



Cancer

# food safety tool kit



# cancer food safety introduction

**This tool-kit discusses why food safety is so important for cancer patients, and provides tips designed to help you stay healthy.**

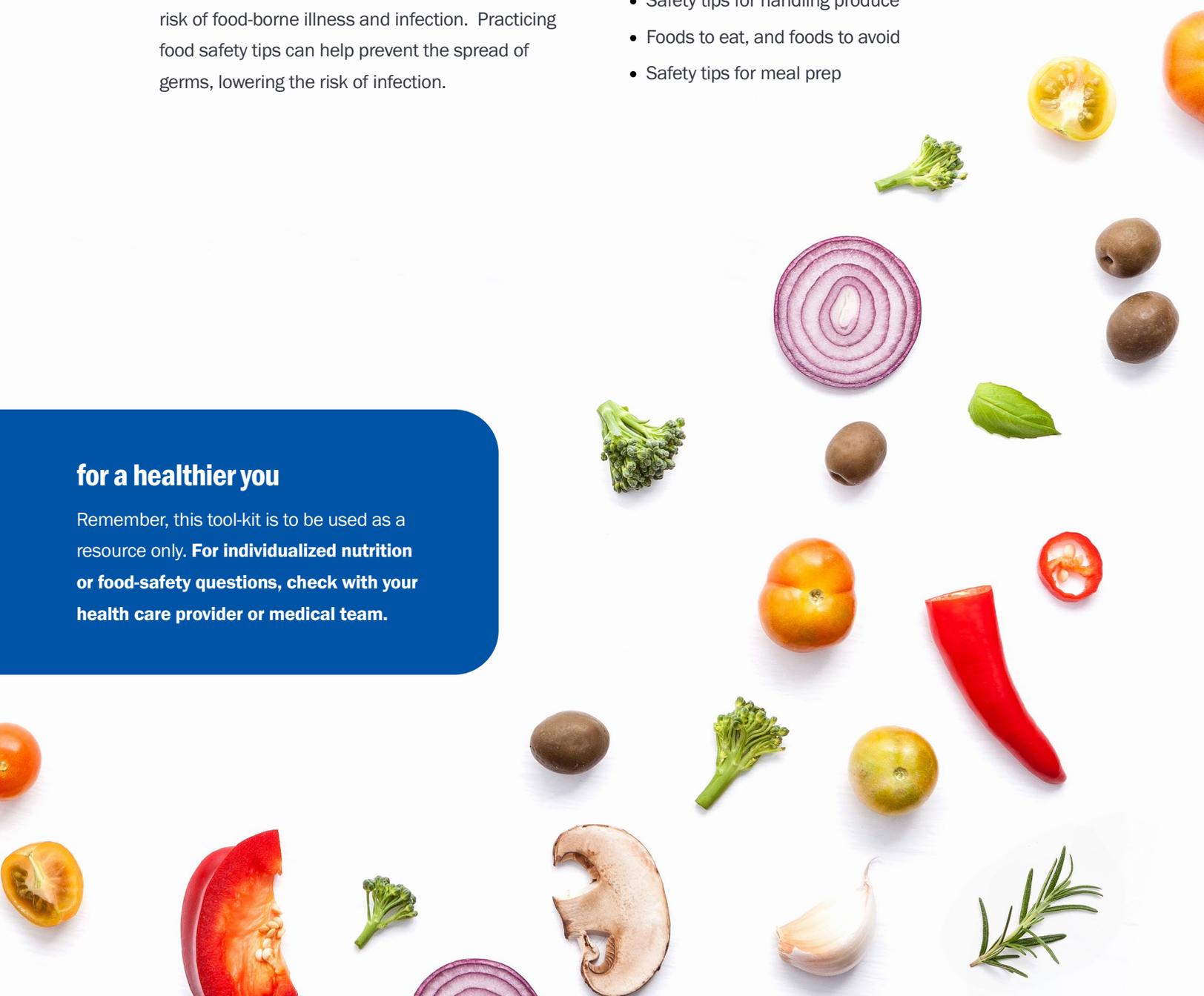
It's always wise to practice proper food safety methods when preparing and handling food, but when undergoing cancer treatment, it is even more important. Cancer and certain cancer treatments can weaken the immune system and increase the risk of food-borne illness and infection. Practicing food safety tips can help prevent the spread of germs, lowering the risk of infection.

