



Nutrition for the Person With Cancer During Treatment

A Guide for Patients and Families



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Nutrition for the Person With Cancer During Treatment: A Guide for Patients and Families

Nutrition is an important part of cancer treatment. Eating the right kinds of foods before, during, and after treatment can help you feel better and stay stronger.

Not everyone has nutrition-related side effects, but this guide will help you address them if and when they come up. You don't have to read straight through all the information here. You can just read the sections you need and use what applies to you.



The information in this guide is not meant to replace the advice of a medical professional. If you have any questions or concerns, you should talk to a doctor, nurse, or dietitian about your nutritional needs. A registered dietitian (RD) can be one of your best sources of information about your diet. If you're going to meet with a dietitian, be sure to write down your questions before your meeting so you won't forget anything.

You can find more on nutrition before, during, and after cancer treatment in our book called *American Cancer Society Complete Guide to Nutrition for Cancer Survivors: Eating Well, Staying Well During and After Cancer*. Call us at **1-800-227-2345** or visit our bookstore online at **www.cancer.org/bookstore** to find out about costs or to place an order.

For more general information or to find a registered dietitian, contact the Academy of Nutrition and Dietetics (see the "To learn more" section on page 47).

Benefits of good nutrition during cancer treatment

Good nutrition is especially important if you have cancer because both the illness and its treatments can change the way you eat. Cancer and cancer treatments can also affect the way your body tolerates certain foods and uses nutrients.

The nutrient needs of people with cancer vary from person to person. Your cancer care team can help you identify your nutrition goals and plan ways to help you meet them. Eating well while you're being treated for cancer might help you:

- Feel better.
- Keep up your strength and energy.
- Maintain your weight and your body's store of nutrients.
- Better tolerate treatment-related side effects.
- Lower your risk of infection.
- Heal and recover faster.

Nutrients

Proteins

We need protein for growth, to repair body tissue, and to keep our immune systems healthy. When your body doesn't get enough protein, it might break down muscle for the fuel it needs. This makes it take longer to recover from illness and can lower resistance to infection. People with cancer often need more protein than usual. After surgery, chemotherapy, or radiation therapy, extra protein is usually needed to heal tissues and help fight infection.

Good sources of protein include fish, poultry, lean red meat, eggs, low-fat dairy products, nuts and nut butters, dried beans, peas and lentils, and soy foods.

Fats

Fats play an important role in nutrition. Fats and oils are made of fatty acids and serve as a rich source of energy for the body. The body breaks down fats and uses them to store energy, insulate body tissues, and transport some types of vitamins through the blood.

You may have heard that some fats are better for you than others. When considering the effects of fats on your heart and cholesterol level, choose monounsaturated and polyunsaturated fats more often than saturated fats or trans fats.

Monounsaturated fats are found mainly in vegetable oils like olive, canola, and peanut oils.

Polyunsaturated fats are found mainly in vegetable oils like safflower, sunflower, corn, and flaxseed. They are also the main fats found in seafood.

Saturated fats are mainly found in animal sources like meat and poultry, whole or reduced-fat milk, cheese, and butter. Some vegetable oils like coconut, palm kernel oil, and palm oil are saturated. Saturated fats can raise cholesterol and increase your risk for heart disease.

Trans-fatty acids are formed when vegetable oils are processed into solids, such as margarine or shortening. Sources of trans fats include snack foods and baked goods made with partially hydrogenated vegetable oil or vegetable shortening. Trans fats are also found naturally in some animal products, like dairy products. Avoid trans fats as much as you can.

Carbohydrates

Carbohydrates are the body's major source of energy. Carbohydrates give the body the fuel it needs for physical activity and proper organ function. The best sources of carbohydrates – fruits, vegetables, and whole grains – also supply needed vitamins and minerals, fiber, and phytonutrients to the body's cells. (Phytonutrients are chemicals in plant-based foods that we don't need to live, but that might promote health.)

Whole grains or foods made from them contain all the essential parts and naturally occurring nutrients of the entire grain seed. Whole grains are found in cereals, breads, and flours. Some whole grains, such as quinoa, brown rice, or barley, can be used as side dishes or part of an entrée. When choosing a whole-grain product, look for the words “whole grain,” “stone ground,” “whole ground,” “whole-wheat flour,” “whole-oat flour,” or “whole-rye flour.”

Fiber is the part of plant foods that the body can't digest. There are 2 types of fiber. Insoluble fiber helps to move food waste out of the body quickly, and soluble fiber binds with water in the stool to help keep stool soft.

Other sources of carbohydrates include bread, potatoes, rice, spaghetti, pasta, cereals, corn, peas, and beans. Sweets (desserts, candy, and drinks with sugar) can supply carbohydrates, but provide very little in the way of vitamins, minerals, or phytonutrients.

Water

All body cells need water to function. If you don't take in enough fluids or if you lose fluids through vomiting or diarrhea, you can become dehydrated (your body doesn't have as much fluid as it should). You get water from the foods you eat, but a person should also drink about eight 8-ounce glasses of liquid each day to be sure that all the body cells get the fluid they need. Keep in mind that all liquids (soups, milk, even ice cream and gelatin) count toward your fluid goals.

Vitamins and minerals

The body needs small amounts of vitamins and minerals to help it function properly. Most are found naturally in foods. They are also sold as supplements in pill and liquid form. They help the body use the energy (calories) found in foods.

A person who eats a balanced diet with enough calories and protein usually gets plenty of vitamins and minerals. But it can be hard to eat a balanced diet when you're being treated for cancer, especially if you have treatment side effects that last for a long time. In this case, your doctor or dietitian may suggest a daily multivitamin and mineral supplement.

If you're thinking of taking a vitamin or supplement, be sure to discuss this with your doctor first. These substances can be harmful, especially when taken in large doses. In fact, large doses of some vitamins and minerals may make chemotherapy and radiation therapy less effective.

Antioxidants

Antioxidants include vitamins A, C, and E; selenium and zinc; and some enzymes that absorb and attach to free radicals, preventing them from attacking normal cells.

If you want to take in more antioxidants, health experts recommend eating a variety of fruits and vegetables, which are good sources of antioxidants. Taking large doses of antioxidant supplements or vitamin-enhanced foods or liquids is usually not recommended while getting chemo or radiation therapy. Talk with your doctor to find out the best time to take antioxidant supplements.

Phytonutrients

Phytonutrients or phytochemicals are plant compounds like carotenoids, lycopene, resveratrol, and phytosterols that are thought to have health-protecting qualities. They're found in plants such as fruits and vegetables, or things made from plants, like tofu or tea. Phytochemicals are best taken in by eating the foods that contain them rather than taking supplements or pills.

