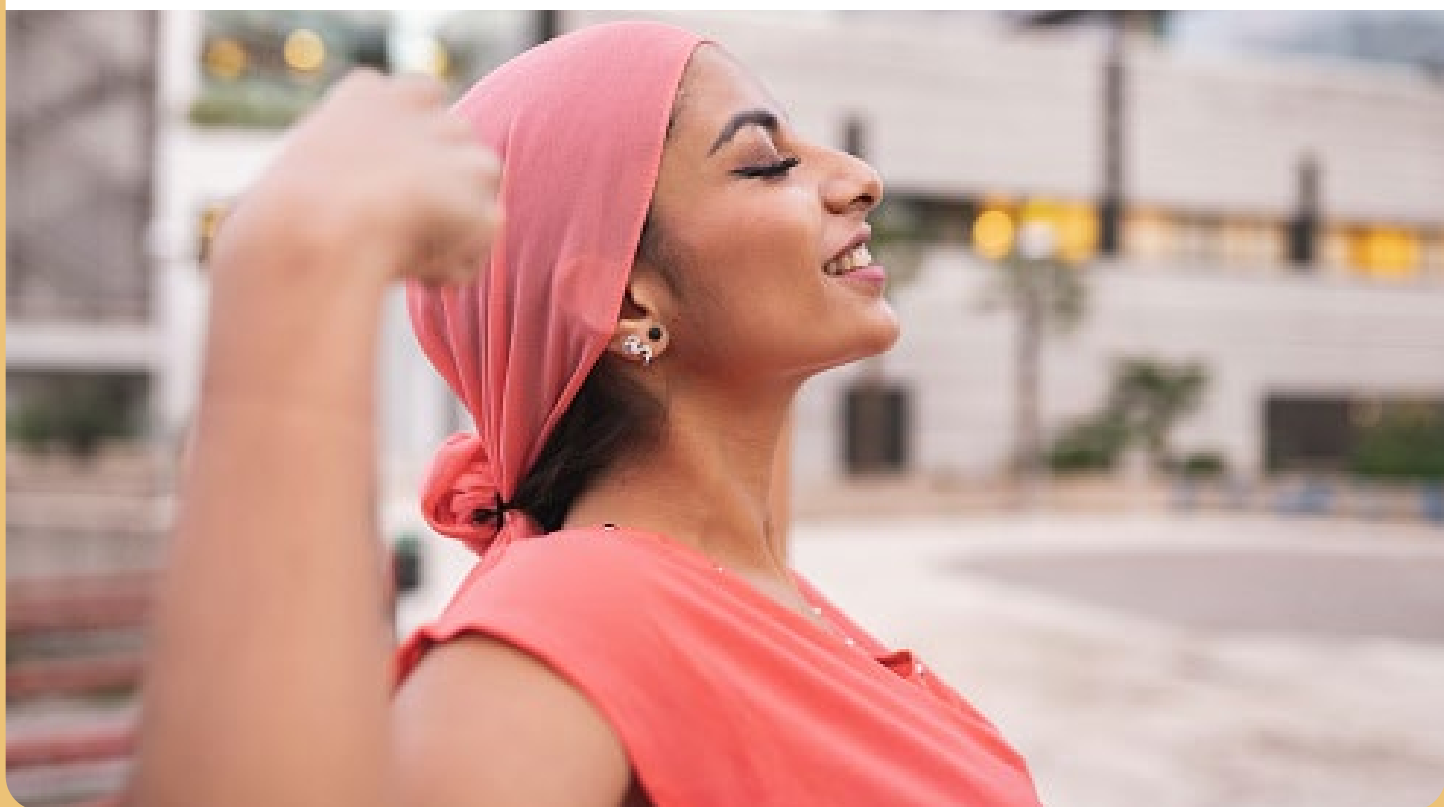




NCCN
GUIDELINES
FOR PATIENTS®

2024

Survivorship Care for Healthy Living



Presented with support from



NATIONAL COMPREHENSIVE CANCER NETWORK®
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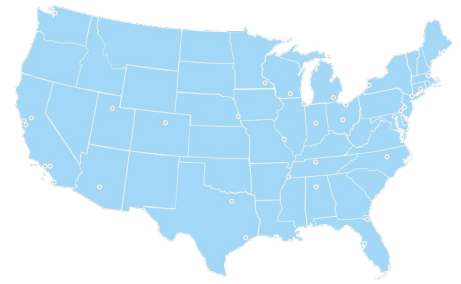


About the NCCN Guidelines for Patients®



National Comprehensive
Cancer Network®

Did you know that top cancer centers across the United States work together to improve cancer care? This alliance of leading cancer centers is called the National Comprehensive Cancer Network® (NCCN®).



Cancer care is always changing. NCCN develops evidence-based cancer care recommendations used by health care providers worldwide. These frequently updated recommendations are the NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®). The NCCN Guidelines for Patients plainly explain these expert recommendations for people with cancer and caregivers.

These NCCN Guidelines for Patients are based on the NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®) for Survivorship, Version 1.2024 — March 29, 2024.

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NCCN Foundation seeks to support the millions of patients and their families affected by a cancer diagnosis by funding and distributing NCCN Guidelines for Patients. NCCN Foundation is also committed to advancing cancer treatment by funding the nation's promising doctors at the center of innovation in cancer research. For more details and the full library of patient and caregiver resources, visit [NCCN.org/patients](https://www.nccn.org/patients).

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About survivorship

- 5 Who is a cancer survivor?
- 5 What is survivorship care?
- 6 Why is healthy living important?
- 7 Key points

People with cancer are living longer than they did in the past. They are surviving, and their needs have changed. Survivorship care includes recovering from cancer and promoting health.

Who is a cancer survivor?

Cancer survivors are people living with cancer and those free of cancer. Survivorship starts at the time of cancer diagnosis and continues through life.

Some people do not like or identify with the term survivor. It is not meant to be a label. Its purpose is to identify the community of people with a history of cancer. Having a common term is useful for improving the care of survivors.

What is survivorship care?

Survivorship care improves health, wellness, and quality of life. Its focus is on the wide and lasting impact of cancer and its treatment. It addresses physical and mental health, health behaviors, professional and personal identity, and finances, just to name a few.

NCCN Guidelines for Patients

Many books in the library of NCCN Guidelines for Patients cover aspects of survivorship care.

