/safety/>.

Chemical and Oil Exposures

- Use extreme caution when returning to your area after a flood. Be aware of potential chemical hazards you may encounter during flood recovery. Floodwater may have buried or moved hazardous chemical containers of solvents or other industrial chemicals from their normal storage places.

- If any propane tanks (whether 20-lb. tanks from a gas grill or household propane tanks) are discovered in a previously flooded area, do not attempt to move them yourself. These represent a very real danger of fire or explosion, and if any are found, police or fire departments or your State Fire Marshal's office should be contacted immediately.
- Car batteries, even those in flood water, may still contain an electrical charge and should be removed with extreme caution by using insulated gloves. Avoid coming in contact with any acid that may have spilled from a damaged car battery.
- Containers of dry chemicals that may have become wet due to flooding in your home or garage can be dangerous. When in doubt about how to safely handle these chemicals, contact your local fire department.
- Avoid oil spills. If you notice oil in the water, stay away from it and contact local authorities or EPA at 1-800-424-8802. Emergency responders and workers should use appropriate clothing and personal protective equipment when working in these hazardous conditions.
- If you come into contact with a chemical from a spill or accident and feel ill, , move away from the area where the chemical was released. Follow emergency coordinators' instructions. As quickly as possible, wash any chemicals from your skin with large amounts of soap and water. Washing with soap and water will help protect you from any chemicals on your body. If you feel ill, seek medical attention immediately from a health care professional.
- Avoid siphoning gasoline by mouth. Siphoning is when you suck a liquid through a funnel or tube from one container to another. Siphoning gasoline can harm your health and cause serious injury or illness. If you inhale gasoline fumes or swallow gasoline and feel ill, see a doctor and/or call the poison center.
- Your regional poison center is available 24/7 by calling 1-800-222-1222 to help assist you in determining if you should seek medical attention following a potential chemical exposure or for information on chemicals.
- Check with your state and/or local health department and news sources to determine if there any known chemical spills in your area and up to date information on recommendations on how to protect yourself.

For information about personal cleaning and disposal of clothing contaminated by chemicals, visit <https://www.cdc.gov/chemical-emergencies/response/get-clean.html>.

Prevent Injury After a Disaster

Power Outages and Electrical Dangers

- NEVER touch a fallen power line. Call the power company to report fallen power lines.
- Do not walk or drive through standing water if downed power lines are in the water.
- If you believe someone has been electrocuted, call or have someone else call 911 or emergency medical help.
- After a hurricane, flood, or other natural disaster you need to be careful to avoid electrical hazards both in your home and elsewhere.
- Avoid contact with overhead power lines during cleanup and other activities.

If a power line falls across your car while you are driving, stay inside the vehicle and continue to drive away from the line.

- If the engine stalls, do not turn off the ignition.
- Warn people not to touch the car or the line.
- Call or ask someone to call the local utility company and emergency services.
- Do not allow anyone other than emergency personnel to approach your vehicle.

If electrical circuits and electrical equipment have gotten wet or are in or near water, turn off the power at the main breaker or fuse on the service panel.

- Do not enter standing water to access the main power switch.
- Call an electrician to turn it off.

Never turn power on or off yourself or use an electric tool or appliance while standing in water.

- Do not turn the power back on until electrical equipment has been inspected by a qualified electrician.
- All electrical equipment and appliances must be completely dry before returning them to service.
- Have a certified electrician check these items if there is any question.

If you see frayed wiring or sparks when you restore power, or if there is an odor of something burning but no visible fire, you should immediately shut off the electrical system at the main circuit breaker.

Consult your utility company about using electrical equipment, including power generators.

- Do not connect generators to your home's electrical circuits without using approved automatic-interrupt devices.
- If a generator is online when electrical service is restored, it can become a major fire hazard and it may endanger line workers helping to restore power in your area.

If You Believe Someone Has Had Electric Shock, Take the Following Steps:

- Look first. Don't touch. The person may still be in contact with the electrical source. Touching the person may pass the current through you.
- Call or have someone else call 911 or emergency medical help.

- Turn off the source of electricity if possible. If not, move the source away from you and the affected person using a non-conducting object made of cardboard, plastic or wood.
- Once the person is free of the source of electricity, check the person's breathing and pulse. If either has stopped or seems dangerously slow or shallow, begin cardiopulmonary resuscitation (CPR) immediately.
- If the person is faint or pale or shows other signs of shock, lay him or her down with the head slightly lower than the trunk of the body and the legs elevated.
- Don't touch burns, break blisters, or remove burned clothing. Electrical shock may cause burns inside the body, so be sure the person is taken to a doctor.

For more information about how to stay safe when the power goes out, visit <https://www.cdc.gov/natural-disasters/response/what-to-do-protect-yourself-during-a-power-outage.html>.

Prevent Carbon Monoxide Poisoning

Carbon monoxide (CO) is an odorless, colorless gas that can cause sudden illness and death if inhaled.

When power outages occur during emergencies such as hurricanes or winter storms, the use of alternative sources of fuel or electricity for heating, cooling, or cooking can cause CO to build up in a home, garage, or camper and to poison the people and animals inside.

Every year, more than 400 people die in the U.S. from accidental CO poisoning.

Exposure to CO can cause loss of consciousness and death. The most common symptoms of CO poisoning are headache, dizziness, weakness, nausea, vomiting, chest pain, and confusion. People who are sleeping or who have been drinking alcohol can die from CO poisoning before ever having symptoms.

Important CO Poisoning Prevention Tips

- Never use a generator, pressure washer, or any gasoline-powered engine inside your home, basement, or garage or less than 20 feet from any window, door, or vent of your home or your neighbor's home even if the doors or windows are open.
- When using a generator, use a battery-powered or battery backup CO detector in your home.
- Never use a gas range or oven to heat a home.
- Never leave the motor running in a vehicle parked in an enclosed or partially enclosed space, such as a garage.
- Keep vents and flues free of debris, especially if winds are high. Flying debris can block ventilation lines.
- Never use a charcoal grill, hibachi, lantern, or portable camping stove inside a home, tent, or camper.
- If conditions are too hot or too cold, seek shelter with friends or at a community shelter.
- If CO poisoning is suspected, move to outside air, call 911 or your local Poison Control Center at 1-800-222-1222 or consult a health care professional right away.

Businesses can help ensure your customers' safety by placing important information about protecting oneself from CO poisoning in the direct vicinity of generators they are selling.

For more information about how to prevent CO poisoning, visit <https://www.cdc.gov/carbon-monoxide/about/index.html>.

Chainsaw Safety

Stay safe while using a chainsaw.

- Wear proper protective clothing and glasses.
- Choose the proper size of chain saw to match the job.
- Operate, adjust, and maintain the saw according to manufacturer's instructions.
- Take extra care in cutting "spring poles" trees or branches that have been bent, twisted, hung up on, or caught under another object during a high wind.
- Be sure that bystanders are at a safe distance from cutting activities.
- Check around the tree or pole for hazards, such as nails, power lines, or cables, before cutting.

For more information about how to prevent chainsaw injuries, visit <https://www.cdc.gov/natural-disasters/safety/chain-saw-safety.html>.

Animal Hazards

Avoid Wild or Stray Animals

- Call local authorities to handle animals.
- Secure all food sources and remove any animal carcasses.
- Get rid of dead animals, according to guidelines from your local animal control authority, as soon as you can.
- For more information, contact your local animal shelter or services, a veterinarian, or the Humane Society for advice on dealing with pets or stray or wild animals after an emergency.

Prevent Contact with Rodents

Surviving rodents often relocate to new areas in search of food, water, and shelter.

- Remove food sources, water, and items that provide shelter for rodents.
- Dispose of garbage on a frequent and regular basis inside and outside of the home.
- Thoroughly clean areas with signs of rodent activity to reduce the likelihood of exposure to germs and diseases.

Removing food sources, water, and items that provide shelter for rodents is the best way to prevent contact with rodents. Where necessary, control rodents by using an integrated pest management approach that includes environmental sanitation, proper food storage, rodent-proofing, trapping, and poisoning.

