

# **Nutrition During Cancer Treatment**

When you're fighting cancer, good nutrition is an important part of your treatment. Eating the right kinds of foods before, during, and after treatment can help you tolerate your treatment better and give you more strength for recovery and healing.

#### Before cancer treatment

Even if your treatment has not yet begun, start eating a diet with **plenty of calories and protein** right away. Good nutrition and the guidelines in this fact sheet will help you:

- · Build extra strength for healing
- Prevent body tissue from breaking down
- Fight off infection
- · Cope with higher doses of cancer treatment

#### **During cancer treatment**

Many cancer treatments that are designed to kill cancer cells also damage healthy cells — which can affect your weight and appetite. Treatments can also affect your body's ability to fight illness. This is called **immunosuppression** [im-yuh-noh-suh-PRESH-uh n].

Studies show that people who eat well during cancer treatment better tolerate side effects and fight illness. Get the best nutrition and fight infection by:

- Following special food-handling guidelines see page 2. Because your ability to fight infections is weaker than usual, you must be extra careful about germs. Learn safe ways to store and prepare food to prevent exposure to germs. Make sure to share the guidelines on page 2 with anyone who prepares or brings you food.
- Choosing foods wisely see page 3. Eat plenty
  of calories and protein, and use the table on
  page 3 to choose foods that are safe and free
  from harmful germs. Avoid the specific foods
  listed in the table during cancer treatment.



- Managing side effects see page 4. You may have side effects that make you not want to eat. Learn what to eat when you don't feel well.
- Staying in touch with a registered dietitian nutritionist (RDN) — see below. An RDN can answer questions and provide suggestions for specific eating problems.

#### After cancer treatment

Return to traditional guidelines for healthy eating. Eat a variety of foods, and go easy on saturated animal fat, salt, sugar, and alcohol. But, continue to follow the food-handling guidelines (on page 2) for 2 to 3 months. A safe, healthy diet will help you regain your strength, rebuild tissue, and feel better.

My follow-up appointment		
Date/Time:		
Place:		
Doctor:		

## Following safe food-handling guidelines

Because cancer treatments weaken your immune system, follow these DOs and DON'Ts to keep germs from making you sick.

When you:	DO	DON'T
Eat away from home (in the hospital or at a restaurant)	<ul> <li>□ Unless your providers say not to, you may have commercially packaged snack foods and drinks.</li> <li>□ Choose restaurants you know are clean. Ask for single-serving condiments.</li> </ul>	<ul> <li>Eat fast food, other restaurant food, or self-prescribed nutritional supplements.</li> <li>Avoid salad bars, delicatessens, smorgasbords, buffets, pot lucks, and sidewalk vendors. Don't eat ice cream, yogurt, and milk shakes from soft-serve machines.</li> </ul>
Shop for food	<ul> <li>☐ Get cold foods home and into the freezer fast.</li> <li>☐ Make sure cans are not dented and containers don't have cracked lids.</li> </ul>	<ul><li>☐ Buy food past the "use-by" date on the label or that is spoiled.</li><li>☐ Eat delicatessen foods.</li></ul>
Prepare food at home	<ul> <li>□ Keep foods at a safe temperature by:         <ul> <li>Cooking hot food thoroughly, and then keeping it warm at or above 135° F.</li> <li>Refrigerating food immediately if you are not going to eat it right away.</li> <li>Keeping cold foods below 41° F.</li> <li>□ Wash tops of cans before opening.</li> </ul> </li> </ul>	<ul> <li>□ Leave these foods at room temperature longer than 2 hours: milk and dairy products, eggs (unless they're pasteurized), all types of meat and fish, baked potatoes, tofu and other soy proteins, sprouts and sprout seeds, cut melons or tomatoes, garlic and oil mixtures, or cooked rice, beans, or vegetables.</li> <li>□ Eat anything that might be spoiled or moldy.</li> <li>□ Use eggs that have cracked before use.</li> <li>□ Refreeze defrosted foods.</li> <li>□ Taste anything that looks or smells strange.</li> <li>□ Cut cooked foods on the same surface as raw foods or use a wooden cutting board.</li> </ul>
Store food	<ul> <li>□ Use tightly sealed, covered containers.</li> <li>□ Discard foods that have passed their expiration date.</li> <li>□ Divide food purchased in large economy sizes into serving sizes and seal in new food-storage bags.</li> <li>□ Rotate stored food to use the oldest food first.</li> <li>□ Keep your non-refrigerated food storage area between 50° F and 70° F.</li> <li>□ Keep your refrigerator between 34° and 40° F.</li> <li>□ Refrigerate only as much food as can be eaten in 2-3 days, and freeze the rest.</li> <li>□ Keep your freezer colder than 5° F.</li> <li>□ Store foods in freezer bags or in clear airtight containers.</li> </ul>	<ul> <li>Keep refrigerated leftovers after 3 days or frozen food with freezer burn.</li> <li>Keep food that has been frozen longer than the time limit shown below.</li> <li>Storage time limits for frozen foods</li> <li>Bakery goods and breads 2 months</li> <li>Prepared foods containing meat broths or gravies</li> <li>Prepared meat dishes 3-4 months</li> <li>Uncooked pork 4-6 months</li> <li>Other meats, uncooked 6-12 months</li> <li>Vegetables 6-9 months</li> </ul>
Clean up	<ul> <li>□ Keep your food preparation areas clean by:</li> <li>− Frequently using a sanitizing solution (1 tablespoon bleach to 1 gallon water) on counter tops, cutting boards, eating surfaces, dishcloths and towels, can openers, and food processor blades.</li> <li>− Removing food particles and spills from all surfaces, appliances, and storage areas.</li> <li>□ Wash dishes on the hottest dishwasher cycle.</li> </ul>	<ul> <li>☐ Handle food or prepare it without washing your hands with soap first.</li> <li>☐ Use anything other than clean paper towels to dry your hands.</li> <li>☐ Hand wash dishes without using a sanitizing solution afterwards (1 tablespoon bleach to 1 gallon water).</li> <li>☐ Use towels to dry dishes (let them air dry).</li> </ul>