Herbs

Herbs have been used to treat disease for hundreds of years, with mixed results. Today, herbs are found in many products, like pills, liquid extracts, teas, and ointments. Many of these products are harmless and safe to use, but others can cause

harmful side effects. Some may even interfere with proven cancer treatments, including chemo, radiation therapy, and recovery from surgery. If you're interested in using products containing herbs, talk about it with your oncologist or nurse first.

Safety considerations

Many people believe that if they find a pill or supplement in stores, it's safe and it works. The Food and Drug Administration (FDA) has rules to help ensure that supplements contain what their labels claim they do, but the supplement's safety and its effects on the body are not addressed by any FDA rules. The FDA does not make manufacturers of these products print possible side effects on their labels. And the FDA can't pull a dietary supplement or herbal product from the market unless they have proof that the product is unsafe.

Tell your cancer care team about any over-the-counter products or supplements you're using or are thinking about using. Some other safety tips:

- Ask your cancer care team for reliable information on dietary supplements.
- Check the product labels for both the quantity and concentration of active ingredients in each product.
- Stop taking the product and call your cancer care team right away if you have side effects, like wheezing, itching, numbness, or tingling in your limbs.



Cancer and cancer treatment affect nutrition

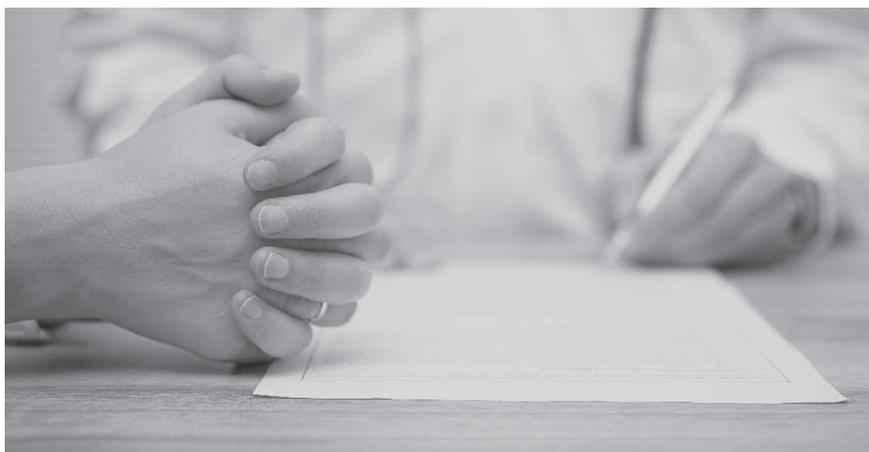
During cancer treatment you might need to change your diet to help build up your strength and withstand the effects of the cancer and its treatment.

When your cancer was first diagnosed, your doctor talked with you about a treatment plan. This may have meant surgery, radiation therapy, chemotherapy, hormone therapy, biologic therapy (immunotherapy), or some combination of treatments. All of these treatments kill cancer cells. But in the process, healthy cells are damaged, too. This damage is what causes cancer treatment side effects. Some of the more common side effects that can affect eating are:

- Loss of appetite (anorexia)
- Sore mouth or throat
- Dry mouth
- Dental and gum problems

- Changes in taste or smell
- Nausea
- Vomiting
- Diarrhea
- Constipation
- Feeling very tired all the time (fatigue)
- Depression

We have a lot more information on the different side effects of cancer treatment. Call us or visit our website for more details.



Before treatment begins

Until you start treatment, you won't know what, if any, side effects you may have or how you will feel. One way to prepare is to look at your treatment as a time to focus on yourself and on getting well. Here are some other ways to get ready:

Make plans now

You can reduce your anxiety about treatment and side effects by taking action now. Talk to your cancer care team about the things that worry you. Learn as much as you can about the cancer, your treatment plan, and how you might feel during treatment. Planning how you'll cope with possible side effects can make you feel more in control and ready for the changes that may come.

Here are some tips to help you get ready for treatment:

- Stock your pantry and freezer with your favorite foods so you won't need to shop as often. Include foods you know you can eat even when you're sick.
- Cook in advance, and freeze foods in meal-sized portions.
- Talk to your friends or family members about ways they can help with shopping and cooking, or ask a friend or family member to take over those jobs for you. Be sure to tell them if there are certain foods or spices you have trouble eating.
- Talk to your cancer care team about any concerns you have about eating. They can help you make diet changes to help manage side effects like constipation, weight loss, or nausea.

For those whose cancer treatment will include radiation to the head or neck, you may be advised to have a feeding tube placed in your stomach before starting treatment. This allows feeding when it gets hard to swallow, and can prevent problems with nutrition and dehydration during treatment.

For more information on coping, see the "To learn more" section on page 47 and/or call your American Cancer Society at **1-800-227-2345**.

Once treatment starts

Eat well

Your body needs a healthy diet to function at its best. This is even more important if you have cancer. In fact, some cancer treatments work better in people who are well-nourished and are getting enough calories and protein. Try these tips:

- Don't be afraid to try new foods. Some things you may never have liked before may taste good during treatment.
- Choose different plant-based foods. Try eating beans and peas instead of meat at a few meals each week.
- Try to eat a variety of fruits and vegetables every day, including citrus fruits and dark-green and deep-yellow vegetables. Colorful vegetables and fruits and plant-based foods contain many natural health-promoting substances.
- Choose high-nutrient foods, and limit the amount of sugary drinks and highly processed foods.

Snack as needed

During cancer treatment your body often needs extra calories and protein to help you maintain your weight and heal as quickly as possible. If you're losing weight, snacks can help you meet those needs, keep up your strength and energy level, and help you feel better. Try these tips to make it easier to add snacks to your daily routine:

- Eat small snacks throughout the day.
- Keep a variety of protein-rich snacks on hand that are easy to prepare and eat. These include yogurt, cereal and milk, half a sandwich, a bowl of hearty soup, and cheese and crackers.

- Avoid snacks that may make any treatment-related side effects worse. If you have diarrhea, for example, avoid popcorn and raw fruits and vegetables. If you have a sore throat, do not eat dry, coarse snacks or acidic foods.
- If you're able to eat normally and maintain your weight without snacks, then don't include them.

