



Considerations for Food and Water Before a Natural Disaster

Heather Norman-Burgdolf, Ph.D., *Dietetics and Human Nutrition*
Annhall Norris, *Family and Consumer Sciences Extension*

When the news talks about the impending ice storm or other potential natural disasters, our first instinct is to run to the store to grab milk and bread. At other times, there is no way to know when a disaster may strike. Regardless, the best time to prepare and plan is now.

Whether it is a fire, flood, ice, or a different natural disaster, there are steps you can take now regarding food and water to make response easier to manage and less stressful. This publication will walk through specific strategies and considerations you can use when preparing for natural disasters

regarding food access, food safety, and water quality. The goal is to keep you and your family fed, healthy, and safe.

What should I have on hand and how much?

All families look different. When storing food and water, consider whether there are infants, children, and/or family members on special diets or who have specific health conditions. Ideally, you should have enough food and water per person stored in the home for at least three days.

Water

For water, aim to store at least one gallon of water per day for each person and each pet in the home. For example, a four-person family with one dog would need 15 gallons of water for three days. Store more water if you live in a hot climate, if someone is pregnant, or if anyone is chronically ill. Avoid glass containers that may break, and do not reuse plastic or cardboard containers that once held milk or juice. Look at expiration dates on bottles and replace them when needed. Over time, chemicals in the bottle can leach into the water and change the taste. Use food grade containers for storage if bottling your own water and replace this water every six months.

Food

Foods should have a long storage life and require little or no cooking or refrigeration. These items are usually commercially canned, shelf-stable, and/or dried. Avoid salty or spicy foods that will increase the need for drinking water. Everyone's list of food items will look different. However, the following items are ideal for a short-term food supply for three days. Keep in mind that canned foods, like beans and vegetables, are ready to eat and do not need to be heated before cooking.

- Canned meats, fish, and beans
- Canned fruits and vegetables
- Canned juices, milk, and soup
- Peanut butter or other nut butters
- Dried foods, jerky, trail mix, and granola
- Nuts and seeds
- Comfort or stress foods like hard candy, chocolate, and coffee

If space and resources allow for it, some families may prefer to set up a two-week food and water supply in their homes. In addition to items

suggested for a three-day supply, consider vitamins, dried fruits, and instant foods like oatmeal, grains, potatoes, and puddings. You can buy milk, soups, and broths in dried and shelf-stable form which provide more nutrition and protein. These items will increase water needs to prepare according to package directions.

Include a list of meals with your food stores you can make using your two-week supply. Planning meals in advance allows you to have at least one balanced meal each day that includes as many food groups as possible. For example, a meal could be vegetable soup or chili with crackers and a fruit cup. This simple meal provides vegetables, fruit, carbohydrates, and protein. Another possibility would be macaroni and cheese with canned peas and dried fruit. When building your two-week supply, buy only a few items each week added to your routine shopping list to spread out the cost over time.

Where should I store food and water?

The environment, temperature, and container affect the storage of food and water. Airtight, moisture-proof containers, like a plastic tote with a locking lid, keep food and water safe and are easy to grab and go. The ideal location is a cool, dry, dark space in your home. The space should not be exposed to sunlight or moisture and the food should be protected from pests and pets. Avoid locations near chemicals or airborne contaminants. Chemicals to avoid include gasoline, paints, and solvents. Airborne contaminants include exhaust from generators and vehicles, smoke from fires, and stoves. Food items should not be stored in a garage since the temperature may rise above 75 degrees F and decrease the quality of the food.

How often should I check dates on labels?

Check stored food and water every 6 months. Consider checking your stored items each time you check smoke detector batteries, change air filters, or do other activities that ensure home safety. Rotate

items for best quality and nutritional value. If dates are close, rotate those into your routine kitchen practices and replace them with new items.

Date labels will differ on items. The most common date labels are Sell-By, Use-By, and Best-if-Used By. None of these are related to food safety, but rather food quality.

- Sell-By tells a store how long to display an item for sale at best quality.
- Use-By and Best-if-Used-By are recommended by the manufacturer for best quality.

What else should I have besides food and water?

Even with ample food and water supplies, there are more items that you will need to make your stored food ready to eat. Consider items that are useful for food preparation without power and personal hygiene. For example, it will be difficult to eat canned foods without a can opener that can function without power.

The list of items you and your family may need depends on age, life stage, and health status. There may be very different items for a family with infants and small children compared to a family with only adults. A few helpful items include:

- Batteries in a variety of sizes
- Flashlights or reliable light source
- Manual can opener
- Disposable plates and utensils
- Waterproof matches
- Hand sanitizer and moist towelettes
- Toilet paper
- First aid kit
- Unscented bleach and measuring spoon
- Zip top bags in a variety of sizes



What should I do if I have a couple of days to prepare?

