



# Keeping Food and Water Safe After a Natural Disaster

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Even with our best intentions, we may not be able to avoid natural disasters in our lifetime. Whether it is a fire, flood, ice storm, or other significant weather event, we can take several actions related to food access, food safety, and water quality when responding to natural disasters. The goal is to keep you and your family fed, healthy, and safe when responding to any disaster.

## The power is out. What about my refrigerator and freezer?

Keep the doors closed as much as possible. It will be tempting to check the temperatures inside, but this will only release cold air that will help

keep your food cool and prevent it from spoiling. Keep a thermometer inside your refrigerator and freezer. In the refrigerator, keep the thermometer near the door, which is usually the warmest area in your fridge. If possible, also keep a thermometer that you can see on the outside of your refrigerator and freezer, allowing you to check the temperature and avoid opening the appliances during a power outage. The refrigerator should be 40 degrees F or below, and the freezer should be 0 degrees F or below. Having coolers and ice on hand may be useful if you are concerned about food spoiling. Freeze containers of water and/or gel packs for use during disasters to keep food cold.



## What should I know about water safety and quality after an emergency?

If there is no safe, reliable drinking water source after an emergency, there are two ways you can make water safe. If the water is cloudy, allow any suspended particles to sink to the bottom or pour it through a coffee filter or clean cloth before using either of the following methods. Note that you cannot make safe to use any water contaminated by gas, oil, or other toxic chemicals.

### Boiling Water

Boiling water is the safest method. It kills bacteria and other microorganisms that might be present in the water. Bring all water to a rolling boil, and let it boil for 1 minute. Allow to cool, and place in a clean covered container for storage.

### Bleach Method

You can also treat water with unscented bleach. Always check the container's label. Most household bleach contains 5%–9% sodium hypochlorite as the active ingredient. Do not use scented or “color safe” bleaches or bleaches with added cleaners. For clear water, add a little less than 1/8 teaspoon per gallon of water (1/2 teaspoon for 5 gallons). For cloudy, murky or very cold water, double the amount of bleach. Mix well and let stand for at least 30 minutes before drinking or using. The bleach method will not kill all parasites. Therefore, the boiling water method is the best choice to kill microorganisms.

### Well Water

Local authorities, such as the health department, will have guidance on whether you should take precautions regarding private wells after a flood. There are several specific precautions you should take if the well is suspected to be contaminated. The first is to safely clear hazards away from the area of the well. For inspecting and disinfecting wells, look to reliable resources from the Centers for Disease Control and Prevention (CDC) or the Environmental Protection Agency (EPA).

Some people might buy dry ice or block ice for longer storage needs. If you buy dry ice, ensure you know the right way to handle and store it. You must wear gloves when handling dry ice, otherwise, you may experience cold burns on your skin. If you are placing it in your refrigerator, wrap it in a towel and put it on the lowest shelf. If you are putting it in the freezer, put it on the highest shelf. Do not let dry ice touch any food directly.

Refrigerators will keep food safe for four hours when you keep the doors closed. If power is still out after four hours, put perishable items in a cooler with ice or gel packs to keep them below 40 degrees F. Throw out all meat, poultry, fish, eggs, and leftovers after four hours if coolers and ice are not available.

Freezers will keep food safe for 48 hours if full and 24 hours if half-full. Throw out all perishable foods once thawed. You can safely refreeze foods that have partially thawed but still have ice crystals. There is no food safety issue, but quality and texture will be less than desired.

## What do we need to know about food after a flood?

Flood and storm water have harmful bacteria and microorganisms that can cause illness. It could also have raw sewage and chemical residues such as gasoline, oil, detergents, or pesticides. This means that anything that flood or stormwater touches is unsanitary. You can only clean and sanitize commercially packaged foods. This includes cans, flexible plastic, or metal pouches (like juices, soups, nuts, and dried foods). Begin by removing the label if possible. Wipe away visible dirt, wash with soap, and rinse. Then, sanitize using one of the methods below. Do not try to clean cardboard containers. You should throw these out.

### Boiling Water

Place containers in water and bring to a boil. Boil for 2 minutes.

### Bleach Solution

Place commercially packaged food items in a fresh sanitizing solution made using 1 cup of unscented bleach in 5 gallons of water. Let stand for 15 minutes. Allow to air dry for 1 hour before opening or storing.