- Most NCCN Guidelines for Patients focus on a type of cancer. They often describe unique details about surveillance and supportive care for that cancer type.
- The *NCCN Guidelines for Patients for Adolescent and Young Adult Cancer* address the survivorship needs of people ages 15 through 39 years.
- The *NCCN Guidelines for Patients for Palliative Care* address patient, family, and caregiver needs for comprehensive care during cancer treatment as well as at the end of life.
- This book is part of a two-part book series on survivorship. Read the other survivorship book to learn about common cancer-related late and long-term effects.

The library of NCCN Guidelines for Patients is available at [NCCN.org/patientguidelines](https://www.nccn.org/patientguidelines) and on the [NCCN Patient Guides for Cancer](#) app.

Standards of survivorship care include:

- Routine testing for the return of a cancer (surveillance) and new cancers (screening)
- Routine testing for late and long-term effects of cancer and treatment
- Prevention of harmful effects of cancer and treatment
- Management of cancer-related challenges including referral to specialists
- Coordinated care between providers
- Planning for ongoing survivorship care

To plan survivorship care, your cancer or primary care provider will assess your needs. Ongoing care requires that you see one or both providers at least once a year. They will review your cancer care, health history, current abilities, and medications.

Your providers may create and review a survivorship plan with you. You will be given a schedule of follow-up visits. Possible cancer-related late effects may be included in the plan. Your providers may refer you to other specialists and community resources.

Why is healthy living important?

You can improve your health and quality of life with healthy living. Depending on the type of cancer, healthy living lowers the risk of recurrence and death. NCCN experts encourage all survivors to adopt a healthy lifestyle.

This book can help you set and achieve goals for healthy living. It is written for survivors with an onset of cancer in adulthood. It explains expert recommendations that are based on

"Move every day, eat healthy foods, and reduce your stress. Watch funny movies and hug loved ones often. Spend time in nature. Never lose hope!"



the latest science and practices at top cancer centers.

Starting survivorship care before cancer treatment is the best way to prevent or lessen problems. But it's never too late to start. In the next chapters, there is detailed information on physical activity, food, supplements, weight, metabolism, and infections. A list of basic goals for healthy living is in **Guide 1**.

Healthy living can be hard to do. Your health care providers can give support. They may work with you so that you can make changes on your own. At times, they may refer you to a

counselor. Through counseling, you can learn about barriers to achieving goals and how to overcome them.

Key points

- A person with cancer is a survivor starting at diagnosis and through the balance of their life.
- Survivorship care improves health, wellness, and quality of life. Your team of care providers will work together to meet your changing needs.
- This NCCN book for cancer survivors is about healthy living. Healthy living can be hard to do. Your providers can offer support including referral to a counselor.

Guide 1 Goals of healthy living

Be physically active daily and avoid inactivity

Eat healthful foods

Limit or avoid drinking alcohol

Achieve and maintain a healthy body weight

Don't smoke, chew, or sniff tobacco and avoid smoke fumes from other people

Practice sun safety to prevent sunburns and do not use tanning beds

Get enough sleep on a regular basis

See your primary care provider regularly

Follow health guidelines as appropriate

“

DO NOT be afraid to ask your medical team ANY questions at any time!!! Your questions will help you and them. No question is stupid. Managing and or controlling your anxiety when it peaks is one thing you can control.”

2

Physical activity

- 9 Move for better health
- 10 Get a personal plan
- 10 Activity goals
- 14 Cancer-related challenges
- 15 Tips for achieving goals
- 16 Key points

Move more! Physical activity is safe and improves the health of most cancer survivors. This chapter will help you to be more active.

Move for better health

Cancer and its treatment may limit the physical activity of cancer survivors. Physical activity is any movement you make that burns more calories than when you're at rest. It includes many types of activities. With the right support, many cancer survivors can increase their physical activity.

Physical activity improves health and well-being. It may even help stop some cancers from returning and extend life, but more research is needed. The known benefits of physical activity among survivors are listed in **Guide 2**.

Guide 2

Benefits of physical activity among cancer survivors

Improved cardiovascular fitness	Cardiovascular fitness is how well your body takes in and transports oxygen to tissue.
Greater muscle strength	Muscle strength is how well you can move or lift objects.
Better balance	Balance is how well you can control your body's position.
Healthier body composition	Body composition is the amount of fat, muscle, bone, and water in your body.
Less fatigue	Fatigue is being tired despite getting enough sleep.
Better emotional well-being	Emotional well-being is a balance between positive and negative feelings and being happy and satisfied with life.
Improved quality of life	Quality of life is your belief that you have a good life.
Lower risk of cardiovascular events	Cardiovascular events are medical conditions that can damage the heart.

Get a personal plan

Before starting any new physical activity, talk to your cancer or primary care provider. They can provide guidance and may refer you to a specialist. Some people also receive support from a provider trained in exercise, such as:

- A physical therapist
- An occupational therapist
- A certified exercise professional
- A rehabilitation specialist

Exercise providers can receive training to work with cancer survivors. The American College of Sports Medicine (ACSM) and American Physical Therapy Association (APTA) offer specialty training. Search for an ACSM- or APTA-certified provider near you.

To help you plan routine physical activity, your provider may perform an assessment. The assessment may include:

- Readiness to be physically active
- Prior and current physical activity
- Barriers to physical activity
- Physical health and treatment
- Mental health and treatment

You may have barriers to getting enough physical activity. You may not have time. You may not have space in your home. You may not know what physical activities are good and safe for you. Your care team can help you overcome these challenges.

Activity goals

Your plan for physical activity should be based on your abilities and goals. It can be tailored to how often and how intensely you want to be active. You can also help select the type of physical activity. Work with your provider to set short- and long-term goals. General goals for physical activity for cancer survivors are listed in **Guide 3**.

Move more and be inactive less

A person can be physically active but still have long periods of inactivity. Inactivity is resting while sitting, reclining, or lying down. Lots of inactivity is linked to poor outcomes. It raises the risk of new cancers and death among cancer survivors. It is linked to depressed mood and lower quality of life.

Your general goals are to move more and not to be inactive for long periods.

Strengthen and stretch muscles

Strengthening and stretching muscles is just as important as exercise. Having stronger muscles may help you to do self-care activities, prevent falling, and have higher bone density. Stretching increases flexibility, which is an important part of physical fitness.

