

# Food Safety During Cancer Treatment

Cancer treatments can weaken your immune system, making it harder for your body to protect itself from harmful bacteria and other organisms. It is important to follow precautions to avoid an infection, which can be picked up from food and drinks.

	Recommended	Avoid (Do Not Eat)
<b>Meat, poultry, fish, tofu, and nuts</b>	<p>Ensure all meats, poultry and fish are cooked thoroughly. Use a food thermometer to be sure that meat and poultry reach the proper temperature when cooked. See “Handling and Preparing Food” for guidelines. Deli and luncheon meats should be heated to steaming before eating.</p> <p>When eating tofu from the refrigerated section (not shelf-stable), cut it into 1-inch cubes or smaller and boil for 5 minutes in water or broth before eating or using in recipes. You don’t have to do this if you are eating aseptically packaged, shelf-stable tofu.</p> <p>Vacuum-sealed nuts and shelf-stable nut butters</p>	<p>Raw or lightly cooked fish, shellfish, lox, sushi or sashimi</p> <p>Raw nuts from bulk bins or fresh nut butters not commercially packaged</p>
<b>Eggs</b>	<p>Cook eggs until the yolks and whites are solid, not runny</p> <p>Pasteurized liquid egg product (Egg Beaters®) or egg custards, and pasteurized eggnog</p>	<p>Raw or soft-cooked eggs (this includes over-easy, poached, soft-boiled and sunny side up)</p> <p>Foods that may contain raw eggs, such as Caesar salad dressing, homemade eggnog, smoothies, raw cookie dough, hollandaise sauce, homemade ice cream and homemade mayonnaise</p>
<b>Milk and dairy products</b>	<p>Pasteurized milk, yogurt, cheese or other dairy products</p>	<p>Soft cheeses made from <i>unpasteurized</i> milk, such as Feta, Brie, Camembert, blue-veined and Mexican-style cheeses (such as Queso Fresco, Panela, Asadero and Queso Blanco)</p> <p>Source: <a href="http://1.usa.gov/1sDLhpg">http://1.usa.gov/1sDLhpg</a></p>

	Recommended	Avoid (Do Not Eat)
<b>Breads, cereal, rice and pasta</b>	Breads, bagels, muffins, rolls, cereals, crackers, noodles, pasta, potatoes and rice are safe to eat as long as they are purchased as wrapped, pre-packaged items, not sold in self-service bins.	Bulk-bin sources of cereals, grains and other foods, unless they are to be cooked
<b>Fruits and Vegetables</b>	Raw vegetables and fruits and fresh herbs are safe to eat if rinsed well under running water and lightly scrubbed with a vegetable brush.	Fresh salsas and salad dressings found in the refrigerated section of the grocery store (choose shelf-stable salsa and dressings instead)  Any raw vegetable sprouts, including alfalfa, radish, broccoli or mung bean sprouts
<b>Desserts and sweets</b>	Fruit pies, cakes and cookies, flavored gelatin  Commercial ice cream, sherbet, sorbet and popsicles  Commercially prepared and pasteurized jam, jelly, preserves, syrup and molasses	Unrefrigerated, cream-filled pastry products  Raw honey or honeycomb (instead, select a commercial, grade A, heat-treated honey)
<b>Water and beverages</b>	Drink only water from city or municipal water services or commercially bottled water.  Pasteurized fruit and vegetable juices  Soda, coffee and tea	Water straight from lakes, rivers, streams or springs  Well water, unless you check with your cancer care team first  Unpasteurized fruit and vegetable juices  Sun tea (instead, make tea with boiling water and use commercially prepared tea bags)  Vitamin- or herbal-supplemented waters (these provide little, if any, health benefit and may contain ingredients that could interfere with your treatment or medications)

Adapted from "Tips When Your White Blood Cell Count is Low," by Grant, BL; Bloch, AS; Hamilton, KK; Thomson, CA. American Cancer Society Complete Guide to Nutrition for Cancer Survivors, 2nd Edition. Atlanta, GA: American Cancer Society; 2010.

# Handling and Preparing Food

It is important that you – or those preparing your food – are careful with handling and preparation.

## Cleaning

Bacteria can spread in the kitchen and onto cutting boards, utensils, counter tops and food.

