PATIENT & CAREGIVER EDUCATION

Nutrition and Breast Cancer: Making Healthy Diet Decisions

This information will help you make healthy diet choices if you have breast cancer, are a breast cancer survivor, or are at a high risk for breast cancer.

You can read the whole resource or just the sections that apply to you. If you have any questions, speak with your clinical dietitian nutritionist, doctor, or nurse.

Breast cancer risk factors

Some things can make a person more likely to get breast cancer. These things are called risk factors. Some risk factors are in your control, and some aren’t.

Here are some examples of risk factors you can’t change:

- Being female.
- Getting your first period at a younger age.
- Getting older.
- Having a family history of breast cancer (other people in your family who have had breast cancer).
- Having certain types of genes (DNA) that increase your risk for breast cancer.

Here are some examples of risk factors you can change:

- Being overweight or obese (being an unhealthy body weight). This is especially true for people who have gone through menopause (the permanent end of their menstrual cycle).
- Not being physically active.
- Drinking too much alcohol.
- Smoking.

Breast cancer and men

Men have the same risk factors as women. Most of the diet and lifestyle guidelines and recommendations in this resource are appropriate for everyone. If you have questions about specific information, talk with your healthcare provider.

Staying a healthy weight

Reaching and staying at a healthy body weight is one of the most important things you can do for your general health. Being overweight and having too much body fat is linked to an increased risk for some diseases, including certain types of cancer, type 2 diabetes, high blood pressure, and heart disease.

People who have gone through menopause and are overweight or obese have a higher risk for breast cancer. Research suggests that gaining a lot of weight during or after breast cancer treatment can increase both your risk of breast cancer returning and your risk for getting other cancers.

Body mass index (BMI)

BMI is a measure of your body weight based on your height. It’s one way to assess body weight. BMI doesn’t measure how much muscle you have compared to how much extra fat is on your body, so it shouldn’t be the only marker for overall wellness. However,

it can be a useful tool to look at health and disease risk. A healthy BMI for most adults is between 18.5 and 24.9.

You can figure out your BMI using the online tool at www.nhlbi.nih.gov/health/educational/lose_wt/BMI/bmicalc.htm.

You can also find your BMI using the chart below (see Figure 1). To do this:

1. Find your height (in feet and inches) in the left-hand column.
2. In the same row, look across the columns to the right until you find your weight (in pounds). If your exact weight isn't in the table, find the weight that's closest.
3. Look at the BMI listed at the top of your weight column. This is your BMI.

For example, if you're 5 feet tall and weigh 130 pounds, your BMI is 25.

BMI Table														
	Normal						Overweight					Obese		
BMI	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

Figure 1. Body mass index (BMI) table

The table below shows weight classes according to the National Institutes of Health (NIH).

Weight class	BMI
Underweight	Less than 18.5
Normal	18.5 to 24.9
Overweight	25.0 to 29.9
Obesity	30.0 to 39.9
Extreme obesity	40.0 or higher

Source: www.nhlbi.nih.gov/health/public/heart/obesity/lose_wt/bmi_dis.htm

It's important to note that BMI is only one way to measure health and weight. Other measures include waist-to-hip ratio and waist circumference, which look at weight in your abdominal (belly) area. Extra weight or fat in the abdominal area is linked to an increased risk for some illnesses, even for people with a healthy BMI.

Managing weight gain after diagnosis and treatment

People often gain weight after their breast cancer diagnosis and treatment. There are many reasons people might gain weight during or after treatment, including:

- Eating too many calories.
- Not being physically active.
- Starting menopause early.
- Having depression (strong feelings of sadness) and anxiety (strong feelings of worry or fear).

- Feeling hungrier than usual due to taking prescribed steroids.
- Eating for comfort or to deal with emotions.
- Eating more than usual due to side effects of treatment, such as fatigue (feeling more tired than usual) or nausea (feeling like you're going to throw up).

If you've gained weight, it can be hard to lose it. Because of this, it's important to try to stay at a healthy weight during your treatment.

Use the guidelines below to help avoid gaining weight. Work with your clinical dietitian nutritionist on your weight goals.

- Choose a balanced diet. Read the "Balancing your plate" section for helpful tips.
- Exercise regularly.
- Control your portion sizes.
- Always put food on a plate so you know how much you are eating. Don't eat from a container or bag.
- Avoid eating while watching TV, during "screen time" (such as checking email or watching a movie), or while talking on the phone.
- Drink 8 (8-ounce) glasses of liquids per day. Choose water or other drinks without calories, such as seltzer.
- Don't drink more than 1 cup of fruit juice per day. It's better to eat whole fruit than drink juice.

You don't have to change your diet all at once. You can 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.

Balancing your plate

The balance of foods on your plate is important when trying to eat healthily. Keep in mind the picture of the plate in Figure 2. This can help you choose the right serving sizes of different foods.

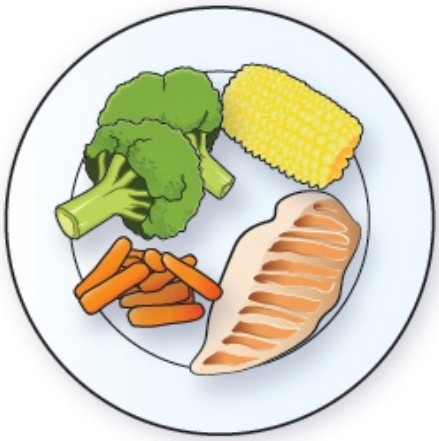

Figure 2. Balancing your plate

Two-thirds (or more) of your plate should be plant-based foods, such as vegetables, fruits, whole grains, and beans.

For your vegetables, try to choose non-starchy ones, such as:

- Broccoli.
- Cabbage.
- Cauliflower.
- Leafy greens, such as spinach, lettuce, kale, collards, and bok choy.
- Mushrooms.
- Asparagus.
- Zucchini.
- Peppers.

- Tomatoes.

Other healthy plant foods include:

- Whole grains, such as brown rice, whole-wheat pasta, quinoa, and barley.
- Starchy vegetables, such as potatoes, sweet potatoes, corn, pumpkin, and peas.
- Whole fruits, such as berries, apples, pears, kiwis, and oranges.

No more than one-third of your plate should be animal protein. Some sources of animal protein are:

- Fish, such as canned sardines, canned salmon, and fresh fish.
- Non-fat or low-fat dairy products, such as plain yogurt.
- Eggs.
- Poultry, such as chicken and turkey.

If you eat red meat, such as beef, pork, and lamb, try to eat it only once or twice a week.

You can also replace animal protein with plant proteins, such as beans, nuts, and tofu.

Your meal might not always look exactly like the plate shown here. You could have a cup of lentil and vegetable soup and a small apple, and you'd still get similar nutrients and have a balanced meal. You might also eat more vegetables at lunch and dinner than at breakfast. The most important things are to have a mostly plant-based diet and control your portions for all meals.

Managing portion sizes

A portion size is the amount of food you're choosing to eat. A serving size is a standard amount of food and can sometimes represent the recommended amount of food.

It's important to think about serving sizes when figuring out how much to eat. Portion sizes of bottled, packaged, and restaurant foods and drinks have gotten larger over the years. The table below lists the serving sizes of some foods.

Food group	Food	Amount in 1 serving size
Bread, cereal, rice, and pasta	Bread	1 slice
	Bagel, New York City style	¼ bagel
	Oatmeal, cooked	½ cup
	Cereal (cold)	1 ounce (½ cup to 1 cup, depending on cereal)
	Pasta	½ cup
	Rice	½ cup
Vegetables	Cooked or raw, chopped	½ cup
	Juice	¼ cup
	Raw, leafy	1 cup
Fruits	Chopped, cooked, or canned (unsweetened)	½ cup
	Dried	¼ cup
	Juice	¾ cup
	Fresh	1 medium fruit
Milk, yogurt, and cheese	Milk or yogurt	1 cup
	Minimally processed cheeses (mozzarella, Swiss,	1 ½ ounces

	muenster, cheddar, provolone, Gouda)	
Lean meat, poultry, fish, beans, eggs, and nuts	Cooked beans	½ cup
	Cooked meat or fish	3 ounces
	Eggs	1
	Nuts	⅓ cup
	Peanut butter	2 tablespoons

Use the following examples of everyday items to help determine your serving sizes (see Figure 3).