## Making Safe Food choices (especially avoid items in bold)

Groups	Allowed	Not Allowed
Milk and dairy products	<ul> <li>Pasteurized grade A milk and milk products, yogurt, sour cream, butter, margarine, whipped topping.</li> <li>Commercially packaged cheeses: mild and medium cheddar, mozzarella, Swiss, Parmesan, cottage cheese, cream cheese.</li> </ul>	Unpasteurized or raw milk or milk products.     Cheese: from delicatessens, with chili peppers or vegetables mixed in, with mold, bleu, Stilton, Gorgonzola, Brie, feta, farmers, Camembert, sharp cheddar.
Meats or substitutes	<ul> <li>All well-cooked or canned meats, fish, poultry, shellfish, smoked meats, commercially packaged lunch meat, canned or commercially packaged fish (refrigerate after opening).</li> <li>Eggs cooked until whites congeal and yolks begin to thicken.</li> <li>All cooked entrees, beans, peas, and lentils.</li> </ul>	<ul> <li>Raw or under cooked meat, fish, poultry, sushi, sashimi, steak tartare.</li> <li>Meat and cold cuts from delicatessens.</li> <li>Cold smoked fish, pickled fish.</li> <li>Raw or under-cooked eggs.</li> <li>Undercooked tofu.</li> <li>Miso products.</li> </ul>
Vegetables	<ul> <li>Raw vegetables washed under cold running water before cutting and peeling.</li> <li>All cooked frozen or canned vegetables.</li> <li>Canned or pasteurized vegetable juice.</li> </ul>	<ul> <li>All types of sprouts.</li> <li>Pre-cut or pre-washed vegetables purchased in vacuum packs or bags.</li> <li>Moldy vegetables.</li> <li>Unwashed raw vegetables or raw vegetables difficult to clean, such as mushrooms, spinach, and parsley.</li> <li>Salads from delicatessens.</li> <li>Commercial salsa from the refrigerator case.</li> </ul>
Fruit	<ul> <li>Raw fruit washed under cold running water before cutting or peeling.</li> <li>Canned or frozen fruit.</li> <li>Canned or fresh pasteurized fruit juice.</li> </ul>	<ul> <li>Home-canned products.</li> <li>Moldy fruit.</li> <li>Unwashed raw fruit or hard-to-clean fresh fruit, such as berries (like raspberries), grapes in bunches (can wash individually), pineapple.</li> <li>Unpasteurized fruit juice.</li> </ul>
Breads, cereals	<ul><li>All bread products.</li><li>All cereals, pasta, rice, potatoes, etc.</li><li>All chips, pretzels, and popcorn.</li></ul>	Raw grain products.     Moldy bread: if even one piece is moldy, throw out the entire package.
Fats and nuts	<ul> <li>All oil, shortening, butter, margarine, creams, gravy.</li> <li>Commercial shelf-stable dressings, mayo, sauces.</li> <li>Roasted nuts in bottles or cans, nuts in bakery products, commercial peanut butter.</li> </ul>	<ul> <li>Fresh refrigerated salad dressings containing aged cheese or raw eggs.</li> <li>Unroasted raw nuts.</li> <li>Unprocessed nuts in shells.</li> </ul>
Soups, stews	All cooked soups except miso soup.     All cooked entrees, casseroles, stews, etc.	Miso soup.
Desserts	<ul> <li>Cakes, pies, cookies.</li> <li>Refrigerated cream-filled pastries, puddings.</li> <li>Frozen ice pops, ices, sherbet, gelatin.</li> <li>Commercial ice cream and frozen yogurt, ice cream filled products.</li> </ul>	<ul> <li>Unrefrigerated cream-filled pastries.</li> <li>Soft-serve ice cream, frozen yogurt, and milk shakes.</li> </ul>
Beverages	<ul> <li>Tap water from city or country sources, bottled water, bottled or powdered beverages.</li> <li>Instant or brewed coffee or tea, cold brewed tea made with boiling water, herbal tea.</li> </ul>	<ul> <li>Well water, unless tested yearly and found safe.</li> <li>Cold brewed tea made with cold or warm water.</li> </ul>
Nutrition supplements	Commercial liquid or powdered nutrition supplements, such as Ensure, Boost, Resource, Carnation Instant Breakfast, etc.	Dried herbs, including herbal nutrition supplements and Chinese herbs.
Other	<ul> <li>Spices: salt and pepper, spices less than 6 months old, all herbs and spices if added during cooking.</li> <li>Sugar, brown sugar, jam, jelly syrup, candy, and gum.</li> <li>Bottled condiments: catsup, mustard, barbecue and soy sauce.</li> <li>Commercially packaged honey.</li> </ul>	<ul> <li>Raw or unpasteurized honey.</li> <li>Uncooked, fresh or dried herbs and spices, including herbal nutritional supplements.</li> </ul>