All major muscle groups should be strengthened and stretched.

- Chest
- Back and shoulders
- Core
- Arms and legs

Guide 3

General goals of physical activity for cancer survivors

Be physically active every day—routine activities, recreation, or exercise

Avoid being inactive for long periods each day

Strengthen major muscles with resistance training 2 to 3 times a week

Stretch major muscles before exercises and at least 2 days per week on which you're not working those muscles

Increase your heart rate each week

- Option 1 is to do moderate-intensity activity for at least 150 minutes with an ultimate goal of 300 minutes a week
- Option 2 is to do vigorous-intensity activity for 75 minutes a week
- Option 3 is to do a mix of moderate- and vigorous-intensity activity each week

Resistance training

Resistance training increases muscle strength. It may include using weights, elastic bands, or your own body weight to work your muscles.



Recommended routine

Strengthen your muscles with resistance training 2 to 3 times a week. Resistance training may include using weights, elastic bands, or your own body weight to work your muscles.

Contact a trained provider if you're new to resistance training. You'll be given exercises to do. It is common to do 2 to 3 sets of exercises and 10 to 15 repetitions of each exercise per set. Rest 2 to 3 minutes between sets. Resistance may be increased if the exercises become too easy.

Do stretching exercises on at least 2 of the days when you're not exercising the major muscles.

Core exercises and balance training are recommended for everyone, especially older survivors and if you're at risk for falling.

Increase your heart rate

Any physical activity is better than none. To further improve your fitness, do activities that increase your heart rate. Among the 3 groups of physical activity, moderate and vigorous activity get the heart pumping.

- Light activity is movement that doesn't cause any change in breathing
- Moderate activity is movement during which you can talk but can't sing
- Vigorous activity is movement that makes it hard to talk because you're breathing hard

Examples of physical activity are listed in **Guide 4.**

General goals of physical activity

A general goal is to do physical activity at a moderate or vigorous intensity during the week.

- ✓ At least 150 minutes of moderate-intensity activity is recommended with an ultimate goal of 300 minutes. That's at least 2½ to 5 hours a week.
- ✓ If you choose vigorous-intensity activity, 75 minutes a week is recommended.
- ✓ You could also do a mix of moderate- and vigorous-intensity activity spread out over the course of the week.
- ✓ All exercise should start with a light-intensity aerobic warm-up and stretching.

Guide 4**Examples of physical activity by intensity****Light intensity****Household activities**

- Child care
- Light housework, such as dusting

Fitness activities

- Restorative yoga
- Tai chi
- Walking slowly

Sports and games

- Activity-promoting video game
- Bowling
- Biking at 5 miles an hour or slower
- Playing catch

Moderate intensity**Household activities**

- General gardening
- Using a manual wheelchair

Fitness activities

- Moderate-intensity yoga, such as Vinyasa
- Pilates
- Water aerobics
- Walking briskly

Sports and games

- Ballroom or line dancing
- Baseball, softball, volleyball
- Biking on level ground or with few hills
- Doubles tennis
- Pickleball

High intensity**Household activities**

- Heavy gardening

Fitness activities

- High-intensity yoga
- Hiking uphill
- Jogging, running
- Jumping rope
- Martial arts
- Stair climbing
- Walking (race paced)

Sports and games

- Aerobic and fast dancing
- Biking faster than 10 miles an hour
- Boxing
- Pickleball
- Running sports (basketball, hockey, soccer)
- Singles tennis
- Swimming (fast pace or laps)

Cancer-related challenges

Cancer and its treatment can make physical activity challenging. Don't get discouraged. Talk to your care provider about ways to be active. If you have one of the health issues in this section, NCCN experts recommend working with a trained professional when starting an exercise program.

Lymphedema

Lymphedema is a buildup of bodily fluid called lymph. It should not stop you from being physically active. Progressive weight training under supervision and physical activity are safe.

- Work with a lymphedema specialist and trained exercise professional when resistance training involves limbs with or at risk for lymphedema.
- Full use of your limbs and range-of-motion exercises can maintain strength and flexibility. Exercise your arms and shoulders when possible.
- Increase your strength with resistance training in small steps. Compression garments may be needed during resistance training.
- Get checked regularly for the start or worsening of lymphedema. Stop exercising and see a lymphedema specialist if lymphedema worsens.

Ostomy

An ostomy is a surgically created change in the way stool or urine leaves the body. A stoma is a hole created in the wall of the abdomen through which stool or urine passes out. You can be active while having a stoma.

- Empty the ostomy bag before exercising.
- Slowly increase strength with resistance training that is overseen by a trained provider.
- Perform core exercises that have been revised to reduce pressure on the abdomen.
- Don't strain your belly (like you would in a Valsalva maneuver) since you are at risk for hernias.
- Use an ostomy protector during contact sports or when there's risk for injury to the ostomy.
- Stay hydrated during physical activity, especially if you have an ileostomy.

Prosthesis or limb amputation

If you wear a prosthesis or have had a limb amputated, consider the following:

- Consult with a trained provider, such as a physical therapist, to make a plan that works for you.
- Be sure to use your prosthesis properly!
- Use your cane, brace, or walker as needed to ensure you don't fall.

Peripheral neuropathy

Peripheral neuropathy is a type of nerve damage. It can be caused by cancer or its treatment. Symptoms include numbness, pain, tingling, weakness, and dizziness.

- Get your stability, balance, and gait checked before starting exercise.
- Do balance training with a trained professional if it would be helpful.
- Use a stationary bike, do water exercises, or do yoga if walking is unsafe. Wear water shoes or protective footwear to prevent skin breakdown.
- Tell your care provider if you have any discomfort when using hand-held weights.
- Use weights with a soft covering or padded gloves if helpful.
- If you're concerned about dropping weights, consider using weight machines or resistance bands.

Bone loss or metastases

Bone loss and cancer in the bone can make bones weak. Physical activity can be safe if you take these steps:

- Don't do exercises that place stress on weak bones. Work with a trained professional for weight-bearing exercises to improve bone density.
- Reduce your risk of falling.
- Contact your cancer care team if bone pain starts.
- Ask your care team if taking vitamin D would help you.

