

KEEPING FOOD AT ITS BEST

Keeping Food Fresh

Your Sub-Zero unit is the most advanced refrigeration system available to keep food fresh and safe to eat, controlled by a microprocessor. But the quality and safety of your food also depends on how you handle it.

The information in this section gives you the most up-to-date handling and storage recommendations to help you keep food at its best. If you have specific questions that are not addressed here, contact your University or County Extension Service, or your local utility company.

Most food inevitably deteriorates over time. From the very beginning until it is consumed, food undergoes changes. Microorganisms get into food, multiply and cause spoiling.

Enzymes that occur naturally in food continue the ripening process even after the food is harvested. Improper temperatures cause food to deteriorate faster. Changes in humidity cause wilting and shriveling that can lead to spoiling.

Sub-Zero's exclusive dual refrigeration system is specifically designed to combat these changes, and keep your food fresh longer. Both refrigerator and freezer maintain accurate, consistent temperatures and proper humidity levels for longer food life expectancy. Dual refrigeration eliminates transfer of fresh food odors to frozen food or ice, and does not freeze the moisture out of the air in the fresh food compartment.

In addition, good handling practices can minimize the rate of changes in food...

- Follow the recommended storage times and temperatures in this guide. Your Sub-Zero unit helps to slow the ripening process by tailoring temperatures to each compartment as needed.
- Use specially designed compartments for dairy foods, deli foods and fresh produce. These compartments maintain temperature and humidity levels that keep specific food groups fresh.
- Rotate food in refrigeration units, using a "first-in, first-out" system.

- When food does spoil, it's usually obvious. It becomes moldy, has an off-odor, looks rotten or discolored. But there are times when spoiling may not be so apparent. If you think a food has been stored too long, discard it. Don't taste it to check if it's okay.
- While the bacteria that cause food spoilage will not cause food-borne illness or food poisoning, taste tests are not a good idea.

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Keeping Food Safe to Eat

Most food borne illness is caused by bacteria such as staphylococcus, salmonella, e coli and botulism. These bacteria grow rapidly at temperatures between 45°F (7°C) and 140°F (60°C), a range that's called the *Danger Zone*. Never leave food in the danger zone for more than two hours. When the bacteria have multiplied to the millions in warm temperatures, they cause illness. Some bacteria cause flu-like symptoms, while others cause serious illness or even death. Young children, the elderly and people who are already ill are more likely to become sick from food poisoning.

To reduce your risk of food borne illness, use the following techniques to keep your food safe to eat:

When You're Shopping

- Place packages of raw meat, seafood or poultry in plastic bags to keep them from dripping on other foods.
- Shop for meat, seafood and poultry last. Don't leave these foods in a hot car when you've finished shopping. Take along a cooler in hot weather or when you have to travel long distances.
- Check "use by" and "sell by" dates on foods to make sure they're fresh. Use extra care when buying deli food. Buy only the amount you will use in 1-2 days. Discard hot or cold deli food that has been at room temperatures for more than two hours.

When You Store Food

- Monitor temperatures of refrigeration zones on the electronic control panel of your Sub-Zero unit. Keep the refrigerator temperature at 40°F (4°C) or below, and freezer temperature at 0°F (-18°C).
- Follow the recommended refrigerator and freezer storage times and temperatures in this guide.
- Store raw meat, poultry and seafood separate from other foods. Keep juices from these packages from dripping on other food.

- Never taste food that looks or smells strange to test its freshness. Discard it.
- For refrigerator storage, leave raw meat, poultry and seafood in its original wrapper unless it is torn. Repeated handling can introduce bacteria to these foods. For freezer storage, use freezer wrap, freezer-quality plastic bags or aluminum foil over the commercial wrap if foods will be stored in the freezer for more than a couple of months. This minimizes dehydration and quality loss.