Throw away any of the following items that have been exposed to floodwater or stormwater:

- Fresh produce
- Food in packages that are not waterproof
- Food in cardboard or paperboard containers
- Food containers with screw tops, twist caps, snap lids, crimped caps, flip tops, and pull tops
- Home-canned foods
- Wooden kitchen items
- Baby bottle nipples and pacifiers

## How do I prepare food without power?

Preparing food after a disaster might be difficult because of power loss, no water source, and/or no fuel. Depending on what is available to you, there are several options for preparing food out of necessity. Keep in mind that some of these options are meant to be used outside and should never be used to cook food indoors.

- Gas range
- Outdoor grill or smoker (be prepared with charcoal or pellets; outdoors only)
- Wood fireplace (be prepared with wood)
- Campfire (be prepared with wood; outdoors only)
- Camping stove (be prepared with propane or butane; propane outdoors only)

Remember to use what will spoil first (perishable items) and cook only what you will eat unless you have a way to store leftovers. You can eat many commercially packaged foods without heating, such as canned beans and vegetables although it is not preferred. It is possible to heat food directly in a metal can. Remove the label and open the can before heating. Do not place it directly on flames but hold it over the heat source or use a grate.

## Are there resources to help provide food and water after disasters?

Look to local organizations and agencies like Cooperative Extension, food pantries, and faith-based organizations after emergencies for guidance and resources.

When disasters are declared federal emergencies, states can request to use the Disaster Supplemental Nutrition Assistance Program (D-SNAP) in the disaster area. Once approved at the federal level, this program provides one month of food aid for individuals and families who were





affected by the disaster and meet certain criteria. You may not qualify for SNAP outside of a disaster declaration, but certain circumstances may make you eligible for D-SNAP because of substantial disaster-related expenses like:

- Home or business repairs
- Temporary shelter expenses
- Evacuation or relocation expenses
- Personal injury
- Loss of income because of disaster
- Certain scenarios where you have food loss after flooding or power outages

If you receive D-SNAP benefits, you will get an Electronic Benefits Transfer (EBT) card that you can use just like a debit card at local, authorized retail stores to buy allowable food. Often, state agencies and organizations will share information about D-SNAP through the press and local media outlets after a disaster strikes. If you already receive SNAP benefits, you can ask for more benefits through the D-SNAP program if you receive benefits less than the monthly maximum or you can show you have sustained losses during the disaster.

## **I want to donate and help others with food and water after a disaster. What should I know?**

Usually after an emergency or natural disaster there is great need, but there can also be an even greater response from individuals hoping to help. Rather than immediately donating, wait for direction from organized agencies and response teams and consider donating time or energy rather than items, if able.

If you do choose to donate goods or items, confirm what you are donating is needed. Think about providing items that support common donations. For example, consider donating manual can openers instead of canned goods or new baby bottles along with canisters of baby formula.

If you have power and a clean water source, consider providing hot meals and water to those in your community who may be experiencing or responding to a disaster.

## **Ensuring Safe Food and Water**

It is never too early or late to learn strategies to ensure safe food and water when responding to a disaster. Even if the disaster does not personally

affect you, it is helpful to know how to support family and friends wherever they live if a difficult situation arises. With a little knowledge and preparation, you and your loved ones will be able to stay nourished, healthy, and safe when responding to a disaster.

#### **Resources and References:**

Consumer's Guide to Food Safety: Severe Storms and Hurricanes <https://www.fsis.usda.gov/food-safety/safe-food-handling-and-preparation/emergencies/consumers-guide-food-safety-severe>

Food and Water Safety During Power Outages and Floods <https://www.fda.gov/food/buy-store-serve-safe-food/food-and-water-safety-during-power-outages-and-floods#how>

Floods <https://www.ready.gov/floods>

Water, Sanitation, & Hygiene (WASH)-related Emergencies and Outbreaks <https://www.cdc.gov/healthywater/emergency/making-water-safe.html>

Food and Nutrition Service Disaster Resources <https://www.fns.usda.gov/disaster/disaster-assistance>

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- Preparing Your Family and Home Before a Natural Disaster
- Protecting Your Family and Home After a Natural Disaster
- Considerations for Food and Water Before a Natural Disaster
- Keeping Food and Water Safe After a Natural Disaster
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