Some quick-and-easy snacks

Angel food cake	Gelatin made with juice, milk, or fruit	Popcorn, pretzels
Cereal (hot or cold)	Granola or trail mix	Puddings, custards
Cheese (aged or hard cheese, cottage cheese, cream cheese, and more)	Homemade milk shakes and smoothies	Sandwiches such as egg salad, grilled cheese, or peanut butter
Cookies	Ice cream, sherbet, and frozen yogurt	Soups (broth based or hearty)
Crackers	Juices	Sports drinks
Dips made with cheese, beans, yogurt, or peanut butter	Milk by itself, flavored, or with instant breakfast powder	Vegetables (raw or cooked) with olive oil, dressing, or sauce
Eggnog (pasteurized)	Muffins	Yogurt (low fat or Greek)
Fruit (fresh, frozen, canned, dried)	Nuts, seeds, and nut butters	Microwave snacks



Tips to increase calories and protein

- Eat several small snacks throughout the day, rather than 3 large meals.
- Eat your favorite foods at any time of the day. For instance, eat breakfast foods for dinner if they appeal to you.
- Eat every few hours. Don't wait until you feel hungry.
- Try to eat high-calorie, high-protein foods at each meal and snack.
- Exercise lightly or take a walk before meals to increase your appetite.
- Drink high-calorie, high-protein beverages like milk shakes and canned liquid supplements.

High-protein foods*

Milk products

Add grated cheese to baked potatoes, vegetables, soups, noodles, meat, and fruit.

Use milk in place of water for hot cereal and soups.

Add Greek yogurt, powdered whey protein, or cottage cheese to favorite fruits or blended smoothies.

Eggs

Keep hard-cooked eggs in the refrigerator. Chop and add to salads, casseroles, soups, and vegetables. Make a quick egg salad.

All eggs should be well-cooked to avoid the risk of harmful bacteria.

Pasteurized egg substitute is a low-fat alternative to regular eggs.

Meats, poultry, and fish

Add cooked meats to soups, casseroles, salads, and omelets.

Mix diced or flaked cooked meat with sour cream and spices to make dip.

Beans, legumes, nuts, and seeds

Sprinkle seeds or nuts on desserts like fruit, ice cream, pudding, and custard. Also serve on vegetables, salads, and pasta.

Spread peanut or almond butter on toast and fruit or blend in a milk shake.

High-calorie foods*

Butter

Melt over potatoes, rice, pasta, and cooked vegetables.

Stir melted butter into soups and casseroles and spread on bread before adding other ingredients to your sandwich.

Milk products

Add whipping or heavy cream to desserts, pancakes, waffles, fruit, and hot chocolate; fold it into soups and casseroles.

Add sour cream to baked potatoes and vegetables.

Salad dressings

Use regular (not low-fat or diet) mayonnaise and salad dressing on sandwiches and as dips with vegetables and fruit.

Sweets

Add jelly and honey to bread and crackers.

Add jam to fruit.

Use ice cream as a topping on cake.

*Adapted from Eldridge B, and Hamilton KK, Editors, The Complete Resource Kit for Oncology Nutrition, Academy of Nutrition and Dietetics, 2013.

Don't forget about physical activity

Physical activity has many benefits. It helps you maintain muscle mass, strength, stamina, and bone strength. It can help reduce depression, stress, fatigue, nausea, and constipation. It can also improve your appetite. So if you don't already exercise, talk to your doctor about how to start a moderate exercise plan.

Managing eating problems caused by surgery, radiation, and chemotherapy

Different cancer treatments can cause different kinds of problems that may make it hard to eat or drink. Here are some tips on how to manage nutrition problems depending on the type of treatment you receive:

Surgery

After surgery, the body needs extra calories and protein for wound healing and recovery. This is when many people have pain and feel tired. They also may be unable to eat a normal diet because of surgery-related side effects. The body's ability to use nutrients may also be changed by surgery that involves any part of the digestive tract (like the mouth, esophagus, stomach, small intestine, pancreas, colon, or rectum).

See the section called “How to cope with common eating problems” on page 27 for tips on dealing with some of the problems that can result from surgery. Be sure to talk to your cancer care team about any problems you're having so they can help you manage them.

Radiation therapy

The type of side effects radiation causes depends on the area of the body being treated, the size of the area being treated, the type and total dose of radiation, and the number of treatments.

The following chart shows possible eating-related side effects of radiation, according to the part of body being treated. Some of these side effects happen during treatment while others may not happen until after treatment.

Part of body being treated	Eating-related side effects that might happen during treatment	Eating-related side effects that might happen more than 90 days after treatment
Brain, spinal column	Nausea, vomiting	Headache, tiredness
Head or neck: tongue, voice box, tonsils, salivary glands, nasal cavity, pharynx (throat)	Sore mouth, hard to swallow or pain with swallowing, change in taste or loss of taste, sore throat, dry mouth, thick saliva	Dry mouth, damage to jaw bone, lockjaw, changes in taste and smell
Chest: lungs, esophagus, breast	Trouble swallowing, heartburn, tiredness, loss of appetite	Narrowing of the esophagus, chest pain with activity, enlarged heart, inflammation of the pericardium (the membrane around the heart), lung scarring or inflammation
Belly (abdomen): large or small intestine, prostate, cervix, uterus, rectum, pancreas	Loss of appetite, nausea, vomiting, diarrhea, gas, bloating, trouble with milk products, changes in urination, tiredness	Diarrhea, blood in urine, bladder irritation

Side effects usually start around the second or third week of treatment and peak about two-thirds of the way through treatment. After radiation ends, most side effects last 3 or 4 weeks, but some may last much longer.

If you have eating-related side effects, see the “How to cope with common eating problems” section on page 27 for tips on how to deal with them.

Tell your cancer care team about any side effects you have so they can prescribe any needed medicines. For example, there are medicines to control nausea and vomiting and to treat diarrhea.

Chemotherapy

Chemotherapy (chemo) side effects depend on what kind of chemo drugs you take and how you take them. Many of the common side effects of chemo that can cause eating problems are covered in the section called “How to cope with common eating problems” on page 27.

Most people get chemo at an outpatient center. It may take anywhere from a few minutes to many hours. Make sure you eat something beforehand. Most people find that a light meal or snack an hour or so before chemo works best. If you’ll be there several hours, plan ahead and bring a small meal or snack in an insulated bag or cooler.

For people with weakened immune systems

Cancer and its treatment can weaken your body's immune system by affecting the blood cells that protect us against disease and germs. As a result, your body can't fight infection, foreign substances, and disease as well as a healthy person's body can.

Here are some tips on how to help protect yourself:

Food-handling tips

- Wash your hands with warm, soapy water for 20 seconds before and after preparing food and before eating.
- Refrigerate foods at or below 40° F.
- Keep hot foods hot (warmer than 140° F) and cold foods cold (cooler than 40° F).
- Thaw meat, fish, or poultry in the microwave or refrigerator in a dish to catch drips. Do not thaw at room temperature.
- Use defrosted foods right away, and do not refreeze them.
- Rinse leaves of leafy vegetables one at a time under running water.
- Use different utensils for stirring foods and tasting them while cooking. Do not taste the food (or allow others to taste it) with any utensil that will be put back into the food.
- Throw away eggs with cracked shells.
- Throw out foods that look or smell strange. Never taste them!



