



PATIENT & CAREGIVER EDUCATION

Nutrition Basics for Cancer Survivors

This information will help you eat well after you have completed cancer treatment.

Now that your cancer treatment is finished, it is a good time to focus on eating healthy foods. There is no evidence that any specific food will prevent your cancer from coming back or other cancers from forming. However, there is strong evidence that achieving and maintaining a healthy weight, following a healthy diet, and staying physically active can help reduce your risk for developing other diseases, including cancer. It will also help you improve your overall health and quality of life and help you feel your best.

Achieve and Maintain a Healthy Weight

Your weight is determined by your genes (information passed from parent to child that determines the makeup of your body and brain), what you eat, and how much you exercise. While you cannot change your genes, you can adapt a healthy life style and diet to promote your health.

A healthy body weight is defined by the Body Mass Index (BMI), which is a measure of your weight based on your height. A healthy BMI for an adult is between 18.5 to 24.9.

Factors such as age, sex, and muscle mass are not accounted for in BMI. However, knowing your BMI is a quick and easy way to help you learn if you are at a healthy body weight, or if you need to lose or gain weight.

Find Your Body Mass Index (BMI)

You can find your BMI on the table below.

1. Find your height in the left-hand column.
2. Go across the columns on the same line and find your weight.
3. Follow that up to the top of the column.

The number you see is your BMI. The row above the BMI numbers tells you whether your weight is in a normal, overweight, or obese range. If you weigh less than the weight listed on the chart, you are underweight.

Your goal should be to achieve a BMI in the normal range. Look for the weight that line up with a normal BMI for your height to find your target weight.

For example, a person who is 65 inches (5 feet, 5 inches) tall and weighs 168 pounds has a BMI of 28, which is overweight.

BMI Table														
BMI	Normal						Overweight					Obese		
	19	20	21	22	23	24	25	26	27	28	29	30	35	40
Height (feet and inches)	Body Weight (pounds)													
4' 10"	91	96	100	105	110	115	119	124	129	134	138	143	167	191
4' 11"	94	99	104	109	114	119	124	128	133	138	143	148	173	198
5' 0"	97	102	107	112	118	123	128	133	138	143	148	152	179	204
5' 1"	100	106	111	116	122	127	132	137	143	148	153	158	185	211
5' 2"	104	109	115	120	126	131	136	142	147	153	158	164	191	218
5' 3"	107	112	118	124	130	135	141	146	152	158	163	169	197	225
5' 4"	110	116	122	128	134	140	145	151	157	163	169	175	204	232
5' 5"	114	120	126	132	138	144	150	156	162	168	174	180	210	240
5' 6"	118	124	130	136	142	148	155	161	167	173	179	186	216	247
5' 7"	121	127	134	140	146	153	159	166	172	178	185	191	223	255
5' 8"	125	131	138	144	151	158	164	171	177	184	190	197	230	262
5' 9"	128	135	142	149	155	162	169	176	182	189	196	203	236	270
5' 10"	132	139	146	153	160	167	174	181	188	195	202	209	243	278
5' 11"	136	143	150	157	165	172	179	186	193	200	208	215	250	286
6' 0"	140	147	154	162	169	177	184	191	199	206	213	221	258	294
6' 1"	144	151	159	166	174	182	189	197	204	212	219	227	265	302
6' 2"	148	155	163	171	179	186	194	202	210	218	225	233	272	311
6' 3"	152	160	168	176	184	192	200	208	216	224	232	240	279	319
6' 4"	156	164	172	180	189	197	205	213	221	230	238	246	287	328

You can also calculate your BMI on the following website:

http://www.nhlbi.nih.gov/health/educational/lose_wt/BMI/bmicalc.htm

Choosing a Mostly Plant-Based Diet

The balance of foods on your plate is important when trying to eat healthy. Keep in mind the picture of the divided plate shown here. Follow the plate method below to portion out the different food groups on your plate.