Understanding food safety can help you take charge of your health and wellness. Refer to this tool-kit to learn more about the ways you can stay safe and tips for good hygiene. To keep you and your family safe, always consider the following:

- Safe cooking temperatures
- Hand washing practices
- Safety tips for handling produce
- Foods to eat, and foods to avoid
- Safety tips for meal prep

## for a healthier you

Remember, this tool-kit is to be used as a resource only. **For individualized nutrition or food-safety questions, check with your health care provider or medical team.**



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## safe cooking temperatures

### Consuming undercooked food increases the risk of developing a foodborne illness.

Patients receiving cancer treatments have weakened immune systems, this also increases the risk of developing a foodborne illness. To help reduce the risk, properly cooking and handling food is important.

Below are some cooking tips to help you stay free from foodborne illness. See the table to the right for safe internal cooking temperatures of various foods.

- Use a food thermometer to measure the internal temperature of red meat, poultry, eggs and fish.
- Check out the [USDA Food Safety & Inspection Service Page](#) for information on how to use a food thermometer.
- Never consume food that is undercooked.
- Always wrap or cover food promptly. Refrigerate or freeze items within one hour of cooking to limit the growth of bacteria.
  - Keep the refrigerator set between 34 °F and 40 °F.
  - Keep the freezer set at 0 °F or below.
- Always thaw frozen meat or poultry in the microwave, refrigerator or in cold water. Never thaw on the counter at room temperature.
- Never consume foods past the expiration date on the label. When in doubt, throw it out!
- Check out the *Eat This, Not That* and *Food Safety Tips: Grocery and Home* handouts for additional information on staying safe around food and cooking.
- Follow the proper food handling guidelines:
  - **Clean:** wash hands and surfaces often
  - **Separate:** keep raw meat and poultry separate from ready-to-eat foods
  - **Cook:** cook foods to safe internal temperatures
  - **Chill:** chill perishable foods within 1 hour

Safe Internal Temperatures	
Steaks and Roasts	145 °F
Fish	145 °F
Pork/Ham	145 °F
Ground Beef	160 °F
Egg Dishes	160 °F
Chicken Breast	165 °F
Whole Poultry	165 °F
Hotdogs	Reheat until steaming hot or 165 °F

Foodborne Illness Symptoms
Fever
Nausea and Vomiting
Dehydration
Upset Stomach
Stomach Cramps
Diarrhea

*\*Seek medical attention immediately if you think you are suffering from a foodborne illness.*

## hand washing

**If you or someone you know is dealing with cancer, it's important to maintain good hand hygiene.**

Handwashing is one of the best ways to keep you and your loved ones healthy by preventing the spread of germs. This is especially important because the immune system can be weakened by certain cancer treatments.

**It's important to wash your hands when doing the following activities:**

- Before, during, and after preparing food
- Before eating food
- Before and after caring for someone in your household who is ill
- Before and after treating a cut or wound
- After using the bathroom
- After changing diapers or helping a child who has gone to the bathroom
- After blowing your nose, coughing, or sneezing
- After touching an animal, animal feed, or animal waste
- After handling pet food or treats
- After touching trash

**To prevent the spread of germs, wash your hands using the following steps:**

- 1. Wet:** Wet your hands with clean running water, turn off the water and apply soap.
- 2. Lather:** Rub your hands to create a soapy lather. Make sure you lather the backs of your hands, between your fingers and underneath your fingernails.
- 3. Scrub:** Scrub your hands for 20 seconds (twice through "Happy Birthday").
- 4. Rinse:** Rinse your hands under clean, running water.
- 5. Dry:** Dry hands with a clean towel or air dry.

### What about Hand Sanitizer?

- An alcohol-based hand sanitizer is a good option if soap and water are unavailable.
- Hand sanitizers can quickly get rid of some germs, but not all germs are killed by hand sanitizer.
- Sanitizers may not remove visible dirt, grease, pesticides, or heavy metals.
- Always choose a sanitizer with at least 60% alcohol.
- Keep hand sanitizers out of the reach of children.

## food safety tips: grocery store and home

**Food safety is important both inside the home and at the grocery store.**

Some cancer medications may lower your body’s ability to fight infections. It’s important to take special care when purchasing food and when handling food in your home. Below are easy ways to help keep you or a loved one free from foodborne illness and food-related infections.