Do not cross-contaminate

- Use a clean knife to cut different foods.
- In the refrigerator, store raw meat sealed and away from ready-to-eat food.
- Keep foods separated on the countertops. Use a different cutting board for raw meats.
- Clean counters and cutting boards with hot, soapy water, or you can use a fresh solution made of 1 part bleach and 10 parts water. Moist disinfecting wipes may be used if they're made for use around food.
- When grilling, always use a clean plate for the cooked meat.

Cook foods well

- Put a meat thermometer into the middle of the thickest part of the food to test for doneness. Test a thermometer's accuracy by putting it into boiling water. It should read 212° F.
- Cook meat until it's no longer pink and the juices run clear. The only way to know for sure that meat has been cooked to the right temperature is to use a food thermometer. Meats should be cooked to 160° F and poultry to 180° F.

Grocery shopping

- Do not use damaged, swollen, rusted, or deeply dented cans. Be sure that packaged and boxed foods are properly sealed.
- Choose unblemished fruits and vegetables.
- Do not eat deli foods. In the bakery, avoid unrefrigerated cream- and custard-containing desserts and pastries.
- Do not eat foods that are bought from self-serve or bulk containers.
- Do not eat yogurt and ice cream products from soft-serve machines.
- Do not use cracked or unrefrigerated eggs.
- Get your frozen and refrigerated foods just before you check out at the grocery store, especially during the summer months.
- Refrigerate groceries right away. Never leave food in a hot car.

Dining out

- Eat early to avoid crowds.
- Ask that food be prepared fresh in fast-food restaurants.
- Ask for single-serving condiment packages, and avoid self-serve bulk condiment containers.
- Do not eat from high-risk food sources, including salad bars, delicatessens, buffets and smorgasbords, potlucks, and sidewalk vendors.
- Do not eat raw fruits and vegetables when eating out.

- Ask if fruit juices are pasteurized. Avoid “fresh-squeezed” juices in restaurants.
- Be sure that utensils are set on a napkin or clean tablecloth or placemat, rather than right on the table.
- If you want to keep your leftovers, ask for a container, and put the food in it yourself rather than having the server take your food to the kitchen to do this.

Tips for when your white blood cell count is low+

	Recommended	Avoid (do not eat)
Meat, poultry, fish, tofu, and nuts	<p>Ensure all meats, poultry, and fish are cooked thoroughly.</p> <p>Use a food thermometer to be sure that meat and poultry reach the proper temperature when cooked.</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 or fresh nut butters</p>
Eggs	<p>Cook eggs until the yolks and whites are solid, not runny.</p> <p>Pasteurized eggs or egg custard</p>	<p>Raw or soft-cooked eggs. This includes over-easy, poached, soft-boiled, and sunny side up.</p>
Milk and dairy products	<p>Only pasteurized milk, yogurt, cheese, or other dairy products</p>	<p>Soft, mold-ripened or blue-veined cheeses, including Brie, Camembert, Roquefort, Stilton, Gorgonzola, and blue cheese</p> <p>Mexican-style cheeses, such as queso blanco fresco, since they are often made with unpasteurized milk</p>

Tips for when your white blood cell count is low+

	Recommended	Avoid (do not eat)
Breads, cereal, rice, and pasta	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
Fruits and vegetables	Raw vegetables and fruits and fresh herbs are safe to eat if washed 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)
Desserts and sweets	Fruit pies, cakes, and cookies, flavored gelatin; commercial ice cream, sherbet, sorbet, and popsicles Sugar Commercially prepared and pasteurized jam, jelly, preserves, syrup, and molasses	Unrefrigerated, cream-filled pastry products Raw honey or honeycomb. Select a commercial, grade A, heat-treated honey instead.
Water and beverages	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

+ Adapted from 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.

How to cope with common eating problems

Cancer and cancer treatments can cause many problems that affect how well you can eat and drink. Here are some of the more common problems and tips on how to deal with them. Always tell your cancer care team about any problems you have. There are often things that can be done to treat the problem or keep it from getting worse.



Appetite changes

Cancer and its treatment can cause changes in your eating habits and your desire to eat. Not eating can lead to weight loss, and this can cause weakness and fatigue. Eating as well as you can is an important part of taking care of yourself. Treatment-related side effects like pain, nausea, and constipation can also cause loss of appetite. Managing these problems may help you eat better.

What to do

- Eat several snacks throughout the day, rather than 3 large meals.
- Avoid liquids with meals, or take only small sips of liquids to keep from feeling full early (unless you need liquids to help swallow or for dry mouth). Drink most of your liquids between meals.
- Make eating more enjoyable by setting the table with pretty dishes, playing your favorite music, watching TV, or eating with someone.
- Be as physically active as you can. Start off slowly, and increase your activity over time as you feel stronger. Sometimes a short walk an hour or so before meals can help you feel hungry.

Constipation

Pain medicines, changes in your eating habits, and being less active can cause your bowels to move less often and stools to become harder to pass (constipation). If you're constipated, try eating high-fiber foods. Also drink extra fluids during the day, eat at regular times, and try to increase your physical activity, if possible.

What to do

- Try to have a bowel movement at the same time each day.
- Drink more fluids, unless instructed otherwise by your cancer care team. Pasteurized fruit juices and warm or hot fluids in the morning are often helpful.

- Use laxatives only as directed by your cancer care team. Contact your team if you haven't had a bowel movement for 3 days or longer.
- Ask your dietitian to recommend a high-calorie, high-protein, fiber-containing liquid supplement if you need more of these.
- Limit drinks and foods that cause gas if it becomes a problem. (See list, below.)

