

Consumer and Family Sciences



Department of Foods and Nutrition



Spotlight on Freezer Storage

Freezing is the best way to preserve the fresh qualities of food. In 1937, consumption of frozen foods was only one pound per person. Today there are thousands of frozen food products in the supermarket. Since so much food is stored frozen, it pays to handle it correctly.

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Cold facts to keep in mind

- Freezing maintains quality, but cannot improve it.
- Frozen food processors flash-freeze food; marketers keep it at 0° F or below to maintain quality. After you make a selection, proper handling is your responsibility.
- Food properly wrapped and stored at 0° F or below will be more than just safe to eat. It will have good flavor and texture, and it will contain all or nearly all the nutrients it had when fresh.

Freezer storage – the colder, the better

Frozen foods require low storage temperatures because the processes that cause loss of quality are still going on. The higher the temperature, the more active these processes. Food held at 15° F may feel very hard, but it is less solidly frozen than food at 0° F. Held for the same length of time, the 0° F food will be superior in color, flavor, texture, and sometimes in nutritive value.

Packaging

Use only moisture- and vapor-proof material (aluminum foil, polyethylene bags, freezer film wraps, plastic and metal containers). The shrink-film wrap on meats in self-serve counters

“breathes” and is not suitable for freezer storage beyond two weeks. Overwrap these packages with a moisture- and vapor-proof material to prevent freezer burn.

Frozen food know-how

Thawing. It’s best to thaw frozen fish, poultry, or meat in the refrigerator. That way the surface does not reach dangerously high bacteria levels before the product thaws in the center. Another benefit of slower thawing is less moisture loss (drip).

Refreezing. Most partially thawed foods refreeze safely if they still contain ice crystals and are firm in the center. However, many foods (like partially thawed ice cream) will not be top quality. Meat, fish, and poultry purposely thawed in the refrigerator and kept no more than one day may be refrozen. Don’t refreeze thawed meat or poultry pies or casseroles, cream pies, or vegetables.

Food thawed to room temperature (72° F) should be thoroughly cooked immediately or discarded if any part of food has been above 40° F for more than two hours.



Freezer Storage Chart

Temperature. 0° F or below is best. Maximum temperature should be 5° F. Check temperature with freezer thermometer or outdoor thermometer, or use this rule of thumb: If freezer can't keep ice cream brick-solid, temperature is above the recommended level. In this case, don't store food more than a week.

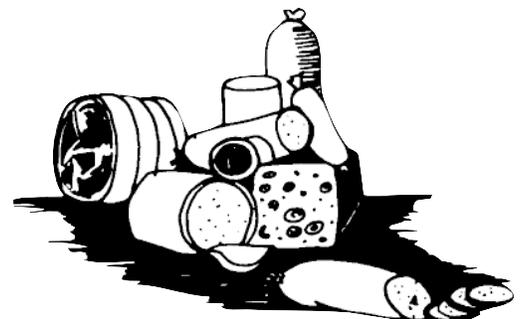
Time. Date food packages with an "expiration date" according to maximum storage time recommended in the table. Longer storage is not dangerous, but flavors and textures begin to deteriorate.

Packaging. Use heavy-duty foil, moisture- and vapor-proof plastic bags and wraps, freezer wrap, or freezer containers. Foil, when folded, may develop pinholes, resulting in freezer burn.

Commercial Frozen Foods. Pick up frozen foods just before going to checkout counter. Purchase only foods frozen solid. Place in home freezer as soon as possible. Cook or thaw according to label instructions.

Home-Frozen Foods. Freeze in coldest part of freezer. Freeze no more than three pounds per cubic foot of freezer space within 24 hours. Don't freeze a quarter of beef at one time.

Food	Recommended Storage Time at 0°F	Handling Hints
Meat, Fish, Poultry		
Meat — home-frozen:		
bacon, corned beef, frankfurters*		* Freezing cured meats not recommended. Saltiness encourages rancidity. If frozen, use within a month + Freezing not recommended. Emulsion may be broken, and product will "weep." ** Freezing alters flavor.
ground beef, lamb, veal	2-3 months	
ground pork	1-2 months	
ham and picnic, cured*		
luncheon meat+		
roasts:		
beef	6-12 months	
lamb, veal	6-9 months	
pork	3-6 months	
sausage, dry smoked**		
sausage, fresh, unsalted	1-2 months	
steaks and chops:		Check for holes in trays and plastic wrap of fresh meat. If none, freeze in this wrap up to 2 weeks. For longer storage, overwrap with suitable freezer wrap. Put two layers of waxed paper between individual hamburger patties.
beef	6-9 months	
lamb, veal	3-4 months	
pork	2-3 months	
venison, game birds	8-12 months	



Food	Recommended Storage Time at 0°F	Handling Hints
Fish:		
home-frozen and purchased frozen fillets and steaks:		
“lean” fish: cod, flounder, haddock, sole	6 months	Same as for home-frozen meat.
“fatty” fish: bluefish, perch, mackerel, salmon	2-3 months	Keep purchased frozen fish in original wrapping; thaw; follow cooking directions on label.
breaded fish	3 months	
clams	3 months	
cooked fish or seafood	3 months	
king crab	10 months	
lobster tails	3 months	
oysters	4 months	
scallops	3 months	
shrimp, uncooked	12 months	
Poultry:		
home-frozen or purchased frozen chicken, whole or cut-up	10 months	Same as for home-frozen meat.
chicken livers	3 months	
cooked poultry	3 months	
duck, turkey	6 months	



What happens to the quality of thawed foods previously frozen? Some foods that you purchase unfrozen, especially meats and poultry, may have been previously frozen. If refrozen, what happens to their quality? Not much, as long as they were commercially frozen.