Inside the Home

- Keep food and water covered and stored in rodent-proof containers. A rodent-proof container is made of thick plastic, glass, or metal and has a tight-fitting lid.
- Keep pet food covered and stored in rodent-proof containers. Allow pets only enough food for each meal, then store or throw out any remaining food. Do not leave excess pet food or water out overnight.
- Dispose of garbage on a frequent and regular basis. If storing trash and food waste inside the home, do so in rodent-proof containers.

- Wash dishes, pans, and cooking utensils immediately after use.
- Remove leftover food and clean up any spilled food from cooking and eating areas.
- Do not store empty cans or other opened containers with food residues inside the home.
- When possible, use spring-loaded traps in the home and outside buildings. Use a small amount of chunky peanut butter or other available food as bait. (Remember – you are more likely to be successful trapping rodents if your home is free of other easily accessible food items.) Place traps in a “T” shape against baseboards or wall surfaces where rodent rub marks, droppings, or rodents have been seen. Keep children and pets away from areas where traps are placed.
- Glue traps and live traps are not recommended. Glue traps mainly catch juvenile rodents, not breeding adults. Rodents caught in live traps and released will likely reenter the home.

Outside the Home

- Dispose of debris and trash as soon as possible. Store woodpiles and stacks of lumber or other materials at least 12 inches above the ground and as far away from the home as possible.
- Store garbage in rodent-proof containers with tight fitting lids.
- Store grains and animal feed in rodent-proof containers.
- Remove any food sources, including animal carcasses, that might attract rodents.
- Haul away trash, abandoned vehicles, discarded tires, and other items that might serve as rodent nesting sites.
- Keep grass short and cut or remove brush and dense shrubbery that may provide rodents cover and protection.
- Trim tree limbs or shrubs that overhang or touch buildings.
- Place spring-loaded traps in outbuildings and in other areas where signs of rodents are found. Do not allow children or pets to play near spring traps.

For more information about controlling rodent exposure after a disaster, visit <https://www.cdc.gov/natural-disasters/response/what-to-do-protect-yourself-from-animals-after-a-disaster.html>.

Prevent or Respond to a Snake Bite

- Be aware of snakes that may be swimming in the water to get to higher ground and those that may be hiding under debris or other objects.
- If you see a snake, back away from it slowly and do not touch it.
- If you or someone you know are bitten, try to see and remember the color and shape of the snake, which can help with treatment of the snake bite.
- Keep the bitten person still and calm. This can slow down the spread of venom if the snake is poisonous. Seek medical attention as soon as possible. Dial 911 or call local Emergency Medical Services. Poison Control Centers can also be a source of help and can be reached at 1-800-222-1222. Apply first aid if you cannot get the person to the hospital right away. Lay or sit the person down with the bite below the level of the heart.
 - » Tell them to stay calm and still.
 - » Wash the wound with warm, soapy water immediately.
 - » Cover the bite with a clean, dry dressing.

For more information on how to prevent or respond to a snake bite, visit <https://www.cdc.gov/natural-disasters/response/what-to-do-protect-yourself-from-animals-after-a-disaster.html>.

Mosquitoes and Hurricanes

- Adult mosquitoes do not generally survive high winds during a hurricane.
- Immediately following a hurricane, flooding may occur. Mosquito eggs laid in the soil by floodwater mosquitoes during previous floods hatch. This results in very large populations of floodwater mosquitoes. Most of these mosquitoes are considered nuisance mosquitoes.
- In general, nuisance mosquitoes do not spread viruses that make people sick. The types of mosquitoes that can spread viruses may increase 2 weeks after a hurricane, especially in areas that did not flood but received more rainfall than usual. However, it can take several more weeks before mosquitoes could start spreading viruses to people.
- Increased rainfall may result in increased hatching of mosquito eggs. In areas with ongoing spread of chikungunya, dengue, West Nile, or Zika viruses, you may be at increased risk of getting infected with a virus. Take steps to protect yourself and your family from mosquito bites.
- Because people spend more time outside cleaning up after a hurricane or flood, they are more likely to be bitten by nuisance mosquitoes. Though these mosquitoes generally don't spread viruses, they can be aggressive biters. Some people may react more strongly to bites. Learn about mosquito bites and take steps to reduce swelling and itching. See a healthcare provider if symptoms worsen.
- Large numbers of nuisance mosquitoes can slow recovery efforts by making work outdoors difficult. Use of insecticides by mosquito control professionals can reduce numbers of mosquitoes in affected areas.
- Flooding caused by hurricanes can be severe, and an increase in nuisance or floodwater mosquito populations is expected in the weeks after flooding. However, because nuisance or floodwater mosquitoes don't spread viruses to people, an increase in the number of people getting sick from diseases spread by mosquitoes is not expected after flooding.

Prevent Mosquito Bites

The best way to prevent diseases spread by mosquitoes is to protect yourself and your family from mosquito bites.

- Wear long-sleeved shirts and long pants.
- Use Environmental Protection Agency (EPA)-registered insect repellents with one of the following active ingredients: DEET, picaridin, IR3535, oil of lemon eucalyptus, para-menthane-diol, or 2-undecanone.
- Treat clothing and gear with 0.5% permethrin.

Take steps to control mosquitoes inside and outside your home. After a hurricane or flood, the health department or mosquito control district will often take steps to reduce the mosquito population. Once flooding recedes, residents can take steps to help control mosquitoes in and around their homes to prevent mosquito bites.

- Remove standing water where mosquitoes could lay eggs. **Once a week**, empty and scrub, turn over, cover, or throw out any items that hold water like tires, tarps, buckets, planters, toys, pools, birdbaths, flowerpot saucers, or trash containers.
- Keep mosquitoes outside.
- Install or repair and use window and door screens.

- Do not leave doors, including garage doors, propped open.
- Use air conditioning when possible.

For more information about mosquitoes, hurricanes, and flooding, visit <https://www.cdc.gov/mosquitoes/response/index.html>.

Rabies

Rabies is a fatal but preventable viral disease. It can spread to people and pets if they are bitten or scratched by a rabid animal. In the United States, rabies is mostly found in wild animals like bats, raccoons, skunks, and foxes.

For more information about rabies, visit <https://www.cdc.gov/rabies/index.html>.

Plague

There are reports that floodwater brings a danger of plague. This is FALSE. Plague is rare in the United States. It is spread through fleas, not floodwater.

For more information about plague, visit <https://www.cdc.gov/plague/about/index.html>.

Landslides and Mudslides

- Landslides occur when masses of rock, earth, or debris move down a slope.
- Debris flows, also known as mudslides, are a common type of fast-moving landslide that tends to flow in channels.
- Landslides are caused by disturbances in the natural stability of a slope. They can accompany heavy rains or follow droughts, earthquakes, or volcanic eruptions.
- Mudslides develop when water rapidly accumulates in the ground and results in a surge of water-saturated rock, earth, and debris. Mudslides usually start on steep slopes and can be activated by natural disasters.
- Areas where wildfires or human modification of the land have destroyed vegetation on slopes are particularly vulnerable to landslides during and after heavy rains.

Health Threats from Landslides and Debris Flows

In the United States, landslides and debris flows result in 25 to 50 deaths each year. The health hazards associated with landslides and mudflows include:

- Rapidly moving water and debris that can lead to trauma;
- Broken electrical, water, gas, and sewage lines that can result in injury or illness; and
- Disrupted roadways and railways that can endanger motorists and disrupt transport and access to health care.

Areas More Likely to Experience Landslides or Mudslides

Some areas are more likely to experience landslides or mudflows, including:

- Areas where wildfires or human modification of the land have destroyed vegetation;
- Areas where landslides have occurred before;

- Steep slopes and areas at the bottom of slopes or canyons;
- Slopes that have been altered for construction of buildings and roads;
- Channels along a stream or river; and
- Areas where surface runoff is directed.