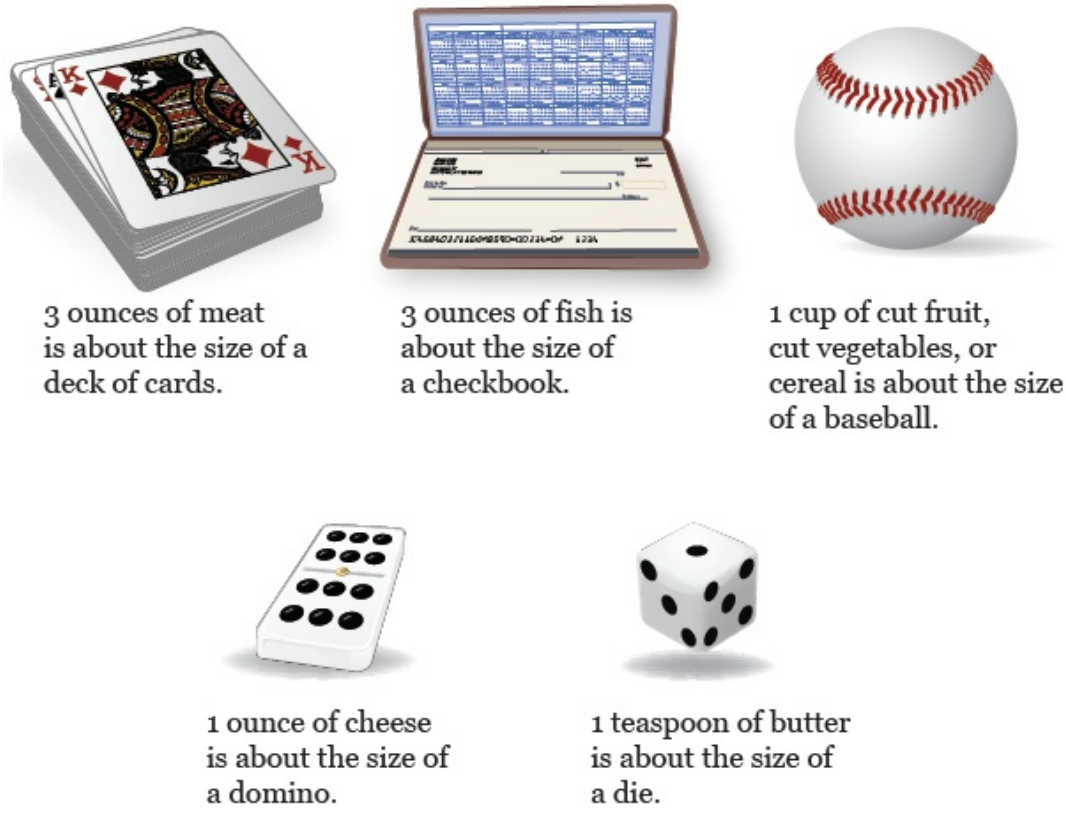

Figure 3. Examples of portion sizes

Common measurements

Use measuring cups and spoons to measure your portions. Here are some common measurements that may be helpful to remember.

- 3 teaspoons = 1 tablespoon

- 4 tablespoons = ¼ cup
- 4 ounces = ½ cup
- 8 ounces = 1 cup
- 1 cup = ½ pint
- 2 cups = 1 pint

Understanding food labels

Reading and understanding food labels can help you make healthy food and drink choices. Food labels include information about the food or drink, such as:

- The amount of added sugars in 1 serving.
- The amount of vitamin D and potassium in 1 serving.
- The serving size.
- The number of calories in 1 serving.
- The percentage of the daily value for nutrients such as sodium, fiber, and vitamin D.

Here are some examples of food labels (see Figure 4).

Nutrition Facts

Serving Size 2/3 cup (55g)
Serving Per Container About 8

Amount Per Serving	
Calories 230	Calories from Fat 72
	% Daily Value*
Total Fat 8g	12%
Saturated Fat 1g	5%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 160mg	7%
Total Carbohydrate 37g	12%
Dietary Fiber 4g	16%
Sugars 1g	
Protein 3g	
Vitamin A	10%
Vitamin C	8%
Calcium	20%
Iron	45%

* Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:

	Calories	2,000	2,500
Total Fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

Nutrition Facts

8 servings per container
Serving size **2/3 cup (55g)**

Amount per serving
Calories **230**

	% Daily Value*
Total Fat 8g	**10%**
Saturated Fat 3g	**5%**
Trans Fat 0g	
Cholesterol 0mg	**0%**
Sodium 160mg	**7%**
Total Carbohydrate 37g	**13%**
Dietary Fiber 4g	**14%**
Total Sugars 12g	
Includes 10g Added Sugars	**20 %**
Protein 3g	
Vitamin D 2mcg	10%
Calcium 260mg	20%
Iron 8mg	45%
Potassium 235mg	6%

* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

Figure 4. Food labels

How to read a food label

The label below lists the nutritional content of a ⅔ cup serving of macaroni and cheese (see Figure 5). The arrows point to the boxes on the right, which explain what each line means.

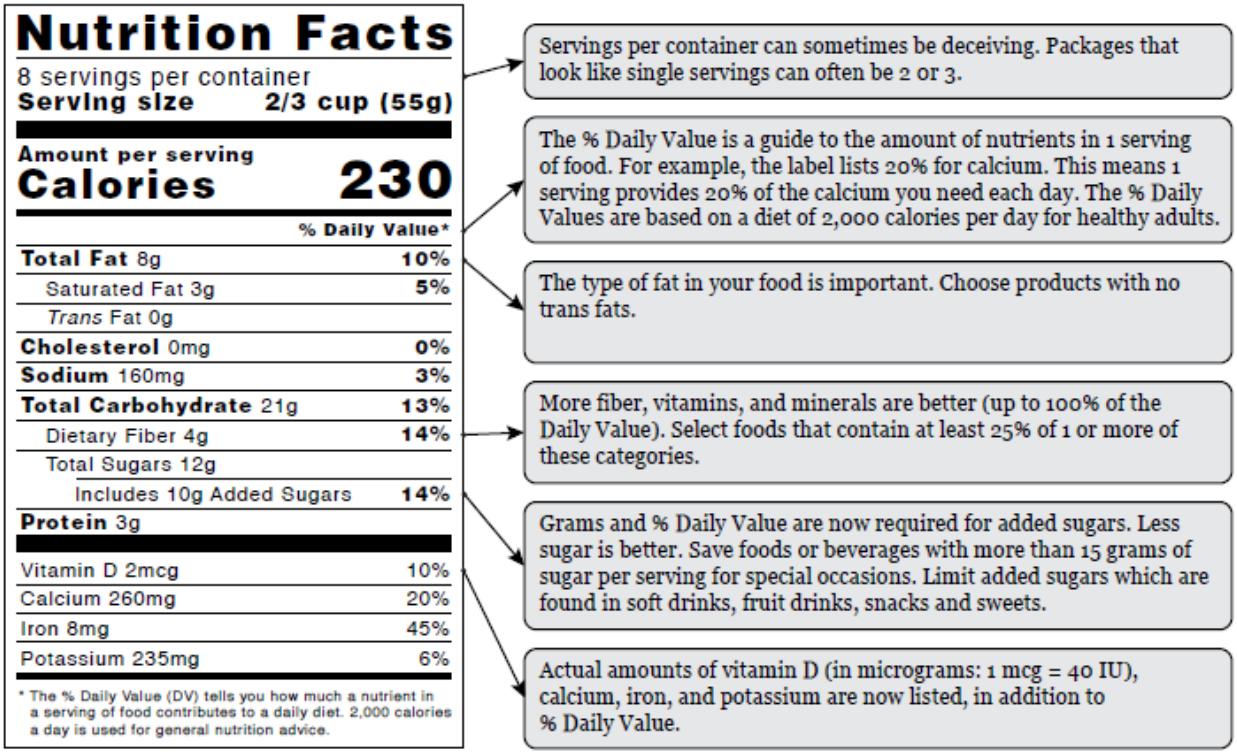

Figure 5. How to read a food label

Keep a food diary

Tracking what you eat and drink with a written food diary helps you be more aware of your choices. It can improve your thought process and awareness of what, when, and why you eat. For example, you might find you eat too much late at night when you're more tired than hungry. You might notice that you have certain snacks because you're stressed or bored.

If you keep a food diary, you may be more likely to reach your nutrition and body weight goals. Keeping a food diary can also help you make better choices about the foods that you eat. Your clinical dietitian nutritionist can help you use your food diary to meet your nutrition goals.

