

## Food Safety During and After Cancer Treatment

Food safety is important for people who are receiving or recovering from cancer treatment. Cancer and cancer treatments, such as chemotherapy, radiation treatment, and bone marrow/stem cell transplants, can weaken the immune system, making it harder for your body to fight infection. This effect lasts until at least a few weeks after treatment ends, sometimes longer.

Foodborne illness (also called food poisoning) occurs when you eat food that contains harmful bacteria, parasites, or viruses. Foodborne illness can be severe and sometimes fatal, especially if you have a weak immune system or are very old, very young, or pregnant.

Raw foods are a common cause of food poisoning. Proper cooking destroys bacteria, but they can grow on cooked food if it is left out too long. Some bacteria, such as *Listeria*, can grow even on foods stored in the refrigerator if they are kept for too long. Food also can become contaminated when someone infected with a virus (often a norovirus) or other "bug" handles it.

If you are receiving or recently finished cancer treatment, pay close attention to food safety rules, such as washing your hands. Be extra careful when handling, preparing, and storing food, and avoid some foods entirely, even if you may have eaten them with no problems in the past. Talk with your doctor or another member of your health care team about how long you should take food precautions and when you may return to eating certain foods again.

### Foods to avoid

Some foods have a higher risk of food poisoning. Here are some foods that can become tainted with bacteria, such as *Listeria* (causing an infection called listeriosis), *E. coli*, *Salmonella*, *Campylobacter*, and *Vibrio*, in addition to *Toxoplasma*, a parasite.

- Cold hot dogs or deli lunch meat (cold cuts)?always cook or reheat until the food is steaming hot
- Dry-cured, uncooked salami
- Unpasteurized (raw) milk and milk products, including raw milk yogurt
- Soft cheeses made from unpasteurized milk, such as blue-veined (a type of blue cheese), Brie, Camembert, feta, goat cheese, and queso fresco or blanco
- Smoked fish
- Deli-prepared salads with egg, ham, chicken, or seafood
- Refrigerated pâté
- Unwashed fresh fruit and vegetables (especially leafy vegetables that can hide dirt and other contaminants)
- Unpasteurized fruit juice or cider
- Raw sprouts, such as alfalfa sprouts
- Raw or undercooked beef, especially ground beef, or other raw or undercooked meat and poultry
- Raw or undercooked shellfish (such as oysters)?these items may carry the hepatitis A virus and should be cooked thoroughly to destroy the virus
- Some types of fish, both raw and cooked, as they may contain high levels of mercury [1]
- Sushi and sashimi, which often contain raw fish?commercially frozen fish (especially those labeled "sushi-grade" or "sashimi-grade") is safer than other fish, but check with your doctor, nutritionist, or other member of your health care team before eating these foods
- Undercooked eggs, such as soft boiled, over easy, and poached; raw unpasteurized eggs, or foods made with raw egg, such as homemade raw cookie dough

### Simple steps for food safety

**Think about your water source.** Some sources of water may have bacterial and chemical contamination. Well water may have bacterial contaminants. Community-supplied tap water is fine for healthy individuals, but it is not tested for safety for people with weak immune systems. A water filter that removes spores and cysts, as well as trace organics and heavy metals, is recommended for food preparation and drinking. Many types of these filters are for sale in stores.

**Cleaning up.** Wash your hands and the counter or surface where you prepare food often, using hot water and soap. Also clean the top of cans before opening them. Rinse fresh produce under running water, and dry it with a clean towel or paper towel. Hard fruits and vegetables, even those labeled "organic," should be lightly sprayed with a vegetable cleaning soap before washing them and then rinsed well. When washing your hands, rub them together for 20 seconds and pay special attention to areas between fingers and under nails.

**Prevent cross-contamination.** Keep raw meat, poultry, and fish or their juice away from other food since bacteria can spread, causing cross-contamination. Wash all items you used for raw foods (utensils, cutting board, plate, and so on) before using them for other foods or for cooked meat. It is ideal to set aside one specific cutting board for preparing uncooked meat and chicken and never using it for uncooked foods, fruits, and

vegetables. Don't rinse raw meat or poultry because it could spread bacteria to nearby surfaces and foods.

**Cook food to the right temperature.** To make sure cooked food is done, use a food thermometer. Check for a safe internal temperature of all poultry and meat, not just roasts. For instance, a hamburger should be cooked to at least medium (160°F). Get a [full list of recommended internal cooking temperatures](#). [2]

**Chill food promptly.** Refrigerate or freeze perishable food within two hours of cooking or buying it (sooner in warm weather).

**Thaw food properly.** Thaw frozen food in the refrigerator rather than at room temperature. You can also thaw food in frequently changed cold water or in the microwave, but cook it as soon as it thaws.

**Dispose of old food.** Eat canned and packaged food before its expiration date (the "use by" or "best before" date). Consume refrigerated leftovers within four days. After that time, throw out the food. Even if food does not smell or look spoiled, it may still be unsafe.

**Take precautions when eating out.** At restaurants, avoid buffets and salad bars where food sits out for a long time and comes in contact with many people. And, if you take home leftovers, put the food in a "to-go" container yourself, rather than having the server do it.

### Symptoms of foodborne illness

Symptoms differ depending on the pathogen, or bug, that causes the illness. Most often, symptoms are like those of the stomach "flu" (a virus).

- Diarrhea
- Stomach pain or cramps
- Nausea
- Vomiting
- Fever

Sometimes a headache and muscle pains also are present. *E. coli* usually does not cause a fever, and diarrhea often is bloody.

The time when symptoms begin can vary widely, from a few hours to 10 days after eating the tainted food, or even later. With *Listeria*, symptoms may not start until a few weeks later. But with most foodborne illnesses, people start feeling sick within the first day or two after infection.

### When you suspect foodborne illness

Call your doctor right away if you think you have food poisoning. Drink plenty of fluids to stay hydrated. Because people with cancer are at increased risk of severe illness, early treatment is important.

If you became ill due to eating food at a public place, call your local health department. By reporting it, you may help prevent other people from getting sick.

### More Information

[Diet and Nutrition Resources](#) [3]

[Nutrition Recommendations During and After Treatment](#) [4]

### Additional Resources

[U.S. Department of Agriculture: Food Safety for People With Cancer](#) [5]

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#### Links:

[1] <http://www.epa.gov/waterscience/fish/advice/>

[2] [http://www.fsis.usda.gov/Factsheets/Keep\\_Food\\_Safe\\_Food\\_Safety\\_Basics/index.asp](http://www.fsis.usda.gov/Factsheets/Keep_Food_Safe_Food_Safety_Basics/index.asp)

[3] <http://www.cancer.net/node/24982>

[4] <http://www.cancer.net/node/24985>

[5] <http://www.fda.gov/Food/ResourcesForYou/Consumers/SelectedHealthTopics/ucm312565.htm>