Protect Yourself Before Intense Storms and Rainfall

- Assume that steep slopes and areas burned by wildfires are vulnerable to landslides and debris flows.
- Learn whether landslides or debris flows have occurred previously in your area by contacting local authorities, a county geologist or the county planning department, state geological surveys or departments of natural resources, or university departments of geology.
- Contact local authorities about emergency and evacuation plans.
- Develop emergency action and evacuation plans for your family and business.
- Develop an emergency communication plan in case family members are separated.
- If you live in an area vulnerable to landslides, consider leaving it.

Protect Yourself During Intense Storms and Rainfall

- Listen to the radio or watch TV for warnings about intense rainfall or for information and instructions from local officials.
- Be aware of any sudden increase or decrease in water level on a stream or creek that might indicate debris flow upstream. A trickle of flowing mud may precede a larger flow.
- Look for tilted trees, telephone poles, fences, or walls, and for new holes or bare spots on hillsides.
- Listen for rumbling sounds that might indicate an approaching landslide or mudflow.
- Be alert when driving. Roads may become blocked or closed due to collapsed pavement or debris.
- If landslide or debris flow danger is imminent, quickly move away from the path of the slide. Getting out of the path of a debris flow is your best protection. Move to the nearest high ground in a direction away from the path. If rocks and debris are approaching, run for the nearest shelter and take cover (if possible, under a desk, table, or other piece of sturdy furniture).

Protect Yourself After a Landslide or Debris Flow

- Stay away from the site. Flooding or additional slides may occur after a landslide or mudflow.
- Check for injured or trapped people near the affected area, if it is possible to do so without entering the path of the landslide or mudflow.
- Listen to the radio or TV for emergency information.
- Report broken utility lines to the appropriate authorities.
- Consult a geotechnical expert (a registered professional engineer with soils engineering expertise) for advice on reducing additional landslide problems and risks. Local authorities should be able to tell you how to contact a geotechnical expert.

For more information about landslides and mudslides, visit <https://www.cdc.gov/landslides-and-mudslides/about/index.html>.

Coping with Disaster

SAMHSA's Disaster Distress Hotline: Call or text 1-800-985-5990 (Deaf/hearing impaired can use your preferred relay service to call 1-800-985-5990).

It is natural to feel stress, anxiety, grief, and worry during and after a disaster. Everyone will react differently, and your own feelings will change throughout the emergency response. Notice and accept how you feel. Taking care of your emotional health during an emergency will help you think clearly and react to the urgent needs to protect yourself and your family during an emergency. Self-care during an emergency will help your long-term healing.

Common Signs of Distress

Look out for these common signs of distress:

- Feelings of shock, numbness, and disbelief
- Changes in energy and activity levels
- Difficulty concentrating
- Changes in appetite
- Sleeping problems
- Nightmares and upsetting thoughts and images
- Feeling anxious or fearful
- Physical reactions, such as headaches, body pains, stomach problems, and skin rashes
- Chronic health problems can get worse
- Changes in use of alcohol, tobacco, or other drugs
- Anger or short-temper

If you experience these feelings or behaviors for several days in a row and are unable to carry out normal responsibilities because of them, seek professional help.

Take the Following Steps to Cope with a Disaster

- Stay informed-When you feel that you are missing information, you may become more stressed or anxious. Watch, listen to, or read the news for updates from officials. Be aware that there may be rumors during a crisis. Turn to reliable sources of information.
- Take care of your body. Eat healthy well-balanced meals, exercise regularly, get plenty of sleep, and avoid alcohol, tobacco, and other drugs. Learn more about wellness strategies for mental health.
- Take breaks- Make time to unwind and remind yourself that strong feelings will fade. Take breaks from watching, reading, or listening to news stories. It can be upsetting to hear about the crisis and see images repeatedly. Try to do some other activities you enjoy to return to your normal life and check for updates between breaks.
- Connect with others- Share your concerns and how you are feeling with a friend or family member. Maintain healthy relationships and build a strong support system.

Seek help when needed. If distress is impacting activities of your daily life for several days or weeks, talk to a clergy member, counselor, or doctor or contact the **SAMHSA helpline**.

- » Call or text 1-800-985-5990; Deaf/hearing impaired can use your preferred relay service to call 1-800-985-5990.

For more information about coping after a disaster, visit <https://emergency.cdc.gov/coping/index.asp>.

Feelings of Depression or Suicidal Thoughts

After a natural disaster, it is normal to feel sad, mad, or guilty—you may have lost a great deal. Your coping skills may change during periods of crisis and heightened stress, limiting your normal ability to effectively solve problems and cope. Stay in touch with family and friends, find a support network, and talk with a counselor. Getting involved with others can help.

If you or someone you know feels like completely giving up or are having thoughts of suicide, get help. Contact the National Suicide Prevention Lifeline: by dialing 988) or use the online Lifeline Crisis Chat. Calls are free and confidential. You will be connected to a skilled, trained counselor in your area.

For more information about the National Suicide Prevention Lifeline, visit <https://988lifeline.org/>.

Helping Children and Youth Cope

Children and youth may also have a difficult time during or after an emergency. Some young people react right away, while others may show signs of difficulty much later. Take time to talk to your children about the disaster, limit their exposure to media coverage of the event, including social media, and as soon as possible, return to and maintain a healthy routine.

Children may not say how they are feeling during a crisis. Explain the situation, answer questions, and reassure them they are loved.

Children are less likely to say that they are feeling stressed but will show signs through their behaviors. Infants and young children may cry more than usual, want to be held more, and become fearful about being separated from their parent/caregiver. Adolescents and teenagers may deny that they are upset or may do more risky things.

The Following Are Some Ways to Help Children Cope:

- Set a good example. Take care of yourself, including exercising and practicing healthy eating habits.
- Encourage children to ask questions. Get down at eye level and speak in a calm, gentle voice using words they can understand.
- Maintain a strong connection and show them they are loved.
- Listen for any rumors children might hear at school or on social media and help explain the correct information to them.
- Tell children it is normal to be upset. Let them know that it's not their fault.

For more information about how to help children cope, visit:

- <https://www.samhsa.gov/>
- <https://www.cdc.gov/natural-disasters/teens/index.html>
- <https://www.cdc.gov/childrenindisasters/helping-children-cope.html>

Disproportionately Impacted Groups

Pregnant, Postpartum, and Breastfeeding Women

[Natural disasters](#) such as hurricanes and floods can be scary and stressful, especially if you are expecting or have a baby. Learn how to protect yourself and your loved ones using this list of things you can do [before, during, and after a natural disaster](#).

Preparing for a Hurricane or Flood

- If you are pregnant, talk to your health care provider about how to get medical care if there is a natural disaster. Your doctor can help you make a plan about where you can go to get prenatal care if your doctor's office has to close and where you can go to have a safe delivery if you can't reach a hospital. Learn the signs of labor including the signs of early labor.
- If you might need to leave your home, know where to shelter. Search for open shelters near you by texting SHELTER and your ZIP code to 43362. Example: Shelter 01234.
 - » Be prepared to leave quickly and have a kit with important items ready to go. Pack your essential items and supplies, including your prescription and non-prescription medications, prenatal vitamins, and a copy of your medical records and insurance information.
- Have at least a 7 to 10-day supply of your prescription medications. Ask your healthcare provider if you can obtain a 30-day (or longer) emergency prescription refill. Some states permit coverage for extra prescription medication refills during an emergency, but laws vary by state. Learn more about Emergency Prescription Laws in your state.
- If you have a baby, plan ahead to help him or her sleep safely, if you have to leave your home. Babies are safest sleeping on their back in their own sleep area like a portable crib or bassinet that does not have pillows, blankets, or toys. Learn more about what you can do to help babies sleep safely.
- Stock healthy low-sodium snacks and bottled water to keep up with your nutrition needs and stay hydrated.
- Take care of your emotional health and practice healthy stress management. Stress can cause problems like having your baby come too soon or having a baby that is under weight. Engaging in physical activity, getting enough rest and drinking enough water can help you reduce stress. Ask for help if you are feeling overwhelmed or stressed.