To keep a good food diary, write down what you eat right after you eat it, including the portion size. Be as detailed as you can. For example, you can write that you ate "1 cup of bran flakes and

½ cup low-fat milk." You can also include how you were feeling when you ate. See the sample food diary in the "Sample Food Diary" section for an example.

Many people find writing a food diary by hand with a pen and a small notebook works best. Other people use a smartphone app or the "Notes" section of their smartphone. You can choose any way that works best for you.

Planning a healthy diet

The guidelines below can help you plan a healthy diet. Work with your clinical dietitian nutritionist to find the diet that's best for you.

Control your calories

- Control portion sizes at all meals and snacks.
- Eat mindfully. Check in with how hungry or full you feel before and after you eat.
- Avoid snacking. Eat your meals at set times during the day. Choose healthy snacks only if you need them.
- Avoid sweetened drinks, such as sodas and soft drinks.
- Limit how much alcohol you drink. Read the "Limit alcohol" section for more information.

Choose plant-based foods

- Vegetables, fruits, and other whole plant foods should be the largest part of your diet.
- Eat a wide variety of vegetables and fruits. Choose fruits and vegetables with different colors, such as dark green, purple,

orange, yellow, red, and white, to get lots of different nutrients.

- Try to eat about 3 cups of vegetables and 1 to 2 cups of fruit each day.

Limit total and added sugars

Sugars are naturally found in many foods, such as fresh fruit and milk. It’s okay to eat naturally occurring sugars in moderate portions.

Some foods (such as soft drinks, fruit drinks, snacks, and sweets) have added sugars (sugars that aren’t found naturally). Foods and drinks with added sugars can add too many calories to your diet. Over time, this can make you overweight or obese. They can also cause issues with your blood sugar and insulin (a hormone that helps control your blood sugar levels). Insulin issues can include chronic hyperglycemia (high blood sugar), hyperinsulinemia (having too much insulin in your blood), and insulin resistance. These conditions may increase your risk for getting breast cancer and some other types of cancer. The World Health Organization (WHO) recommends having no more than 25 grams (6 teaspoons) of added sugar per day. This measure is for someone eating 2,000 calories a day.

Follow these recommendations to limit the amount of sugar you eat:

- Read food labels to find out how much added sugar a food or drink has.
  - Grams and % Daily Value are now required for added sugars. Less sugar is better.
  - Ingredients are listed in descending (decreasing) order. This

means that the product has more of the ingredients that are listed first and less of those listed last. Make sure sugar isn't one of the first few ingredients on the list.

- Food labels list added sugars in many ways. Some names to watch for are:
  - Corn syrup.
  - Brown rice syrup.
  - High-fructose corn syrup.
  - Muscovado.
  - Fruit juice concentrate.
  - Maltose.
  - Dextrose.
  - Evaporated cane juice.
  - Turbinado sugar.
  - Sucrose.
  - Glucose.
  - Fructose.
  - Barley malt.
  - Raw sugar.
  - Honey.
  - Maple syrup.
  - Cane sugar.
  - Invert sugar.

- Save foods and drinks with more than 15 grams of sugar per serving for special occasions.

- Remember that sugar is sugar, whether it’s raw, brown, white, organic, or powdered.

If you have other health concerns, such as diabetes, prediabetes, insulin resistance, or obesity, talk with your clinical dietitian nutritionist.

Include fiber in your diet

Fiber is a part of plants that you can eat but can’t be digested by your body. Fiber is good for your health and can help you:

- Keep your blood sugar at the right levels.
- Lower your cholesterol levels.
- Have regular bowel movements (poop) and prevent constipation (having fewer bowel movements than usual).
- Feel more full and satisfied after a meal.

Most people should eat at least 25 to 35 grams of fiber per day. You can do this by eating about 2½ cups of vegetables or legumes, 2 cups of fruit, and 3 servings of whole grains every day. To eat 3 servings of whole grains, you could have 1½ cups of whole-grain cereal, oats, whole-wheat pasta, millet, quinoa, brown rice, or other cooked whole grains or 3 slices of whole-wheat bread.

Increasing the amount of fiber in your diet over a short period of time can cause gas and bloating. Add sources of fiber to your diet slowly and drink lots of water. This will help your body get used to the change.

Foods with fiber

High-fiber foods usually have at least 3 grams of fiber per serving. Vegetables, fruits, beans, and whole grains are usually high in fiber. They also have many vitamins and minerals. Whole grains include the entire grain seed. They're better for you than refined grains. Examples of whole grains are:

- Brown rice, black rice, and wild rice.
- Spelt.
- Millet.
- Quinoa.
- Bulgur.
- Oats and oatmeal.
- Buckwheat.
- Barley.
- Whole wheat.
- Popcorn.

Read the labels on your foods to find those that are high in fiber. Labels that list the word "whole" or "whole grain" before the first ingredient are good fiber sources. For example, look for "whole wheat flour" as the first ingredient in bread, not just "wheat flour."

Some foods such as yogurts and snack bars now contain added fiber (such as inulin). There isn't enough evidence to suggest that these added fibers have the same health benefits as fiber that's naturally found in foods.

The table below lists some good food sources of fiber. For more information and a full list of fiber-rich foods, read *A Guide to High Fiber Foods* (https://sandbox18.mskcc.org/pe/high_fiber_foods).

Food group	Food	Portion	Fiber (grams)
Vegetables	Artichoke, cooked	1 medium	7 grams
	Broccoli, cooked	1 cup	6 grams
	Carrots, raw	1 cup, chopped	3 ½ grams
	Baked potato with skin	1 small	3 grams
	Cauliflower, cooked	1 cup	3 grams
Fruits	Raspberries (fresh or frozen)	1 cup	8 grams
	Pear (with skin)	1 medium	6 grams
	Avocado	½ medium	5 grams
	Apple (with skin)	1 medium	4 ½ grams
	Orange	1 medium	3 grams
Grains	Whole wheat pasta	1 cup	6 grams
	Whole wheat bread	2 slices	4 grams
	Popcorn (air-popped)	3 cups	3 ½ grams
	Barley, cooked	½ cup	3 grams
Beans, legumes, nuts, seeds	Lentils, cooked	½ cup	8 grams
	Black beans, cooked	½ cup	7 ½ grams

	Almonds	1 ounce	3 ½ grams
	Pistachios	1 ounce	3 grams

Choose foods with healthy fats

It’s healthy and necessary to include some fat in your diet. There are different types of fat. Some are healthier than others.

Fat has a lot of calories. One gram of fat has 9 calories, while 1 gram of a carbohydrate or protein has 4 calories. This means that high-fat foods have a lot of calories in a small amount of food. This is important to remember if you’re trying to lose weight or stay at a healthy weight.

For people with certain medical conditions, limiting fat may be helpful. For most people, it’s better to avoid eating too many calories and choose healthier types of fats instead of avoiding them completely.

Saturated and trans fats

Saturated and trans fats may raise your cholesterol levels. High cholesterol is often linked to heart disease. Limit the amount of saturated and trans fats in your diet.

Saturated fats are naturally occurring fats. The following foods have lots of saturated fats:

- Meats, such as pork and beef.
- Full-fat dairy products, such as cheese and butter.
- Coconut, such as coconut oil and coconut milk.
- Palm oil.

Most of the saturated fat people eat come from foods like burgers, sandwiches, pizza, and desserts.

Trans fats aren’t naturally occurring. The Food and Drug Administration (FDA) has banned trans fats from many foods already, but you may still see them sometimes. Read the food label when buying packaged foods to see if the product has trans fats. Choose products with no trans fats whenever you can.

Trans fats are sometimes listed as “partially hydrogenated oil” or “fractionated oil.” Foods that may have trans fats include:

- Coffee creamers.
- Deep fried foods.
- Some margarines.
- Microwave popcorn.
- Processed or packaged cookies, cakes, chips, and crackers.

Monounsaturated and polyunsaturated fats

Monosaturated and polyunsaturated fats are healthier for you. They’re found mostly in plant foods, fish, and other seafood. Good sources of healthy fats include:

- Fish and other seafood, such as:
  - Salmon
  - Sardines
  - Halibut
  - Mussels
  - Cod
  - Herring
  - Anchovies
- Nuts, seeds, and oils, such as:

    - Almonds
    - Olive oil
    - Walnuts
    - Canola oil
    - Pumpkin seeds
    - Flaxseeds
- Vegetables and fruits, such as:
    - Avocados
    - Brussels sprouts
    - Bok choy (Chinese cabbage)
    - Seaweed

Limit alcohol

Research shows a link between drinking alcohol and an increased risk for breast cancer. Women who drink more than 1 serving of alcohol per day on average are at an increased risk of breast cancer. The type of alcoholic drink doesn't matter. The risk increases with the more alcohol you drink. Drinking a lot of alcohol may also increase the risk of breast cancer in men.

