Freezer Storage

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Storing foods in the freezer is a great way to maintain their quality, freshness and nutritional value. The recommended freezer temperature (0 degrees Fahrenheit) will keep food safe to eat indefinitely. Freezing to this temperature inactivates any bacteria, yeasts and molds present in food. Be careful in thawing as these can become active again and cause food spoilage and foodborne illness. Remember, bacteria are not killed by freezing temperatures; they just become dormant.

The Colder, the Better

Freezers should be kept at a temperature of 0 F or lower. The food, color, flavor and texture will be retained best if the product is frozen in peak condition. When foods are frozen quickly, fewer ice crystals form. If foods have large ice crystals, they will affect quality when thawed. Ideally, food items 2 inches thick should freeze in 2 hours. When you are adding a quantity of food, turn down the dial to ensure a colder freezer. Lay packages out on other frozen items to freeze quickly. Allowing air to circulate around packages will ensure quick freezing for best quality. Once items are frozen, they may be stacked.

Packaging

 $\label{lem:continuous} Remember these three rules when wrapping for freezer storage:$

- 1. Wrap tightly.
- 2. Wrap again.
- 3. Wrap individual portions separately.

Wrapping tightly and double wrapping helps maintain quality and prevents freezer burn. Wrapping individual portions separately lets you remove some of the food to prepare without thawing food that is not needed for your meal.

Use only moisture- and vapor-proof materials for storing solid foods. Good choices are polyethylene bags, freezer film wraps and aluminum foil over a layer of plastic film next to the food. Acid foods may react to the aluminum if in direct contact. For liquid foods, use plastic containers or canning jars specifically designed for freezer storage. Optimal storage materials are also easy to mark. Label your

foods with the date and contents so that keeping an inventory is easy. It is safe to freeze items in original packaging; however, doing so might not preserve the quality if frozen for a length of time. Over-wrap the items for best results.

Package Dating

Here are some package dating tips to help protect yourself and your family:

- Buy the food with the longest best-if-used-by date for best food quality. If you can't use perishable foods within 3 to 7 days, freeze for later use.
- Be sure to freeze food before the best-if-used-by date to maintain the highest quality while frozen.
- When you thaw, open and prepare the food, use it quickly to keep it safe.
- Discard prepared foods or improperly thawed and opened foods that have been uneaten within 4 days.

Thawing and Refreezing Foods

Most partially thawed foods will refreeze safely if they still contain ice crystals and are firm in the center. However, many foods, such as partially thawed ice cream, will not be top quality. If meats have completely thawed, but are below 40 F, they may be refrozen without cooking as long as each package is inspected for no off color or odors that might indicate spoilage. Casseroles or vegetables should be refrozen only if ice crystals are still present. Note that the quality of the food might decline with additional freezing/thawing. If the temperature of the food is above 40 F or if the temperature is unknown, it should be discarded.

Search Ohioline (ohioline.osu.edu/search.php) for the Ohio State University Extension fact sheet "What To Do When Your Freezer Stops" for information on what to do when your freezer's power goes out and what to do with its food contents.

More Tips on Freezing Foods

 Foods that contain whole grains should be stored in the freezer because of their oil content. The oil will become rancid over time if not frozen.

- Store yeast in a cool environment like the refrigerator or the freezer. The date on a package of yeast is an expiration date. Since it is a living organism, the expiration date is very important to be sure the yeast is still viable and able to cause fermentation.
- To store leftover baked goods, wrap the leftovers tightly in aluminum foil and then place in a zipper-lock bag and store in the freezer. To thaw, take the food out of the bag and place on the center rack of a 450 F oven for 10 to 15 minutes. Carefully remove the foil and place back in the oven until the crust reaches the desired crispness (probably a few minutes).
- Bagels and hamburger buns defrost more quickly when frozen presliced or separately. Wrap each bagel in plastic wrap, slipping a layer of plastic between the presliced halves as well as around them. Then, place the contents in a freezer bag. Freezing this way allows frozen bagels to go straight from the freezer to the toaster. This technique also works for English muffins. French toast and pancakes can be stored layered between parchment squares but will keep better if wrapped in plastic wrap than in foil.
- If you usually buy fresh ground beef, shape it and then freeze it in individual patties.
- If keeping meat in the freezer, it may be left in its original packaging for up to 2 weeks. Beyond that time period, the meat needs to be wrapped tightly in moisture- and vapor-proof material designed for use in the freezer to prevent unwanted freezer burn.
- Defrost frozen fish, poultry or meat in the refrigerator.
 Never defrost these foods on the counter or in the sink where the room temperature is more likely to allow the

- growth of bacteria. Thawing time will vary depending on the weight of the meat: approximately 4 to 7 hours per pound for a large roast; 3 to 5 hours per pound for a small roast; and 12 to 14 hours for a 1-inch steak. Frozen foods may also be cooked without thawing. Allow about one-third to one-half more cooking time.
- Fresh fish may be stored in the freezer in moisture- and vapor-proof wrap to keep air away from the product. Frozen fish products should be placed in the freezer immediately after purchasing unless you are planning to thaw and cook the fish. While fish may be thawed in the refrigerator, it should be cooked immediately after defrosting. Frozen packages take 18 to 24 hours for 1 pound of fish. Avoid refreezing fish, as it results in poorer quality and a higher bacteria count.
- If you finish a bag of coffee beans in less than 10 to 12 days, store the coffee in either its original bag or in a zipper-lock bag away from heat and light. If you plan to keep beans longer than this, store them in the freezer. If you buy ground beans, store them in the freezer. If possible, measure the appropriate amount into a filter and cool to room temperature before brewing.