During and After a Hurricane or Flood

During and after a disaster, you may have strong emotions. Connecting with family, friends, and others in your community can help you [cope with a natural disaster](#). Take care of yourself and each other. Know when and how to seek help.

If You Are Pregnant

- During a natural disaster, you may have to stay at a shelter or temporary housing. If you go to a shelter, tell the staff that you are pregnant so they can help you.
- It is important that you get medical care right away if you are having signs of labor. Call your doctor, 911, or go to the hospital immediately if it is safe to leave. If you are in a shelter, tell the staff as soon as possible about your symptoms.

- When it is safe to do so, make an appointment to continue your prenatal care, even if it is not with your usual doctor.
 - » [Get your vaccines](#), like the flu, Tdap shots, and COVID-19 vaccine or booster, to protect yourself and your developing baby against seasonal influenza, [whooping cough](#), and COVID-19. Vaccination helps protect you during pregnancy and protects your baby for several months after their birth.
- If you do get sick, talk with a health care provider right away.
 - » Explain that you are pregnant or think you might be pregnant.
 - » Some infections might harm your developing baby. The sooner you get the care you need, the better.
 - » While you are sick, drink plenty of clean water, rest, and follow the health care provider's advice.
- During [extreme heat](#), wear loose, lightweight, light-colored clothing, stay hydrated, and try to keep cool to prevent your body from overheating.
 - » Stay in air-conditioned buildings as much as you can. If your home is not air-conditioned, reduce your risk for heat-related illness by spending time in public facilities that are air-conditioned, and using air conditioning in vehicles. Contact your local health department or find an air-conditioned shelter or cooling center in your area.

Before you start taking any medicines, even ones that you can buy at the store, talk with a health care provider.

- » Make sure to tell the doctor or nurse that you are pregnant or might be pregnant.
- » Some medicines are not good to take during pregnancy, but others are okay.
- » Continue taking your multivitamins with 400 micrograms of folic acid every day to help keep you and your developing baby in good health.
- » If you are already taking another medicine, talk to your health care provider before stopping that medicine or taking a new medicine.
- Follow these steps to [prevent mosquito bites](#) to reduce your risk for illnesses spread by mosquitoes.
 - » Cover up by wearing long-sleeved shirts and long pants.
 - » Stay and sleep in places with air conditioning or that use window and door screens.
 - » Use Environmental Protection Agency (EPA)-registered insect repellents with one of the following active ingredients listed in the label: DEET, picaridin, IR3535, oil of lemon eucalyptus, para-menthane-diol, or 2-undecanone.
 - » Once a week, empty and scrub, turn over, cover, or throw out items that hold water, such as trash containers, tires, buckets, toys, planters, flowerpots, birdbaths, or pools.

If You Recently Had a Baby

- After giving birth and while [breastfeeding](#), take special care of your body like drinking plenty of clean water and resting as often as you can.
- Get a postpartum checkup within 6 weeks after having your baby, even if it is not with your usual doctor.
- [Get your vaccine](#), like the flu shot and COVID-19 vaccine or booster, if you did not already receive it during flu season. Stay up to date on your [COVID-19 vaccines](#).
- See a health care provider for well-baby checkups and get [recommended vaccinations](#) for your baby, even if it is not with your baby's usual doctor.

- See a doctor or other health care provider if you are concerned about a health problem, even if it is not with your or your baby's usual doctor.
- Depression can occur during or after pregnancy, however, it is treatable, and most people get better with treatment. If you think you have depression, talk with your health care provider as soon as possible. Learn more about [depression during and after pregnancy](#).
- If you are not ready to get pregnant again, you can ask for several months' supply of the pill, patch, or ring, and you can consider using a method that last for several months like the shot. You also can ask for a longer acting method like intrauterine devices (IUDs) and implants, which can last for 3 to 10 years depending on the device. Talk with a health care provider about what [birth control method](#) is right for you.

If You Are Breastfeeding or Feeding an Infant or Young Child

- If you [breastfeed](#), continue to do so. Breastfeeding remains the best infant feeding option in a natural disaster situation. Breastfeeding is the best source of nutrition for most infants. It can also reduce the risk for certain health conditions for both infants and parents. Learn more on [how to feed your young child safely during a disaster](#).
- If you [feed your baby with formula](#), use ready-to-feed formula if possible. Use bottled water to prepare powdered or concentrated formula. If bottled water is not available, boil water for 1 minute and let it cool before mixing with formula.
- [Wash your hands](#) before preparing formula and before feeding your baby or infant. If soap and water is not available for handwashing, you can use alcohol-based hand sanitizer for sanitizing your hands.
- Always [clean infant feeding items](#) with bottled, boiled, or treated water and soap before each use. If you cannot clean infant feeding supplies safely, children can lap up milk from a disposable cup, if available. Throw out bottle nipples or pacifiers that have been in contact with floodwater.
- If your home has been affected by floods, it is possible that mold may be present. If you are pregnant or have a young infant, avoid entering a building with mold damage. Learn more about [mold exposure after natural disasters](#).
- After [stormy weather or severe flooding](#), avoid touching or walking in flood water.
 - » If you do touch the water, make sure to use soap and clean water to wash the parts of your body that came in contact with the water.
 - » Do not swallow any of the flood water and be careful to keep it away from your mouth.
 - » If you feel sick in any way, talk to a doctor or health care provider right away.
 - » Remember to explain that you are pregnant or think you might be pregnant or have been pregnant in the past year.
- To prevent carbon monoxide poisoning, do not use generators, kerosene heaters, grills, or camp stoves indoors. Carbon monoxide is a gas with no color or smell. It is a poison to you, your baby or anyone. If you breathe it, it can make you very sick. It can even kill you. Learn more about how to [prevent carbon monoxide exposure](#).

For additional information about the effects of exposures, such as stress, related to a disaster on pregnancy or breastfeeding, call MotherToBaby at 1-866-626-6847. MotherToBaby is service of the

non-profit Organization of Teratology Information Specialists (OTIS) and also provides a chat option with a specialist online through their website (<https://mothertobaby.org/our-work/>).

For more information about infant and young child feeding during disasters, visit:

- <https://www.cdc.gov/breastfeeding/php/about/index.html>
- <https://www.cdc.gov/breastfeeding/php/guidelines-recommendations/feeding-your-child-safely-during-a-disaster.html>

Post-disaster Safety

- If you are pregnant or were recently pregnant, avoid hard physical work or disaster clean-up work.
- If your home has been affected by floods, it is possible that mold may be present. If you are pregnant or have a young infant, avoid entering a building with mold damage. Learn more about [mold exposure after natural disasters](#).
- After [stormy weather or severe flooding](#), avoid touching or walking in flood water.
 - » If you do touch the water, make sure to use soap and clean water to wash the parts of your body that came in contact with the water.
 - » Do not swallow any of the flood water and be careful to keep it away from your mouth.
 - » If you feel sick in any way, talk to a health care provider right away.
 - » Remember to explain that you are pregnant or think you might be pregnant or have been pregnant in the past year.
- To prevent carbon monoxide poisoning, do not use generators, kerosene heaters, grills, or camp stoves indoors. Carbon monoxide is a gas with no color or smell. It is a poison to you, your baby or anyone. If you breathe it, it can make you very sick. It can even kill you. Learn more about how to [prevent carbon monoxide exposure](#).

For more information about disaster planning for pregnant, postpartum, and breastfeeding people, visit

- <https://www.cdc.gov/reproductive-health/emergency-preparation-response/safety-messages.html>
- <https://www.cdc.gov/breastfeeding/php/guidelines-recommendations/feeding-your-child-safely-during-a-disaster.html>
- <https://www.cdc.gov/breastfeeding/php/about/index.html>

Infants

Feeding Infants and Young Children

- Breastfed infants should continue breastfeeding.
- For families who need infant formula during an emergency, ready-to-feed (RTF) infant formula is the safest option. RTF infant formula is a sterile liquid infant formula that is ready to feed without adding water.
- **If your baby is less than 2 months old, was born prematurely, or has a weakened immune system it is especially important to use ready-to-feed infant formula in any emergency.** Liquid infant formula is made to be sterile (without germs) and is the safest option for infants not receiving breast milk.