### Managing common side effects

Try the ideas below to help you find something you can eat when your dealing with treatment side effects.

side effects.	<ul> <li>Don't eat or drink anything until your vomiting is under control.</li> </ul>	
Loss of appetite	<ul> <li>Start with small amounts of clear liquids, and add other foods slowly to see how you tolerate them.</li> </ul>	
$\square$ Eat the foods you like the most.	other roods slowly to see now you tolerate them.	
☐ Eat 6 small meals throughout the day, including a snack at bedtime, rather than 3 larger meals.	Nausea	
"Power pack" your food by adding butter, cheese, or other high-calorie ingredients.	Eat foods that are easy on your stomach (crackers, toast, yogurt). Avoid foods that are fatty, very sweet, spicy, or have strong odors.	
☐ Drink high-calorie, high-protein supplements such as Carnation Instant Breakfast or Ensure.	☐ Eat slowly.	
☐ Eat soft, cool, or frozen foods.	$\square$ Eat 6 small meals a day instead of 3 larger meals.	
☐ Eat as much as you can when you're feeling well.	☐ Don't drink liquid with meals, drink only between	
☐ Ask your doctor about appetite stimulants.	meals. Slowly sip liquids all day long so you don't get dehydrated.	
Changes in taste and smell	☐ Ask your doctor about medicine to control nausea.	
☐ Avoid foods with strong odors.	Diarrhea and cramping	
☐ Add seasonings, flavorings, or sauces.	☐ Drink plenty of fluids to replace loss.	
☐ Eat foods cold or at room temperature.	☐ Use fewer dairy products. If this helps, ask your	
$\square$ Use plastic utensils and dishes.	dietitian for more ideas on lactose-free eating.	
☐ Add sugar if food tastes too salty. Add salt if food tastes too sweet.	☐ Eat foods that contain pectin, such as applesauce, oatmeal, and fruits and vegetables that are peeled.	
Dry mouth	☐ Eat foods high in potassium and sodium, such as bananas, juice, fresh fruits and vegetables, and potatoes, as tolerated.	
☐ Drink 8 to 12 cups of liquid daily.	□ Avoid caffeinated drinks like coffee and soda.	
$\square$ Add sauces, gravies, or salad dressings to foods.	Avoid carrellated drilles like correct and sodd.	
☐ Stimulate your saliva with sweet or tart foods and drinks, or by sucking on hard candy or chewing gum.	Weight loss and muscle wasting	
(Avoid if you have a sore mouth or throat.)   Keep your lips moist with lip balm.	"Power pack" your food by adding butter, cheese, or other high-calorie ingredients.	
Reep your lips moist with lip baim.	☐ Drink more liquids.	
Sore mouth and throat	☐ Eat more fiber.	
☐ Avoid foods or liquids that irritate your mouth.	Constipation	
☐ Drink through a straw.	-	
☐ Eat soft or pureed foods.	☐ Drink hot beverages. ☐ Increase fluid intake.	
☐ Eat your food cold or at room temperature.	☐ Increase fluid Intake.	
☐ Rinse your mouth often with water.	□ IIICI ease IIDel IIItake.	

**Vomiting** 

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