Resources

For more information about freezing foods, search Ohioline (**ohioline.osu.edu/search.php**) for these Ohio State University Extension fact sheets:

- Freezing Basics, HYG-5341-15
- Freezing Cooked Foods, HYG-5308-15
- Freezing Fruits, HYG-5349-15
- Freezing Meat, Poultry and Game, HYG-5334-15
- Freezing Vegetables, HYG-5333-15

Food Storage Chart

Here is a chart with information on the appropriate length of storage in the freezer for various foods.

Food	Recommended Storage Time for Top Quality (at 0 F)	Helpful Handling Hints
Meat: Beef, Pork, Veal, Lamb, Wild Game		Check for holes in trays and plastic wrap of fresh meat. Rewrap if needed. For best quality, double-wrap.
Bacon	1 to 2 months	
Canned Meat (marked "Keep Refrigerated")	Do not freeze.	
Chops: Beef, Veal, Lamb, Pork	4 to 6 months	
Corned Beef	1 month, drained	
Frankfurters	1 to 2 months	Freeze in original packaging.
Ground Meat (uncooked)	3 to 4 months	Overwrap if storing longer than 2 months.
Ham (vacuum-sealed, whole, half or sliced)	1 to 2 months	
Luncheon Meats	1 to 2 months	Product may "weep" when defrosted.
Roasts: Beef, Lamb, Pork, Veal	6 to 12 months	
Sausage (fresh, unsalted or smoked)	1 to 2 months	
Steaks: Beef, Lamb, Pork, Veal	6 to 12 months	

Food	Recommended Storage Time for Top Quality (at 0 F)	Helpful Handling Hints
Fish		For best quality, double-wrap.
Cooked, Commercially Frozen Seafood	3 months	
Lean Fish: Cod, Flounder, Haddock, Sole, Trout, Polluck, Perch	6 months	
Fatty Fish: Mackerel, Bluefish Salmon, Tuna, Smelt	2 to 3 months	
Shellfish	3 months	
Poultry: Chicken, Duck, Turkey		For best quality, double-wrap.
Whole or cut up	12 months	
Livers/Giblets	3 to 4 months	
Cooked Poultry	4 to 6 months	
Chicken Nuggets and Patties	1 to 3 months	
Eggs		
Eggs in the Shell	Do not freeze.	
Whole Eggs Out of the Shell	12 months	
Egg Substitutes (unopened)	12 months	If opened, do not freeze.
Main Dishes		
Meat, Fish, Poultry: Pie and Casseroles	2 to 4 months	
Commercially Frozen Meals/TV Dinners	3 to 4 months	
Soups and Stews	2 to 3 months	
Prestuffed Pork, Lamb, Chicken, Beef	Does not freeze well.	
Dairy		
Butter or Margarine	12 months	
Hard Cheeses: Cheddar, Swiss, etc.	4 to 6 months	
Processed Cheeses (loaves, slices)	4 to 6 months	
Soft Cheese: Brie, Cottage	3 months	
Milk	3 months	
Cream: Heavy, Light, Half-and-Half	2 to 4 months	
Yogurt	1 to 2 months	
Ice Cream and Sherbet	2 months	
Vegetables		Visit ohioline.osu.edu for more information on freezing vegetables.
Commercially Frozen	8 months	
Frozen from Fresh in the Home	8 months	
Fruits		Visit ohioline.osu.edu for more information on freezing fruits.
Berries, Cherries, Peaches, Pears, Pineapple	9 to 12 months	
Fruit Juice Concentrates	8 to 12 months	
Citrus Fruits	4 to 6 months	

Food	Recommended Storage Time at 0 F for Top Quality	Helpful Handling Hints
Baked Goods		Freezing does not refresh baked goods; it can only maintain whatever the quality of the food was before freezing.
Yeast Bread and Roll Dough (unbaked)	1 month	
Yeast Bread and Rolls (baked)	2 to months	
Quick Bread and Muffins (baked)	2 to 3 months	
Cake Batter	1 month	
Baked Cake (unfrosted)	2 to 4 months	
Baed Cake (frosted)	1 month	
Angel Food Cake	6 to 12 months	
Chiffon Sponge Cake	1 to 2 months	
Fruit Cake	6 to 12 months	
Cookies (baked at home)	8 to 12 months	
Cookies (commercially packaged)	8 to 12 months	
Cookie Dough (unbaked)	3 months	
Fruit Pies and Pastries (baked)	1 to 2 months	
Fruit Pies and Pastries (unbaked)	2 to 4 months	
Cream Pies and Pastries	3 months	
Pancake and Waffle Batter	3 months	
Other Food Staples		
Coconut (shredded)	1 year	
Herbs	1 to 2 years	
Nuts (unsalted)	9 to 12 months	
Nuts (salted)	6 to 8 months	
Popcorn (unpopped)	2 to 3 years	
Rice (cooked)	6 months	
Spices (ground)	1 to 2 years	
Spices (whole)	2 to 3 years	

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