Safely Preparing and Storing Powdered Infant Formula

There may be times when powdered infant formula is the only option during an emergency. During a water-related emergency, such as a natural disaster or drinking water outage, tap water may not be safe to mix with powdered infant formula. If a family must use powdered infant formula when tap water is unsafe to drink, follow these steps to prepare and store it safely and correctly:

Step 1

- Clean your preparation surface. Wash your hands with soap and water or use alcohol-based hand sanitizer with at least 60% alcohol. Use a clean bottle or other food-grade safe container and a lid or cap to prepare the infant formula. Make sure the formula is not expired.
- Use bottled water to prepare powdered formula

Step 2

- Use bottled water to prepare powdered formula until local authorities say the tap water is safe to drink. If bottled water is not available, learn how to make water safe by boiling or disinfecting.

Step 3

- Use the exact amount of water and formula listed on the formula container instructions. If you do not have a measuring cup to measure the water, use a disposable water bottle or other food-grade safe container that lists the total volume so you can estimate. Measure the water first and then add the infant formula powder with the scoop provided.
- Shake infant formula in the bottle or other food-grade safe container to mix.

Step 4

- With the lid or cap on, shake infant formula in the bottle or other food-grade safe container to mix. Do not stir. You do not need to warm infant formula before feeding.

Step 5

After feeding, be sure to thoroughly clean the bottle and nipple with soap and safe water. Learn about [cleaning and sanitizing infant feeding items in emergencies](#).

Cup Feeding

Using a bottle and nipple to feed formula or breast milk during an emergency can be dangerous if safe water is not available to clean the items properly. Cup feeding is an alternative way to feed infants when they are unable to feed directly at the breast and when infant feeding items cannot be cleaned properly. Cup feeding can be used with babies of all ages and is also safe for premature and many ill babies.

For more information about cup feeding infants, visit <https://www.cdc.gov/infant-feeding-emergencies-toolkit/php/cup-feeding.html>.

Cleaning Infant Feeding Items

Always clean infant feeding items with safe water. In most emergencies, bottled water is safest for cleaning.

- If bottled water is not available, water contaminated with germs can be made safe for cleaning by boiling, adding bleach, or filtering.
- Do not use water contaminated with harmful chemicals, toxins, or radioactive material. It cannot be made safe by boiling or adding bleach.
- Always follow instructions from local public health officials for specific advice about water safety.
- When safe water and soap are not available for cleaning feeding items, use disposable cups and supplies for feeding your infant.

Throw away bottle nipples, pacifiers and other items that are hard to clean if they have been touched by flood water. Tiny cuts or breaks in these items can let in germs that can't be removed by cleaning.

For more information about feeding infants and young children after a disaster, visit <https://www.cdc.gov/infant-feeding-emergencies-toolkit/php/>.

Keeping Your Baby Safe When Away from Home

If you have to leave your home, there are steps you can take to help your baby stay safe.

- If you have to leave your home, have your emergency kit that includes copies of medical records and emergency telephone numbers, health care providers' information, medicines and infant care supplies, such as baby food and a portable crib, ready to go.
- Be prepared to leave quickly.
- Know that Infants and young children may cry more than usual, want to be held more, and become fearful about being separated from their parent/caregiver.
- If you are staying at a shelter, tell the shelter staff about any care needs you or your baby may have and take [actions to help your baby sleep safely](#).
- If you or your baby use prescription medicines and you have them with you, take them with you and continue taking or giving them as directed.
- Do not smoke or allow smoking around your baby.
- Infants are among those most at risk from exposure to air pollution, but everyone can experience effects like eye, lung or throat irritation.

To reduce the risk of sudden infant death syndrome (also known as SIDS) and other sleep-related causes of infant death, [take the following actions](#):

- Place your baby on his or her back for all sleep times—for naps and at night.
- Use a firm sleep surface designed for babies, such as a mattress in a [safety-approved crib](#) covered by a fitted sheet.
- Keep your baby's sleep area (for example, a crib or bassinet) in the same room where you sleep until your baby is at least 6 months old, or ideally, until your baby is one year old.
- Keep soft bedding such as blankets, pillows, bumper pads, and soft toys out of your baby's sleep area. Additionally, do not cover your baby's head or allow your baby to get too hot.

Children and Youth

Make a Plan

- Make sure your child's emergency contact information is up to date with their school. Utilize a backpack emergency card to place in your child's backpack.
- If you are separated from your child, make sure he or she knows how to get in touch with you.

Evacuation

- Talk to your children about where you are evacuating, explain that you are doing so to keep them safe.
- If you are evacuating, make sure you take any medication that you or a family member might need.
- Keep any available medical and immunization records with you, if possible.

Floodwater Safety

- Prevent children from playing in or around floodwater. It doesn't take long or much water for children to drown.
- Floods pose special danger to children. Watch for dangerous situations and learn how to keep kids safe.
- Disinfect flood-damaged surfaces to protect your children from exposure to toxins.

Safe Cleanup

- Keep children safe in the aftermath. Children should not take part in disaster cleanup work. Do not use N-95 respirators on children. N-95 respirators do not fit children and will not protect them.
- Never leave young children alone or allow them to play in damaged buildings or in areas that might be unsafe.
- Children are among those most at risk from exposure to air pollution, but everyone can experience effects like eye, lung, or throat irritation.

Stress and Coping

- Children may be very frightened and need help coping after a storm.
- After a storm, help children to understand that they are safe and secure by talking, playing, and doing other family activities with them.
- After a storm, young children may cry more than usual, want to be held more, and become fearful about being separated from their parent/caregiver.
- After a storm, children may be afraid to sleep alone and may want to sleep with a parent or another person. Be as flexible as you can.
- Children will feel more secure if you can stick to a routine as much as possible - eat/sleep at the same time as always.
- After a storm, some children may be quiet or withdrawn. Others may become upset easily, cry frequently, and/or become angry. Encourage children to talk.
- Children with special health care needs such as autism spectrum disorder may have difficulties

with changes in routine - help them anticipate changes/tell them what might happen. It may be helpful to use stories.

- The National Child Traumatic Stress Network offers ideas on how to reassure children they are safe after a major storm.

For more information about how to care for children in a disaster, visit <https://www.cdc.gov/childrenindisasters/index.html>.

Older Adults

Natural disasters, such as hurricanes, tornadoes, and blizzards, may force you to evacuate your home or shelter-in-place at short notice. It is important to know what to do in case of an emergency well before disaster strikes.

If you are an older adult living in the community, you may face some challenges during an emergency. For example, you may have mobility problems, or chronic health conditions, or you may not have any family or friends nearby to support you. Support services that are usually available, such as help from caregivers or in-home health care and meal delivery services, may be unavailable for a period of time. In addition, older adults may experience challenges that come with advanced age, such as hearing or vision problems or cognitive impairment, which may make it difficult to access, understand, and respond to emergency instructions.

Friends, family, and neighbors should check on older adults to make sure they are okay and getting the assistance they need.

Creating a Plan

The first step in preparing for an emergency is creating a plan. Work with your friends, family, and neighbors to develop a plan that will fit your needs.

- Choose a contact person who will check on you during a disaster, and decide how you will communicate with each other (for instance, by telephone, knocking on doors). Consider speaking with your neighbors about developing a check-in system together.
- Create a list of contact information for family members and friends. Leave a copy by your phone(s) and include one in your Emergency Supply Kit.
- Plan how you will leave and where you will go during an evacuation. If you are living in a retirement or assisted living community, learn what procedures are in place in case of emergencies. Keep a copy of exit routes and meeting places in an easy-to-reach place.
- Create a care plan and keep a copy in your Emergency Supply Kit. Try out CDC's easy-to-use care plan template: <https://www.cdc.gov/caregiving/media/pdfs/Complete-Care-Plan-Form-5081.pdf>
- If you have medical, transportation, or other access needs during an emergency, consider signing up for SMART911, Code Red, or your local county registry, depending upon which service your area uses to help first responders identify people who may need assistance right away.

