



Which Foods Should I Keep or Discard During a Power Outage?

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Key Takeways

- Food stored above 40°F for too long can grow harmful bacteria.
- Keep doors closed; fridge lasts ~4 hours, freezer up to 48 hours.
- Use thermometers and keep freezers full to stay cold longer.
- Eat meat, dairy, and leftovers first since they spoil fastest.
- If unsure about food safety, throw it out.

Virginians are no strangers to severe weather events. For example, Hurricane Helene in 2024 resulted in widespread power outages across the Commonwealth. Before a power outage strikes, it is important to be prepared, including how to preserve refrigerated and frozen foods and avoid wasting hundreds of dollars in groceries.

Microorganisms are naturally present in many foods. When food is in the temperature danger zone (40-140°F) for long enough, microbes can grow and cause your food to spoil (Figure 1). If foodborne pathogens are present, illness may result. Additionally, when frozen foods thaw, they release moisture and nutrients that can support microbial growth.

This fact sheet provides practical guidance on keeping your food out of the temperature danger zone for as long as possible during a power outage. We will also address how to prioritize the order of consumption of foods to minimize food waste and prevent foodborne illness.

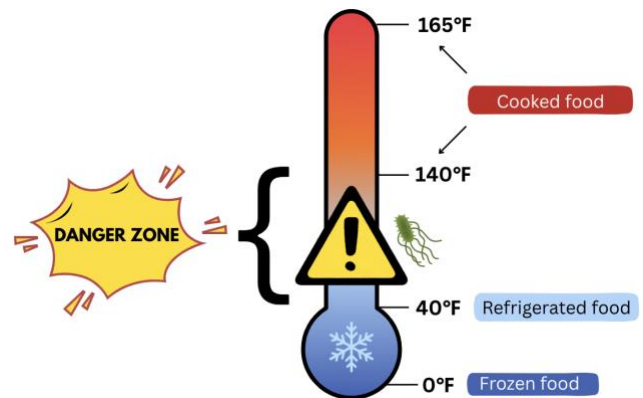


Figure 1: A visual representation of the food safety temperature danger zone. (Created by Ellen Gabriel using Canva)

What Should I do to Prepare for a Power Outage?

Begin preparing at least 1–2 days before a severe weather event, or before the start of any major weather-related season (e.g., hurricane season).

One of the most important preparation steps is placing an appliance thermometer in the refrigerator and freezer (USDA FSIS, 2013; FDA, 2024). Your refrigerator should be set to a maximum of 40°F or below, and your freezer should be set to 0°F or below. These temperatures serve as your baseline for safe food storage, and appliance thermometers will allow you to monitor the temperatures inside your appliances during a power outage.

You can even get appliance thermometers that sync with your smartphone or tablet via an app, allowing you to remotely monitor the temperature inside your

refrigerator and freezer 24/7 without opening the doors. If a power outage occurred while you were away from home, an appliance thermometer could indicate whether one occurred, how much the temperature fluctuated in the refrigerator or freezer, and how long it lasted. All these measurements are important to monitor when determining the safety of your food during and after a power outage.

Another important strategy is to keep your freezer as full as possible, especially with higher-risk foods like meats, dairy, and egg products, which are more likely to support pathogen growth if temperature abuse occurs (USDA FSIS, 2013; FDA, 2024). Filling the freezer to capacity will keep food colder and safer for longer.

In addition, it is recommended to fill containers (plastic bottles, gallon jugs, plastic bags, etc.) with water and place them in any remaining empty spaces in your freezer (USDA FSIS, 2013; FDA, 2024). Frozen water containers act as ice packs, helping to maintain cold temperatures during a power outage. This same principle applies to refrigerators: storing water bottles in the main compartment or in the door can help prevent temperature fluctuations when the refrigerator is opened. This is because water has a high heat capacity and acts as a temperature stabilizer, reducing the impact of warm air on food (Chojnacky et al., 2009).



Figure 2: A refrigerator door with shelves filled with plastic water bottles that will act as a temperature stabilizer (Chojnacky et al., 2009). (Source: Ellen Gabriel)



Figure 3: A full freezer containing frozen food items, an icemaker, and water bottles placed strategically to fill empty spaces. (Source: Ellen Gabriel)

Store food toward the back of the freezer, where temperatures remain colder longer (USDA FSIS, 2013).

How Long Will My Food Last Once My Power Goes Out?

Once a power outage strikes, perishable refrigerated foods are generally safe for up to 4 hours without power, if the door remains closed. This assumes internal temperatures rise above 40°F. Food in a full freezer will generally remain safe for ~48 hours (24 hours if half full) as long as the door remains closed (USDA FSIS, 2013; FDA, 2024; U.S. Department of Health and Human Services, 2024). However, you can make better-informed decisions about how long your food will last if you have an appliance thermometer that lets you monitor the temperature in your refrigerator and freezer. With this, you can pinpoint the moment the temperature exceeds 40°F and start the countdown then.

Consider placing a note on the refrigerator indicating when the power went out. That way, you'll be able to identify when the food is no longer safe to consume, and the note will serve as a reminder before opening the refrigerator or freezer door.