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- Wrap food stored in the refrigerator unit in foil or plastic wrap, or place it in plastic bags or airtight containers to keep it from drying out. Date all packages.
 - Wrap food stored in freezer units in freezer wrap, or place it in freezer-quality plastic bags or containers. Single layers of aluminum foil may tear and cause freezer burn.

When You Prepare Food

- Clean everything that comes in contact with food.
 - Wash your hands for 20 seconds before and after handling food.
 - Sanitize counters, equipment and utensils after handling raw meat, seafood or poultry. Rinse with a dilute chlorine bleach solution, one teaspoon to a quart of water.
 - Use clean kitchen towels, sponges and cloths. Replace sponges every few weeks.
 - Use disposable plastic gloves if you have an infected cut or burn on your hands.
- Thaw food in the refrigerator or microwave oven, not on the counter. When you thaw food in a microwave oven, cook it immediately.
 - Marinate food only in the refrigerator.
 - Rinse poultry and seafood in cold water before cooking.
 - Avoid cross-contamination in preparing food. Keep raw meat, poultry and seafood and their juices away from other food. For example, don't use the same surface and utensils for preparing raw meat, poultry and seafood that you use for preparing salad ingredients.

- Thoroughly clean your plastic and wooden cutting boards.
- Wash with hot water and soap, and rinse with a diluted chlorine bleach solution of 1 teaspoon to a quart of water.

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Keeping Food Safe to Eat

When You Cook Food

- Don't taste raw or partially cooked meat, poultry, eggs or fish.
- Cook meat to an internal temperature of 165°F (74°C) or above, poultry to 180°F (82°C) or above. For cuts more than 2" (51 mm) thick, use a meat thermometer to check the temperature. For thinner cuts, clear juices (not pink) are a sign of doneness.
- If you are cooking frozen meat or poultry that has not been defrosted, increased the cooking time to 1-1/2 times the time required for thawed items.
- Roast meats or poultry in oven temperatures of 325°F (163°C) or above.
- Cook eggs until the yolk and white are firm, not runny.
- Don't use recipes in which eggs remain raw or partially cooked.
- If your microwave has a temperature probe, use it. Check temperatures of meat and poultry in at least three spots. Rotate foods during microwaving.

When You Have Leftovers

- Refrigerate or freeze cooked leftovers in small, covered containers within 2 hours after cooking. Make sure there is adequate air space around the containers so that food can cool down quickly.
- Remove the stuffing from meat or poultry and store it separately.
- Date packages of leftovers and use within a safe period of time.
- Cover and reheat leftovers thoroughly before serving.
- Bring sauces, soups and gravy to a boil. Heat other foods to 165°F (74°C).
- If you think food may be spoiled, discard it. When in doubt, throw it out.

Fresh Food Storage Suggestions

Shelf life of fresh foods varies depending on how fresh it is when you buy it. To keep your food fresher longer, follow the recommended storage tips.

- **Vegetables:** Wash vegetables in cool water and drain. Store in air-tight containers or plastic wrap. Vegetables do well in high-humidity storage.
- **Fruits:** Wash and dry fresh fruits. Store more aromatic fruits in plastic bags. Fruits do well stored in low humidity.
- **Prepackaged Meats:** Store in original packaging. After opening, rewrap tightly in plastic wrap or aluminum foil.
- **Fresh Meats, Fish and Poultry:** Remove store wrappings, then rewrap in plastic wrap, foil or waxed paper and refrigerate immediately.
- **Eggs:** Store eggs unwashed in their carton or a portable egg tray. Use within 2 weeks.
- **Milk, Cream and Cottage Cheese:** Keep carton closed. Store on refrigerator shelf and use within 5 days.
- **Cheese:** Store in original packaging until ready to use. After opening, rewrap tightly in plastic wrap or aluminum foil.
- **Leftovers:** Let cool and cover tightly with plastic wrap or foil. Airtight plastic containers work well to prevent drying out and odor transfer.