Drinking too much alcohol is also linked to other health problems, such as:

- Liver disease.
- Cancers of the mouth, throat, and esophagus (the tube that carries food and liquids from your mouth to your stomach).
- Irritation of the stomach and pancreas (the gland that helps you digest food and controls blood sugar levels).

- High blood pressure.

If you drink, do it in moderation and try to save it for special occasions. Follow these tips to control how much alcohol you drink:

- Remember that different types of alcohol have different serving sizes. Below are the serving sizes for some alcoholic drinks. One serving of:
  - Wine or champagne: 4 to 5 ounces (about 100 calories).
  - Regular beer: 12 ounces (about 150 calories).
  - Hard liquor (such as tequila or vodka): 1.5 ounces (about 100 calories).
- Note the size of the wine glasses you use at home or in restaurants. Some wine glasses hold 20 ounces or more—up to 5 servings of wine.
- You can add things like seltzer to your alcohol to water it down so you don’t drink as much of it.

If you have any questions about alcohol, talk with your doctor, nurse, or clinical dietitian nutritionist.

Limit salt and sodium

Eating foods with a lot of salt can raise your blood pressure and increase your risk for stroke, heart failure, and kidney disease. Most people should eat less than 2,300 mg of sodium (about 1 teaspoon of salt) per day. Fresh food that isn’t processed is usually lower in sodium.

Read food labels to find out the amount of sodium in the product. Choose foods that are labeled “low sodium,” “very low sodium,”

or “sodium-free.”

Follow these tips to reduce how much sodium you eat:

- When cooking, flavor your foods with fresh herbs and spices instead of salt.
- Limit the amount of canned foods you eat (such as canned soups).
- Limit the amount of packaged, processed, pickled, and cured foods you eat (such as pickles and deli meats).
- Don’t add salt to your food at the table.

About soy foods

Some breast cancer cells use estrogen and other hormones to grow. Because of this, many people have questions about soy foods and breast cancer.

Soy foods naturally contain plant compounds called isoflavones (i-so-FLAY-vones). Isoflavones are similar to the estrogen that’s made in our body, but they work differently. Eating soy foods (sometimes called phytoestrogens) won’t increase how much estrogen your body makes.

Research shows that eating whole soy foods **won’t** increase your risk of getting breast cancer. If you have breast cancer or have had it in the past, eating soy foods won’t make your cancer worse or increase your risk for cancer recurrence (when your cancer comes back).

Some research shows that eating soy foods may offer health benefits. This is still being researched.

It’s usually better to choose whole soy foods over very highly processed soy foods and ingredients. Whole soy foods contain important nutrients such as protein, iron, and calcium. Examples of whole soy foods include:

- Tofu
- Miso
- Tempeh
- Soy milk
- Edamame

You may also see soy ingredients in many foods, such as:

- Soy lecithin
- Soybean oil
- Soy sauce

These ingredients are safe for most people and won’t increase your cancer risk.

Some research shows that very high amounts of isoflavones may not be safe. It’s important to eat whole soy foods that may offer health benefits and not soy products in a supplement, powder, or pill form. Soy products marketed as dietary supplements may have health risks.

About dietary supplements

There are many dietary supplements you can take if needed. They come in many forms, such as pills, liquids, and powders.

The healthiest and best way to get nutrients is from food. Most people can get the nutrients they need from a balanced, mostly

plant-based diet. However, some people may need to get some nutrients with supplements. You may need supplements if you:

- Have certain medical conditions.
- Are on a special diet.
- Are vegan (don’t eat any animal products).
- Are 65 years of age or older.
- Are pregnant or plan to become pregnant soon.
- Have a nutrient deficiency or insufficiency (you don’t have or get enough of a certain nutrient).

Ask your healthcare provider or clinical dietitian nutritionist for more information if you think you might need to take supplements.

Remember the following precautions (safety measures) with dietary supplements. Some dietary supplements may:

- Interact with medications, including chemotherapy and endocrine (hormone) therapy.
- Interact with each other.
- Cause serious side effects
- Not be regulated for the safety, content, or quality of the product.

It’s important for your entire healthcare team to know about any supplements you’re taking. This includes vitamins, minerals, herbs, botanicals, and other supplements.

To learn more about supplements, read *Herbal Remedies and*

Cancer Treatment (https://sandbox18.mskcc.org/pe/herbal_remedies). You can also visit MSK's About Herbs website (www.msk.org/herbs) or download MSK's free About Herbs iPhone app for more information.

Other resources include the American Cancer Society (www.cancer.org) and the American Institute for Cancer Research (www.aicr.org). Type "dietary supplements" into the search bar when visiting these sites for more information.

About organic foods

When the United States Department of Agriculture (USDA) labels a food "organic," it means that farms and facilities have grown or produced the food according to certain rules. These include:

- Organic plant foods must be grown without synthetic (human-made) pesticides or herbicides (substances used to control bugs and weeds).
- Organic animal products must be made from animals that aren't given growth hormones or antibiotics (substances given to animals to make them grow faster or treat disease). These animals must be given organic food. They can't be given food that's made from other animals.
- Organic foods aren't genetically modified organisms (GMO), meaning their genetic material (DNA) isn't changed in any way before they're grown.

There are some benefits to choosing organic foods, and for some people it's an important personal choice. However, there isn't enough research to show that it's better for your health to eat

organic foods. Eating more of them won't lower your risk for cancer. Some organic foods may be more expensive or harder to find compared with other foods.

It's important to remember that you should always eat lots of different fruits and vegetables. Whether they're organic or not isn't as important.

Eating well during your breast cancer treatment

There are many types of treatment for breast cancer. It's important to eat well during your treatment. Eating well during your breast cancer treatment can help you:

- Feel stronger.
- Have more energy.
- Manage your side effects.
- Prevent or reduce weight gain or weight loss.
- Get the right nutrients.
- Lower your risk of foodborne illness (food poisoning).
- Avoid dehydration.
- Heal after surgery.

Eating guidelines for people getting chemotherapy treatment

Food safety

If you're getting chemotherapy, you're at an increased risk for getting an infection or foodborne illness. This is because chemotherapy treatment can lower the number of white blood cells in your body. These cells fight bacteria (germs) and keep your immune system strong. Avoid foods that aren't prepared,

stored, or handled correctly. This can happen where you shop for food, eat out, or even at home.

To prevent foodborne illness, it's important to buy foods that are safe to eat and to make and store food safely. For more information, read *Food Safety During Cancer Treatment* (https://sandbox18.mskcc.org/pe/food_safety).

Managing your body weight

During chemotherapy, some people gain weight, and other people lose weight. It's best to try to stay at a healthy body weight and not gain or lose too much weight during treatment. For more information, see the section "Staying a healthy body weight."

If you're losing too much weight because of your chemotherapy treatment, you may want to change your diet. You may not be very hungry due to side effects of treatment such as fatigue, anxiety, and depression. If you lose your appetite (don't feel as hungry as usual), follow the suggestions below:

- Eat your favorite foods.
- Eat small meals or snacks regularly during the day.
- Eat with friends or family that support you.
- Add healthy fats (such as olive oil, avocado, and nuts) to your meals and snacks.
- Ask for help buying and making food.
- Listen to music you enjoy while you eat.
- Plan meals on a set schedule so you don't forget to eat.
- Try homemade smoothies with nutrient-rich ingredients such as fruits, vegetables, and nuts.

- Don’t force yourself to eat a large amount at once, but don’t skip meals entirely.

Read *Eating Well During Your Cancer Treatment* (https://sandbox18.mskcc.org/pe/eating_cancer_treatment) for more information about staying a healthy weight during your cancer treatment.

Staying hydrated

It’s important to stay well-hydrated during chemotherapy. Drink at least 8 (8-ounce) cups of water or other no-calorie or low-calorie drinks (such as seltzer or tea) each day.

Not drinking enough liquids can cause:

- Lightheadedness (feeling like you might faint).
- Dizziness.
- Nausea.
- Constipation.
- Fatigue.
- Urinary tract infections (UTI, an infection in your urinary system).

