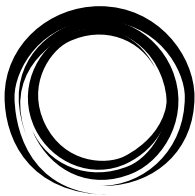


# **BEFORE DISASTER STRIKES...**

## **A GUIDE TO FOOD SAFETY IN THE HOME**



International Association for  
**Food Protection**®

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## **INTRODUCTION**

An emergency reserve of food and water in the home is essential in the event of a natural disaster, power outage, or other crisis. Ensuring the safety and quality of that food and water supply is just as important. Consumption of contaminated food or water may result in illness or death, but careful planning can help ensure a safe food and water supply for you and your family. This pamphlet provides guidelines for assembling an emergency food and water supply kit and for determining whether or not food and water are safe for consumption.

## **PLAN AHEAD**

Planning ahead for situations when you may need an emergency food and water supply is a good idea. The type and amount of food that you may choose to store depends on several factors:

- number of members in household
- special health conditions
- ability to use the food in an emergency
- space for storage
- distance from a local market

### **Items to store for an emergency include:**

- Chlorine bleach, one gallon of 5.25% sodium hypochlorite
- Disposable plates, cups, tableware, plastic bags
- Can opener, pocket knife, other utensils, paper towels, packaged handwipes
- Covered two-quart saucepan
- Canned heat burner and extra fuel
- Charcoal for outdoor cooking
- First aid kit
- Flashlight, extra batteries, and candles

- Matches in a waterproof container
- Radio with batteries
- Personal items: clothes, blankets, and personal hygiene supplies
- Emergency food supply (3-day supply of nonperishable food)
- Emergency water supply (3-day supply; 1 gallon per person per day)

## **Preparing an Emergency Food Supply**

Emergency food supplies should:

- be non-perishable
- require no refrigeration
- require minimal preparation or cooking
- require a minimal amount of water if preparation is needed
- be compact and lightweight

Good examples of emergency foods include:

- Ready-to-eat canned meats, fruits and vegetables
- Soups (canned or dried soups in cups)
- Smoked or dried meats like beef jerky
- Dried fruit
- Juices (canned or powdered)
- Milk (canned, powdered or shelf stable brick pack)
- Staples (sugar, salt, pepper, instant rice and potatoes)
- Ready-to-eat and instant cereals
- High energy foods (peanut butter, jelly, nuts, granola bars)
- Cookies, candy and other snacks
- Foods for infants, elderly and those with special diet needs

Avoid storing foods high in salt that will increase thirst. Also, store single servings or one-meal sizes to avoid leftovers. Canned foods keep almost indefinitely as long as cans are undamaged. However, for the best quality and nutritional value, replace canned goods every year. Finally, emergency food and supplies must be safely stored from pests and rodents. Grains and other dry goods must be stored in a cool, dry location. Tightly sealed bags, plastic containers, and metal canisters are good storage containers for dry goods.

## **Preparing an Emergency Water Supply**

*How much water is needed?*

Most people can live only a few days without water. Your emergency water supply should include a three-day supply of water for each person in your household. Be sure to include water for drinking, brushing teeth, cooking, and cleaning. You will need to store one gallon of water per person per day, on average. This amount may vary depending upon age, physical condition, activity, diet, and climate.

A normally active person needs to drink at least two quarts of water a day. Hot environments can double the amount. Children, nursing women, and ill persons need more.

*What type of container to use to store water?*

Water may be stored in plastic, glass, fiberglass or enamel-lined metal containers. Containers that held toxic (poisonous) substance should never be used for storing emergency water. Intact, durable plastic containers like soft drink bottles or water bottles are best to use. Food-grade plastic buckets or larger containers can also be used. Milk

jugs and other containers that previously held food items are impossible to adequately clean. These types of jugs can harbor disease-causing bacteria and should not be used.

Before storing emergency water, the container and lid must be thoroughly washed with soap and clean, warm water. Rinse the container well with clean, warm water, fill with water, and then treat the water before storage.