Safety Tip	Details
<p><b>Grocery Store Food Safety</b></p>	<ul style="list-style-type: none"> <li>• Do not purchase food from bulk-food containers.</li> <li>• Do not purchase cans with cracks, dents, or bulges.</li> <li>• Do not buy fruits or vegetables that are bruised or damaged.</li> <li>• Avoid raw sprouts, such as alfalfa or bean sprouts, as these have a higher risk of being contaminated with harmful bacteria.</li> <li>• Avoid unpasteurized juices and milk products.</li> <li>• For a full list of safe foods to purchase, check out the <i>Eat This, Not That</i> handout.</li> <li>• When buying pre-cut or packaged fresh produce, look for an expiration date. Do not purchase if produce has expired.</li> <li>• Pick-up foods that spoil easily at the end of the shopping trip and store in a cooler on the way home.</li> <li>• Double-bag raw meats or fish before placing in the grocery cart to prevent any meat juices from dripping. Store on the bottom rack of the cart or away from fresh produce.</li> </ul>
<p><b>Kitchen Food Safety</b></p>	<ul style="list-style-type: none"> <li>• After grocery shopping, immediately store cold or frozen food items in the freezer and refrigerator.</li> <li>• Scrub all raw fruits and vegetables with a brush and water before eating.</li> <li>• Soak berries and other foods that are not easily scrubbed in water, then rinse.</li> <li>• Fruits and vegetables that require peeling should be washed and scrubbed with a brush after peeling.</li> <li>• If using frozen fruit or vegetables in an uncooked dish, such as a smoothie, soak in water and rinse before preparing. If cooking, there is no need to wash frozen fruits or vegetables.</li> <li>• Wash hands and countertops with warm water and soap before and after preparing food.</li> <li>• Wash your hands with warm water and soap every time you touch raw meat, chicken, turkey, eggs, or fish.</li> <li>• Use separate cutting boards for fruits or vegetables and raw meat items.</li> <li>• Thaw raw meats and fish in the refrigerator or defrost in the microwave. Never allow it to thaw on the counter, as this can increase the risk for foodborne illness.</li> <li>• Use the <i>Safe Cooking Temperatures</i> handout for proper cooking temperatures of meats and fish.</li> </ul>

## food safety tips: grocery store and home

### Cancer

Safety Tip	Details
<p><b>Tips for a Clean and Safe Fridge</b></p>	<ul style="list-style-type: none"> <li>• Keep the refrigerator temperature set at 40 °F or below.</li> <li>• Keep the freezer temperature set at 0 °F or below.</li> <li>• Use an appliance thermometer to measure the internal temperature.</li> <li>• Store raw meats and fish in a sealed container or securely wrapped on a plate to prevent juices from dripping.</li> <li>• Store raw meats and fish on the bottom shelf.</li> <li>• If possible, keep fruits and vegetables in the crisper drawer.</li> <li>• Keep perishable food items out of the door. The temperature of the door changes every time you open it. Juices, water, and condiments are the best items to keep in the door space.</li> <li>• Eggs and dairy should be kept on the shelves.</li> <li>• Frozen foods don't last forever. Toss items that have been in the freezer for more than 3 months.</li> <li>• Wipe up spills immediately.</li> <li>• Try to wipe out the fridge shelves and doors weekly before loading that week's groceries. Wipe down with hot, soapy water and dry with a clean towel.</li> <li>• Store an opened box of baking soda in the back to help eliminate odors and keep your fridge smelling fresh.</li> </ul>

## staying healthy while away from home

### When dealing with cancer, it's important to follow food safety tips, but what about when you go out to eat?

Though you can't control every aspect about the foods you eat out, you can make smarter choices. When it comes to foods not eaten at home, practice the following safe habits.

- Do not eat raw or undercooked animal products, including meat, pork, game, poultry, eggs, and fish.
- Order meats prepared medium to medium-well.
- Choose egg preparation methods that thoroughly cooks the yolk, including scrambled, hard-boiled, fried, or over-hard eggs.
- Avoid eating foods from salad bars or buffets. Food can be left out for long periods of time and exposed to many germs in these types of restaurants.
- Avoid sharing silverware and cups.
- Put any leftover food in a "to-go" container yourself, rather than the server.
- Refrigerate leftovers as soon as you get home. If food has been sitting out for more than 2 hours, discard.
- Choose restaurants that are clean and that are willing to prepare your food to order.

### Reheating Leftovers

When reheating leftovers, be sure they reach 165° F. Always use a food thermometer to check the internal temperature of the food. For more information on how to use a food thermometer, check out the [USDA Food Safety and Inspection Service Page](#).

