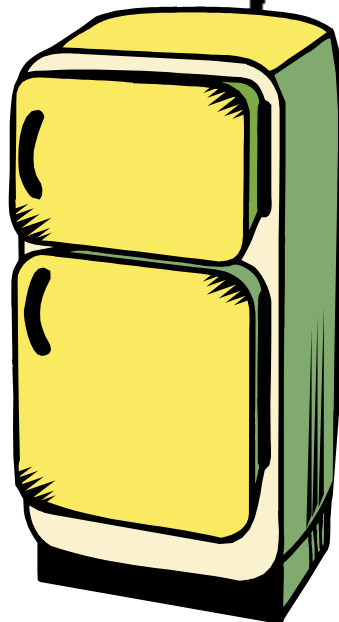


# Keeping Food Safe During Power Outages

It may be an electrical or winter ice storm – or something less devastating, such as the freezer discovered with its door open. The safety of food may be a problem following any condition where electricity has been interrupted for an extended period of time. The following information is intended to help you judge the safety of your food after a power failure.

- Keep an appliance thermometer in the refrigerator and freezer at all times to see if food is being stored at safe temperatures (40°F for the refrigerator; 0°F for the freezer). The key to determining the safety of foods in the refrigerator and freezer is how cold they are. If you're not sure a particular food is cold enough, use an instant-read food thermometer to check its temperature. Most foodborne illness is caused by bacteria that multiply rapidly at temperatures above 40°F.
- Keep the refrigerator and freezer doors closed as much as possible to maintain the cold temperature. The refrigerator will keep food safely cold for about 4 to 6 hours. A full freezer should keep food safe about 2 days; a half-full freezer, about 1 day. Add bags of ice or dry ice to the freezer if it appears the power will be off for an extended time. 25 pounds of dry ice should stabilize a 10-cubic foot full freezer for 2 to 4 days. Wear heavy gloves to handle dry ice as the super-cold temperature can easily damage your skin.
- Never taste food to determine its safety. Some food may look and smell fine, but if they have been at room temperature longer than two hours, bacteria able to cause foodborne illness can begin to multiply very rapidly. Some types will produce toxins or poisonous substances, which are not destroyed by cooking and can possibly cause illness.

For more information about food safety during an emergency or other food safety topics, contact the Consumer HelpLine of Cornell Cooperative Extension – Suffolk County. An information specialist is available Monday through Friday from 9 a.m. to 12 Noon. Call 631-727-7850, ext. 374 or email at [jl9@cornell.edu](mailto:jl9@cornell.edu).



## Food Storage Q & A

**Q.** *May I refreeze the food in the freezer if it thawed or partially thawed?*

**A.** Yes, the food may be safely refrozen if the food still contain ice crystals or feels as cold as if refrigerated. Discard any items in either the freezer or the refrigerator that have come into contact with raw meat juices. Partial thawing and refreezing may reduce the quality of some food but the food will remain safe to eat. Refer to the attached chart for specific recommendations.

**Q.** *Are there any refrigerated foods that would be safe to eat a day or two after a power outage?*

**A.** The following foods should keep at room temperature a few days: butter or margarine; hard and processed cheeses; fresh fruits and vegetables; pasteurized fruit juices; opened jars of vinegar-based salad dressings, jelly, relish, mustard, ketchup, and peanut butter; cakes except cream-cheese frosted or cream filled. Discard anything that has an unusual odor or turns moldy.

**Q.** *A snowstorm knocked down the power lines; can I put the food from the refrigerator and freezer out in the snow?*

**A.** Not a good idea! Frozen food can thaw if it is exposed to the sun's rays even when the temperature is very cold. Refrigerated foods may become too warm and foodborne bacteria could grow. The outside temperature could vary hour by hour. Additionally, perishable items could be exposed to unsanitary conditions or to animals. Take advantage of the cold temperatures by making ice. Fill buckets or empty milk cartons with water and leave them outside to freeze. Then put the ice in your refrigerator or coolers.