Foods that might cause gas

Apples (raw), apple juice	Cucumbers	Peppers
Asparagus	Eggs	Pickles
Avocado	Fish	Radishes
Beans and peas, dried	Kohlrabi	Rutabaga
Beer	Lentils	Sauerkraut
Broccoli	Melons	Spicy foods
Brussels sprouts	Milk	Spinach
Cabbage	Mushrooms	String beans
Cauliflower	Mustard	Strong cheese
Collards	Nuts	Sweet potatoes
Corn	Onions, leeks, scallions	Turnip greens

High-fiber foods to choose more often*

Breads and cereals	Serving size	Dietary fiber (in grams)
Bran cereals	½ cup	3-13
Popcorn	2 cups	5
Brown rice	½ cup	6
Whole-wheat bread	1 slice	1-2
Whole-wheat pasta	¼ cup	6
Wheat bran, raw	¼ cup	6

Legumes

Kidney beans	½ cup	8
Navy beans	½ cup	9
Nuts	1 ounce	1-3

Vegetables

Broccoli	½ cup	4
Brussels sprouts	½ cup	3
Carrots	½ cup	2
Corn	½ cup	5
Green peas	½ cup	3
Potato with skin	1 medium	3

Fruits

Apple with peel	1 medium	4
Banana	1 medium	2
Blueberries	½ cup	2
Pear with skin	1 medium	5
Prunes	3	3
Orange	1 medium	3
Raisins	¼ cup	3
Strawberries	1 cup	3

*Adapted from Eldridge B, and Hamilton KK, Editors, The Complete Resource Kit for Oncology Nutrition, Academy of Nutrition and Dietetics, 2013.

Diarrhea

Cancer treatments and medicines can cause your bowels to move much more often and become very loose. Three or more loose or watery stools a day is called diarrhea. Uncontrolled diarrhea can lead to fluid loss (dehydration), weight loss, poor appetite, and weakness.

What to do

- Drink plenty of mild, clear, non-carbonated liquids during the day. Drink liquids at room temperature. This may be easier to take than very hot or cold drinks.
- Eat small, frequent meals and snacks during the day.
- Avoid greasy, fried, spicy, or very sweet foods.
- Avoid milk or milk products if they seem to make the diarrhea worse. Yogurt and buttermilk are OK.
- Avoid drinks and foods that cause gas, like carbonated drinks, gas-forming vegetables, and chewing gum.
- Drink and eat high-sodium (salt) foods like broths, soups, sports drinks, crackers, and pretzels.
- Drink and eat high-potassium foods like fruit juices and nectars, sports drinks, potatoes with the skin, and bananas.
- Call your cancer care team if diarrhea continues or increases, or if your stools have an unusual odor or color.

What to eat or not eat when you have diarrhea*

	Eat	Foods that may cause problems
High protein	Baked or broiled beef, pork, chicken, turkey, veal, fish Eggs, buttermilk, cheese, yogurt	Fried meats, high-fat cuts of meats, meats with gristle Dairy products other than buttermilk or yogurt
Breads, cereals, rice, and pasta	Bread, rolls, and pasta made from refined, white flour; converted or instant rice Refined cereals like farina, Cream of Wheat, Cream of Rice, oatmeal, cornflakes Pancakes, waffles, cornbread, muffins, graham crackers	Whole-grain breads and cereals like whole wheat, oat, and rye; bran Shredded wheat Granola Wild rice
Fruits and vegetables	Soups made with vegetables listed here: cooked asparagus tips, beets, carrots, peeled zucchini, mushrooms, celery Tomato paste, tomato puree, tomato sauce Baked potato without skin Canned, frozen, or fresh fruit	Fresh, unpeeled fruit; pears; melon All other vegetables
Drinks, desserts, and other foods	Butter, margarine Mayonnaise, salad dressing, vegetable oil Cake, cookies, flavored gelatin desserts, sherbet Decaffeinated beverages Salt, pepper, spices, and gravy as tolerated	Desserts with nuts Coconut, dried fruit Chocolate, licorice Pickles Popcorn Foods with a lot of pepper, chili seasoning, or taco seasoning; hot sauces

*Adapted from Eldridge B, and Hamilton KK, Editors, The Complete Resource Kit for Oncology Nutrition, Academy of Nutrition and Dietetics, 2013.

Fatigue

Fatigue is feeling very tired all the time. It doesn't get better when you rest. It's a common problem for people with cancer and those getting cancer treatment. If you're feeling tired or lack energy, talk to your cancer care team.

Fatigue can have many causes, including cancer treatments, not eating enough, lack of sleep, depression, low blood counts, and some medicines. When the cause of the fatigue is medical, your doctor may be able to treat the cause to help you feel better.

Along with treatment, there are many nutrition steps you can take and other things you can try to help you cope with fatigue.

What to do

- Try to prioritize your activities. Do the most important ones when you have the most energy.
- Take short walks or get regular exercise, if you can. More and more research tells us that being moderately active can help decrease cancer-related fatigue.
- Drink plenty of fluids. Dehydration can make fatigue worse. Be sure to get at least 8 cups of fluid each day. If you are losing weight, be sure to include some fluids that have calories, like juices or milk.
- Try easier or shorter versions of your usual activities. Don't push yourself to do more than you can manage.
- Stress can make fatigue worse. Ask your cancer care team about stress management.

Mouth dryness or thick saliva

Radiation therapy to the head and neck areas, some types of chemo, and certain other medicines can cause dry mouth or thick saliva. The glands that make saliva can become irritated and make less saliva, or your saliva can become very thick and sticky. Dryness can be mild or severe.

A dry mouth can increase your risk of cavities and mouth infection. If you smoke, chew tobacco, or drink alcohol, the dryness can be worse.

If you have either of these side effects, drink plenty of fluids throughout the day and eat moist foods as much as possible. Also brush your teeth and rinse your mouth often with a baking soda, salt, and water solution to help keep it clean and prevent infection (recipe follows).

What to do

- Drink plenty of liquids throughout the day. (Drinking lots of fluids helps thin mucus.)
- Take small bites, and chew your food well.
- Moisten foods with broth, soup, sauces, gravy, yogurt, or creams.
- Suck on sugarless candy or chew sugarless gum to stimulate saliva. Citrus, cinnamon, and mint flavors often work well.
- Avoid commercial mouthwashes, alcoholic and acidic drinks, and tobacco.
- Limit caffeine intake, from coffee, tea, energy drinks, and caffeinated soft drinks.

- Nutritional supplements, like liquid meal replacements, may be helpful. If you can't get enough calories and nutrition through solid foods, you may need to use liquid supplements for some time. Talk to your cancer care team about this.

What to eat or not eat when you have a dry mouth*

	Eat	Foods that may cause problems
High protein	Meats, poultry, and fish in sauces and gravies	Dry meats, poultry, and fish without sauces
	Casseroles, soups, and stews	
Breads, cereals, rice, and pasta	Bread, rolls	Dry breads, rolls
	Cooked and cold cereals, cereal with milk	Pasta, rice Pretzels, chips
	Rice soaked in gravy, sauce, broth, or milk	Dry cereal
Fruits and vegetables	Canned and fresh fruits that have a lot of moisture, like oranges and peaches	Bananas, dried fruit Vegetables, unless in a sauce or with a high moisture content
	Vegetables in sauce	
Drinks, desserts, and other foods	Club soda, hot tea with lemon (decaf), fruit-ades, diluted juices, sports drinks	Cookies, cake, pie, unless soaked in milk
	Commercial liquid nutrition supplements	
	Homemade milk shakes; ice cream, sherbet, pudding	

*Adapted from Eldridge B, and Hamilton KK, Editors, The Complete Resource Kit for Oncology Nutrition, Academy of Nutrition and Dietetics, 2013.