- Reheat sauces, soups and gravies by bringing them to a rolling boil.
- Cover leftovers to reheat. This retains moisture and ensures that food will heat all the way through.
- Eat leftovers within 1-2 days.

### Avoid certain foods, including:

- Unwashed fresh fruits and vegetables
- Raw sprouts, such as alfalfa or bean sprouts
- Cold hot dogs or deli meat. These can pose a risk for a certain foodborne illness called listeria. If you wish to eat these foods, heat until steaming hot.
- Refrigerated pâté
- Raw oysters
- Smoked fish
- Sushi or sashimi
- Unpasteurized beverages, such as raw cider, raw milk, and unpasteurized fruit juices
- Unpasteurized cheeses, like blue cheese, Brie, Camembert, feta, goat cheese and queso fresco
- Foods made with raw eggs, such as homemade ice cream, eggnog, cookie dough, freshly made sauces (aioli, béarnaise, hollandaise, mayonnaise and Caesar salad dressing), mousses, meringues and tiramisu
- Deli prepared salads, like chicken, tuna or egg salad

## eat this, not that

### Cancer

Group	Eat This	Not That
<b>Dairy</b>	<ul style="list-style-type: none"> <li>Commercially packaged cheese and cheese products made with pasteurized milk, such as mild and medium cheddar, mozzarella, parmesan, Swiss</li> <li>Commercial eggnog</li> <li>Dry, refrigerated and frozen pasteurized whipped topping</li> <li>Commercially made ice cream, frozen yogurt, sherbet, ice cream bars, homemade milkshakes</li> <li>Pasteurized milk</li> <li>Pasteurized yogurt</li> </ul>	<ul style="list-style-type: none"> <li>Cheeses containing chili peppers or other uncooked vegetables</li> <li>Cheeses with mold, such as blue cheese, gorgonzola, stilton, Roquefort</li> <li>Mexican-style cheeses, such as queso fresco – these are typically made with unpasteurized milk</li> <li>Unpasteurized or raw milk, cheese, yogurt, and other milk products</li> </ul>
<b>Protein: Meat, Fish, Eggs, Poultry, Soy</b>	<ul style="list-style-type: none"> <li>Cooked tofu or shelf stable tofu, such as Mori-Nu® silken tofu</li> <li>Limit hot dog, sausage, and bratwurst consumption, but if consuming heat until steaming hot</li> <li>Well-cooked eggs and egg substitutes</li> <li>Well-cooked fish, meat, poultry- use the <i>Safe Cooking Temperatures</i> handout for food safety tips</li> </ul>	<ul style="list-style-type: none"> <li>Deli meats, hot dogs, sausages, and bratwursts unless reheated until steaming hot</li> <li>Foods containing raw eggs – hollandaise sauce, raw cookie dough, homemade mayonnaise, Caesar salad dressing</li> <li>Raw or runny eggs</li> <li>Raw meats, fish, or poultry</li> <li>Raw tofu</li> <li>Refrigerated meat spreads</li> <li>Smoked or pickled fish</li> <li>Sushi, lox, or sashimi</li> <li>Tempeh products</li> </ul>
<b>Fruits and Vegetables</b>	<ul style="list-style-type: none"> <li>Dried fruits</li> <li>Frozen or canned fruits or vegetables</li> <li>Shelf-stable salsa or salad dressing</li> <li>Well-washed fruits, vegetables, and herbs – do not use soap as this can cause diarrhea, cold water works well</li> </ul>	<ul style="list-style-type: none"> <li>Bruised, damaged, or moldy fruits and vegetables</li> <li>Food that came from a damaged can</li> <li>Fresh salsa or salad dressing found in the refrigerated section of the grocery store</li> <li>Fruits or vegetables from a buffet line or salad bar</li> <li>Raw vegetable sprouts – alfalfa, radish, broccoli, mung bean, or other sprouts</li> <li>Unwashed herbs</li> <li>Unwashed fruits and vegetables</li> <li>Wilted salad greens</li> </ul>
<b>Grains</b>	<ul style="list-style-type: none"> <li>Cooked grains – pasta, rice, other grains</li> <li>All breads, bagels, rolls, muffins, waffles</li> </ul>	<ul style="list-style-type: none"> <li>Avoid “bulk bin” sources of cereals, grains, or other foods</li> <li>Avoid eating foods with raw flour</li> </ul>
<b>Nuts and Seeds</b>	<ul style="list-style-type: none"> <li>Canned or bottled roasted nuts</li> <li>Commercially packaged peanut butter</li> <li>Nuts in baked products</li> <li>Shelled, roasted nuts</li> </ul>	<ul style="list-style-type: none"> <li>Non-commercially packaged peanut butter</li> <li>Unroasted, raw nuts</li> <li>Roasted nuts in the shell</li> </ul>