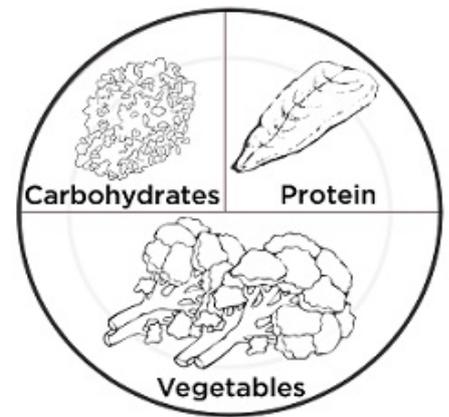


Plate method

Half of your plate should be colorful

vegetables. Try to eat mostly low starch ones such as:

- Broccoli
- Cabbage
- Cauliflower
- Leafy greens (e.g., spinach, lettuce, kale)
- Mushrooms
- Peppers
- Tomatoes
- Summer squash
- Zucchini

One-quarter of your plate should be complex carbohydrates (starches) or fruits. Some examples are:

- Whole fruits (e.g., berries, apples, pears, kiwis, oranges)
- Whole grains (e.g., brown rice, whole wheat pasta, quinoa, barley)
- Starchy vegetables (e.g., potato, corn, green peas)

One-quarter of your plate should be high-quality protein.

Some good protein sources are:

- Fish

- Skinless poultry (e.g., chicken, turkey)
- Lean red meat (e.g., beef, pork, lamb). Limit the amount you eat to no more than 18 ounces of cooked red meat per week. One serving size of red meat is 3 ounces, which is about the size of a deck of cards. Also choose cuts that are lower in fat such as beef round, tenderloin, or sirloin tips and lean center cuts of pork and lamb.
- Legumes (e.g., beans, chickpeas, lentils)
- Nonfat or low-fat dairy products (e.g., plain yogurt, milk), low-fat cheese
- Egg whites. Eating more egg whites will lower your fat intake.
- Nuts and nut butters. Nut and nut butters should be eaten in moderation. Although they contain healthy oils, they are high in calories.

Designing a Healthy Diet

Below are some suggestions that can help you design a healthy diet. Work with your dietitian to find the diet that is best for you.

Control your intake of calories

- Choose foods that are nutrient-rich such as vegetables and fruits, whole grains, low-fat or nonfat dairy products, lean meats, fish, and beans.
- Limit foods that are high in saturated fats, added sugars, refined carbohydrates (low fiber starches, such as white bread), and salt.
- Avoid trans fats. Trans fats are found in some margarines, as well as processed or packaged baked goods, such as cookies, cakes, chips, and crackers. On a nutrition label you may see trans fats listed as:
 - Partially hydrogenated oil
 - Hydrogenated oil

- Drink alcohol in moderation. Limit your alcohol intake to no more than 1 drink a day for women and 2 drinks a day for men.
- To maintain your weight, balance the calories you take in with the calories you burn during physical activity. For more information about how to increase your physical activity please read *Exercise for Cancer Survivors: Level 1* (www.mskcc.org/pe/exercises_survivors_1) and *Exercise for Cancer Survivors: Level 2* (www.mskcc.org/pe/exercises_survivors_2).
- To lose weight, lower your food intake and increase your exercise.
- To gain weight, increase your intake of calorie-dense foods. For more information about gaining weight, talk to your healthcare provider about meeting with a dietitian.

Fruits and vegetables should be the largest part of your diet

- Choose a wide variety of fruits and vegetables with different colors, such as dark green, purple, orange, yellow, red, and white.
- Eat 5 or more servings per day of fruits and vegetables. This could include 5 or more non-starchy vegetables and 2 to 3 fruits.

Choose foods high in fiber

- Most adults should consume at least 25 to 35 grams of fiber each day. You can reach this fiber goal by eating 5 or more servings of vegetables and fruits plus 3 servings of whole grains and legumes such as:
 - Chick peas
 - Lentils
 - Black beans
 - Whole grain cereal
 - Whole wheat pasta

- Quinoa
- Brown rice
- Increase your fiber intake slowly and drink plenty of water.

Choose foods low in added sugars

- Foods and beverages with added sugars often add too many calories to the diet. Over time, they can contribute to:
 - Being overweight or obese
 - Chronic hyperglycemia (high blood sugar)
 - Hyperinsulinemia (too much insulin in the blood)
 - Insulin resistance and diabetes

These conditions are associated with an increased risk of developing cancer. Although there is no clear evidence to prove that avoiding sugar will prevent cancer recurrence, it is wise to limit added sugars. If you have concerns about diabetes, prediabetes, or insulin resistance, talk with your dietitian.

