



UNIVERSITY OF  
FLORIDA

IFAS EXTENSION

## What To Do When Your Freezer Stops

Compiled by Judith A. Wakefield  
Indian River County Extension  
1028 20 Place, Suite D  
Vero Beach, FL 32960  
772-770-5030

Sooner or later, every home has a power outage. The electricity may have gone off during a thunder or tropical storm, or the refrigerator may simply quit working. Whatever the cause, dealing with the food involved when the unit is off requires a knowledge of food safety.

When the freezer is working it should keep food at 0° F or colder but if the power is off due to electrical or mechanical problems, safe use of the food in the freezer is important for the health of your family.

### **Safety of Frozen Foods After a Power Failure**

If you know there is a good likelihood that the power will be off for an extended period of time (for instance if a hurricane is predicted) set the refrigerator and freezer temperature to the coldest setting to build up a cooling reserve.

### **Thawing Rate**

With the door closed, food in a full freezers will stay at freezing temperatures about 2days; a half-full freezer about 1 day.

It will stay below 40 degrees (where food can thaw but will be at a safe temperature) up to three days, even in summer. Thawing rate depends on:

- The amount of food in the freezer. A full freezer stays cold longer than a partially-full one.
- The kind of food. A freezer filled with meat stays cold longer than a freezer filled with baked goods.
- The freezer. A well-insulated freezer keeps food frozen longer than one with little insulation.
- Size of freezer. The larger the freezer, the longer food stays frozen.

If the freezer isn't full group packages so they form an "igloo" to protect each other. Place them to one side or on a tray so that if they begin thawing, their juices won't get on other food. Then keep the freezer door closed.

Food in well-fitted, well-insulated 4-cubic-foot home freezers will not begin to spoil in fewer than three days; in a 12- to 36-cubic-foot freezer, food will not begin to spoil in fewer than five days, and may be all right seven or eight days if the food is very cold.

If you think power will be out for several days, try to find some dry ice. Although dry ice can be used in the refrigerator, block ice is better. You can put it in the refrigerator's freezer unit along with your refrigerated perishables such as meat, poultry, and dairy items.

### Handling Dry Ice

- To locate a distributor of dry ice, look under "ice" or "carbon dioxide" in the phone book.
- Buy 25 pounds of dry ice to keep a 10 cubic-foot freezer full of food safe 3 to 4 days; half full, 2 to 3 days. A full 18 cubic-foot freezer requires 50 to 100 pounds of dry ice to keep food safe 2 days; half full, less than 2 days.
- Handle dry ice with caution and in a well-ventilated area. Don't touch it with bare hand; wear gloves or use tongs.
- Wrap dry ice in brown paper for longer storage. One large piece lasts longer than small ones.
- The temperature of dry ice is  $-216^{\circ}$  F; therefore, it may cause freezer burn on items located near or touching it. Separate dry ice from the food using a piece of cardboard.
- 

Open the freezer only for adding dry ice. Covering the freezer with blankets, quilts, crumpled newspaper or excelsior will help keep the cold in. Do not cover air vent openings.

### **Even If Food Has Started To Thaw, Some Foods Can Be Safely Kept**

Partial thawing and re-freezing does reduce the quality of foods, particularly fruits, vegetables and prepared foods. Red meats are affected less than many other foods.

Keeping an appliance thermometer in the refrigerator and freezer at all times will be very helpful when the electricity is off because you will know what the temperature is in each unit. The refrigerator temperature should be  $40^{\circ}$  F or below; the freezer,  $0^{\circ}$  or lower.

You can safely re-freeze foods if they still contain ice crystals, are firm in the center and/or the temperature in the freezer is  $40^{\circ}$  F or below. Be very careful with meat and poultry products or any food containing milk, cream, sour cream, or soft cheese. When in doubt, throw them out.

Ground beef, fresh sausage, variety meats and creamed dishes should be used at once and only if they still have ice crystals.

When food has thawed completely there are rule-of-thumb guides. For the actual handling of specific foods, follow the instructions in the following charts.

Be sure to discard any fully cooked items in either the freezer or the refrigerator that have come into contact with raw meat juices.

