

Food Safety Guidelines for People with Cancer

When certain bacteria, viruses or parasites contaminate food, they can cause foodborne illness. People with weak immune systems due to cancer are more likely to get sick from contaminated food. This handout will tell you how to safely handle and prepare your food to avoid foodborne illness. It also has a chart that lists foods you should not eat.

Four basic steps to food safety

Food that looks fine can have bacteria, viruses or parasites that can make you sick. The easiest way to stay safe is to follow four steps each time you handle and prepare food. These 4 steps are: **clean, separate, cook and chill.**

Step One: Clean your hands and surfaces often. Bacteria can spread in the kitchen and get onto cutting boards, utensils, countertops and food. To make sure your hands and surface are clean you should:

- Wash hands in warm soapy water for **at least 20 seconds** before and after:
 - Handling food
 - Touching garbage
 - Using the bathroom
 - Touching pets
- Wash cutting boards, dishes, utensils and countertops with hot soapy water before and after you prepare raw meat, poultry, seafood and any food that will not be cooked. As an added precaution, the U.S. Departments of Agriculture and Health and Human Services suggest sanitizing cutting boards and countertops by rinsing them in a solution made of 1 tablespoon of unscented liquid chlorine bleach per gallon of water. As an alternative, plastic cutting boards can be run through the wash cycle of a dishwasher.
- Wash all fresh fruits and veggies well under running water for at least 30 seconds right before eating. These include fruits and veggies that are prewashed, prerinsed or are organic.
- Use paper towels to clean up kitchen surfaces. Wash kitchen cloths, towels and sponges daily in the hot cycle of the washing machine.
- Clean lids of cans with hot soapy water before opening. Wash the can opener with hot soapy water after use.
- Wipe the handles of grocery carts and baskets with a sanitizing wipe before using them.
- Wash your hands with soap and water or use an alcohol-based hand sanitizer after touching menus in a restaurant.

Step Two: Separate and don't cross contaminate. Cross-contamination occurs when bacteria spreads from one type of food to another. This often happens when raw meat, poultry, seafood and eggs are not handled safely. To prevent cross-contamination:

- Keep raw meat, poultry, seafood and eggs away from other foods in your grocery cart, grocery bags and in your refrigerator. Put raw packaged meat, poultry or seafood into a plastic bag before putting it in the shopping cart. Store meat and seafood on the bottom shelf of the fridge.
- Never put cooked food back on a plate that held raw meat, poultry, seafood or eggs. Wash the plate with hot soapy water before putting cooked foods on it.
- Don't reuse marinades that were used on raw foods unless you bring them to a boil first.
- Use separate cutting boards for meat and nonmeat foods.
- Don't cut different types of foods with the same knife. Wash the knife with hot, soapy water before using it to cut a different type of food. Or, use one knife to cut meat, another to cut veggies and another to cut bread.
- Don't taste the food you are cooking with the same utensil used for stirring. Use a clean utensil each time you taste food while it is cooking.

Step Three: Cook foods to safe temperatures. Foods are safely cooked when they are heated to the USDA-FDA recommended safe minimum internal (inside) temperatures, as listed on this page. **To make sure foods are cooked safely, always use a food thermometer.** Check the inside temperature in several places with the thermometer to make sure the food is cooked to the safe minimum temperature. Follow the table below for safe cooking guidelines.

Turkey, Chicken, Duck Whole, Pieces and Ground	Heat to an inside temperature of at least 165°F.
Beef, Pork, Veal, Lamb Steaks, Roasts and Chops	Heat to an inside temperature of at least 160°F for ground meats and at least 145°F for steaks, roasts and chops with a 3-minute rest time after cooking. Juices should run clear.
Fish	Heat to an inside temperature of at least 145°F. Cook until flesh is opaque and thickest part pulls apart easily with a fork.
Shrimp, Lobster, Crab	Cook until red and flesh is pearly opaque.
Clams, Mussels, Oysters	Cook until the shells open. If the shells do not open, do not eat the seafood inside.
Eggs	Cook until the yolks and whites are firm. Use only recipes in which the eggs are cooked or heated to at least 160°F.
Sauces, soups, gravies	Bring to a boil when reheating.
Hot dogs, packaged lunch meats and deli meats	Heat until steaming hot or at least 165°F.
Leftovers and Casseroles	Heat to at least 165°F.
Nonpasteurized tofu	Cut into cubes and boil for 5 minutes.
Foods that are cooked and waiting to be served	All foods should stay at least at 140° F between the time they are cooked and served.

- When cooking in a microwave oven, cover, stir and rotate food for even cooking. If there is no turntable, rotate the dish by hand once or twice during cooking. Always allow standing time before checking the inside temperature with a food thermometer. Food is done when it reaches at least the safe minimum inside temperature.