Frozen Food Storage Suggestions

- **Freezer Storage:** Wrap foods in material designed for frozen food storage. The wrap must seal out air and moisture. Do not refreeze thawed meats.
- **Ice Cream:** The firmness of the ice cream will depend on its cream content. Higher quality ice creams usually have a higher cream content requiring colder freezer temperatures to maintain their firmness. Soft ice cream is not always an indication of a temperature problem.

A Final Note...

Make sure your refrigerator and freezer doors close freely and completely. Overloading will affect temperatures inside the unit. Do not fill your freezer with large quantities of unfrozen foods expecting them to "fast freeze". Give the freezer ample time to circulate cold air around unfrozen items before adding additional items.

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Meat, Fish and Poultry		Recommended storage temperatures	Approximate storage life at refrigerator temperatures	Recommended storage time in freezer at 0°F (-18°C)	Comments
Food	Form				
<i>Fresh Fish and Seafood</i>	cod, flounder, haddock, sole bluefish, perch, mackerel, salmon shrimp oysters	32°F (0°C) 32°F (0°C) 32°F (0°C) 32°F (0°C)	2 days 2 days 4 days 1 day	6 months 2-3 months 5-9 months 4 months	<i>Freeze in original wrap up to 2 weeks. Use freezer wrap, freezer-quality plastic bags, or aluminum foil over the commercial wrap if foods will be frozen for more than a couple of months.</i>
<i>Fresh Meat</i>	beef steaks, roasts lamb chops, roasts pork and veal chops, roasts variety meats (tongue, liver, etc.)	32-35°F (0-2°C) 32-35°F (0-2°C) 32-35°F (0-2°C) 32-35°F (0-2°C)	3-5 days 3-5 days 3-5 days 1-2 days	6-12 months 6-9 months 4-6 months 3-4 months	<i>Freeze in original wrap up to 2 weeks. Use freezer wrap, freezer-quality plastic bags, or aluminum foil over commercial wrap if foods will be stored in the freezer for more than two months.</i>
<i>Hamburger, Ground and Stew Meats</i>	hamburger, stew meats, ground turkey, veal, pork, lamb, and mixtures	32-35°F (0-2°C)	1-2 days	3-4 months	<i>Freeze in original wrap up to 2 weeks. Use freezer wrap, freezer-quality plastic bags, or aluminum foil over commercial wrap if foods will be frozen for more than a couple of months.</i>
<i>Hotdogs and Lunch Meats</i>	hotdogs, opened package unopened package lunch meats, opened package unopened package	32-35°F (0-2°C) 32-35°F (0-2°C) 32-35°F (0-2°C) 32-35°F (0-2°C)	1 week 2 weeks 3-5 days 2 weeks	in freezer wrap, 1-2 months	<i>Check "sell by" dates. Do not use more than one week after this date.</i>
<i>Bacon and Sausage</i>	bacon sausage (pork, beef, turkey), raw smoked breakfast links, patties hard sausage - pepperoni, jerky sticks	32-35°F (0-2°C) 32-35°F (0-2°C) 32-35°F (0-2°C) 32-35°F (0-2°C)	7 days 1-2 days 7 days 2-3 weeks	1 month 1-2 months 1-2 months 1-2 months	<i>Keep wrapped, store at recommended refrigerator temperatures.</i>
<i>Ham and Corned Beef</i>	corned beef ham, whole ham, half ham, slices	32-35°F (0-2°C) 32-35°F (0-2°C) 32-35°F (0-2°C) 32-35°F (0-2°C)	5-7 days 7 days 3-5 days 3-4 days	1 month 1-2 months 1-2 months 1-2 months	<i>For freezer storage, drain juices.</i>
<i>Fresh Poultry</i>	chicken or turkey, whole chicken or turkey, pieces duck or goose	32-35°F (0-2°C) 32-35°F (0-2°C) 32-35°F (0-2°C)	1-2 days 1-2 days 1-2 days	1 year 9 months 6 months	<i>Freeze in original wrap up to 2 weeks. Use freezer wrap, freezer-quality plastic bags, or aluminum foil over commercial wrap if foods will be stored in the freezer for more than two months.</i>