Try not to drink many sweetened drinks, soft drinks (such as cola or ginger ale), and juices.

Keeping up your energy

Fatigue is a common side effect during chemotherapy and may get worse over time. While there’s no one food to prevent or reduce fatigue, following a balanced diet, getting regular exercise, and getting enough sleep can help. You can also try the

suggestions below.

- Limit the amount of added sugars you eat, such as candy, baked goods, and sodas. Too much added sugars and sweets can cause fatigue due to changes in blood sugar levels. They can also add too many calories to your diet.
- Try to have small, regularly-spaced meals and eat protein-rich foods at each meal. Good sources of protein include nuts, nut butters, eggs, quinoa, beans and legumes, fish, plain yogurt, and lean poultry.
- It’s OK to have 1 or 2 cups of coffee or another caffeinated drink per day. Don’t have caffeine to stay up late or in place of balanced meals.
- If you feel tired during the day, try going for a short walk instead of eating if you’re not actually hungry.
- Limit or avoid alcoholic drinks.
- Stay hydrated.
- Try to be physically active.

Managing side effects

You may have different side effects during chemotherapy treatments. Side effects can be different for everyone. They can also be different every day. The following tables show some possible side effects during chemotherapy as well as foods you can try to help them and foods to avoid.

Nausea

What to try	What to avoid
• Ginger tea. • Cool or cold foods, such as	• Strong food smells or other odors. • Large meals.

breakfast cereal with milk or a raw vegetable sandwich. • Fresh or frozen fruit. • Eating small meals often. • Saltines or plain crackers. • Broth or other simple soups. • Hard candies.	• Greasy, creamy, oily, or fried foods.

Constipation

What to try	What to avoid
• Drinking at least 8 (8-ounce) cups of water per day. • Raw or cooked vegetables and fruits. • Dried fruit, such as prunes or apricots. • Beans and legumes. • Whole grain products, such as bran cereal or oatmeal. • Plain yogurt. • Hot tea or coffee (limit to 1 to 2 cups per day if caffeinated).	• Foods made with white flour, such as crackers, cakes, and white bread. • White rice. • Bananas.

Diarrhea

What to try	What to avoid
• Plain nonfat yogurt. • Bananas. • White bread products, such as a plain roll. • Plain white rice. • Cooked or canned fruits in small portions. • Weakly brewed tea and plain water.	• Fruit juice and highly sweetened drinks. • Sugar-free candies. • High-fiber cereals or breads. • Large portions of raw vegetables and fruits. • Canned fruits in heavy syrup. • Coffee or caffeinated drinks.

• Lean cooked fish, such as flounder or halibut. • Cooked eggs. • Drinking small amounts of liquid often.	

Vomiting

What to try	What to avoid
After vomiting stops: • Drinks with electrolytes, such as sports drinks. • Ice pops. • Broth. • Very small portions of solid foods, if you're able.	• Any solid food, until you stop vomiting.

Mouth sores

What to try	What to avoid
• Drinking through a straw. • Cool, soft, smooth foods and drinks, such as yogurt, pudding, or applesauce. • Rinsing your mouth with salt water or alcohol-free mouthwash.	• Acidic foods and drinks, such as orange juice or tomato sauce. • Very hot foods and drinks. • Spicy foods. • Rough-textured or very dry foods, such as granola. • Alcoholic drinks. • Mouthwash with alcohol.

Taste changes or metallic taste

What to try	What to avoid
• Adding lemon, orange, or cucumber slices to your water. • Chewing mint-flavored gum.	• Metal utensils. • Any foods or drinks that don't taste good.

• Cold or cool foods. • Fresh fruit. • Drinking through a straw.	

Heartburn

What to try	What to avoid
• Small meals. • Chewing food well. • Small sips of liquids. • Sitting upright for at least 1 hour after meals or snacks. • Gently elevating the head of your bed with pillows or a wedge.	• Acidic foods, such as orange juice, tomato sauce, or coffee. • Large meals. • Eating or drinking quickly. • Carbonated (fizzy) drinks, such as soda. • Spicy foods. • Alcoholic drinks. • Mint.

Dietary supplements during cancer treatment

Don’t take vitamins, minerals, herbal remedies, or other dietary supplements during chemotherapy unless your healthcare provider or clinical dietitian nutritionist tells you to. Large doses of antioxidants might keep some cancer treatments from working as well as they should. For that reason, it’s important to avoid most vitamins and other dietary supplements during chemotherapy. You won’t get too many vitamins or antioxidants from a diet rich in whole foods, such as fruits and vegetables.

You may need to take a vitamin D supplement (see the section “Managing your bone health”). Talk with your doctor or clinical dietitian nutritionist about taking vitamin D and what amount is right for you.

During chemotherapy and radiation therapy:

- Don’t drink more than 16 ounces (2 cups) of green tea per day.

- Don’t drink more than 8 ounces (1 cup) of juice per day.
- Limit or avoid drinks with vitamins added (such as Vitamin Water®).

For more information on dietary supplements, read the section “About dietary supplements.”

Eating guidelines during endocrine (hormone) therapy

Hormone treatments include tamoxifen, leuprolide (Lupron®), and aromatase inhibitors such as anastrozole (Arimidex®), exemestane (Aromasin®), and letrozole (Femara®). These may be used for short or long periods of time. If you’re getting hormone therapy, review the following guidelines.

Medication-nutrient interactions

Grapefruit and grapefruit juice can interact with many medications. Avoid eating grapefruit and drinking grapefruit juice if you’re taking tamoxifen.

Certain dietary supplements can interact with tamoxifen and other hormone treatments. Always check with your healthcare provider or clinical dietitian nutritionist before starting any dietary supplements.

Managing your body weight

For some people, hormone therapy can make it harder to stay at a healthy body weight. Read the section “Staying a healthy weight” for more information on managing your weight and for tips to improve your diet.

Diet and hot flashes

A hot flash is a feeling of intense heat that isn't caused by an outside source. Hot flashes are a problem for some people during menopause. They can also be a problem for people getting treatment for breast cancer. Hot flashes can be different for everyone. They may last for different lengths of time and may come and go.

Staying at a healthy weight or losing weight if you're overweight may help with hot flashes.

A stressful or warm environment can start a hot flash. Some foods and drinks can also start hot flashes or make them worse.

If you have hot flashes, try to avoid or limit the following foods and drinks:

- Caffeinated drinks, such as coffee, soda, and energy drinks.
- Chocolate.
- Alcohol.
- Spicy foods.
- Hot drinks.

Talk with your healthcare provider before taking any dietary supplements to relieve your hot flashes. For more ways to manage your hot flashes, read *Managing Your Hot Flashes Without Hormones* (https://sandbox18.mskcc.org/pe/managing_hot_flashes).

Managing Your bone health

Osteopenia and osteoporosis

Bone mineral density is a measure of how dense your bones are. It’s normal to lose density in your bones over time. Osteopenia is a condition where your bone mineral density is lower than normal for your age. Having a lower bone mineral density can lead to osteoporosis, a disease in which your bones become weak and more likely to fracture (break). The fractures most often happen in your spine, hip, ribs, or wrist. They can happen when you do normal, everyday activities.

Osteoporosis can sometimes develop as a side effect of breast cancer treatment. If you’re taking aromatase inhibitors (a form of hormone therapy) it can decrease your bone mineral density and increase your risk for osteoporosis and bone fracture. You may not have any signs of osteoporosis unless you have a fracture.

To help keep your bones strong and lower your risk of getting a fracture:

- Eat calcium-rich foods. Read the section “Food sources of calcium” for more information.
- Get enough vitamin D.
- Do exercises that strengthen your bones and muscles. Weight-bearing exercises, such as walking, jogging, running, or yoga, can help increase bone mineral density. For more information on managing osteopenia or osteoporosis, read *Osteoporosis, Osteopenia, and How to Improve Your Bone Health* (https://sandbox18.mskcc.org/pe/osteo_bone_health).

Calcium

Calcium is a mineral your body needs to keep your bones and teeth healthy and strong. If you don’t have enough calcium in your diet, your body takes calcium from your bones, which can make them weaker. Most adults need 1,000 to 1,200 mg of calcium every day.

Sex	Age (years)	Recommended daily intake (milligrams)
Female	19 to 50	1,000 mg
	Over 50	1,200 mg
Male	19 to 70	1,000 mg
	Over 70	1,200 mg

If you have osteoporosis, you might need more calcium, vitamin D, or both. Talk with your doctor or clinical dietitian nutritionist about how much you need per day. Don’t take more than your daily recommended amount of calcium. Taking too much can be harmful to your health.