Tips for achieving goals

Physical activity is a life-long pursuit. It takes effort and support to reach and maintain goals. There are many strategies you can use to achieve success.

- Have an achievable plan for physical activity that is tailored to you.
- Address what stops you from being physically active.
- Schedule movement breaks regularly and stand or move while talking on the phone, for example.
- Find support from an exercise buddy or class. Work with an exercise specialist.
- Use a fitness device or phone app to track your activity.

“

Oftentimes we do not want to be outside or go to the gym. A big help was online exercise videos. You can walk a mile and do a cardio exercise, just in a few minutes from your home. These were instrumental in allowing me to get my exercise from the comforts of my home—at my own pace.”

Key points

- There are many benefits of physical exercise for cancer survivors.
- Work with your care providers to make a plan for physical activity that is best for you.
- A plan for physical activity should include goals to move more and be less inactive.
- Do physical activity that increases your heart rate every week. The goal for moderate activity, like brisk walking, is at least 150 minutes a week. Vigorous activities, like running, can be completed in 75 minutes.
- Strengthen and stretch all major muscles at least 2 days a week.
- Don't allow health issues stop you from being active. Talk with your care providers about ways to cope with challenges.
- Set yourself up for success! Make an achievable plan. Address barriers to physical activity. Find support.



I remember not being able to physically climb stairs, but today, after treatment, things are getting better and easier to navigate."

3

Food and supplements

- 18 Help for a healthier diet
- 22 Foods to eat
- 23 Foods to limit
- 24 Beware of supplements
- 25 Key points

**What you eat impacts your health.
This chapter will help you make
good food choices.**

Help for a healthier diet

Cancer survivors who eat healthful foods are more likely to have better outcomes. These outcomes include a lower chance of new cancers and cancer returning.

Many cancer survivors want to have a healthier diet but need help. There is a lot to learn about what your body needs and how to make informed choices about food. Here's a few ways to achieve your goals:

- Ask for help
- Read Nutrition Facts labels
- Use MyPlate
- Track calories

Ask for help

You can get help from your cancer or primary care provider. Some people receive help from a registered dietitian. There are dietitians who are trained to work specifically with cancer survivors.

Ask your care providers for information on healthy foods. They may have handouts or can direct you to good websites and apps. They can also help make a nutritional plan for you.

Nutritional assessment

To make a nutritional plan, your provider will do an assessment. The assessment will cover many factors. Be ready to talk about:

- Day-to-day food and drink choices
- How much and how often you eat and drink
- How often you eat at restaurants
- What supplements you take
- Any barriers to accessing healthful foods and drinks

“

Ask about the services your hospital and other facilities provide to cancer patients, such as counseling, nutritional advice, meditation, physical therapy, palliative care, and integrative medicine. Don't be shy. Be your own advocate—or ask someone close to be one for you.”

Read Nutrition Facts labels

A Nutrition Facts label is a label with numbers on packaged food, like cereal or potato chips. This label lists the calories and nutrients per serving. Read the Nutrition Facts label when choosing food. Take note of how many servings are in a package.

What are calories?

Dietary calories (calories for short) are a measurement of how much energy food provides. You will gain weight if you consume more calories than your body needs. You will lose weight if you consume fewer calories than your body needs.

Nutrition Facts label

These boxes appear on many packaged foods in the United States. Information contained in these boxes includes serving size information, calories, nutrients present, and percentage of daily values. Values that are 20% or more are considered high.

Serving Size

Amount of Calories

Nutrients

Footnote

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 1g

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 240mg

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.

Percent Daily Value

Values that are 20% or more are considered high.

(For educational purposes only. These labels do not meet the labeling requirements described in 21 CFR 101.9.)

What are nutrients?

Nutrients are substances in food that your body uses to live. Your body can't make some of these, so you'll need to get them by eating food. There are 5 main essential nutrients that are listed on Nutrition Facts labels and described in **Guide 5**.

The “% daily value” on the Nutrition Facts label tells if a nutrient is high or low per serving. A daily value of 5% or less is low. A daily value of 20% or more is high.

Guide 5 Nutrients

Fats

Your body needs fats for many reasons, including to grow cells, provide energy, and keep warm.

There are 4 types of fats:

- Monounsaturated fat
- Polyunsaturated fat
- Saturated fat
- Trans fat

Unsaturated fats are good for your health.

Carbohydrates

Carbohydrates are the main source of energy for your body.

There are 3 main types:

- Fiber
- Starches
- Sugar

Fiber and unrefined starches are good for your health.

Proteins

Your body needs proteins to build and repair body tissue, fight infection, and provide energy.

There are 9 essential proteins that you can only get from food. Foods with proteins that are low in bad fats and salt (sodium) are good for your health.

Vitamins and minerals

Your body needs vitamins and minerals to boost the immune system, support normal growth, and help cells and organs work.

Some examples of commonly needed vitamins and minerals include:

- Calcium
- Potassium
- Fiber
- Vitamin D
- Iron

Use MyPlate

It can be hard to keep track of the amount of nutrients you eat. Food groups make choosing healthful foods easier. The food groups are:

- Fruits
- Vegetables
- Grains
- Protein
- Dairy

MyPlate is a symbol of how much to eat from each food group. It helps people make healthy choices about food. The amount of food needed from each food group varies among people. It depends on factors like your age and how active you are. Learn more about healthy eating at [ChooseMyPlate.gov](https://www.choosemyplate.gov).

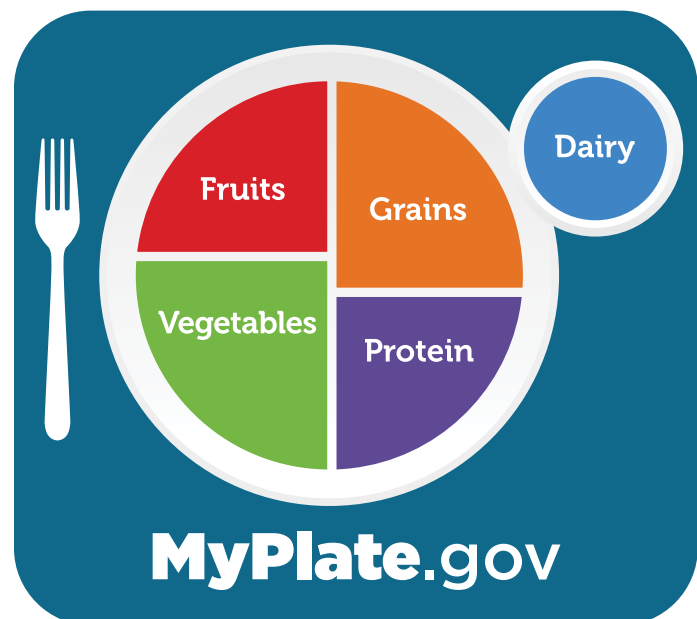
Track calories

It is easy to overeat. You can overeat even if you eat only healthful food. On the other hand, you may not get enough calories and nutrients if you fast for long periods. Therefore, diet plans such as intermittent fasting are not recommended for cancer survivors.

