

Food Safety After a Power Outage

The Water & Food chapter mentions the 40°F safety line in one sentence. This guide is the actual decision-making: exactly how long refrigerated and frozen food stays safe, what order to eat it in so less of it goes to waste, when it's safe to refreeze, and how to buy extra time with ice or dry ice if the outage runs long.

The core rule

Bacteria that cause foodborne illness grow fastest between 40°F and 140°F, the "danger zone." The question that matters isn't how the food looks, smells, or tastes, it's how long it sat above 40°F and for how long. **Never taste food to decide whether it's safe;** many of the bacteria that make food dangerous don't change its appearance, smell, or flavor at all.

Use an appliance or food thermometer, not a guess, to check the actual temperature of anything you're unsure about after an outage.

How long you actually have

Appliance	Door kept closed	Action
Refrigerator	Safe up to 4 hours	After 4 hours without power, discard perishables: meat, poultry, fish, eggs, dairy, and leftovers
Freezer, full	Holds a safe temperature about 48 hours	Keep the door closed; don't open it to check unless necessary
Freezer, half full	Holds a safe temperature about 24 hours	Same rule, less buffer, since there's less frozen mass to hold the cold

Keep the door closed as much as possible in every case, opening it to look resets the clock on how fast the interior warms.

Buying more time

- **Before an outage:** keep the freezer as full as practical; a full freezer holds cold twice as long as a half-empty one. Freezer packs, bags of ice, or even frozen bottles of water tucked into empty space all add thermal mass that extends how long everything stays cold.
- **During a longer outage:** block ice or dry ice can extend a freezer's safe window substantially. As a rough guide, **50 pounds of dry ice can hold an 18-cubic-foot freezer for about 2 days.**

Dry ice safety

Dry ice is solid carbon dioxide at about -109°F. Never touch it with bare skin, it causes frostbite-like burns instantly; handle it with gloves or a thick towel. It sublimates directly into CO₂ gas, which displaces oxygen in a small, sealed space, so keep the room ventilated and never store it in a fully airtight cooler or a small closed room where someone might be overcome without warning. Keep it away from children and pets.

What to eat first

This is the part that's easy to overlook while you're focused on what's safe: the *order* you eat things in determines how much of your food survives the outage at all. FEMA and the Red Cross both give the same sequence:

1. **Fresh, perishable food first.** Refrigerated meat, dairy, produce, and leftovers have the shortest safe window (4 hours per the table above), so they're either eaten now or lost regardless of what else happens. Cooking perishable meat fully, even without a clear plan to eat all of it immediately, keeps the option to safely refrigerate or eat the cooked leftovers a bit longer than the raw ingredients would have lasted.
2. **Then the freezer.** A full freezer holds a safe temperature for about 48 hours, giving genuinely more runway than the refrigerator, but it's still a countdown, not a stockpile. Work through freezer contents next, prioritizing anything that's started to thaw over anything still solid.
3. **Shelf-stable food last.** Canned goods, dry staples, and other non-perishables aren't racing a clock the way refrigerated and frozen food are, so they're the correct thing to hold in reserve while the time-sensitive food gets used first.

Following this order does two things at once: it minimizes actual food waste, and it naturally preserves your longest-lasting supply (the shelf-stable Tier 1 stock) for whatever comes after the refrigerator and freezer contents are gone, exactly when you'll need it most if the outage runs long.

When the power comes back

Condition	Safe to refreeze or keep?
Still has ice crystals, or reads 40°F / 4°C or below	Yes, safe to refreeze or refrigerate. Quality (texture, taste) may suffer, but it's safe.
Above 40°F but you're not sure how long	If it's been more than 2 hours above 40°F, discard it. When in doubt, throw it out.
Refrigerator perishables after 4+ hours without power	Discard: meat, poultry, fish, eggs, dairy, leftovers, cut produce
Shelf-stable pantry items (canned goods, dry goods) that weren't submerged or heat-damaged	Safe to keep; the danger zone rule applies to perishables, not sealed shelf-stable food

When in doubt, throw it out

This isn't overcaution for its own sake. The cost of throwing out food that might have still been fine is inconvenience; the cost of eating food that wasn't is a foodborne illness on top of whatever emergency is already underway, at exactly the moment medical care may be hardest to reach. Treat any real uncertainty as a "discard," not a coin flip.

Before the next outage

Two cheap habits do most of the work: keep an appliance thermometer in both the refrigerator (40°F or below) and freezer (0°F or below) year-round so you're reading an actual number instead of guessing, and keep the freezer stocked with ice packs or water bottles in any empty space. Both are already on the site's own Shopping List under Water & Food.

Sources

- USDA FoodSafety.gov, "Food Safety During Power Outage" (4-hour refrigerator rule, 48/24-hour freezer rule, refreezing guidance): FoodSafety.gov
- USDA Food Safety and Inspection Service, keeping food safe during emergencies: USDA FSIS
- CDC, "Keep Food Safe After a Disaster or Emergency": CDC
- FDA, food and water safety during power outages and floods: FDA

- Dry ice quantity guidance (50 lbs / 18 cu ft freezer / 2 days) and handling safety: USDA
- Eating order during a power outage (fresh, then freezer, then non-perishable): Ready.gov; American Red Cross