Mouth sores

Certain chemo drugs or radiation to the head and neck can cause mouth sores.

If you have these problems, eating soft, bland foods and lukewarm or cool foods can be soothing. On the other hand, foods that are coarse, dry, or scratchy may make you feel worse. You may also find that tart, salty, or acidic fruits and juices; alcohol; and spicy foods are irritating.

Rinse your mouth regularly with a salt, baking soda, and water solution (1 teaspoon of baking soda and 1 teaspoon salt mixed in 1 quart water). This helps prevent infections and helps your mouth feel better. Gargle with the mixture to relieve a sore throat, but don't swallow it.



What to do for mouth sores

- Eat soft, bland foods like creamed soup, cooked cereal, macaroni and cheese, yogurt, and pudding.
- Puree or liquefy foods in a blender to make them easier to swallow.
- Eat foods cold or lukewarm, rather than hot, to reduce mouth irritation.
- Drink through a straw to bypass mouth sores.
- Avoid rough, dry, or coarse foods.
- Eat high-protein, high-calorie foods to speed healing.
- Avoid alcohol, carbonated beverages, and tobacco.
- Your doctor can prescribe a “swish and swallow” mouthwash with a numbing agent if needed. Ask about this.

What to eat or not eat when you have mouth sores*

	Eat	Foods that may cause problems
High protein	<p>Ground, chopped, or blenderized meats, poultry, or fish</p> <p>Casseroles</p> <p>Egg, cheese, and bean dishes</p> <p>Milk shakes, yogurt, and commercial liquid nutritional supplements</p>	<p>Whole meats, poultry, fish, dry meats</p>
Breads, cereals, rice, and pasta	<p>Moistened breads</p> <p>Cooked cereals, cold cereal soaked in milk</p> <p>Pasta and rice in sauce</p>	<p>Dry toast, hard rolls, dry crackers, English muffins, bagels</p>
Fruits and vegetables	<p>Cooked or blenderized fruits and vegetables</p>	<p>Fresh fruits and vegetables (unless very ripe, soft, and juicy, like applesauce, bananas, and watermelon); citrus fruit, pineapple, and other acidic fruits</p> <p>Pickled fruit; raw and pickled vegetables</p> <p>Tomatoes</p>
Drinks, desserts, and other foods	<p>Fruit nectars</p> <p>Flavored gelatin</p> <p>Ice cream, sherbet, pudding</p> <p>Butter, margarine, and vegetable oils</p>	<p>Carbonated drinks</p> <p>Cookies and cakes unless soaked in milk</p> <p>Crunchy snacks like pretzels and chips</p> <p>Vinegar</p> <p>Condiments like pepper, pepper sauces, chili powder, cloves, nutmeg, salsa</p>

*Adapted from Eldridge B, and Hamilton KK, Editors, The Complete Resource Kit for Oncology Nutrition, Academy of Nutrition and Dietetics, 2013.

Nausea

A person can have nausea with or without vomiting. If it's caused by chemo, nausea can happen on the day you get your treatment and/or can last for a few days – depending on what drugs you get. If you're getting radiation therapy to the belly, chest, brain, or pelvis, nausea can start shortly after treatment and last for several hours. Nausea and vomiting can have other causes, too.

Be sure to tell your cancer care team if you have nausea or are vomiting because there are medicines that can help.

What to do

- Eat 6 to 8 snacks or small meals a day, instead of 3 large meals.
- Eat dry foods, like crackers, toast, dry cereals, or bread sticks, when you wake up and every few hours during the day.
- Eat foods that don't have strong odors.
- Eat cool foods instead of hot or spicy foods.
- Avoid foods that are overly sweet, greasy, fried, or spicy.
- If you need to rest, sit up or recline with your head raised for at least an hour after eating.
- Suck on hard candy, like peppermint or lemon, if there's a bad taste in your mouth.

What to eat or not eat when you have nausea*

	Eat	Foods that may cause problems
High protein	Boiled or baked meat, fish, and poultry; cold meat or fish salad Eggs Cream soups made with low-fat milk Non-fat yogurt	Fatty and fried meats, like sausage or bacon Fried eggs Milk shakes (unless made with low-fat milk and ice cream)
Breads, cereals, rice, and pasta	Saltines, soda crackers, bread, toast, cold cereal, English muffins, bagels Plain noodles, rice	Doughnuts, pastries, waffles, pancakes, muffins
Fruits and vegetables	Potatoes (baked, boiled, or mashed) Juices Canned or fresh fruits, vegetables as tolerated (do not eat if appetite is poor or nausea is severe)	Potato chips, French fries, hash browns Breaded, fried, or creamed vegetables; vegetables with strong odor
Drinks, desserts, and other foods	Cold fruit juice, decaffeinated soft drinks, iced decaf tea, sports drinks Sherbet, fruit-flavored gelatin Pudding Popsicles, juice bars, fruit ices Butter or margarine in small amounts, fat-skimmed gravy	Alcohol Coffee Pie, ice cream, rich cakes Spicy salad dressings Olives

*Adapted from Eldridge B, and Hamilton KK, Editors, The Complete Resource Kit for Oncology Nutrition, Academy of Nutrition and Dietetics, 2013.

Swallowing problems

Cancer and its treatments can sometimes cause trouble with swallowing. If you're having problems swallowing, try eating soft or liquid foods. You may be able to swallow thick fluids more easily than thin liquids. If you're unable to eat enough regular foods to meet your nutritional needs, drink high-calorie and high-protein liquids.

Your doctor may refer you to a speech therapist. This is an expert health professional who can teach you how to swallow better and how to decrease coughing and choking when you eat and drink.