# Refrigerator Foods

## When to Save and When to Throw It Out

**General Rule:** As long as the power has been out less than 2 hours, all foods should be safe.

<b>FOOD</b>	<b>Held above 40 °F for over 2 hours</b>	<b>FOOD</b>	<b>Held above 40 °F for over 2 hours</b>
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### MEAT, POULTRY, SEAFOOD

- Fresh or leftover meat, poultry, fish, or seafood . . . . . Discard
- Thawing meat or poultry . . . . . Discard
- Meat, tuna, shrimp, chicken, or egg salad . . . . . Discard
- Gravy, stuffing . . . . . Discard
- Lunchmeats, hot dogs, bacon, sausage, dried beef . . . . . Discard
- Pizza – with any topping . . . . . Discard
- Canned hams labeled “Keep Refrigerated” . . . . . Discard
- Canned meats, opened . . . . . Discard

### CHEESE

- Soft Cheeses: blue/bleu, Roquefort, brie, Camembert, colby, cottage, cream, Edam, Monterey Jack, ricotta, mozzarella, Muenster, Neufchatel . . Discard
- Hard Cheeses: cheddar, Swiss, Parmesan, provolone, Romano . . . Safe
- Processed Cheeses . . . . . Safe
- Shredded Cheeses . . . . . Discard
- Low-fat Cheeses . . . . . Discard
- Grated Parmesan, Romano, or combination (in can or jar) . . . . Safe

### DAIRY

- Milk, cream, sour cream, buttermilk, evaporated milk, yogurt . . . . . Discard
- Butter, margarine . . . . . Safe
- Baby formula, opened . . . . . Discard

### EGGS

- Fresh eggs, hard-cooked in shell, egg dishes, egg products . . . . . Discard
- Custards and puddings . . . . . Discard

### CASSEROLES, SOUPS, STEWS . . . Discard

### FRUITS

- Fresh fruits, cut . . . . . Discard
- Fruit juices, opened . . . . . Safe
- Canned fruits, opened . . . . . Safe
- Fresh fruits, coconut, raisins, dried fruits, candied fruits, dates . . Safe

### SAUCES, SPREADS, JAMS

- Opened mayonnaise, . . . . . Discard  
tartar sauce, horseradish . . . . . if above  
50 °F for over 8 hrs.
- Peanut butter . . . . . Safe
- Jelly; relish; taco, barbecue & soy sauce; mustard; catsup; olives . . . Safe
- Worcestershire sauce . . . . . Discard
- Fish sauces (oyster sauce) . . . . . Discard
- Hoisin sauce . . . . . Discard
- Opened vinegar-based dressings . . Safe
- Opened creamy-based dressings . . Discard
- Spaghetti sauce, opened jar . . . . Discard

### BREAD, CAKES, COOKIES, PASTA

- Bread, rolls, cakes, muffins, quick breads . . . . . Safe
- Refrigerator biscuits, rolls, cookie dough . . . . . Discard
- Cooked pasta, spaghetti . . . . . Discard
- Pasta salads with mayonnaise or vinaigrette . . . . . Discard
- Fresh pasta . . . . . Discard
- Cheesecake . . . . . Discard
- Breakfast foods – waffles, pancakes, bagels . . . . . Safe

### PIES, PASTRY

- Pastries, cream filled . . . . . Discard
- Pies – custard, cheese filled, or chiffon . . . . . Discard
- Pies, fruit . . . . . Safe

### VEGETABLES

- Fresh mushrooms, herbs, spices . . Safe
- Greens, pre-cut, pre-washed, packaged . . . . . Discard
- Vegetables, raw . . . . . Safe
- Vegetables, cooked . . . . . Discard
- Vegetable juice, opened . . . . . Discard
- Baked potatoes . . . . . Discard
- Commercial garlic in oil . . . . . Discard