Track your calories to prevent overeating and undereating. You can track your calories using Nutritional Facts labels. Many apps help you track calories.

The MyPlate system

The USDA recommends that half of your plate contains fruits and vegetables, while the other half contains grains and proteins. Dairy is indicated outside of the plate for occasional use.



Foods to eat

NCCN experts recommend eating the foods described below. This will help you live a healthier life.

Eat plant-based foods

In general, a healthy diet is rich in plant sources. Most of your plant-based foods should be vegetables, fruits, beans, and whole grains. Other plant-based foods are soy, nuts, seeds, or oils.

Vegetables

Vegetables include dark green vegetables, starchy vegetables, red and orange vegetables, legumes (beans and peas), and other types. Vegetables can be fresh, canned, frozen, or dried. They can be squeezed or blended to make juice. Squeezed vegetable juice lacks fiber, but a drink of 100% squeezed vegetable juice counts as a vegetable.

Fruit

There are thousands of types of fruit. Fruit can be fresh, canned, frozen, or dried. Fruit can also be squeezed or blended to make juice. Squeezed fruit juice lacks fiber, but a drink of 100% squeezed fruit juice counts as fruit.

Whole grains

Grains are seeds from grasses. They include wheat, rye, rice, oats, cornmeal, and barley. Food made from whole grains has all the parts of the seeds. Refined grains have had some parts of the seeds removed. Food made from whole grains is recommended to ensure healthy living as it provides fiber, vitamins, minerals, and other nutrients.

Soy

Soy foods are made from soybeans, which are also called edamame. Other examples of soy-based foods are tofu and tempeh. According to recent research, eating up to 3 servings of soy a day may be beneficial for cancer survivors.

Eat a diet of mostly nutrient-rich, plant-based foods.



Eat nutrient-rich foods

Avoid empty-calorie foods that have many calories and few nutrients. Instead, eat foods that are rich in nutrients compared to their calories. Nutrient-rich foods will help you get the nutrients you need. No single food has every nutrient, so learn which combinations of foods have the nutrients you need.

Healthy fats

Recommended sources of fat include plant sources, such as olive or canola oil, avocados, seeds and nuts, and cold-water fish. Cold-water fish include mackerel, salmon, herring, tuna, and sardines. These listed fats should be chosen over saturated fats and eaten in small amounts when trying to lose weight.

Healthy carbohydrates

Recommended sources of carbohydrates include fruits, vegetables, whole grains, and legumes (beans).

Healthy proteins

Recommended sources of protein are poultry, fish, legumes, low-fat dairy foods, eggs, and nuts.

Vitamins and minerals

Recommended sources of vitamins and minerals include low-fat or non-fat yogurt, leafy greens (spinach, kale), whole grains, and cashews.

Foods to limit

Red meat

Eat limited amounts of red meat. Beef, pork, and lamb are red meats. NCCN experts recommend eating no more than 18 ounces of cooked red meat a week. This is about 1.125 pounds or the size of an average paperback book.

Processed foods

Processed food is food that has been changed from its natural state. There are classes of processed foods.

- Processed foods have added fats, sugar, or salt.
- Ultra-processed foods typically have at least 5 ingredients and have artificial colors, flavors, and preservatives.

Limit eating processed and ultra-processed foods, especially those high in fats and sugar. Highly processed foods are linked to a greater risk of cancer. These foods include chips, cookies, candy bars, desserts, processed baked goods, sugary cereals, and fried foods.

Cancer survivors should limit eating processed meats. Ham, hot dogs, deli cuts, bacon, and sausage are processed meats. Eating processed meats is linked with a greater chance of colorectal and stomach cancers.

Sugar

Limit eating refined sugar. Refined sugar is sugar that is extracted from foods. When reading labels, look for refined sugars called high-fructose corn syrup, cane sugar, cane

juice, rice syrup, molasses, caramel, and glucose, maltose, or dextrose.

NCCN experts recommend eating less than 6 teaspoons of sugar a day on a 2,000-calorie diet. A teaspoon is about the size of the tip of your finger (joint to tip).

Refined sugar is in many foods and drinks, so take notice when consuming:

- Soft drinks and sports drinks
- Some breakfast cereals
- Sweets and baked goods
- Canned goods
- Preserves, jams, and nut butters
- Low-fat foods
- Ketchup, salad dressing, and pasta sauce

Alcohol

Cancer survivors should limit or not drink alcohol at all. Low levels of alcohol are related to a lower risk of cancer. Survivors of liver, esophageal, kidney, and head and neck cancers should not drink alcohol due to a higher chance of death.

Beware of supplements

NCCN experts advise that most cancer survivors do not take supplements. Right now, there is no clear proof that they improve cancer prevention and control, or stop recurrence. If you do take supplements, they do not replace the need for a healthy diet.

Some supplements can interfere with other medicines including chemotherapy. Let your health care team know if you are taking or want to take supplements.

What are supplements?

Supplements provide more nutrients than what is in the food you eat. They are taken by mouth in the form of a pill, capsule, tablet, or liquid. Supplements are not medicines. They are not intended to cure, treat, or prevent disease.

There are several common types of supplements.

- Vitamin supplements (such as a daily multivitamin)
- Mineral supplements
- Essential fatty acid supplements
- Botanical supplements
- Performance and sports supplements
- Weight loss supplements
- Probiotics

Are supplements ever helpful?

Supplements may be helpful for cancer survivors who are malnourished. Survivors of stomach cancer may not be able to eat

food. Survivors may have a poor diet or have health issues that require supplements. Your cancer or primary care provider, or a registered dietician can provide guidance on supplements.