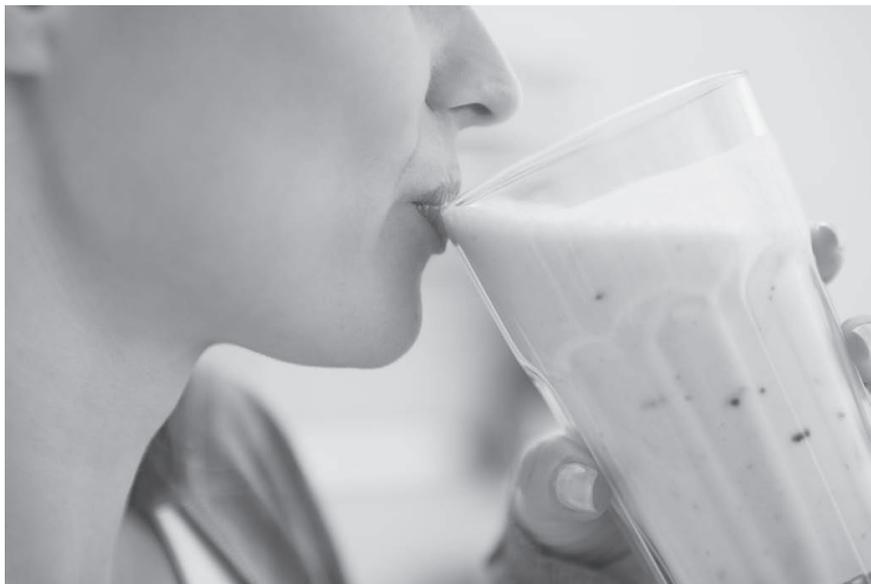
What to do

- Follow your speech therapist's instructions for any special eating techniques.
- Call your cancer care team right away if you cough or choke while eating, especially if you have developed a fever.
- Eat small, frequent meals.
- Use canned liquid nutritional supplements if you're unable to eat enough food to meet your needs.

Try these thickening products:

Gelatin: Use to help soften cakes, cookies, crackers, sandwiches, pureed fruits, and other cold food. Mix 1 tablespoon unflavored gelatin in 2 cups hot liquid until dissolved; pour over food. Allow food to sit until saturated.

Tapioca, flour, and cornstarch: Use to thicken liquids. Note that these must be cooked before using.



Commercial thickeners: Follow label instructions, and use to adjust a liquid's thickness.

Pureed vegetables and instant potatoes: Use in soups. Note that these change the food's flavor.

Baby rice cereal: Use to make a very thick product.

- If thin liquids are recommended for you, try these: coffee, tea, soft drinks, liquid nutritional supplements, Italian ice, sherbet, broth, and thin cream-based soups.
- If thick liquids are recommended for you, try these: buttermilk, eggnog, milk shakes, yogurt shakes, and ice cream.

What to eat when you have trouble swallowing (pureed and thick-liquid diet)+

	Puréed thick-liquid diet	Mechanical soft diet
Protein	Thickened milk, yogurt without fruit, cottage cheese, sour cream Casseroles Soft-scrambled eggs Puréed meat, poultry, and fish	Milk, yogurt, cheeses, sour cream All eggs Ground meats and ground-meat casseroles, fish, sandwiches made with ground meats or spreads
Breads, cereals, pasta, and rice	Slurry of cooked cereals like Cream of Wheat and Cream of Rice	Soft breads Graham crackers, cookies Soft cold cereals in milk Pancakes, waffles Pasta, rice
Fruits and vegetables	Puréed fruit and vegetables without seeds and skins Mashed potatoes	Bananas Canned fruit Soft, well-cooked, or puréed vegetables
Drinks, desserts, and other foods	Thickened juices and nectars Thick milk shakes Thickened broths and cream soups Syrups, honey, butter, margarine	All beverages Soft desserts that don't require much chewing (like ice cream, sherbet, flavored gelatin, pudding, custard), soft cakes and cookies Syrups, honey, butter, margarine

+ Adapted from 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.

Taste and smell changes

Cancer and its treatments can change your senses of taste and smell. These changes can affect your appetite and are often described as a bitter or metallic taste. If you're having these problems, try foods, marinades, spices, drinks, and ways of preparing foods that are different from those you usually use. Also, keep your mouth clean by rinsing and brushing, which may help foods taste better.

What to do

- Try using plastic flatware and glass cups and plates.
- Try sugar-free lemon drops, gum, or mints.
- Try fresh or frozen fruits and vegetables instead of canned.
- Season foods with tart flavors like lemon wedges, lemonade, citrus fruits, vinegar, and pickled foods. (If you have a sore mouth or throat, do not do this.)
- Rinse your mouth with a baking soda, salt, and water mouthwash before eating to help foods taste better. (Mix 1 teaspoon salt and 1 teaspoon baking soda in 1 quart water. Shake well before swishing and spitting.)
- If red meats taste strange, try other protein-rich foods like chicken, fish, eggs, or cheese.
- Blend fresh fruits into shakes, ice cream, or yogurt.
- To reduce smells, cover beverages and drink through a straw; choose foods that don't need to be cooked; and avoid eating in rooms that are stuffy or too warm.

Weight gain

Some people find they don't lose weight during treatment. They may even gain weight. This is particularly true for people with breast, prostate, or ovarian cancer who are taking certain medicines or getting hormone therapy or chemotherapy.

If you notice you're gaining weight, tell your cancer care team so you can find out what may be causing this change.

If you want to stop gaining weight, here are some tips that can help:

What to do

- Ask your cancer care team for a referral to a registered dietitian to help you get your nutrition needs met without gaining weight.
- Try to walk daily if you can and if it's OK with your doctor. Talk with your cancer care team about referral to a physical therapist to help you safely increase activity levels.
- Limit food portion sizes, especially with high-calorie foods.
- Choose fish, poultry, or beans and peas instead of red meat. If you eat red meat, choose only lean cuts and eat smaller portions.
- Choose whole-grain breads, pasta, and cereals (such as barley and oats) instead of breads, cereals, and pasta made from refined grains, and brown rice instead of white rice.
- Limit your intake of refined carbohydrate foods, including pastries, candy, sugar-sweetened breakfast cereals, and other high-sugar foods.

Nutrition after treatment ends

Most eating-related side effects of cancer treatments go away after treatment ends. Sometimes side effects like poor appetite, dry mouth, change in taste or smell, trouble swallowing, or weight changes last for some time. If this happens to you, talk to your cancer care team and work out a plan to deal with the problem.

Tips for healthy eating after cancer

- Check with your cancer care team for any food or diet restrictions.
- Ask your dietitian to help you create a nutritious, balanced eating plan that can help you deal with any weight changes you might have experienced during cancer treatment.
- Follow a healthy eating pattern that includes foods high in nutrients, a variety of colorful fruits and vegetables, and whole grains.
- Limit or avoid red and processed meats, sugary drinks, and highly processed foods.
- It is best not to drink alcohol. If you do drink, have no more than 1 drink per day for women or 2 drinks per day for men.