- Wash your hands with warm water and soap for at least 20 seconds before and after handling food and after using the bathroom, changing diapers and handling pets.
- Wash your cutting boards, dishes, utensils and counter tops with hot, soapy water after preparing each food item and before you go on to the next food.
- Consider using paper towels to clean up kitchen surfaces. If you use cloth towels, wash them often in the hot cycle of your washing machine.
- Rinse fresh fruits and vegetables under running tap water, including those with skins and rinds that are not eaten.
- Rub firm-skin fruits and vegetables under running tap water or scrub clean with a clean vegetable brush while rinsing with running tap water.

## Cooking

Food is safely cooked when it reaches a high enough internal temperature to kill harmful bacteria that cause illness.

<b>Safe Minimal Internal Temperature</b> <i>As measured with a food thermometer</i>	
<b>Beef, pork, veal and lamb (roast, steaks and chops)</b>	145°F with a 3-minute “rest time” after removal from the heat source
<b>Ground meats</b>	160°F. Color is not a reliable indicator of doneness.
<b>Poultry (whole, parts or ground)</b>	165°F
<b>Eggs and egg dishes</b>	160°F. Cook eggs until both the yolks and whites are firm. Only use recipes in which eggs are cooked or heated thoroughly. Scrambled eggs should not be runny.
<b>Leftovers and casseroles</b>	165°F
<b>Fin fish</b>	145°F
<b>Sauces, soups and gravy</b>	Bring to a boil when reheating.

# Handling and Preparing Food

(continued)

Cooking Guidelines for Seafood	
<b>Shrimp, lobster and crabs</b>	Flesh pearly and opaque
<b>Clams, oysters and mussels</b>	Shells open during cooking
<b>Scallops</b>	Milky white, opaque and firm

- Separate raw meat, poultry, seafood and eggs from other foods in your grocery shopping cart, grocery bags and in your refrigerator.
- When using the microwave, cover food, stir and rotate for even cooking.
- Use one cutting board for fresh produce and a separate one for raw meat, poultry and seafood.
- Never place cooked food on a plate that previously held raw meat, poultry, seafood or eggs.

## Chilling

Refrigerate foods quickly because cold temperatures slow the growth of harmful bacteria.

- Keeping a constant temperature of 40°F or below is one of the most effective ways to reduce risk of foodborne illness. Use an appliance thermometer in your refrigerator to ensure the temperature is at 40°F or below. The freezer temperature should be 0°F or below.
- Do not over-stuff the refrigerator. Cold air must circulate to help keep food safe.
- Never let raw meat, poultry, eggs, cooked food or cut fresh fruits or vegetables sit at room temperature more than two hours before putting them in the refrigerator or freezer (one hour when the temperature is above 90°F).
- Never defrost food at room temperature. Food must be kept at a safe temperature during thawing. There are three safe ways to defrost food: in the refrigerator, in cold water and in the microwave. Food thawed in cold water or in the microwave should be cooked immediately.
- Always marinate food in the refrigerator.
- Divide large amounts of leftovers into shallow containers for quicker cooling.
- Use or discard refrigerated food on a regular basis. Check USDA cold storage guidelines at [www.fightbac.org](http://www.fightbac.org).

*Adapted from "Fight Bac! Fight Foodborne Bacteria." Partnership for Food Safety Education, 2011.*

## When Eating Out

Make dining out an enjoyable experience by following some simple guidelines to avoid foodborne illness.

- Observe your food when it is served, and don't hesitate to ask questions before you order.
- Ask whether the food contains uncooked ingredients such as eggs, meat, poultry or fish. If so, choose something else.
- Ask how these foods have been cooked. If the server does not know, ask to speak to the chef to be sure your food has been cooked to a safe minimum internal temperature.
- Avoid buffets, which may contain undercooked foods or foods that have been at room temperature too long. Order from a menu to minimize your risk.
- Avoid ordering salads, cold sandwiches or other cold foods. These are more likely to carry germs that can transmit illnesses from foodservice workers.
- If you get a "doggy bag" or save leftovers to eat at a later time, refrigerate perishable foods as soon as possible — and always within two hours of purchase or delivery. If the leftover food is in air temperatures above 90°F, refrigerate it within one hour.



*Adapted from "Food Safety for People with Cancer: A Need-To-Know Guide for Those Who Have Been Diagnosed with Cancer," USDA Food Safety and Inspection Service.*