Many supplements do not have the stated active ingredient and may have unlisted ingredients. Some supplements may be harmful to certain cancer survivors. Ask your care provider if any are harmful to you.

Key points

- Work with your care providers to make a plan for eating healthy foods. A registered dietician may be available to help.
- Tools to help you eat more healthfully are Nutrition Facts labels, MyPlate symbol and information, and calorie-counting apps.
- Eat food that is nutrient-rich and made of plants, such as fruits, vegetables, beans, and whole grains.
- Consume limited amounts of highly processed food, refined sugar, red meat, and alcohol.
- Most cancer survivors do not need supplements. Talk with your care providers about which, if any, supplements are good for you.



Let us know what you think!

Please take a moment to complete an online survey about the NCCN Guidelines for Patients.

[NCCN.org/patients/response](https://www.nccn.org/patients/response)

4

Weight and metabolism

- 27 Weight assessment
- 28 Strategies to manage weight
- 30 Key points

Weight is an issue for many cancer survivors. Survivors may also have poor metabolic health. This chapter explains strategies to control your weight and metabolism.

Many cancer survivors experience weight changes. Some survivors lose weight. Other survivors gain weight. Unintentional weight changes may worsen a survivor's health and quality of life. This may impact the cancer coming back. To improve outcomes, there are 3 goals for cancer survivors.

- Achieve a healthy weight
- Maintain healthy weight
- Strive for metabolic health

Body mass index

Body mass index (BMI) is a quick measure of body fat. A hand-held device or an online BMI calculator can be used to easily measure BMI.



Weight assessment

Cancer and primary care providers can help you with weight and metabolic health. They may refer you to a specialist like a registered dietician. Look for a dietician who is board-certified as a Specialist in Oncology Nutrition or a member of the Oncology Nutrition Dietetic Practice Group of the Academy of Nutrition and Dietetics.

Together, your care providers will track your body mass index (BMI) and metabolic health. They will also track your body composition. Body composition is often divided into fat and fat-free mass.

BMI

Body mass index (BMI) is a quick measure of body fat based on height and weight. It is used to identify weight status.

There are 4 groups of weight status based on BMI:

- A BMI of 30 or more is considered obese
- A BMI of 25 to 29.9 is considered overweight
- A BMI of 18.5 to 24.9 is considered a healthy weight for most people
- A BMI of less than 18.5 is considered underweight

BMI is a helpful but imperfect measure. It may be too imprecise for people who are muscular. Measuring the size of the waistline may be better.

Metabolic health

Metabolism is the chemical processes in the body that are needed to live. A healthy metabolism lowers the chance of heart disease, type 2 diabetes, and stroke.

Metabolic syndrome is a state of unhealthy metabolism. It is diagnosed when a person has at least 3 out of 5 unhealthy metabolic conditions.

- A large waistline
- High blood pressure (hypertension)
- High blood sugar (hyperglycemia)
- High blood fats, called triglycerides
- Low “good” cholesterol, called HDL

You can improve your metabolic health with a healthy lifestyle. Being at an optimal weight is a key goal but not the only one. Some people at an optimal weight have metabolic disease.

It is also important for your metabolic health to be active, eat well, and not smoke.

In-depth assessment

If your test results are of concern, your provider will perform an in-depth assessment. The assessment will be used to make a plan to improve results. The assessment will cover many factors.

- Food choices and eating habits
- Supplement use
- Levels of physical activity
- Prior weight issues and management
- Readiness to change
- Mental health and treatment
- Dental health

Strategies to manage weight

There are many strategies for weight management. They differ based on whether the goal is to gain, maintain, or lose weight.

See Guide 6 for a list of key strategies.

Strategies for all survivors

One helpful strategy is to track your weight, calories, and physical activity. There are many good tracking apps. If an app is not for you, ask your provider for a handout.

Being physically active and eating healthy foods are key for weight management. Follow

the goals for physical activity and healthy foods listed in Chapter 2 and Chapter 3:

- Move more and be inactive less
- Exercise weekly
- Stretch and strengthen muscles
- Eat mostly plant-based foods
- Limit eating of red meat and processed foods

Guide 6

Strategies for weight management

Strategies for all survivors

- Track weight, diet, calories, and physical activity
- Follow the goals of physical activity listed in Chapter 2
- Follow the goals of food choices listed in Chapter 3

Strategies to gain weight

- Address physical, mental, and social reasons of being underweight
- Eat more often and increase portion size
- Eat food that is high in calories and nutrients
- Don't drink while eating
- See a registered dietician
- Check your weight regularly
- Take appetite stimulants

Strategies to lose weight

- Check your weight every day
- Lose no more than 2 pounds a week if under 65 years of age; lose no more than 1 pound a week if 65 years of age or over
- Don't eat too many high-calorie foods, especially empty-calorie foods
- Control how much you eat by following plate or serving size standards
- Address physical, mental, and social reasons of being overweight
- See a registered dietician or join a weight management program
- Use community resources
- Undergo bariatric surgery or take weight-loss medications if needed
- Do physical activity

Strategies to maintain weight

- Make maintaining healthy body weight a goal
- Check your weight every day
- Don't eat too many high-calorie foods, especially empty-calorie foods
- Control how much you eat by following plate or serving size standards
- Do physical activity

Strategies to gain weight

To gain weight, you need to consume more calories. Eat more often and eat foods high in calories and nutrients. Also, don't drink while eating. Drinking may limit how much you eat. Get the help you need. Registered dietitians can provide information, guidance, and support.

Strategies to lose weight

Stay focused and weigh yourself every day. Don't feel bad if your weight is higher on one day. Instead, look for trends in weight change. Slower weight loss is healthier than fast weight loss.

To lose weight, you need to consume fewer calories. Avoid high-calorie foods and don't eat too much. Following standard serving sizes and using portion-control plates may be helpful.

Get the help and support you need. Registered dietitians help many people lose weight. Weight management programs are also popular. For some people, surgery or medications may help to lose weight. Weight loss supplements are not recommended as there is no proof that they help cancer survivors.

The effects of certain weight loss medications, such as semaglutide or tirzepatide, on cancer survivors are unknown at this time. NCCN recommends lifestyle changes (diet/exercise) over taking a medication.