- Read food labels. Food labels list sugars in many ways. Other names to watch for are:
 - Corn syrup
 - Brown rice syrup
 - High-fructose corn syrup
 - Fruit juice concentrate
 - Maltose
 - Dextrose
 - Sucrose
 - Glucose

- Fructose
- Honey
- Maple syrup
- Cane sugar

Sugar can be raw, brown, white, or powdered, but it's all still sugar. Check the label on packaged foods to see how much sugar is in it. Make sure it is not one of the first few ingredients on the list.

Choose foods moderate in salt and sodium

- Salt and sodium are not exactly the same things. Sodium is a mineral. It is often found in processed foods. The table salt we use is about 40% sodium and 60% chloride. That means that most of the sodium people eat comes from eating processed foods, not from adding salt at the table. However, you still want to watch both. Eating a diet high in sodium may raise your blood pressure and increase your risk for stroke, heart failure, and kidney disease.
- Eat less than 2,300 milligrams (mg) of sodium (which is about 1 teaspoon of salt) a day.
- To lower the amount of sodium in your diet:
 - Choose foods that are labeled “low sodium,” “very low sodium,” “salt free,” and “sodium free.” Low-sodium foods have less than 140 mg of sodium per serving.
 - Read food labels to find out the amount of sodium per serving in your food.
 - Limit how much packaged, processed, pickled, smoked, and cured foods you eat, because they are usually high in sodium and nitrates (salts added to keep food from spoiling).
 - Do not add salt to your food at the table.

- Avoid preparing and cooking food with salt.
- Flavor your foods with fresh herbs, spices, and lemon juice instead of salt.

Fats

Some fat in our diets is necessary and healthful. There are different types of fat and some are healthier than others. Unsaturated fats are healthier for you than saturated fats.

- Unsaturated fats are found in:
 - Olive oil
 - Canola oil
 - Peanut oil
 - Fish oil
 - Avocado
- Saturated fats are found in:
 - Meat
 - Full-fat dairy products (e.g., whole milk, cheeses, heavy cream)
 - Butter
 - Coconut
 - Palm oil

For some medical conditions, limiting fat may be helpful. Here are some recommendations for limiting fat in your diet and choosing the healthier types of fat.

- Some red meat (e.g., beef, lamb, pork) is high in fat. Limit the amount you eat to no more than 18 ounces of cooked red meat per week. One serving size of red meat is 3 ounces, which is about the size of a deck of cards.

- Avoid processed meats such as bacon, sausage, hot dogs, and cold cuts. Too much processed red meat is linked to certain kinds of cancer.
- Eat less saturated fat. No more than 10% of your calories should be from saturated fats. These fats can raise unhealthy types of cholesterol levels that clog your arteries (blood vessels) and cause heart disease.
- Choose foods low in unhealthy cholesterol. Cholesterol is found in foods that come from animal sources, such as egg yolks, higher fat meats, and low-fat or full-fat dairy.
- Avoid foods with trans fats. Trans fats are found in some margarines, as well as processed or packaged baked goods, such as cookies, cakes, chips, and crackers.
- Choose foods rich in omega-3 fatty acids. These fats are thought to protect against cardiovascular (heart) disease and improve insulin resistance. Omega-3 foods include:
 - Fish and other seafood, such as salmon, sardines, herring, mackerel, mussels
 - Nuts, seeds, and oils, such as almonds, walnuts, pumpkin seeds, olive oil, and canola oil
 - Avocados
 - Seaweed

Tips for trimming fat from your diet

- Bake, broil, grill, steam, or poach instead of frying.
- Baste with fruit juice, broth, or wine instead of gravy.
- Use herbs and spices to add flavor.
- Limit spreads that are high in fat. These include butter, margarine,

cream cheese, mayonnaise, and salad dressings.

- Refrigerate your soups and skim off the fat layer that forms on top.
- Use non-stick pans or vegetable cooking spray, instead of oil.
- Blot extra fat from food with a paper towel.
- Marinate foods with balsamic vinegar or citrus juice.

Alcohol Guidelines

- **Drinking alcohol increases risk for certain forms of cancer.** If you choose to drink, limit your alcohol intake to no more than 1 drink a day for women and 2 drinks a day for men. One serving is equal to a 5 ounce glass of wine, 12 ounces of beer, or 1.5 ounces of hard liquor.