Food sources of calcium

The best way to get calcium is from food. There are now many foods and drinks available that have calcium added to them. They are often called “calcium-fortified.”

Review the following list and talk with your healthcare provider or clinical dietitian nutritionist about how much calcium you’re getting in your daily diet. When reviewing this list, it’s important to note that the calcium content can change depending on the brand. Be sure to check the food labels.

Food group	Food	Portion size	Calcium	Calories

			in portion (mg)	in portion
Dairy foods	Yogurt, plain, nonfat	1 cup (8 ounces)	265	150
	Cheddar cheese	1 ½ ounces	307	171
	Gruyere cheese	1 ½ ounces	430	176
	Parmesan cheese	1 ½ ounces	503	167
	Milk, low-fat	1 cup (8 ounces)	305	102
	Milk, whole	1 cup (8 ounces)	276	149
Non-dairy alternatives	Soy milk, plain, calcium-fortified	1 cup (8 ounces)	301	80
	Rice milk, plain, calcium-fortified	1 cup (8 ounces)	283	113
	Almond milk, vanilla, calcium-fortified	1 cup (8 ounces)	451	91
Seafood	Sardines, canned in oil, with bones, drained	2 sardines	92	50
	Salmon, sockeye, canned, drained	4 ounces	263	189
	Ocean perch, Atlantic, cooked	4 ounces	39	109
	Mussels, steamed	4 ounces	37	195
Fruits and vegetables	Collards, cooked	½ cup	134	31
	Turnip greens, cooked	½ cup	104	29

	Kale, cooked	½ cup	47	18
	Bok choy (Chinese cabbage), raw	1 cup	74	9
	Brussels sprouts	½ cup	28	28
	Figs, fresh	2 medium figs	35	74
Nuts, beans, and soy	Almonds	¼ cup	96	207
	White beans, canned	½ cup	96	150
	Edamame (soybeans), prepared	½ cup	49	95
	Tofu, firm, prepared with calcium sulfate	½ cup	253	88
Other foods and drinks	Fortified, ready-to-eat cereals (various)	¾ cup to 1 cup	250 to 1,000	100 to 210
	Orange juice, calcium fortified	1 cup	500	117
	Oatmeal, plain, instant, fortified	1 packet prepared	98	101
	Mineral water (such as San Pellegrino®, Perrier®)	1 cup (8 ounces)	33	0
	Basil, dried	1 teaspoon	31	3

Source: USDA National Nutrient Database for Standard Reference

You can view this searchable site for information about other foods at https://fdc.nal.usda.gov.

Taking a calcium supplement

It's best to get your calcium from your diet. But, not everyone can get enough calcium through just foods and drinks. Your healthcare provider or clinical dietitian nutritionist will let you know how much calcium is right for you and tell you if you need to take a supplement. You can buy a calcium supplement over-the-counter (without a prescription).

Talk with your doctor or clinical dietitian nutritionist before taking calcium supplements. Getting more than the recommended daily amount of calcium can have health risks.

The following are tips for taking calcium supplements if you need them:

- If you're taking more than 500 mg of calcium supplements per day, take it in divided doses. This helps your body absorb it better. For example, if you take 1,000 mg of calcium each day, take 500 mg in the morning and 500 mg in the evening.
  - Most calcium supplements are best absorbed when taken with food. Calcium citrate is a form that can be taken either with food or on its own.
- Take calcium supplement pills with a glass of water.
- Don't buy calcium tablets that are made from bone, coral, or dolomite. They may contain lead or other harmful metals. Certain health-food store formulas have this problem. Most calcium supplements that you buy in a pharmacy have been tested for this.

- Calcium supplements can cause constipation. If you have this side effect, increase the amount of liquids and fiber in your diet. If that doesn't work, talk with your doctor or clinical dietitian nutritionist about taking a stool softener or laxative. You can also try to get more calcium from foods instead of taking supplements.
- Calcium supplements aren't replacements for other treatments for osteoporosis. Even if you take a calcium supplement, you should also eat foods that are rich in calcium. You should also keep doing weight-bearing exercises, such as walking.

For more information on calcium supplements, read *Calcium Supplements* (https://sandbox18.mskcc.org/pe/calcium_supplements).

Vitamin D

Vitamin D helps your body absorb calcium. It's also important for keeping your bones strong and healthy. Your body makes vitamin D after you're in the sun. Vitamin D is also found in some foods, such as fatty fish, cod liver oil, eggs, and vitamin D fortified milk.

It can be hard to get enough vitamin D from sunlight and foods alone. Your healthcare provider or clinical dietitian nutritionist may tell you to take vitamin D supplements. These can be prescription or over-the-counter vitamin D supplement pills or calcium supplements with added vitamin D.

You may have an increased risk for having low levels of vitamin D if you:

- Don't spend much time outside of your house.
- Spend little time in the sun or regularly use sunscreen on your

body or face.

- Are overweight or obese.
- Have darker skin.
- Have certain medical conditions, such as celiac disease (sensitivity to gluten).
- Are an older adult.

Talk with your healthcare provider or clinical dietitian nutritionist about how much vitamin D you need. Your healthcare provider can check your vitamin D levels with a blood test.

Physical activity

Regular physical activity is important for good health. Moderate to high-intensity exercise for 30 to 60 minutes per day has been linked with a lower risk for getting breast cancer. Staying active and exercising can also:

- Help you reach and stay at a healthy body weight.
- Improve your heart health.
- Keep your bones strong.
- Help you avoid falling.
- Build your muscle mass and reduce fat tissue.
- Improve your mental health, including your memory, thinking, and speech.
- Reduce fatigue and increase your energy levels.
- Reduce depression or anxiety.
- Prevent or help with constipation.
- Reduce your risk for other types of cancer and many other

health conditions and diseases (such as heart disease).

- Improve your overall health.

Exercise is important for people with cancer. Exercise can help you have less fatigue and boost your energy if you're getting chemotherapy. Exercise may also help you get through your treatments on time and improve your self-esteem. It can strengthen your immune system, increase your fitness, and help prevent weight gain.

Talk with your healthcare provider before starting any exercise program or increasing how much you exercise now.

How to add exercise to your daily routine

It's important to find physical activities you enjoy. This way, you're more likely to do them regularly. Remember that any small increases in activity will help. Set small exercise or activity goals for yourself and slowly work your way up to doing more.

Exercise can be broken up into 2 or 3 sessions. For example, if you don't have 1 whole hour to exercise, try walking for 30 minutes twice per day. Try the following ideas to increase your physical activity:

- Take the stairs instead of the elevator or escalator.
- Get off the subway or bus 1 or 2 stops early and walk the rest of the way.
- Go for a walk after dinner.
- Do some gentle stretches when you first get up in the morning.
- Bike, walk, or rollerblade to the store or to work instead of driving.

- Walk your dog (if you have one) many times a day instead of hiring a dog walker.
- Get up from your desk and take short walks around the office during the day.
- Instead of sending an email or calling a coworker, walk to their office.
- Park your car a little farther away from your destination and walk the rest of the way.
- Plan active social activities with friends and family. For example, instead of meeting for lunch or coffee, go for a bike ride. Instead of watching a movie with your children, go to the park with them.
- When golfing, walk instead of using a golf cart.
- Walk or play Frisbee® at the beach or in the park instead of lying down or sitting.
- After going out for dinner, go out dancing.
- Make walking or biking date nights with your partner.
- Clean your house or apartment.
- If it’s raining or snowing outside, walk laps inside a mall.

The table below will help you determine how much exercise you need each week, depending on your goals.

Goal	Type and amount of exercise
To gain important health benefits, such as decreased risk for heart disease, stroke, depression, type 2 diabetes.	150 minutes (2½ hours) per week of moderate-intensity exercise (such as walking fast or dancing), 75 minutes (1 hour and 15 minutes) of vigorous exercise (such as

	running, rowing, or uphill hiking), or an equal combination of both.
For added health benefits, such as weight loss, weight maintenance, decreased risk for certain cancers.	More than 300 minutes (5 hours) per week of moderate-intensity exercise, 150 minutes (2½ hours) per week of vigorous exercise, or an equal combination of both.

Sources: US Department of Health and Human Services, the American Cancer Society, and the American College of Sports Medicine.

Exercise log

Use an exercise log to help you keep track of how much exercise you do each week. If you have any special health concerns or questions about planning an exercise program, talk with your healthcare provider.