Strategies to maintain weight

It is important to make maintaining a normal weight a lifetime goal. Weigh yourself every day. Otherwise, you may be unaware of losing or gaining weight.

To maintain weight, be careful not to eat too many foods that are high in calories. Also, be careful not to overeat or deprive yourself of food. Following serving size standards and using portion-control plates may be helpful.

Key points

- Many cancer survivors lose or gain too much weight.
- A BMI of 18.5 to 24.9 is a goal of healthy living for cancer survivors.
- Metabolic health can be improved with a healthy lifestyle.
- Strategies to gain weight include eating more often; eating high-calorie, healthful foods; and not drinking while eating.
- Strategies to lose weight include not eating high-calorie foods and limiting portions. Check your weight every day and don't lose weight too quickly.
- Strategies to maintain weight include checking your weight daily, avoiding high-calorie foods, and controlling food portions.

5

Infections

- 32 Weakened immune response
- 33 How to protect yourself
- 35 Safe vaccines for survivors
- 37 Key points

Infections can cause serious health problems in cancer survivors. This chapter tells you how to prevent getting infections. It also explains which type of vaccines to get and when.

Weakened immune response

Cancer survivors may be at risk for infection. Many have a poor immune response due to cancer, other health problems, or treatment.

What is an infection?

An infection is defined by three key features:

- A germ (microbe) enters your body
- The germ multiplies inside your body
- The germ worsens your health

An example of an infection in people is chickenpox. Chickenpox is caused by a virus called the varicella-zoster virus. When the virus has multiplied, it causes an itchy skin rash and flu-like symptoms. It may reactivate later in life as shingles.

What is an immune response?

An immune response is a defensive reaction by your body to a germ. The immune system tries to keep germs out of your body and attacks germs that get in. Immune cells damage and kill germs. Signs that your body is fighting an infection include fever, sneezing, coughing, inflammation, and thick, yellow mucus.

Immune responses can be weak during several types of cancer treatment. The time for the immune system to recover after treatment varies between treatments. Read **Guide 7** for a list of cancer-related factors that can weaken the immune system.

Guide 7 Cancer-related immune suppressors

Blood cancers and cancers that spread to bone

Splenectomy

Radiation therapy

Certain chemotherapies

Certain antibody therapies

Corticosteroids called “steroids” for short

Hematopoietic cell transplant

CAR T-cell therapy

Blood transplant

How to protect yourself

Your cancer or primary care provider will assess your risk of infection and a poor immune response. Your risk mainly depends on three things:

- Your health history
- The type of cancer treatment and time since treatment ended
- Exposure to germs

Based on the assessment, your provider will present a plan to prevent infections. Ways to prevent infections are listed in **Guide 8**.

Avoid getting infected

One strategy is to avoid having contact with germs. Don't go to busy indoor places or use crowded transportation if possible. If you can't avoid crowds, wearing a mask might help. Don't touch animal feces or fluids, which can transmit disease. Avoid travel to high-risk areas. If the water is unsafe, drink bottled water and don't use ice.

If you have contact with germs, washing yourself is very important. Wash your hands before and after having close contact with people and animals. If you can't wash your hands, use hand sanitizer with at least 60% alcohol.

Guide 8

Preventing infections among cancer survivors

Animal care	<ul style="list-style-type: none"> • Wash your hands after handling animal feces • Avoid animal feces and fluids if you have a weak immune system
Travel	<ul style="list-style-type: none"> • Get vaccinated before traveling to high-risk areas • Take medicines that prevent infections before traveling to high-risk areas • Learn how to prevent infections from germs in water, air, and animals
Gardening	<ul style="list-style-type: none"> • Wear gloves to avoid cuts • Wear a mask to avoid cells called spores
Hand hygiene	<ul style="list-style-type: none"> • Wash your hands often to prevent getting and spreading germs • If you can't wash your hands, use hand sanitizer with at least 60% alcohol
Antimicrobial prophylaxis	<ul style="list-style-type: none"> • Take prescribed medicine to prevent infections
Vaccines	<ul style="list-style-type: none"> • Stay up-to-date with getting vaccines

When gardening, wear gloves to prevent skin cuts, which increase the risk of infection. Wear shoes outdoors. Wear facial masks to reduce infections of cells called spores.

Get antimicrobial prophylaxis

Antimicrobials are drugs that kill or stunt the growth of germs. Based on your risk, your provider may prescribe an antimicrobial to prevent an infection. Antimicrobials are grouped by which type of organisms they attack.

- Antibiotics treat bacterial infections (fluoroquinolone, levofloxacin, ciprofloxacin)
- Antifungals treat fungal infections (fluconazole, posaconazole)
- Antivirals treat viral infections (neuraminidase inhibitors, acyclovir)



While cancer survivors may never return to their life exactly as it was before, part of their new lives, hopefully, can be the mutual support of each other and support of patients currently battling cancer.”

Hand hygiene

Proper hand hygiene is one way of preventing infection. It can be done with thorough hand washing and use of hand sanitizer.

STOP GERMS! WASH YOUR HANDS

Keeping hands clean is one of the most important things we can do to stop the spread of germs and be healthy.



Wet your hands with clean, running water, and apply soap.



Lather your hands by rubbing them together with the soap.



Scrub your hands for at least 20 seconds.



Rinse hands well under running water.



Dry hands using a clean towel or air dry them.



[cdc.gov/handwashing](https://www.cdc.gov/handwashing)



Safe vaccines for survivors

Vaccines are biological agents that prevent diseases. They contain whole germs, parts of a germ, or a product of a germ. Many vaccines safely prevent infections in cancer survivors. Preventing infections can save lives and protect against some cancers.

Unfortunately, many survivors do not get vaccinated.

Your provider will assess which vaccines you need, and which are safe for you. Vaccines for cancer survivors are listed in **Guide 9**.

Tell your provider if you are allergic to vaccines, medications, or food. Such allergies may impact which vaccines you can receive.

Before vaccination, your immune system should be as strong as possible. Vaccines may not work well if your immune system is weak.