For information about care plans to help both older adults and caregivers, visit <https://www.cdc.gov/caregiving/guidelines/>.

Creating an Emergency Supply Kit

After an emergency, you may not have access to clean water or electricity. Make sure you are prepared with your own supply of food, water, and other items to last for at least 72 hours.

Visit [Ready.gov](https://www.ready.gov) for a list of basic items to gather for your Disaster Supply Kit.

Medical-Related Items:

- A 3-day supply of medicine, at a minimum. If medications need to be kept cold, have a cooler and ice packs available.
- ID band (full name, contact number for family member/caregiver, and allergies)
- Hearing aids and extra batteries
- Glasses and/or contacts and contact solution
- Medical supplies like syringes or extra batteries
- Information about medical devices such as wheelchairs, walkers, and oxygen including model numbers and vender.

Documents (Keep physical copies in a waterproof bag and take photos of each document for backup):

- [Your Care Plan \[PDF – 1 MB\]](#)
- Contact information for family members, doctors, pharmacies and/or caregivers
- List of all medications, including the exact name of the medicine and the dosage, and contact information for pharmacy and doctor who prescribed medicine
- List of allergies to food or medicines
- Copies of medical insurance cards
- Copies of a photo ID
- Durable power of attorney and/or medical power of attorney documents, as appropriate.

For more information about emergency preparedness for older adults, visit:

- <https://www.ready.gov/older-adults>

Extreme Heat

Older adults physiologically do not adjust as well as young people to sudden changes in temperature. They are more likely to have chronic medical conditions and take prescription medicines that affect the body's ability to control its temperature or sweat.

If you are an older adult and do not have access to air conditioning due to power outages:

- Drink water regularly. Do NOT wait until you're thirsty to start drinking water.
- Avoid using your oven or stove to prepare meals.
- Wear loose-fitting clothes.
- Take showers to cool down.
- If you don't have air conditioning, consider staying with a friend or family member during a heatwave. It may be enough to take an "air conditioning break" at a local mall or library during the heat of the day.

- Don't overwork yourself, and make sure you rest.
- Have others check up on you, and vice versa.
- Wear sunscreen and clothing to protect yourself from sunburns, which make it hard for your body to cool down.
- When outside in the heat, wear a hat, try to stay in the shade, and move slowly so you won't become overheated.
- Seek medical care immediately if you have [symptoms of heat-related illness](#) like muscle cramps, dizziness, headaches, nausea, weakness, or vomiting.

For information about older adults and extreme heat, visit <https://www.cdc.gov/extreme-heat/risk-factors/extreme-heat-and-older-adults-aged-65.html>.

People with Disabilities

Emergency plans should be tailored to meet specific needs. If you have a disability or care for someone who does, it may require extra planning to handle an emergency. A good plan may include family, friends, neighbors, and organizations that support people with disabilities and can help make decisions.

Below are tips for people with disabilities, their families, and individuals who support them.

Plan Ahead

- Keep a list of names and numbers of doctors, pharmacists, and family members and others who support you on hand. Write down and keep the web address and passwords for any health portals you need to use to communicate with healthcare providers.
- Keep a list and adequate supply of medications and copies of prescriptions on hand.
- Keep a list of vaccination records, allergies, and special equipment you might need, such as oxygen and hearing aids. If possible, have special equipment from your list ready to take with you if you need to evacuate.
- If you use an augmentative or alternative communications device or other assistive technologies, plan how you will evacuate with the devices and accessories (e.g. extra hearing aid batteries) or how you will replace equipment if it is lost or destroyed. Keep model information and note where the equipment came from (Medicaid, Medicare, private insurance, etc.).
- Plan how you will communicate with others if your equipment is not working, including pen and paper, laminated cards with phrases and/or pictograms.
- If you use an electric wheelchair, consider keeping a manual wheelchair as backup and/or a backup battery for recharging.
- Keep extra sets of batteries if you need power for medical or other assistive devices such as hearing aids. Be sure to check expiration dates every 6 months and keep battery contacts from touching to avoid leaking and corrosion.
- Consider a generator for home use if a power outage may jeopardize health or safety.
 - » FEMA may provide financial assistance for purchasing or renting a generator to power medical or other assistive devices during a Presidentially declared disaster under the Other Needs Assistance (ONA) provision of the Individuals and Households Program (IHP): <https://www.disasterassistance.gov/get-assistance/forms-of-assistance/4473>.

Evacuating Your Home

- If you have to evacuate your home, consider wearing a medical alert tag or bracelet to let emergency workers know about your healthcare needs, or write your needs on paper and keep it with you.
- If you need help securing accessible transportation, contact your local paratransit service provider or local emergency management services (EMS) to see what resources may be available. You can find your local EMS by visiting www.fema.gov/locations and entering your zip code. A Center for Independent Living in your area may also be a helpful resource: <https://acl.gov/programs/centers-independent-living/list-cils-and-spils>.
- If someone is helping you shelter and you have a disability, explain how they can best assist you.
- If you are helping a person with a disability evacuate or shelter, always ask the person with a disability how you can best assist them.

Service Animals

Know that the law requires that service animals be allowed to be kept with you inside shelters during emergencies.

Include your service animal in your emergency plan. Make sure your emergency kit includes food and other items for service animals.

- Be ready to answer 2 questions from emergency managers and responders: 1) Is the service animal required because of a disability? 2) What work or task has the service animal been trained to perform?
- Emotional support animals (animals that provide comfort or support but are not trained to perform a task) are not covered by the law and may not be allowed to stay with you in a shelter.

For information about resources for people with disabilities and their caregivers, visit:

- <https://www.cdc.gov/disability-emergency-preparedness/people-with-disabilities/index.html>
- <https://www.ready.gov/disability>

For more information about emergency planning for children with disabilities, visit:

- <https://www.cdc.gov/disability-emergency-preparedness/people-with-disabilities/index.html>
- <https://www.cdc.gov/childrenindisasters/children-with-special-healthcare-needs.html>

People with Chronic Illness

Natural disasters, such as hurricanes, floods, tornados, and wildfires, can be stressful and dangerous especially if you are managing a chronic disease; not only during the disaster, but also afterward.

- People who need medical treatments that require electricity, such as supplemental oxygen or refrigerated medications, are especially at risk when power goes out.
- Access to regular dialysis treatments may be interrupted after a storm.
- People with some chronic diseases, especially older people, may also be at higher risk from extreme heat and a loss of air conditioning during a power outage.
- The disruption of a disaster can contribute to worsening some chronic conditions.

People with chronic diseases may be dealing with health effects from a storm for some time after it is over.

Because of the higher risks to people with chronic disease, it's important that you know how to best prepare yourself. Talk to your medical provider about planning to get extra medication in case of a disaster. Plan ahead on how you can safely evacuate if needed and what to do if you lose power.

HHS's [Emergency Prescription Assistance Program](#) may be activated after a disaster. The EPAP helps people who live in a federally-declared disaster area and do not have health insurance. Eligible people can receive a free 30-day supply of their medications for as long as EPAP is active. People can also use the program to receive vaccinations or to replace certain medical supplies or some forms of medical equipment that were lost or damaged because of the emergency or while evacuating. If activated, call 855-793-7470 to enroll or visit www.PHE.gov/EPAP.

Alzheimers Disease or Other Dementias

- Disasters, or any change in routine, can be especially upsetting and confusing for people with [Alzheimer's or related dementia](#). Be aware of signs of anxiety or agitation in people with dementia and be prepared with strategies to calm them during times of stress.
- People with dementia sometimes wander and can become easily lost. Don't leave the person with dementia alone when their routine or environment is disrupted.
- If you have a family member in a long-term care facility, find out about its disaster plans and rules for visitors during those times.

Arthritis

- If you have trouble moving or getting around, make a note of that in your [emergency plan](#). Think about how you will stay mobile during an emergency.
- Keep medicines for pain and other arthritis symptoms handy, and plan for special medicine needs, such as scheduled infusions or refrigeration of medicines like biologicals.
- Keep any assistive devices you use to get around where you can find them quickly.
- Avoid hard physical work like disaster cleanup to prevent joint injuries that can worsen your arthritis symptoms. Learn more about [things you can do to manage arthritis](#).