Frequently asked euestions

What's the best anti-cancer diet?

There isn't one type of diet that can prevent or cure cancer. Diets with many kinds of whole plant foods, low added sugars, and the right number of calories for you is probably the best diet for overall health and may lower your risk of some diseases.

One type of diet is the Mediterranean Diet, which is linked with health benefits. The Mediterranean Diet includes many vegetables, beans, fruits, seafood, and healthy plant oils (such as olive oil and nuts). It includes very few refined carbohydrates (such as white bread products), sugars, and meats. Talk with your doctor or clinical dietitian nutritionist if you think it might be right for you.

Reaching and staying at a healthy body weight is one of the best

ways you can lower your cancer risk. Following the many healthy habits in this guide will also help lower your cancer risk. It's important to note that cancer involves many more factors than diet alone. While following these recommendations, you should continue with your regular cancer screenings and treatments.

What foods are good for a person with cancer?

The best foods for any person are based on that person's specific needs and tolerances. These can be very different for everyone.

For example, someone who's trying to lose weight might be helped by eating fresh raw vegetables and high-fiber grains. But if someone has diarrhea while having chemotherapy or radiation therapy, those foods wouldn't be the best choices. Talk with your clinical dietitian nutritionist to determine what foods might be good to eat and what might be good to limit or avoid.

Will eating sugar make my cancer worse?

All the cells in our bodies use glucose (a form of sugar) for growth and energy. Diets with too much sugar and too many calories overall can lead to increased levels of insulin and other hormones that may allow tumors to grow.

It's a good idea to limit sugars from foods and drinks and your total calories. Eating too much sugar, or too much of **any** food, can also cause you to have extra body weight in the form of fat. And it's known that being overweight or obese can increase your risk of getting cancer.

It's important to note that you should eat an overall healthy diet and that having a cookie or treat sometimes won't cause cancer growth.

For more information, read the Academy of Nutrition and Dietetics article about sugar and cancer at www.oncologynutrition.org/erfc/healthy-nutrition-now/sugar-and-cancer.

What's the relationship between red meat, processed meat, and cancer?

Research by the American Institute for Cancer Research shows that eating more than 18 ounces of red meat per week increases your risk of getting colorectal cancer (cancer in your colon or rectum). Beef, lamb and pork are all red meats. Eating any amount of processed meat regularly can also increase your risk of getting both stomach and colorectal cancers. Processed meats are meats that are preserved by smoking, salting, curing, or adding other preservatives. Examples of processed meats include sliced turkey and bologna deli meats, bacon, ham, and hot dogs.

Are coffee or other drinks with caffeine okay to drink?

It's fine for most people to drink moderate amounts (no more than 1 or 2 cups per day) of coffee or other caffeinated drinks (such as black or green tea). Some research suggests that there are possible health benefits linked to drinking moderate amounts of coffee. Avoid or limit sweetened beverages with added caffeine (such as energy drinks) and avoid alcoholic beverages with added caffeine. Also, keep in mind that drinks such as flavored lattes can have a lot of calories and sugar.

How can I improve my immune system?

Following a balanced diet and exercising regularly can help make sure your body is strong enough for treatment.

The following are other ways to support your body and immune

system:

- Avoiding smoking or other tobacco use.
- Getting enough sleep.
- Staying at a healthy body weight.
- Limiting how much alcohol you drink.
- Managing your stress level.
- Managing your blood pressure.
- Washing your hands properly.

During chemotherapy treatment, it’s important to follow food safety precautions, such as cooking meats thoroughly and avoiding unpasteurized foods. This will help your body if your immune system can’t fight off infections as well as it should.

What’s the best diet for weight loss?

Research shows that limiting the number of calories you eat is the best way to lose weight and keep it off. To lose weight or stay at a healthy weight, you may need to make lifestyle changes, and dieting alone may not work. Cutting out whole food groups, such as fats or carbohydrates, also isn’t likely to work and is hard to keep doing for long periods of time.

If you exercise often, you can increase your lean muscle tissue. This will increase the rate at which your body burns calories. Exercise regularly to keep or increase your lean muscle mass and decrease your fat mass.

Sample meal plan

The following is a 1-week sample meal plan. Each day's menu has about 1,600 calories. These plans may not be right for every person. You don't need to follow the plans exactly, and you can shape them for your needs. They can be used to give you ideas for healthy meals and snacks.

Day 1

Meal	Food
Breakfast	• 2 whole-grain frozen waffles topped with 1 cup of mixed berries (frozen or fresh). • 1 cup of coffee or tea with 2 tablespoons of milk or non-dairy milk such as soy, almond or oat milk.
Snack	• 2 tablespoons of whole, unsalted almonds.
Lunch	• Hummus and pita sandwich made with: ◦ 1 whole-wheat pita. ◦ 3 tablespoons of hummus. ◦ ½ cup of chopped lettuce or other leafy greens. ◦ 1 slice Swiss cheese. ◦ Sliced fresh tomato. ◦ Sliced red onion. • 1 small square of dark chocolate.
Dinner	• 4 ounces of baked flounder with fresh lemon and black pepper. • ⅔ cup cooked barley. • 1 cup of steamed green beans or broccoli. • Small salad made with: ◦ 1 cup of mixed greens. ◦ ½ cup of other raw vegetables, such as mushrooms, carrots, or cauliflower. ◦ 1 tablespoon of olive oil vinaigrette salad dressing.

Snack	• 1 medium pear

Day 2

Meal	Food
Breakfast	• ½ of a whole-wheat or oat bran bagel with 1 tablespoon of peanut butter or another nut butter, such as cashew, almond, or sunflower.
Snack	• 6 ounces of plain, nonfat yogurt or low-fat yogurt. • 2 large Brazil nuts.
Lunch	• Tricolor salad made with: ◦ 1 cup of arugula. ◦ ½ cup of radicchio. ◦ ½ cup of endive. ◦ 1 tablespoon of pine nuts. ◦ 1 tablespoon of raisins. ◦ 2 teaspoons of balsamic or other flavored vinegar. ◦ ½ cup of cooked pumpkin or squash topped with nutmeg, to taste.
Dinner	• Pasta with chicken and artichoke. Toss together the following: ◦ 1 cup of cooked whole-wheat penne. ◦ 5 ounces of grilled skinless and boneless chicken breast, chopped. ◦ 2 teaspoons of olive oil mixed with 1 teaspoon of lemon juice. ◦ ½ cup of artichoke hearts (rinsed and drained, if canned). ◦ ½ cup diced tomato. ◦ 2 tablespoons of chopped fresh parsley.
Snack	• 1 cup of watermelon.

Day 3

Meal	Food
Breakfast	• 1 whole-wheat English muffin with 1 tablespoon of butter or butter replacement.

	• ½ of a banana. • 1 hard-boiled egg. • 1 cup of coffee or tea with 2 tablespoons of milk or milk replacement.
Lunch	• 8 to 10 ounces of vegetarian lentil soup. • 1 small whole-grain roll.
Snack	• 6 ounces of plain, nonfat yogurt or low-fat yogurt. • 2 clementines or 1 small orange.
Dinner	• Seafood stir-fry made with: ◦ 5 ounces of sea bass. ◦ 2 teaspoons of peanut oil. ◦ 1 teaspoon of soy sauce. ◦ 1 tablespoon of unsalted peanuts. ◦ 1 cup of sliced zucchini and carrots. • ⅔ cup of cooked brown rice.
Snack	• ½ cup of coconut sorbet. • 1 tablespoon of slivered almonds.

Day 4

Meal	Food
Breakfast	• 1 cup of oat-bran or shredded-wheat type cold cereal with: ◦ ¾ cup of non-fat or low-fat milk or milk replacement. ◦ ½ cup of fresh or frozen blueberries. • 1 cup of coffee or tea with 2 tablespoons of milk or milk replacement.
Snack	• 6 ounces of plain non-fat or low-fat yogurt with 1 teaspoon of honey.
Lunch	• Spicy seitan (wheat gluten) sandwich made with: ◦ 2 slices of whole-wheat bread. ◦ 4 ounces of prepared chicken-style seitan topped with ground cumin and black pepper, to taste. ◦ 2 large Romaine lettuce leaves.