To learn more

More American Cancer Society information

You can buy these books from your American Cancer Society. Call us at **1-800-227-2345** or visit our bookstore online at **www.cancer.org/bookstore** to find out about costs or to place an order.

American Cancer Society Complete Guide to Nutrition for Cancer Survivors: Eating Well, Staying Well During and After Cancer

What to Eat During Cancer Treatment

American Cancer Society's Eating Healthy Cookbook

No matter who you are, we can help. Visit **www.cancer.org**, or call us at **1-800-227-2345**.

National organizations and websites*

American Institute for Cancer Research (AICR)

Toll-free: 1-800-843-8114

Website: www.aicr.org

Offers information and conferences on diet, nutrition, and cancer, as well as personalized answers to your nutrition questions

Academy of Nutrition and Dietetics

Toll-free: 1-800-877-1600, ext. 5000 (for referral to a local dietitian)

Website: www.eatright.org

Their website contains information on diet and nutrition; also has a directory of registered dietitians that can be searched by location and specialty. You can also get a referral to a local dietitian using the toll-free phone number.

* Inclusion on this list does not imply endorsement by the American Cancer Society.



Recipes to try

High-calorie, high-protein shake and drink recipes

If you need more calories or have trouble swallowing, try the following recipes – but keep in mind that they might not be right for everyone. If you want to increase calories but not fat, use reduced-fat dairy products. If you're eating well and maintaining your weight, there's no reason to increase your calorie intake.

Follow these basic instructions for all the drink recipes below:

- Place all ingredients in a blender container, or mix in a large container with a hand-held blender.
- Cover and blend on high speed until smooth.
- Chill before serving.
- Store unused drinks in the refrigerator or freezer.
- Add 1 to 2 tablespoons of powdered milk to each recipe to increase protein.

Note: If you can't tolerate milk or milk products, or if you have diabetes, ask your nurse or dietitian for other recipe ideas.

Fortified milk

Drink or use in cooking to add protein

- 1 quart whole or low-fat milk
- 1 cup powdered non-fat dry milk

Blend and chill at least 6 hours. Can also be made with buttermilk or dry buttermilk.

(211 calories and 14 grams of protein per cup)

Sherbet shake

A refreshing shake

- 1 cup sherbet
- $\frac{3}{4}$ cup low-fat milk
- $\frac{1}{2}$ teaspoon vanilla extract

(320 calories and 8 grams of protein)

Classic instant breakfast milk shake

A protein- and calorie-packed favorite

- $\frac{1}{2}$ cup low-fat milk or fortified milk (see recipe, above)
- 1 envelope instant breakfast mix
- 1 cup vanilla ice cream (add flavorings or different flavor ice creams for variety)

(450 calories and 14 grams of protein)

Increase flavor and calories by adding fresh or frozen fruit or chocolate or strawberry syrup. Add peanut butter or dry milk for extra protein.

Homemade soup recipes

Chicken and white bean soup

- 1 rotisserie chicken breast section or 3 cups chopped white chicken meat
- 1 tablespoon canola oil
- 3 carrots, sliced
- 2 celery stalks, sliced
- 1 onion, chopped
- 2 cups water
- 6 cups reduced-sodium chicken broth
- 1 (15-ounce) can Great Northern beans, rinsed and drained
- Pepper and salt to taste

Remove wings from chicken and reserve. Remove skin from breast and discard. Shred the meat from the breast and break off breast bones.

Heat oil in a stock pot over medium heat. Sauté the carrots, celery, onion, chicken wings, and breastbones for 8 to 10 minutes, or until vegetables soften.

Add water and chicken broth and bring to a boil, stirring to combine. Reduce heat, cover, and simmer for 15 to 20 minutes. Add beans and chicken meat and cook for 5 minutes. If too thick, add more broth or water. Discard bones and wings before serving. Season with salt and pepper. Makes 6 servings.

Approximate nutrients per serving: 235 calories, 5 grams of fat, 28 grams of protein

Hearty turkey minestrone soup

- 1 pound ground turkey breast or lean ground beef
- 1 onion, chopped
- 2 carrots, chopped
- 2 celery stalks, chopped
- 8 cups reduced-sodium chicken broth or beef broth
- 1 (14.5-ounce) can diced tomatoes
- 1 teaspoon dried basil
- 1 teaspoon dried oregano
- ½ cup small pasta, such as orzo or pastini
- 1 (10-ounce) package frozen chopped spinach
- 1 (15-ounce) can chickpeas or white beans, rinsed and drained
- Pepper and salt to taste
- Grated Parmesan cheese, optional

In a stockpot over medium-high heat, sauté the turkey and onion until the turkey is cooked through. Add the carrots and celery and sauté for 10 minutes, or until softened. Add the broth, tomatoes, basil, and oregano and stir to combine. Bring to a boil. Reduce the heat and simmer for 20 minutes, stirring occasionally.

Add the pasta, frozen spinach, and chickpeas or beans and cook for 10 minutes, or until pasta is tender, stirring occasionally. Season with salt and pepper. Serve with Parmesan cheese. Makes 14 servings.

Approximate nutrients per serving: 120 calories, 1 gram of fat, 13 grams of protein

Spicy cream of broccoli soup

- 3 cups broccoli florets and peeled stems, coarsely chopped
- 1½ cups reduced-sodium chicken broth, vegetable broth, or water
- 1 tablespoon olive oil
- 1 small onion, finely chopped
- 1 tablespoon all-purpose flour
- 3 cups low-fat milk
- ½ teaspoon salt (optional)
- ½ teaspoon pepper
- ¼ teaspoon paprika
- ¼ teaspoon celery seed
- Pinch cayenne pepper, optional

In a large saucepan over high heat, bring the broccoli and broth to a boil. Reduce heat, cover, and simmer for 8 to 10 minutes, or until very tender. Cool slightly. Transfer to a blender or food processor and purée. Set aside.

In the same saucepan over medium heat, add the oil and onion. Sauté the onion for 3 to 5 minutes, or until softened. Add the flour and cook until fully incorporated, stirring constantly. Gradually add the milk and cook until thickened, stirring constantly. Add the reserved broccoli purée, salt, pepper, paprika, celery seed, and cayenne pepper and stir well to combine. Makes 5 servings.

Approximate nutrients per serving: 115 calories, 4.5 grams of fat, 7 grams of protein



Nutrition is an important part of cancer treatment. Eating the right kinds of foods before, during, and after treatment can help you feel better and stay stronger. The American Cancer Society has prepared this guide to help you and your loved ones cope with treatment side effects that might affect how well you can eat.

For cancer information, answers, and support, call your American Cancer Society at **1-800-227-2345**.



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