Cancer

Cancer patients who are treated with chemotherapy are more likely to get infections. Chemotherapy can cause a condition called neutropenia—a decrease in the number of white blood cells. These cells are the body's main defense against infection. Neutropenia often occurs between 7 and 12 days after receiving chemotherapy.

If you are being treated with chemotherapy, keep these tips in mind after an emergency.

- Take steps to avoid getting an infection. Clean your hands often, try to avoid crowded places and people who are sick, and stay away from moldy or dirty places.
- Watch for signs of an infection, like chills and sweats, a sore throat or other pain, nasal congestion, or vomiting.
- Call a doctor right away if you get a fever.

For more information on cancer and emergencies, visit <https://www.cdc.gov/cancer-survivors/patients/be-prepared-for-an-emergency.html>.

Chronic Obstructive Pulmonary Disease (COPD)

Talk to your doctor about preparing a [COPD Action Plan](#) and a [COPD Travel Pack](#). If you have these already, keep them in your disaster supply kit and bring them with you when leaving home.

- If you receive oxygen therapy, ask your doctor how to find emergency shelters that provide this service. Also ask how to make sure you have enough equipment and supplies during and after a disaster.
- If you have to leave your home and go to a shelter, make sure the staff know that you have [COPD](#).
- Learn more about how to protect your lungs during a disaster and tips for returning home after a disaster.

Diabetes

Managing diabetes can be hard during a major storm, loss of electricity, or infectious disease outbreaks. Plan ahead so that you can manage your diabetes during times of emergency.

Having essential supplies, prescriptions, important paperwork, and practical skills will help you during an emergency. People with diabetes should also be prepared to manage their condition during any kind of emergency, whether they have to shelter in place, evacuate, or protect themselves from an infectious disease.

If you are living with diabetes or have a loved one with the disease, follow these tips after an emergency.

People who need emergency diabetes assistance after a storm can call 1-800-342-2382, Mon-Fri, 9:00 AM to 7:00 PM.

Create a Diabetes Care Kit

[Planning](#) is an important part of being prepared for an emergency. In addition to having basic emergency supplies, people with diabetes should also put together a diabetes care kit. Keep the kit in an easy-to-carry waterproof bag or storage container so you can move quickly if you have to evacuate. View a [printable checklist of the supplies](#).

Put your medical information in a sealed plastic bag, including:

- Copies of any prescriptions, including eye health prescriptions.
- Current dosages and times when you take medicines.
- Your basal rates, insulin-to-carbohydrate ratio, insulin sensitivity factor, blood sugar target, and correction factors for insulin pumps.
- Your pharmacy and doctor's name, address, and phone number.
- The make, model, and serial number of your insulin pump or continuous glucose monitor.
- A copy of your photo ID and health insurance card.

Pack enough diabetes supplies to last at least 1 to 2 weeks, including:

- Insulin and syringes for every injection. Learn more about [insulin storage](#).
- Blood sugar (glucose) meter.
- Extra batteries for your blood sugar meter and insulin pump.
- Lancets and lancing devices.

- Insulin pump supplies, including extra pump sets and insertion devices.
- Glucagon kits.
- Ketone strips.
- Alcohol wipes.
- Glucose tablets or 15 grams of quick carbs (such as juice, hard candy, or honey) to [treat low blood sugar](#).
- Oral diabetes medicine.
- An empty plastic bottle or sharps container to safely carry syringes, needles, and lancets.

Be sure to store your supplies properly according to the manufacturer's instructions. Also check the expiration dates for your supplies every few months. Anything that's close to expiring, replace with fresh supplies. You can use the supplies that were in the kit for your daily care before they reach the expiration date.

Find a Shelter that Meets Your Needs

If you have to go to a shelter during an emergency, look for one that can meet your medical needs. Do you:

- Have a home health nurse?
- Use a walker?
- Use oxygen?
- Need assistance to go to the bathroom?
- Require wound care or medicine through an IV?

If you answered "yes" to any of these questions, then it's likely you should find a [special medical needs shelter](#).

When you get to the shelter, tell the people in charge about your diabetes and any other conditions, such as being on dialysis. They can help you with medical care and insulin storage.

Insulin

In a power outage when refrigerated insulin isn't available:

- Try to keep your insulin as cool as possible, but make sure not to freeze it. Insulin that has been frozen can break down and will be less effective.
- Keep your insulin away from direct heat and out of direct sunlight, which also make it less effective.
- For up to 4 weeks, you can use insulin in opened or unopened vials that have been stored at room temperature (between 59°F and 86°F).
- Realistically, you may have to use insulin that has been stored above 86°F. If so, monitor your blood sugar regularly. If you're living in an emergency shelter, let someone in charge know if your blood sugar is too high or low, so they can get help if needed. Contact your doctor as soon as the emergency is over.
- When you can get your usual insulin and store it properly, throw away any insulin that was stored at room temperature or exposed to very high or low temperatures. Plan to visit your doctor if you have questions about managing your diabetes going forward or have any other health concerns.

Switching insulin:

In an emergency, you may need to use a different insulin brand or type instead of your usual insulin. You should work with your doctor if you need to switch insulin brands or types, but that might not be possible in crisis conditions. In that case, follow this emergency guidance from the [US Food & Drug Administration \(FDA\)](#) and be sure to monitor your blood sugar closely and get medical attention as soon as possible.

Using an insulin pump:

If you use an insulin pump, you may be able to substitute another insulin for your usual insulin ([see FDA's emergency guidance](#)). Check the instructions for your pump to see which insulin types will work. The guidance also explains which insulin types you can use instead of your usual insulin if you need to switch from using your pump to using injectable insulin (taken with a needle).

Managing Diabetes After a Storm

After a natural disaster or emergency, it may be difficult to manage your diabetes like you normally do. It may be harder to get healthy food or sometimes to even get some of your medicine.

- It may be hard to find the food that you usually eat. Try to choose foods that are lower in carbohydrates (sugar) and salt, if possible.

Try to test your blood sugar often to make sure it's in the target range. You may be getting more or less physical activity than usual and eating different foods. [Know what to do if you have low or high blood sugar.](#)

- [Check your feet](#) every day for cuts, redness, swelling, sores, blisters, corns, calluses, or any other change to the skin or nails. Call a doctor as soon as possible if you see an injury or wound. Don't go barefoot.
- For more information, visit the [Diabetes Disaster Response](#) website or call 1-800-342-2383.

Diabetes and Extreme Heat

- Get medical attention for heat-related illness. Certain diabetes complications, such as damage to blood vessels and nerves, can affect your sweat glands so your body can't cool as effectively. That can lead to heat exhaustion and heat stroke, which is a medical emergency.
- High temperatures can also change how your body uses insulin. You may need to test your blood sugar more often and adjust your insulin dose and what you eat and drink.
- Drink plenty of clean, safe, water—even if you're not thirsty. People with diabetes get dehydrated (lose too much water from their bodies) more quickly. High blood sugar can make you urinate more, causing dehydration.
- Avoid alcohol and drinks with caffeine, like coffee and energy or sports drinks. They can lead to water loss and spike your blood sugar levels.
- Wear loose-fitting, lightweight, light-colored clothing.
- Wear sunscreen and a hat when you're outside.

Diabetic Ketoacidosis

Diabetic ketoacidosis (DKA) is a serious complication of diabetes that can be life-threatening, and can

happen after a storm if you are unable to access insulin or if your care is otherwise interrupted. DKA is most common among people with [type 1 diabetes](#). People with [type 2 diabetes](#) can also develop DKA.

DKA usually develops slowly. Early symptoms include:

- Being very thirsty.
- Urinating a lot more than usual.

Talk to a medical provider right away if you are not able to access insulin or if you notice these symptoms.