Fresh Fruits		Recommended storage temperatures	Approximate storage life at refrigerator temperatures	Recommended storage time in freezer at 0°F (-18°C)	Comments
Form					
apples	34-40°F (1-4°C)	3-6 months	See food preservation books/guides for complete instructions on freezing fruits.	<p><i>Wash and dry most fruits, store in crisper compartment. (Do not wash berries and cherries until you are ready to use them, however.)</i></p> <p><i>Fully ripe fruits should be stored in the refrigerator at recommended temperatures, to slow down the ripening process.</i></p> <p><i>Unripe fruits should be left to ripen at room temperature, in a container that allows for air circulation.</i></p> <p><i>To hasten the ripening process, you can place unripe fruit in a paper bag that has holes poked in it. Close the bag and set it on a counter. The fruit will produce ethylene, a gas that initiates the ripening process. Check the bag each day.</i></p> <p><i>Most fruits should be stored in lower humidity.</i></p> <p><i>Discard any fresh fruits that are moldy or have other signs of spoilage, and wipe out the refrigerator compartment.</i></p> <p><i>See page 37 for a list of ethylene sensitive and ethylene producing vegetables and fruits.</i></p> <p><i>✓ indicates fruit that is sensitive to chill injury, a cause of spoilage. Damage may not be apparent until the fruit is returned to a warmer temperature.</i></p>	
apricots	34°F (1°C)	1-2 weeks			
asian pears	34°F (1°C)	5-6 months			
✓avocados	40°F (4°C)	2-4 weeks			
blackberries	34°F (1°C)	2-3 days			
blood oranges	40-44°F (4-7°C)	3-8 weeks			
blueberries	34°F (1°C)	10-18 days			
✓cantaloupe	36-40°F (2-4°C)	10-14 days			
cassavas	34°F (1°C)	1-2 months			
cherries, sweet	34°F (1°C)	2-4 weeks			
clementines	40°F (4°C)	2-4 weeks			
✓cranberries	36-40°F (2-4°C)	2-4 months			
figs, fresh	34°F (1°C)	7-10 days			
✓grapefruit	50-60°F (10-16°C)	4-6 weeks			
grapes	34°F (1°C)	8-12 weeks			
✓guavas	40-50°F (4-10°C)	2-3 weeks			
honeydew	45-50°F (7-10°C)	3-4 weeks			
kiwifruit	34°F (1°C)	4-6 weeks			
kumquats	40°F (4°C)	2-4 weeks			
✓lemons	50-55°F (10-13°C)	1-5 months			
✓limes	48-50°F (9-10°C)	3-5 weeks			
lychees	35°F (2°C)	3-5 weeks			
✓mangoes	50°F (10°C)	2-3 weeks			
nectarines	34°F (1°C)	2-4 weeks			
✓oranges	34-48°F (1-9°C)	3-8 weeks			
✓papayas	45-55°F (7-13°C)	1-3 weeks			
peaches	34°F (1°C)	2-4 weeks			
pears	34°F (1°C)	2-3 weeks			
persimmons	34°F (1°C)	3-4 months			
✓pineapple	45°F (7°C)	2-5 weeks			
plums/prunes	34°F (1°C)	2-4 weeks			
✓pomegranates	40°F (4°C)	2-3 months			
quinces	34°F (1°C)	2-3 months			
raspberries	34°F (1°C)	2-3 days			
rhubarb	34°F (1°C)	2-3 weeks			
strawberries	34°F (1°C)	5-10 days			
tangerines	40°F (4°C)	2-4 weeks			
✓watermelon	45-55°F (7-13°C)	2-3 weeks			