*Follow these steps to ensure a safe water supply:*

- Treat water with liquid household chlorine bleach that contains 5.25% sodium hypochlorite (do not use scented or “color safe” bleach or bleaches with added cleaners)
- Add 16 drops (1/4 teaspoon) bleach per gallon of water
- Mix the water and bleach thoroughly
- Cap the container tightly and let stand for at least 30 minutes
- Date each container and label ‘Purified Drinking Water’
- Store in a cool, dark place or in the freezer

Water must be stored away from gasoline, kerosene, pesticides, or other chemicals. Plastic water storage bottles can allow the vapors from these chemicals to enter the bottle and contaminate the water.

Bottled water from the grocery can be stored as emergency water. This water has already been purified and does not need to be treated. Store purchased bottled water until the expiration date marked on the container.

The length of time water can be stored depends on the following:

- original quality of water
- storage temperature
- light exposure

Stored water may eventually develop an unacceptable appearance, taste, or odor. Plan to replace your emergency water supply every three months. In an emergency, water that tastes flat can be aerated by pouring the water back and forth between the container and a clean bottle.

## **Purifying Water in an Emergency**

When a water supply becomes unsafe for drinking, you must treat the water before it can be used for drinking, cooking, or brushing teeth. Consider all tap water unsafe following a flood, regardless of its source, because of overflowing sewers, decomposing animals, street runoff water, etc. Listen for public announcements on the safety of your local water supply before using any water after a flood or other emergency.

There are two ways to treat unsafe water:

- **Boiling** — This is the safest method of purifying water. Water must be placed in a clean saucepan or other cooking container and heated to a rolling boil for 10 minutes. Cover the boiled water and let it cool before use.
- **Adding bleach** — Add 16 drops of bleach (1/4 teaspoon) per gallon of water. Mix thoroughly and let stand (covered) for 30 minutes. If the water does not slightly taste and smell like bleach, repeat the bleach treatment and let stand for another 15 minutes.  
**Note:** you must place water in a clean and washed container, or the bleach will be ineffective.

**Caution: If the water looks cloudy prior to boiling or adding bleach, let the water sit undisturbed so that any suspended particles settle to the bottom. Then filter the water through layers of clean cotton, paper towels, cheese cloth, or coffee filters before boiling or treating with bleach.**

## **Evaluating Refrigerated and Frozen Food**

Following a disaster or power outage, it is extremely important to evaluate the safety of refrigerated and frozen foods in the home.

### **Refrigerated Foods**

Generally, refrigerated foods are safe as long as the power is out only for a few hours. Food will remain chilled four to six hours if the refrigerator door is kept closed. When the power is restored, all food must be checked according to the following guidelines:

*Foods that can be safely stored at room temperature (above 40°F) for a few days:*

- Fresh fruits and vegetables
- Fresh herbs and spices
- Peanut butter and jellies
- Ketchup, olives and relish
- Bread, rolls and muffins
- Certain hard cheeses, such as Cheddar, Swiss, Parmesan, and Romano

*Foods to discard if kept above 40°F for more than 2 hours:*

- Raw or cooked meat, poultry and seafood
- Casseroles, stews or soups
- Meat-topped pizza and lunch meats
- Milk/cream, yogurt and soft cheese (such as Feta and Brie)
- Mayonnaise, tartar sauce or creamy sauce
- Cooked pasta, potato, rice, and salads prepared from these foods



- Cookie dough
- Fresh eggs and egg substitutes
- Cream-filled pastries
- Custard, chiffon or cheese pies
- Gravies
- Any moldy items and food with unusual odor or appearance
- Any foods exposed to flood waters or sewage

## **Frozen Foods**

Generally, food in a freezer will stay frozen for about two days if the freezer is full. To preserve food, keep the freezer door closed as much as possible. Some foods such as meats and vegetables will remain frozen longer than others.