For information about resources for people with diabetes, visit:

- <https://www.cdc.gov/diabetes/articles/diabetes-care-emergencies.html>
- <https://www.cdc.gov/diabetes/articles/managing-insulin-in-emergency.html>
- https://www.cdc.gov/natural-disasters/communication-resources/managing_chronic_conditions_after_natural_disaster.html
- <https://www.cdc.gov/diabetes/treatment/>

Epilepsy

- For some people with epilepsy, seizures can be triggered by flashing lights, sounds, lack of sleep, stress, or other triggers that may be common in an emergency situation. If possible, know what triggers your seizures.
- If you are staying at a shelter, make sure the staff know you have epilepsy and how to help you if you have a seizure.
- Talk with people surrounding you such as family, neighbors, co-workers, and friends about what to do if you have a seizure. Teach them how to help you and things to do in case you have a seizure.
- Seizure first aid information is available here: <https://www.cdc.gov/epilepsy/first-aid-for-seizures/>.

For more information about epilepsy and disaster preparedness, visit <https://blogs.cdc.gov/publichealthmatters/2021/11/epilepsy-awareness/>.

Heart Disease

- Stress from a disaster may increase blood pressure. [Monitor your blood pressure](#) regularly, especially if you have high blood pressure. Learn more about [measuring](#) and [controlling high blood pressure](#).
- Stress from a disaster can lead to heart disease symptoms. Know the signs and symptoms of [heart attacks](#) and [stroke](#).
- [Wildfire smoke](#) and disaster-related air pollution can increase heart disease symptoms such as chest pain, [heart attacks](#), trouble breathing, [stroke](#), or an abnormal heartbeat. It can also make symptoms of [heart failure](#) worse. Get medical help if you or someone you know is having these symptoms.
- Get enough [sleep](#) to protect your heart health.

Kidney Disease

- Include information about your local dialysis center in your emergency plan and disaster supply kit.
- Ask your dialysis center for their disaster plans and where you will get treatments if the

center is closed during a disaster. Your [local health department](#) may be able to help with transportation to the dialysis center or recommend another place if yours is closed. If you need more help, call the [Kidney Community Emergency Response \(KCER\)](#) Hotline at 1-866-901-3773.

- If you cannot get your treatments, follow the [3-Day Emergency Diet](#) and keep the foods on this diet in your disaster supply kit. If you are pregnant or have an infant or child who is on dialysis, talk to your doctor or dietitian about changes to this diet.
- In case of a power failure, if you have a home dialysis machine, you may be able to do manual exchanges until the power comes back on.
- Learn what to do in an emergency if you need dialysis.

For more information about kidney dialysis and emergencies, visit <https://www.cdc.gov/kidney-disease/caring/>.

People Worried about Safety at Shelters due to Discrimination

If you have concerns about discrimination at public shelters, there are additional things you may want to consider as you plan ahead.

Here are some things you can do to help prepare:

- Make sure you have a safe place to go during the storm, whether that is with a welcoming family member, friend, or at a public shelter. Keep in mind your specific health needs when deciding where to shelter.
- Add contact information for advocacy groups to your emergency “go kit”—this information can help you if you experience discrimination while receiving emergency services or sheltering.
- In addition to the [SAMHSA Disaster Distress Helpline](#), 1-800-985-5990, know that you can reach out to crisis support services such as the [988 Suicide & Crisis Lifeline](#) (call or text 988), The Trevor Project's Lifeline (1-866-488-7386), or other community-specific support resources. Keep these numbers handy in case you do not have Internet access after a disaster.

People with Mental Health Disorders

People with [mental health disorders](#) may react more strongly to natural disasters and other emergencies. The stress from needing to evacuate from your home can trigger negative thoughts and feelings that can make mental disorders worse.

It is very important that people who are receiving treatment (e.g., therapy, medication) continue their treatment plans during an emergency and monitor for any new symptoms.

If emergency professionals say that the area you live in may be at risk for severe weather or other natural disasters, talk with your health care or mental health care provider about any concerns you might have.

Planning ahead can help you feel more prepared for emergencies. Here are some things you can do:

- If you take [prescription medicine](#), talk with your pharmacist or health care provider about getting [extra medication](#) in case pharmacies are closed.
- Identify shelter locations near you. If you have a psychiatric service animal, tell a shelter staff person when you arrive at the shelter.
- Talk with your health care providers about how to continue your treatment if offices and health clinics are damaged or closed. Be sure to monitor yourself for any new symptoms.
- Have multiple ways to stay connected with family and friends.

Get immediate help in a crisis

- Call 911
- Call or text SAMHSA's [Disaster Distress Helpline](#): 1-800-985-5990

Additional information is available at the Substance Abuse and Mental Health Services Administration (SAMHSA) website.

For additional information and resources on taking care of your mental health after a disaster, visit:

- <https://emergency.cdc.gov/coping/selfcare.asp>
- <https://www.samhsa.gov/disaster-preparedness>

Pet Safety

CDC recommends the following guidance regarding pet safety in emergencies:

- Make a plan. Disasters can happen without warning, so be prepared for the incident.
- Include your pets' needs in your family's emergency supply kit. Prepare a [disaster kit](#) for your pet(s), so evacuation will go smoothly for your entire family. Ask your veterinarian for help putting together your pet's veterinary records including vaccine records.
- Practice sheltering in place and evacuating with your pet. When sheltering at home with your pet, make sure the room chosen is pet friendly.
- Microchip your pet(s) and make sure they wear collars and tags with up-to-date contact information and other identification.
- Find out if local shelters provide accommodations for pets. If you need to evacuate, contact your local emergency management office and ask if they offer accommodations for owners and their pets.
- If you are an individual with a disability with a service animal, you have the legal right to be evacuated and sheltered with your service animal.
 - » Be ready to answer two questions from emergency managers and responders: 1) Is the service required because of a disability? 2) What work or task has the service animal been trained to perform?
 - » Be prepared with food, extra water, ID tags, veterinarian records, and other supplies for your service animal. Do not rely on the shelter to provide food for your service animal.
 - » Emotional support animals (animals that provide comfort or support but are not trained to perform a task) are not covered by the law and may not be allowed to stay with you in a shelter.
- If accommodations are needed for your pet(s):
 - » Contact local veterinary clinics, boarding facilities, and local animal shelters. Visit the Humane Society website to find a shelter in your area.
 - » Contact family or friends outside the evacuation area.
 - » Contact a pet-friendly hotel, particularly along evacuation routes.
- Protect yourself from injury and illness. Disasters are stressful for people and pets alike. Practice safe handling of your pet because your pet may behave differently during a stressful situation.
- Protect yourself and pets from diseases. People and pets are at higher risk for certain diseases during and after natural disasters. . Exposure to inclement weather conditions, stagnant water, wildlife, or unfamiliar animals, and overcrowding in boarding or shelter facilities can put your pet at risk for getting sick. Some of these illnesses can then spread to people.

What if I am separated from my pet?

- Make sure that your family is in a safe location before you begin your search.
- If you are in a shelter that houses pets, inform one of the pet caretakers. Once you have been cleared to leave the shelter and return home, contact animal control about your lost pet.

For more information about pet safety during an emergency, visit <https://www.cdc.gov/healthy-pets/emergency-preparedness/>

Additional Web and MultiMedia Resources

- Hurricanes and other tropical storms
 - » <https://www.cdc.gov/hurricanes/about/index.html>
- Floods
 - » <https://www.cdc.gov/floods/about/index.html>
- Educational materials by topic
 - » <https://www.cdc.gov/natural-disasters/communication-resources/index.html>
- State and local emergency preparedness
 - » <https://www.cdc.gov/readiness/php/index.html>

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National Center for Environmental Health
National Center for Immunization and Respiratory Disease
National Center for Injury Prevention and Control
National Center on Birth Defects and Developmental Disabilities
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For More Information

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Web: <https://www.emergency.cdc.gov/>

Email: preparedness@cdc.gov

CDC-Info

Web: <https://www.cdc.gov/cdc-info/>

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Email Form: <https://wwwn.cdc.gov/dcs/ContactUs/Form>