Remember, you can't rely on appearance or odor. Never taste food to determine its safety! Some foods may look and smell fine, but if they've been at room temperature too long, bacteria that cause foodborne illness can begin to grow very rapidly. Some types will produce toxins that are not destroyed by food.

## 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 will be safe.

FOOD	Held above 40 <sup>0</sup> F for over 2 hours
<b>MEAT, POULTRY, SEAFOOD</b> 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
<b>CHEESE</b> 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
<b>FOOD</b>	<b>Held above 40<sup>0</sup>F for over 2 hours</b>
Grated Parmesan, Romano, or combination (in can or jar)	Safe
<b>DAIRY</b>	

Milk, cream, sour cream, buttermilk, evaporated milk, yogurt	Discard
Butter, margarine	Safe
Baby formula, opened	Discard
<b>EGGS</b> Fresh eggs, hard-cooked in shell, egg dishes, egg products	Discard
Custards and puddings	Discard
<b>CASSEROLES, SOUPS, STEWS</b>	Discard
<b>FRUITS</b> Fresh fruits, cut	Discard
Fruit juices, opened	Safe
Canned fruits, opened	Safe
Fresh fruits, coconut, raisins, dried fruits, candied fruits, dates	Safe
<b>SAUCES, SPREADS, JAMS</b> Opened mayonnaise, tartar sauce, horseradish	Discard if above 50 <sup>0</sup> F for over 8 hours
Peanut butter	Safe
Jelly; relish; taco, barbecue & soy sauce; mustard; catsup; olives	Safe
White wine 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
<b>FOOD</b>	<b>Held above 40<sup>0</sup>F for over 2 hours</b>
<b>BREADS, CAKES, COOKIES, PASTA</b> 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
<b>PIES, PASTRY</b> Pastries, cream filled	Discard
Pies - custard, cheese filled, or chiffon	Discard
Pies, fruit	Safe
<b>VEGETABLES</b> 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

<b>FOOD</b>	<b>Still contains ice crystals and feels as cold as if refrigerated</b>	<b>Thawed. Held above 40°F for over 2 hours</b>
<b>MEAT, POULTRY, SEAFOOD</b> Beef, veal, lamb, pork, and ground meats	Refreeze	Discard
Poultry and ground poultry	Refreeze	Discard
<b>FOOD</b>	<b>Still contains ice crystals and feels as cold as if refrigerated</b>	<b>Thawed. Held above 40°F for over 2 hours</b>
<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 in 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>FOOD</b>	<b>Still contains ice crystals and feels as cold as if refrigerated</b>	<b>Thawed. Held above 40°F for over 2 hours.</b>
<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

**BE PREPARED** for all power outages. If you live in an area where loss of electricity from summer or winter storms is a problem, you can plan ahead to be prepared for the worst.

- Stock up on shelf-stable foods - canned goods, juices, and “no-freeze” entrees
- Plan ahead how you can keep foods cold. Buy some freeze-pak inserts and keep them frozen. Buy a cooler. Freeze water in plastic containers or store bags of ice.
- Know in advance where you can buy dry and block ice.
- Develop emergency freezer-sharing plans with friends in another part of town or in a nearby area.

For additional food safety information about meat, poultry, or egg products, call the toll-free USDA Meat and Poultry Hotline at 1 (800) 535-4555. For hearing impaired (TTY) 1(800) 256-7072. The Hotline is staffed by food safety experts weekdays from 10 am to 4 pm Eastern time. Food safety recording can be heard 24 hours a day using a touch-tone phone.

#### Resources Used:

University of Florida Disaster Preparedness and Recovery Notebook

Food Fla\$h - When Your Freezer Stops - University of Florida

Buying, Storing and using Frozen Foods by The Pillsbury Company

Keeping Food Safe During A Power Outage - Food Safety and Inspection Service, USDA

<http://www.fsis.usda.gov/oa/pubs/pofeature.htm>

The Institute of Food and Agricultural Sciences (IFAS) is an Equal Employment Opportunity - Affirmative Action Employer authorized to provide research, educational information and other services only to individuals and institutions that function without regard to race, color, sex, age, disability or national origin. U.S. Department of Agriculture, Cooperative Extension Service, University of Florida, IFAS, Florida A. & M. University Cooperative Extension Program, and Boards of County Commissioners Cooperating.