## eat this, not that

### Cancer

Group	Eat This	Not That
<b>Sweets and Desserts</b>	<ul style="list-style-type: none"> <li>• Commercially packaged sweets, such as cookies, cakes, pies, and other shelf-stable items</li> <li>• Popsicles</li> <li>• Pudding</li> </ul>	<ul style="list-style-type: none"> <li>• Avoid unrefrigerated, cream-filled pastry products</li> <li>• Bakery items that are past the expiration date or have been sitting out all day</li> <li>• Raw or non-heat-treated honey; honey in the comb</li> </ul>
<b>Beverages</b>	<ul style="list-style-type: none"> <li>• Distilled water or city water</li> <li>• Homemade juices, if consumed within 2 hours of juicing</li> <li>• Tea made with boiling water and commercial tea bags</li> <li>• Instant, brewed, or cold brew coffee made with boiling water</li> </ul>	<ul style="list-style-type: none"> <li>• Sun tea</li> <li>• Unpasteurized fruit juice, vegetable juice, or cider</li> <li>• Water from lakes, rivers, streams, or springs</li> </ul>
<b>Fats and Oils</b>	<ul style="list-style-type: none"> <li>• Packaged oils</li> <li>• Pasteurized butter</li> </ul>	<ul style="list-style-type: none"> <li>• Unpasteurized butter</li> </ul>
<b>Other</b>		<ul style="list-style-type: none"> <li>• Brewer's yeast, if uncooked</li> <li>• Herbal and nutrient supplement preparations</li> </ul>

## meal prep food safety tips

**Meal prepping is a great way to save time and nourish your body on days when energy is low.**

If food isn't properly handled, it can increase the risk of developing a foodborne illness. Follow the tips below to stay free from foodborne illness while meal prepping.

Do	Don't
<ul style="list-style-type: none"> <li>Wash hands with warm, soapy water before preparing food.</li> <li>To ensure hands are clean of unwanted germs, wash them for the length of time it takes to sing "Happy Birthday" twice, or about 20 seconds.</li> </ul>	<ul style="list-style-type: none"> <li>Wash meat, poultry, seafood, or eggs.</li> </ul>
<ul style="list-style-type: none"> <li>Rinse whole fruits and vegetables under cold running water</li> <li>Dry using a salad spinner or clean cloth.</li> </ul>	<ul style="list-style-type: none"> <li>Use soap or detergent on produce items.</li> </ul>
<ul style="list-style-type: none"> <li>Wash any surface, hands, utensil, or raw food that has touched uncooked meat, poultry, seafood, eggs, or flour before using them.</li> </ul>	<ul style="list-style-type: none"> <li>Eat uncooked meat, poultry, seafood, eggs, flour, or foods that have touched these items.</li> </ul>
<ul style="list-style-type: none"> <li>Clean cooking surfaces and utensils with hot, soapy water after every use.</li> </ul>	<ul style="list-style-type: none"> <li>Reuse cutting boards, utensils, or plates that have touched uncooked poultry, meat, eggs, seafood, or flour unless washed with hot, soapy water.</li> </ul>
<ul style="list-style-type: none"> <li>Use separate cutting boards for produce and uncooked meat, poultry, eggs, and seafood.</li> </ul>	<ul style="list-style-type: none"> <li>Use the same cutting board for all food items.</li> </ul>
<ul style="list-style-type: none"> <li>Use the <i>Safe Cooking Temperatures</i> handout and a food thermometer to make sure food is properly cooked through.</li> </ul>	<ul style="list-style-type: none"> <li>Serve or consume meat, poultry, or seafood that has not been tested with a food thermometer or has been tested but doesn't meet temperature requirements.</li> </ul>
<ul style="list-style-type: none"> <li>Keep seafood, meat, and poultry at 140°F or above between cooking and serving.</li> </ul>	<ul style="list-style-type: none"> <li>Allow food to cool before refrigerating.</li> </ul>
<ul style="list-style-type: none"> <li>Refrigerate food within 2 hours.</li> </ul>	<ul style="list-style-type: none"> <li>Let perishable food sit out for more than 2 hours.</li> </ul>

Chart adapted from U.S. Food and Drug Food Safe Meal Prep