Potato Salad . . . . . Discard

# Frozen Food

## When to Save and When to Throw It Out

FOOD	Still contains ice crystals and feels as cold as if refrigerated	Thawed. Held above 40°F for over 2 hours
<b>MEAT, POULTRY, SEAFOOD</b>		
• Beef, veal, lamb, pork, and ground meats . . . . .	Refreeze . . . . .	Discard
• Poultry and ground poultry . . . . .	Refreeze . . . . .	Discard
• Variety meats (liver, kidney, heart, chitterlings) . . . . .	Refreeze . . . . .	Discard
• Casseroles, stews, soups . . . . .	Refreeze . . . . .	Discard
• Fish, shellfish, breaded seafood products . . . . .	Refreeze. However, there will be some texture and flavor loss.	Discard
<b>DAIRY</b>		
• Milk . . . . .	Refreeze. May lose some texture.	Discard
• Eggs (out of shell) and egg products . . . . .	Refreeze . . . . .	Discard
• Ice cream, frozen yogurt . . . . .	Discard . . . . .	Discard
• Cheese (soft and semi-soft) . . . . .	Refreeze. May lose some texture.	Discard
• Hard cheeses . . . . .	Refreeze . . . . .	Refreeze
• Shredded cheeses . . . . .	Refreeze . . . . .	Discard
• Casseroles containing milk, cream, eggs, soft cheeses . . . . .	Refreeze . . . . .	Discard
• Cheesecake . . . . .	Refreeze . . . . .	Discard
<b>FRUITS</b>		
• Juices. . . . .	Refreeze . . . . .	Refreeze. Discard if mold, yeasty smell, or sliminess develops.
• Home or commercially packaged . . . . .	Refreeze. Will change texture and flavor . . . . .	Refreeze. Discard if mold, yeasty smell, or sliminess develops.
<b>VEGETABLES</b>		
• Juices. . . . .	Refreeze . . . . .	Discard after held above 40°F for 6 hours.
• Home or commercially packaged or blanched . . . . .	Refreeze. May suffer texture and flavor loss . . . . .	Discard after held above 40°F for 6 hours.
<b>BREADS, PASTRIES</b>		
• Breads, rolls, muffins, cakes (without custard fillings) . . . . .	Refreeze . . . . .	Refreeze
• Cakes, pies, pastries with custard or cheese filling . . . . .	Refreeze . . . . .	Discard
• Pie crusts, commercial and homemade bread dough . . . . .	Refreeze. Some quality loss may occur . . . . .	Refreeze. Quality loss is considerable.
<b>OTHER</b>		
• Casseroles – pasta, rice based . . . . .	Refreeze . . . . .	Discard
• Flour, cornmeal, nuts . . . . .	Refreeze . . . . .	Refreeze
• Breakfast items – waffles, pancakes, bagels . . . . .	Refreeze . . . . .	Refreeze
• Frozen meal, entree, specialty items (pizza, sausage and biscuit, meat pie, convenience foods). . . . .	Refreeze . . . . .	Discard

# Handling Food through Hurricanes and Floods

Flooding often accompanies hurricanes. People living in areas subject to floods should be ready to raise refrigerators or freezers by putting cement blocks under their corners. Canned goods and other foods kept in a basement or low cabinets should be moved higher.

Flood waters may carry silt, raw sewage, oil or chemical waste. If foods have been in contact with flood waters, use the information below to determine their safety.

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## DISCARD

- Meat, poultry, fish and eggs
- Fresh produce
- Home canned foods
- Commercial glass jars or food or beverages including "never opened" jars with waxed cardboard seals such as mayonnaise and salad dressing; pop tops; or peel-off tops.
- All foods in cardboard boxes, paper, foil, cellophane or cloth
- Spices and seasonings
- Opened containers and packages
- Flour, sugar, grain, coffee and other staples in canisters
- Cans dented, leaking, bulging or rusted

## SAVE

- Undamaged commercial canned goods are safe if sanitized.  
**To sanitize cans**, first mark contents on can lid with indelible ink. Remove labels – paper can harbor dangerous bacteria. Then wash cans in a strong detergent solution using a scrub brush. Finally, immerse container for 15 minutes in a solution of 1-teaspoon chlorine bleach per quart of room temperature water. Air-dry before opening.

- Sanitize dishes and glassware the same way. To disinfect metal pans and utensils, boil them in water 10 minutes. Discard wooden spoons, plastic utensils, baby bottle nipples and pacifiers.

## How to treat tap water if it becomes contaminated

- Boiling is the best way to purify water that is unsafe because of bacteria. Place the water in a clean container and bring to a full boil and continue boiling for at least 3 minutes. After the water has cooled, fill clean containers.
- Liquid bleach method can be used if boiling is not possible because of lack of fuel, electricity, or equipment. Use liquid bleach that contains 5.25 percent sodium hypochlorite and that has no added cleaners. Place the water in a clean container and add bleach. For each gallon of water, add 16 drops or ¼ teaspoon. Mix thoroughly and allow to stand for at least 30 minutes before using the water. The water should have a slight bleach odor after standing. If not, repeat the bleach treatment.
- **NOTE:** Chlorine will not kill parasites such as Cryptosporidium or Giardia, which may be present in flood waters. Boiling is the best treatment in these situations.

**Source:** Food Safety and Inspection Service, USDA, 4/02



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