	◦ ¼ of an avocado.
Dinner	• Mixed veggie platter made with: ◦ ½ cup of steamed or sautéed mixed greens, such as spinach, kale, bok choy, or collard greens. ◦ ½ cup of roasted parsnips, turnips, or other root vegetables. ◦ ¼ cup of chickpeas. ◦ 1 tablespoon of olive oil. ◦ 2 tablespoons of grated or shredded Parmesan, Pecorino, or other hard cheese. ◦ Black pepper, to taste.

Day 5

Meal	Food
Breakfast	• Homemade smoothie made in the blender with the following: ◦ ½ cup of orange juice mixed with ¼ cup of water. ◦ ½ of a banana. ◦ 6 ounces of plain, nonfat yogurt or low-fat yogurt. ◦ 1 cup of whole frozen strawberries. • 1 cup of coffee or tea with 2 tablespoons of milk or milk replacement.
Lunch	• Quinoa salad (can be made ahead in a larger batch) made to include the following: ◦ ¾ cup of cooked quinoa. ◦ ½ cup of cubed, cooked butternut squash. ◦ ½ cup of cooked mustard greens or other spicy greens. ◦ ½ teaspoon of ground turmeric. ◦ 2 teaspoons of sunflower seeds. ◦ Black pepper, to taste.
Snack	• 2 tablespoons of hummus or white bean dip. • ½ cup of chopped carrots. • 1 whole-wheat pita.

Dinner	• 1 medium slice of plain cheese pizza (blot the top with a napkin or paper towel to absorb extra oil). • 1 cup of steamed broccoli or cauliflower.

Day 6

Meal	Food
Breakfast	• Vegetable egg scramble made with: ◦ 2 eggs or vegan egg replacements. ◦ ½ cup of broccoli or bell pepper. ◦ ½ cup of chopped tomatoes. ◦ 1 teaspoon of olive oil. • 1 cup of coffee or tea with 2 tablespoons of milk or milk replacement.
Snack	• ¾ cup of non-fat or low-fat cottage cheese with ½ cup of sliced melon.
Lunch	• Peanut butter sandwich made with: ◦ 2 slices of whole grain bread. ◦ 1 tablespoon of peanut butter or another nut butter, such as cashew, almond, or sunflower. ◦ ½ of a medium banana, sliced. ◦ 1 teaspoon of honey. • 1 ½ cups of sliced carrot, celery, or zucchini sticks.
Dinner	• Pasta with pesto tofu and vegetables made with: ◦ ½ cup of cooked fusilli, orecchiette, or another pasta. ◦ ½ cup of crumbled tofu (firm or extra-firm) mixed with about 3 teaspoons of prepared pesto sauce. ◦ 1 cup of chopped zucchini, steamed or lightly boiled in pasta water. ◦ ½ cup of spinach, steamed or lightly boiled in pasta water. ◦ Chopped fresh basil.
Snack	• 1 apple.

Day 7

Meal	Food
Breakfast	• ½ cup of cooked oatmeal made with: ◦ ½ cup of non-fat milk or milk replacement. ◦ 1 teaspoon of cinnamon. ◦ ¼ cup of dried cranberries. • 1 cup of coffee or tea with 2 tablespoons of milk or milk replacement.
Snack	• 1 navel orange.
Lunch	• 4 ounces of grilled salmon. • 1 cup of mixed greens with balsamic vinegar. • ½ cup of edamame.
Dinner	• Homemade nachos made with: ◦ 20 tortilla chips. ◦ 1 ounce of shredded Monterey Jack cheese. ◦ ⅔ cup of black beans, rinsed and drained. ◦ Bake in oven at 350 °F (177 °C) until the cheese is just melted. • Serve with: ◦ ½ cup of salsa. ◦ 1 cup of lettuce. ◦ ½ cup of sliced jicama. ◦ ½ cup of sliced tomato or cherry tomatoes. ◦ 1 tablespoon of chopped fresh cilantro.

Sample food diary

Time/place	Type of food/drink	Amount	Activities during meal
Thursday, 8 a.m.	Coffee with half-and-half	16 oz with 3 tablespoons	
	Whole wheat bagel	½ bagel with 2	

	with peanut butter	tablespoons	
	Orange	1 medium	
Noon	Fruit and nut bar (almond coconut)	1	
2 p.m.	Salad bowl	2 cups lettuce, ½ cup kidney beans, ¼ cup guacamole, ½ cup diced tomatoes, ½ cup brown rice, 1 tablespoon sour cream	Finished 1 liter bottle of water started this morning
			Went to gym after work, 30 minutes on elliptical and 30 minutes stretch class
8 p.m.			Finished ½ liter bottle water started after lunch
8:30 p.m.	Mussels with garlic white wine sauce	2 cups with shells	
	French bread with butter	2 small slices with 2 teaspoons of butter	
	White wine spritzer	3 oz wine and 3 oz seltzer	
	Water	1 glass	
Friday, 8 a.m.	Coffee with half-and-half	12 oz coffee with 2 tablespoons half-and-half	
	Oatmeal and	½ cup cooked with	

	blueberries	water and ¼ cup blueberries	
	Hard-boiled egg	1	
10 a.m.	Plain yogurt	6 oz	
	Pistachios	2 tablespoons, unshelled	
12:30 p.m.	Red lentil soup	6 oz, made with olive oil, garlic, onion	
	Raw carrots	½ cup chopped, raw	
	Golden delicious apple	1 medium	Finished 1 liter bottle water started this morning
5 p.m.	Popcorn with salt	1 cup	
	Water	12 oz	
6:30 p.m.	Penne pasta	1 cup cooked with ½ cup tomato sauce, ½ cup sautéed broccoli, ¼ cup sautéed spinach	
	Chocolate cupcake with chocolate frosting	½ of a large size	
	Water	8 oz	
8 p.m.	Mint tea	12 oz	

Resources

MSK support services

Evelyn H. Lauder Breast Center (Breast and Imaging Center)

300 E. 66th St. (at 2nd Avenue)
New York, NY 10065
www.mskcc.org/cancer-care/outpatient/evelyn-h-lauder-breast

The following services are offered at the Evelyn H. Lauder Breast Center:

- Breast medicine and surgery consultation
- Diagnostic imaging
- Chemotherapy
- Social work services
- Psychiatry services
- Nutrition services
- Occupational therapy
- Special surveillance breast program
- Survivorship program
- Genetic counseling
- Art therapy

To make an appointment with a clinical dietitian nutritionist, call 212-639-7312. To learn more about these services, read *Breast and Imaging Center (BAIC) Support Services* (https://sandbox18.mskcc.org/pe/baic_support).

Integrative Medicine Service

646-449-1010
www.msk.org/integrativemedicine

The Integrative Medicine Service offers many therapies to complement (go along with) traditional medical care. Some of their services include music therapy, mind/body therapies, dance and movement therapy, yoga, and touch therapy. Their services are available to you, your family, your caregivers, and the general public.

Tobacco Treatment Program
212-610-0507
www.msk.org/tobacco

MSK's Tobacco Treatment Program has specialists who can help you quit smoking, whether or not you're a patient at MSK. The healthcare providers in the Tobacco Treatment Program use a wide range of approaches to help you quit, including medications and behavioral techniques.

The Tobacco Treatment Program is located at 641 Lexington Ave. (between East 54th and East 55th streets) on the 7th floor. For more information about our Tobacco Treatment Program, call 212-610-0507<.

External resources

Academy of Nutrition and Dietetics

www.eatright.org
Has information about the latest nutrition guidelines and research and can help you find a clinical dietitian nutritionist in your area. The academy also publishes *The Complete Food and Nutrition Guide*, which has over 600 pages of food, nutrition, and health

information.

American Cancer Society
800-227-2345
www.cancer.org
Has information on diet and other cancer-related topics.

American Council on Exercise (ACE)
888-825-3636
www.acefitness.org
Has information on a variety of health and fitness topics and can provide you with names of certified fitness professionals in your area.

American Heart Association
800-242-8721
www.heart.org/HEARTORG
Has 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
800-843-8114
www.aicr.org
Has information on diet and cancer prevention research and education.

BreastCancer.org
www.breastcancer.org
Has information on breast cancer treatment, diagnosis, day-to-day concerns, and how to lower your risk.

National Cancer Institute (NCI)

800-422-6237 (800-4-CANCER)

www.cancer.gov

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

If you have questions or concerns, contact your healthcare provider. A member of your care team will answer Monday through Friday from 9 a.m. to 5 p.m. Outside those hours, you can leave a message or talk with another MSK provider. There is always a doctor or nurse on call. If you're not sure how to reach your healthcare provider, call 212-639-2000.

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

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