In some cases, severe weather forecasts may provide two or three days of notice to prepare for events. Consider refilling prescription medications and checking the dates and amounts of stored food and water. Ensure you know where your emergency kit is stored and that it is easily accessible. Rather than panic buying items, consider other items you may need to have if you are unable to get to the store. These items may include pet food, baby food, or formula. Prioritize eating perishable foods (fresh fruits, vegetables, and dairy) in your home if you were to lose power and the ability to refrigerate foods.

What should I do if I don't have time to prepare?

There may be some instances where there is no time to prepare for a natural disaster or you only have a few hours to prepare. Identify what foods will spoil fastest (perishables) and prioritize those with meals and snacks. Save items you can eat with no cooking or preparation in case you lose power. Be creative with pantry staples you have on hand. For example, you can use canned beans in a tortilla with canned corn for a filling taco. If there is time, prepare a recipe using items you have available to provide a food option if you were to lose power. A quick recipe for breakfast or a snack would be homemade muffins that include nuts and/

or seeds. This provides food that does not require refrigeration, and nuts and seeds will increase caloric content and nutrition.

Are there other things I should consider?

Every home and the people who live there have different needs which will affect how you prepare for an emergency. Here are a few other considerations when taking steps to prepare food and water in case of an emergency.

Health conditions

Certain health conditions are affected significantly by food. For example, limiting sodium in the diet is important for people who are actively managing their blood pressure. Many shelf-stable and canned foods may be high in sodium, which is used as a preservative. When stocking canned and dried foods, look for low- or no-sodium options. Similarly, people managing blood sugar may need to be aware of the types of foods they store and look for whole-grain options or no-added-sugar options when choosing carbohydrate foods. Maintaining blood sugar levels may require frequent snacks. Going for extended periods of time without eating may cause issues in blood sugar management.

Prescription medications

Although food is important to provide nourishment and energy, you might also need food to take certain prescription medications. Consider whether you have enough of your prescribed medication on hand if there is an emergency or how you would manage without an immediate refill. These are questions to ask your health-care provider or pharmacist. Certain medications, like insulin, may require refrigeration. Ensure you have a backup plan to keep medications cool if there is a power outage.

Medical equipment

Establish a plan for powering electronic or battery-dependent medical devices. Examples include breathing machines, power wheelchairs and

scooters, oxygen devices, home dialysis machines, and breast pumps.

Infants

If there are infants or young toddlers in the home, consider whether you have a clean water source for preparing formula. Figure out if there are supplies to clean and sanitize bottles and baby items. If the baby is breastfed, do you need an alternate plan for storing fresh or frozen breastmilk if there is a power outage? Consider whether you need baby food in your emergency food supplies.

Pets

Just like humans, you need to consider pets when preparing for emergencies. Think about what supplies you need in addition to shelf-stable pet food and any medications your pet may take. Make sure leashes and pet carriers or other ways to safely transport your pet are in a place where you can grab them quickly in case you need to leave your home in a hurry.

Put Your Preparation into Action

Picture your home and the people in it who may be affected by an emergency or natural disaster. Do you know where your emergency kit and stored food and water are? Is it easily accessible? Do you have a plan to regularly check supplies? What are important considerations for you and your family? Thinking through these questions will allow you to know where to begin and turn your preparation into action for food and water safety in the face of a disaster.

Resources and References:

Centers for Disease Control and Prevention, Natural Disasters and Severe Weather Food and Water Needs <https://www.cdc.gov/disasters/foodwater/prepare.html>

Ready.gov <https://www.ready.gov/>

Food and Drug Administration: 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>

FEMA <https://www.ready.gov/>

American Red Cross <https://www.redcross.org/get-help/how-to-prepare-for-emergencies.html>

This publication is part of the “In the Face of Disaster” Publication Series:

- 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
- Financial Considerations Before a Natural Disaster
- Financial Management After a Natural Disaster
- Considerations for Older Adults and People with Disabilities Before a Disaster
- Helping Older Adults and People with Disabilities Cope After a Disaster
- Navigating Trauma After a Natural Disaster

Copyright © 2023 for materials developed by University of Kentucky Cooperative Extension. This publication may be reproduced in portions or its entirety for educational or nonprofit purposes only. Permitted users shall give credit to the author(s) and include this copyright notice.

Educational programs of Kentucky Cooperative Extension serve all people regardless of economic or social status and will not discriminate on the basis of race, color, ethnic origin, national origin, creed, religion, political belief, sex, sexual orientation, gender identity, gender expression, pregnancy, marital status, genetic information, age, veteran status, or physical or mental disability.