When you do open the freezer, carefully evaluate all foods following these general guidelines:

*Partially thawed foods:*

- Food that still contains ice crystals can be safely refrozen. However, partial thawing and refreezing reduces the quality of most foods.
- Meats that have thawed, **but did not exceed 40°F**, can be cooked and refrozen. Discard if the color or odor is bad, even if the meat is still cold.
- Fruits that still look and smell good may be refrozen.
- Discard thawed vegetables, fish and shellfish, ice cream, and frozen dinners because bacteria multiply rapidly in these foods.

**For more information about the safety of meat and poultry items, please call USDA Meat and Poultry Hotline: 1-800-535-4555.**

## **Evaluating the Safety of Canned Food**

Certain types of disasters, such as wild fires, can cause extensive destruction of food. Smoke odors seem to penetrate any type of container with the exception of commercially canned foods. Many commercially canned foods can be saved if they are not dented or damaged. Discard any cans that are bulging, leaking, have been exposed to intense heat or that have come in contact with industrial or sewage waste. Commercially canned foods that are not damaged must be washed with a strong soap solution and then rinsed before use. Cans may also be soaked in a bleach solution (1 tbsp bleach to a quart of water) for 2 minutes. The cans must be dried before opening. Carefully evaluate all canned items. *When in doubt, throw them away.*

## **UNSAFE FOOD**

Foods defined as “unsafe” cannot be made safe to eat. Discard the following foods:

- Any food that has been exposed to flood waters or sewage, including foods in glass or plastic containers. Sediment and contaminated water can become lodged under cap lips, snaprings, and other spots. The contamination can then be transferred to the food when containers are opened.
- Any food item with a strange color or odor. However, do not rely on the smell or appearance of a food to determine if it is safe to eat.
- Perishable foods left at room temperature (more than 40°F and less than 140°F) for more than 2 hours. Harmful bacteria can grow rapidly at room temperature in foods such as milk and meat. Consuming contaminated food can cause serious illness. *When in doubt, throw food out!*

## **CLEANING AND SANITIZING YOUR HOME AFTER EXPOSURE TO FLOODWATER**

In the event that your home is contaminated with floodwater, you will need to thoroughly clean and sanitize the kitchen area. Follow these basic steps:

- Scrub kitchen counters, pantry shelves, refrigerators, stoves, and all food storage and preparation areas with warm, soapy water. Rinse each area, and then sanitize with a clean cloth dipped in a sanitizing solution of 2 teaspoons of chlorine bleach to 1 quart of water.
- Clean dishes, glassware utensils, and pans, by first washing in warm soapy, water. Rinse each item, and then sanitize by soaking for at least 1 minute in a chlorine solution of 1 tablespoon of household chlorine bleach to 1 gallon of water. Drain, and allow to air dry.
- Do not attempt to clean and sanitize items such as wooden spoons and cutting boards, baby bottle nipples, pacifiers, and disposable tableware and plates. These items can not be effectively cleaned and should be discarded.
- Wash all kitchen towels, wash rags and table cloths with soap and warm water in the washing machine. Use chlorine bleach to sanitize these items following the directions on the bleach container, and your appliance manual.

## **ILLNESS**

Most often people get sick within 4 to 72 hours after consuming contaminated food or water. Symptoms can be nausea, vomiting, diarrhea, fever, and/or cramps. Depending on the length and severity of the symptoms, you may want to consult your physician and notify your local health department.

**Always wash your hands thoroughly with soap and water to prevent illness.**

**EMERGENCY NUMBERS:**

POLICE \_\_\_\_\_

FIRE \_\_\_\_\_

RED CROSS \_\_\_\_\_

HEALTH DEPT. \_\_\_\_\_

PHYSICIAN \_\_\_\_\_

GAS UTILITY \_\_\_\_\_

ELECTRICIAN \_\_\_\_\_

PLUMBER \_\_\_\_\_

SEWER DEPT. \_\_\_\_\_

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E-mail: [info@foodprotection.org](mailto:info@foodprotection.org)