Generally, the faster the freezing rate, the better the quality. Commercial freezing is much faster than home freezing. With quick freezing, there is less breakdown of cells. When water (a component of all foods) freezes rapidly, tiny crystals are formed. Slower freezing forms large ice crystals that cause cells to rupture. Moisture leaks out and quality is lowered.

Why do some packages say, “do not refreeze”? To protect their sizeable investments in development, testing, and marketing, frozen food packers want their products to have a good image with shoppers. They advise against refreezing because quality can deteriorate if interior temperatures range up to 40° F, and they do not know what home defrosting and refreezing conditions may be.

Freezer management

A chest or upright freezer that maintains a temperature of 0° F or below offers convenience and flexibility, but rarely can it be justified only on the merits of saving money. To get the greatest use out of your freezer, keep it fully stocked. A rapid rate of turnover — once every six months — is recommended. This will greatly reduce the operating cost per pound of food.

Food	Recommended Storage Time at 0°F	Handling Hints
Dairy Products		
Butter	6-9 months	Store in moisture- and vapor-proof freezer container or wrap.
Margarine	12 months	
Whipped butter and margarine		Do not freeze. Emulsion will break, and product will separate.
Buttermilk, sour cream, and yogurt		Do not freeze.
Cheese:		
Camembert	3 months	Thaw in refrigerator.
cottage, farmers cheese (dry curd only)	3 months	Thaw in refrigerator. Do not freeze creamed cottage cheese; it gets mushy.
Neufchatel		Do not freeze.
hard cheese:		
Cheddar	6 weeks	Cut and wrap cheese in small pieces. When frozen, may show mottled color due to surface moisture. Thaw in refrigerator.
Edam, Gouda Swiss, brick, (etc.)	6-8 weeks	
process cheese food products (loaf, slices)	4 months	
Roquefort, blue	3 months	Becomes crumbly after thawing. Still good for salads and melting.
Cream: light, heavy, half-and-half	2 months	Heavy cream may not whip after thawing. Use for cooking. Thaw in refrigerator.
whipped	1 month	Make whipped cream dollops; freeze firm. Place in plastic bag or carton; seal; store in freezer. To thaw, place on top of dessert.
Eggs:		
in shell		Do not freeze
whites	12 months	Store in covered container. Freeze in amounts for specific recipes.
yolks	12 months	For sweet dishes, mix each cup of yolks with 1 tablespoon of corn syrup or sugar. For other cooking, substitute 1/2 teaspoon of salt for sugar.
Ice cream, ice milk, sherbet	2 months	
Milk	1 month	Allow room for expansion in freezer container. Thaw in refrigerator. Freezing affects flavor and appearance. Use in cooking and baking.



Food	Recommended Storage Time at 0°F	Handling Hints
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Commercial Frozen Foods

Also see: meats, fish, and poultry; fruits and vegetables; dairy products.

Baked goods:

yeast bread and rolls, baked	3-6 months
rolls, partially baked	2-3 months
bread, unbaked	1 month
quick bread, baked	2-3 months
cake, baked, unfrosted:	
angel food, chiffon, sponge	2 months
cheese cake	2-3 months
chocolate	4 months
fruit cake	12 months
yellow or pound	6 months
cake, baked, frosted	8-12 months
cookies, baked	8-12 months
pie, baked	1-2 months
fruit pie, unbaked	8 months

Freezing does not freshen baked goods. It can only maintain the quality (freshness) the food had before freezing.



Main dishes:

meat, fish, and poultry pies and casseroles	3 months
TV dinners:	
shrimp, ham, pork, frankfurter	3 months
beef, turkey, chicken, fish	6 months

Fruits and Vegetables

Fruit:

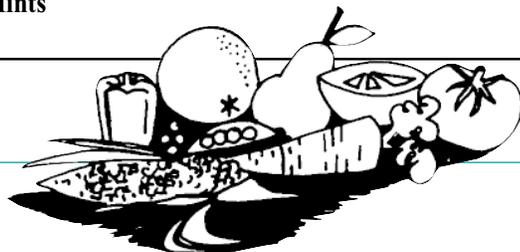
home-frozen or purchased frozen berries, cherries, peaches, pears, pineapple, etc.	12 months
citrus fruit and juice frozen at home	6 months
fruit juice concentrates	12 months

Freeze in moisture- and vapor-proof container.

Vegetables:

home-frozen	10 months
purchased frozen in cartons, plastic bags, or boil-in-bags	8 months

Cabbage, celery, salad greens, and tomatoes do not freeze successfully.

Food	Recommended Storage Time at 0°F	Handling Hints
Home-Frozen Foods		
Also see: meat, fish, and poultry; fruits and vegetables; dairy products.		
Bread	2-4 months	 <p data-bbox="828 420 1485 525">Package foods tightly in foil, moisture- and vapor-proof plastic wrap, freezer wrap, or watertight freezer containers. For casseroles, allow head room for expansion.</p>
Cake	2-3 months	
Casseroles — meat, fish, poultry	3-4 months	
Cookies, baked and dough	3-6 months	
Nuts:		
salted	6-8 months	
unsalted	9-12 months	
Pies, unbaked fruit	2-4 months	

Related publications

Contact the Extension office in your county for copies of the following related publications, or download pdf files directly from the World Wide Web.

CFS-423-W, *Spotlight on Cupboard Storage*
www.ces.purdue.edu/extmedia/CFS/CFS-423-W.pdf

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