Step Four: Chill foods quickly. Cold temperatures slow the growth of harmful bacteria. Use an appliance thermometer to make sure the refrigerator is at 40°F or lower and the freezer temperature is at 0°F or lower. To chill foods safely you should:

- Read food labels when in the store to make sure food is not past its “sell by” date.
- Refrigerate or freeze meat, poultry, eggs, seafood and any foods that can spoil within 2 hours after buying or cooking. Refrigerate within 1 hour if the temperature outside is above 90°F.
- Never thaw food at room temperature, such as on the countertop. Thaw food in the refrigerator, in cold water or in the microwave. When thawing food in the refrigerator, keep it away from raw fruits, veggies and other cooked foods. Put a dish under the food to catch drips. If you thaw food in cold water or in the microwave, you should cook it right after it is thawed. Do not refreeze food once it is thawed.
- Throw away food that has been out of the refrigerator for more than 2 hours.
- Throw away cooked foods, such as leftovers, that are stored in the refrigerator after 72 hours (3 days). Put dates on cooked foods you store in the refrigerator. If you are not sure about the safety of a food in your refrigerator, don’t take the risk – **when in doubt, throw it out!**
- Freeze foods that will not be used within 2 to 3 days.

If you are not sure about the safety of a food in the refrigerator, don’t take the risk.

When in doubt, throw it out!

Call your doctor or nurse right away if you have:

- Nausea
- Vomiting
- Diarrhea
- Fever of 100.4°F (38°C) or higher



Foodborne illness often feels like the flu. Call your doctor or nurse right away if you have the symptoms above or if you think you have become sick because of food you have eaten.

Foods and drinks to avoid

Follow the guidelines in this handout for safe selection and preparation of foods. If you had a bone marrow or stem cell transplant, see the last page.

Food Group	Do Not Eat or Drink
Protein Sources	<ul style="list-style-type: none"> • Undercooked or raw meat, poultry, seafood, shellfish and eggs • Nonpasteurized tofu (tofu that is not shelf stable or aseptically packaged). Unpasteurized tofu must be cut into 1-inch cubes or smaller, and boiled for at least 5 minutes in water or broth before eating or using in recipes. • Sliced meats from the deli. Commercially packaged luncheon meats and hot dogs are allowed, if heated until steaming hot before eating. • Unpasteurized, refrigerated pâtés or meat spreads • Smoked seafood unless contained in a cooked dish • Unroasted raw nuts
Milk	<ul style="list-style-type: none"> • Unpasteurized or raw milk, milk products or eggnog • Unpasteurized cheeses • Sliced cheeses from the deli (commercially packaged cheeses are allowed) • Soft cheeses such as feta, Brie, Camembert, blue-veined cheeses, and Mexican-style cheeses such as “queso blanco fresco” • Unpasteurized yogurt
Beverages	<ul style="list-style-type: none"> • Cold brewed tea/sun tea/mate’ tea • Unpasteurized beer • Kombucha tea

More foods and drinks to avoid

Food Group	Do Not Eat or Drink
Fruits	<ul style="list-style-type: none"> • Fresh fruits that have not been carefully washed, peeled or cooked. • Unpasteurized fruit juices (such as apple cider)
Vegetables	<ul style="list-style-type: none"> • Fresh vegetables or herbs that have not been carefully washed, peeled or cooked. • Raw sprouts (alfalfa, bean, broccoli and any other sprouts) • Unpasteurized vegetable juices
Grains	<ul style="list-style-type: none"> • Unpackaged breads • Raw, uncooked grain products
Fats, Oils and Sweets	<ul style="list-style-type: none"> • Salad dressings containing molded cheese (such as bleu, Roquefort) • Foods that contain raw/undercooked eggs such as homemade mayonnaise, eggnog, cookie dough and Caesar-salad dressings • Raw or unpasteurized honey
Other	<ul style="list-style-type: none"> • Items from salad bars, buffets or self-service restaurants • Items from bulk food bins • Raw uncooked brewers' yeast • Moldy and outdated food products



If you had a bone marrow or stem cell transplant, follow the food safety guidelines in our “Low Pathogen Diet and Food Safety” handout. If you need a copy of this handout, please ask your nurse.

Other information

- Talk with your doctor, nurse or dietitian **before** taking probiotics. Ask if it's safe for you to take them. Some patients should avoid taking certain probiotics based on their diagnosis and/or treatment plan.

To learn more about food safety

- Visit www.foodsafety.gov
- Read the booklet “Food Safety Guidelines for People with Cancer” from the U.S. Departments of Agriculture and Health and Human Services

To order a free copy, call 1-888-674-6854 or email fsis.outreach@usda.gov.

To view online, visit: www.fsis.usda.gov. Click on Topics > Food Safety Education > Fact Sheets > At-Risk Populations > Food Safety for People with Cancer

This info is a general resource. It is not meant to replace your doctor’s advice.
Ask your doctor or health care team any questions. Always follow their instructions.