Hydration

- The amount of water your body needs will vary depending on your physical activity and the season. Drink at least 8 (8-ounce) glasses of water (flat or sparkling) daily.

Keeping a Food Diary

To help you keep track of your diet, you may want to keep a daily diary of all the foods you eat over a few days. This will help you see your typical food intake and how well it matches with the “Designing a Healthy Diet” section above. It can also help you achieve your goal weight.

Right after you eat, write down what you ate and how much. See the sample food diary at the end of this resource. There is also a blank copy that you can photocopy for your own use.

If you prefer to use your smartphone, there are many apps that can help you track what you eat. You can also use the “Notes” section in your

smartphone. Any method of keeping a food diary is fine, as long as it works for you. Your dietitian can help you use your diary to meet your nutritional goals.

Keep in mind that you do not have to change your diet all at once. Set 1 or 2 goals each week. If you have setbacks, you can learn from them. Small changes add up to big results over time.

Summary

- Eat at least 5 or more servings of fruits and vegetables a day. Be sure to include deep yellow and orange vegetables and dark leafy greens.
- If you drink alcohol, limit alcoholic drinks to no more than 1 drink a day for women and 2 drinks a day for men.
- Limit your intake of red meat to less than 18 ounces per week and avoid processed and fatty meats such as canned ham (Spam[®]) and salami.
- Choose healthy fats and limit intake of unhealthy fats.
- Monitor your intake of salt and sodium.
- Avoid foods that are smoked or pickled.
- Choose and prepare foods and drinks with little added sugars and sweeteners.
- Ask your healthcare provider for a referral to see a dietitian. He or she can help you create a healthy eating plan.

Sample Food Diary

Time and Place	Food, Drink, or Both	Amount	Mood	Activities During Meal
8:00 AM at work	Coffee with 1% milk	16 ounces + 2 tablespoons of milk	Good, alert	Read paper during breakfast
	Fat-free plain Greek yogurt	5.3 ounces		
	Apple	1 small		
11:00 AM at work	Cereal bar (blueberry)	1 bar	Anxious	Ate while in a staff meeting
	Water	1 (8 ounce) glass		
2:00 PM at work	Vegetable soup and crackers	1 bowl + 4 crackers	Good, but tired	Ate at desk while working on report
	Bottled water	16 ounces		
7:00 PM at home	Grilled chicken breast	3 ounces	Good, but tired	Watched TV with the kids
	Broccoli	1 cup		
	Brown rice	1 cup		
	Red wine	1 (4 ounce) glass		
	Water	2 (8 ounce) glasses		

Nutrition Services

212-639-7071

Our Nutrition Service offers nutritional counseling with one of our registered dietitians. Your dietitian will review your current eating habits and give advice on what to eat during and after treatment.

Integrative Medicine Service

646-888-0800

Offers many services to complement traditional medical care, including music therapy, mind/body therapies, dance and movement therapy, yoga and touch therapy.

Additional Resources

Academy of Nutrition and Dietetics (AND)

www.eatright.org

AND is a professional organization for registered dietitians. To find a registered dietitian in your area, click on “Find a Registered Dietitian” in the upper right corner of the website home page.

American Cancer Society (ACS)

www.cancer.org

1-800-227-2345

Offers a variety of information and services, including Hope Lodge, a free place for patients and caregivers to stay during cancer treatment.

American Heart Association

www.heart.org/HEARTORG

1-800-242-8721

Offers a variety of information on healthy eating and general exercise guidelines. They also publish several heart-healthy cookbooks that can be found in most bookstores.

American Institute for Cancer Research

www.aicr.org

1-800-843-8114

Includes information on diet and cancer prevention.

National Cancer Institute(NCI)

www.cancer.gov

1-800-4-CANCER

Offers information about cancer, including summaries of treatment guidelines, research news, clinical trial listings, links to medical literature, and more.

United States Department of Agriculture (USDA)

www.choosemyplate.gov

Offers a variety of information on healthy eating and general exercise in an interactive format.

If you have any questions, contact a member of your healthcare team directly. If you're a patient at MSK and you need to reach a provider after 5:00 PM, during the weekend, or on a holiday, call 212-639-2000.

For more resources, visit www.mskcc.org/pe to search our virtual library.

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