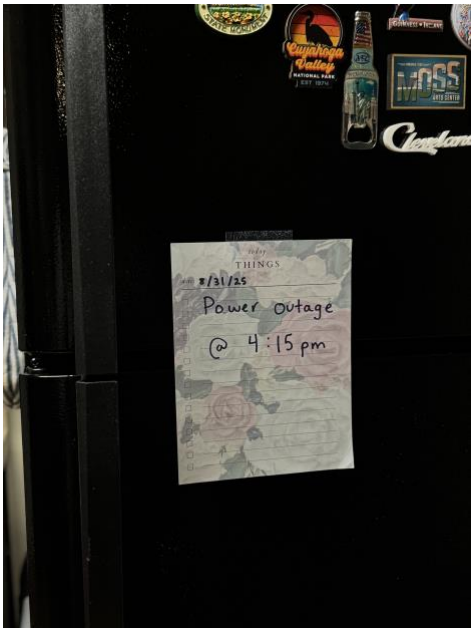


Figure 4: An example of a note to leave on your refrigerator during a power outage that specifies the date and time that the outage occurred. (Source: Ellen Gabriel)

If you lost power while asleep or away from home, try to identify the time when others in the surrounding area lost power. If you cannot identify a time, it becomes difficult to determine whether the food is still safe. An appliance thermometer that lets you remotely monitor your refrigerator and freezer temperatures on your electronic device would be paramount in this scenario.

Can I Open My Fridge When the Power Is Out?

While it may be tempting, avoid opening the refrigerator or freezer as much as possible (USDA FSIS, 2013; FDA, 2024). Opening the door will invite warm air, increasing your food's exposure to danger-zone temperatures. To help keep doors closed, consider placing a visible reminder (such as tape or a sign) on the refrigerator. This is a great idea if you live with someone who may forget about the power outage and would otherwise accidentally open the refrigerator or freezer. A tape seal can also indicate if someone opened the door if the tape has been broken.



Figure 5: Masking tape used to tape the refrigerator and freezer doors shut can remind you not to open them. (Source: Ellen Gabriel)

Can I Put My Food Outside When?

If your power goes out during the winter and you are thinking about storing your food outside in the snow to keep it cold, this can expose food to animals and unsafe temperature fluctuations (USDA FSIS, 2013). Instead, consider leaving containers of water outside if you expect freezing conditions and use them as ice packs to keep your food cold for longer (USDA FSIS, 2013). Use a cooler with ice for immediate-use foods if needed.

What foods Will Go Bad Sooner After a Power Outage?

You only have four hours from when your food is stored at a temperature greater than 40°F to consume the following food items if you can prepare them safely, so you may want to prioritize eating first: raw or leftover cooked meats, seafood, and tofu; any leftover meals; soft, shredded, or low-fat cheeses; milk, cream, yogurt, sour cream, and cheesecake; eggs and custards, fresh cut fruits and vegetables, creamy sauces (like mayonnaise), fish/oyster sauce, opened pasta sauce, refrigerated doughs, cream-filled pastries, packaged leafy greens, opened

vegetable juice, and garlic stored in oil (USDA FSIS, 2013; U.S. Department of Health and Human Services, 2024).

What Foods Will Last Longer After a Power Outage?

Shelf-stable foods (those that do not require refrigeration) like baked goods (without cream fillings), waffles, pancakes, bagels, hard or processed cheeses, butter or margarine, opened fruit juices, and nuts are generally safe to consume after the 4-hour window during which food is stored above 40°F. Also, any frozen foods that have thawed but still have ice crystals can be refrozen or safely consumed (USDA FSIS, 2013; U.S. Department of Health and Human Services, 2024).

Stock up on non-perishable foods (items you can store in the pantry) in case the power outage lasts longer than 48 hours, at which point neither your refrigerated nor your frozen foods will be safe to eat. Examples include canned foods, crackers, peanut butter, and cereal. Keep a manual can opener available. If there is a risk of flooding, keep food away from the ground and elevated on shelves. If dry foods become wet, they will spoil much faster.

Do not consume food that develops an off odor, visible mold, or unusual appearance (USDA FSIS, 2013; U.S. Department of Health and Human Services, 2024). Never taste food to determine whether it is still good to eat; when in doubt, throw it out!

Refer to Table 1 for a more comprehensive overview of which foods to keep or discard after temperature abuse.



Figure 6: Spoiled cucumbers. (Source: Ellen Gabriel)

Table 1: What to do with refrigerated food during a power outage.

Food	Exposed to temperatures over 40°F for 4 hours or more?
Meat and seafood	Discard
Leftovers (casserole, soup, pizza, pasta, rice, cooked vegetables, etc.)	Discard
Soft cheese (brie, cottage cheese, mozzarella, etc.)	Discard
Hard cheese (Swiss, parmesan, cheddar, etc.)	Keep
Other dairy (milk, cream, yogurt, etc.)	Discard
Butter/margarine	Keep
Eggs	Discard
Fresh fruits and vegetables	Keep, but discard if pre-cut
Creamy condiments (mayonnaise, cream-based dressings, tartar sauce, etc.)	Discard
Non-creamy condiments (ketchup, jelly, soy sauce, etc.)	Keep
Grains/breads (muffins, tortillas, etc.)	Keep
Pastries with cream	Discard

(USDA FSIS, 2013; U.S. Department of Health and Human Services, 2024)

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Additional Resources

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

<https://www.fda.gov/emergency-preparedness-and-response>

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