Guide 9

Vaccines for cancer survivors

Non-live vaccines for all survivors

- Flu vaccine every year (inactivated or recombinant)
- Tetanus, diphtheria, pertussis vaccine
- Recombinant zoster vaccine (RZV) for shingles if you are 50 years of age or over
- COVID-19 vaccine
- HPV vaccine if not received before and you are 45 years of age or under
- Pneumococcal vaccine if you are 65 years of age or over
- Hepatitis B vaccine if you are 60 years of age or under

Non-live vaccines for survivors at high risk of certain infections

- Pneumococcal vaccine if you are 19 years of age or over
- Hepatitis B vaccine if you are over 60 years of age
- Hepatitis A vaccine
- Haemophilus influenzae type b vaccine
- Meningococcal vaccine
- Other vaccines based on travel or risk of exposure

Live vaccines to avoid or take with caution if immune system is weakened

- MMR (measles, mumps, rubella)
- Oral typhoid
- Rotavirus
- Yellow fever
- Nasal flu vaccine
- Varicella zoster (single or combined with MMR)

The number of immune cells (white blood cells) in your body should be normal or stable. You must not have any ongoing infection.

Your provider will assess if a vaccine is safe for you based on your health. Safety also depends on the type of vaccine and the time since your cancer treatment ended.

Types of vaccines

Live vaccines contain an entire germ that has been weakened (attenuated). They create a strong immune response to the real germ. Live vaccines may cause major health problems in people with weak immune systems. Do not get live vaccines unless approved by a vaccine or cancer expert.

If you have a weak immune system, people who have close contact with you should not get live vaccines. If they do, keep your distance for 2 to 6 weeks depending on the vaccine. Avoid contact with feces and urine of children for 4 weeks after they get a rotavirus vaccine.

Non-live vaccines are safe for cancer survivors. There are 3 types:

- Inactivated vaccines contain a germ that has been killed.
- Subunit vaccines contain a part of a germ. Subtypes include recombinant, polysaccharide, and conjugate vaccines.
- Toxoid vaccines contain a disease-causing protein from the germ. They cause a strong immune response if you are exposed to the real germ.

Timing of vaccinations

The immune system is weak during some cancer treatments. It may remain weak for a time after treatment ends. Vaccines are less safe when your immune system is weakened. If you need a vaccine, get it when your immune system is as close to normal as possible.

Get non-live vaccines:

- At least 2 weeks before cancer treatment or
- At least 3 months after chemotherapy or radiation therapy when possible
- At least 6 months after a hematopoietic cell transplant, such as a bone marrow transplant
- At least 6 months after chemotherapy and the last dose of anti-B-cell antibody therapy

If needed, you may be able to receive some vaccines during cancer treatment. An example is an inactivated flu shot. If you had a blood stem cell transplant, a flu shot should be delayed until at least 4 months after the transplant.

Get live vaccines:

- At least 4 weeks before treatment or
- At least 3 months after chemotherapy

Do not get live viral vaccines after a transplant if you have active graft-versus-host disease (GVHD) or a weakened immune system. Talk to your transplant specialist about which vaccines are safe.

Key points

- Cancer survivors may be at risk of infections and poor immune responses.
- You can protect yourself by avoiding contact with germs, washing your hands, and taking medicines that prevent infections.
- When possible, get vaccines that do not contain a live germ. Consult with an expert in vaccines or cancer before taking live vaccines. Close contacts should also not get live vaccines.
- Do not get vaccines during cancer treatment if possible. It is safe to get them weeks before treatment or several months after treatment. If needed, you can get some types of vaccines during treatment.



share with us.

**Take our survey and help make the
NCCN Guidelines for Patients
better for everyone!**

[NCCN.org/patients/comments](https://www.nccn.org/patients/comments)

“

Listen to your body. 'Squeaky wheel gets the grease.' If you feel off let your medical team know. Be persistent, infections can come quickly!!"

6

Making treatment decisions

- 39 It's your choice
- 39 Questions to ask
- 45 Resources

It is important to be comfortable with the health care you choose. This choice starts with having a candid conversation with your care team.

It's your choice

In shared decision-making, you and your care team share information, discuss the options, and agree on a treatment plan. It starts with an open and honest conversation between you and your team.

Care decisions are very personal. What is important to you may not be important to someone else. Some things that may play a role in your decision-making:

- What you want and how that might differ from what others want
- Your religious and spiritual beliefs
- Your feelings about certain treatments
- Your feelings about pain or side effects
- Cost of treatment, travel to treatment centers, and time away from school or work
- Quality of life and length of life
- How active you are and the activities that are important to you

Think about what you want from cancer care including help for healthy living. Discuss openly the risks and benefits of your options. Share concerns with your care team.

Second opinion

It is normal to want to get help as soon as possible. While mental health should not be ignored, there is time to have another provider suggest a treatment plan. This is called getting a second opinion, and it's a normal part of medical care. Even doctors get second opinions!

Things you can do to prepare:

- Check with your insurance company about its rules on second opinions. There may be out-of-pocket costs to see providers who are not part of your insurance plan.
- Make plans to have copies of all your records sent to the provider you will see for your second opinion.

Questions to ask

Possible questions to ask your health care providers are listed on the following pages. Feel free to use these or come up with your own. Be clear about your goals for treatment and find out what to expect from treatment.

Questions about physical activity

1. Are there any physical activities or exercises that you do/do not recommend?
2. What should be my activity goal?
3. Do I have any lasting side effects from treatment that could interfere with my movement?
4. Do you have any tips to get me moving when I might not want to?
5. Do I need physical or occupational therapy? Does my insurance cover this?

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Questions about food

1. Do I have any dietary restrictions now that I am out of treatment?
2. What is my goal for calorie intake?
3. Can I have a referral for a nutritionist or dietician? Will my insurance cover that?
4. Do you have any tips for keeping myself on track when I get too tired to cook?

Questions about weight

1. What's my BMI?
2. Do I need to do anything to get to an ideal BMI?
3. Is my metabolism working properly?
4. Do I need to be concerned about weight changes now that I am out of treatment?

Questions about infection

1. Am I immunocompromised?
2. Which vaccines are safe for me to receive right now?
3. Are there any viruses or bugs circulating that I should be mindful of?
4. Should I receive a COVID-19 booster shot?
5. Am I at risk for any infection from my treatment sites?

Questions about resources and support

1. Who can I talk to about help with housing, food, and other basic needs?
2. What assistance is available for transportation, childcare, and home care?
3. Who can tell me what my options for health insurance are and assist me with applying for insurance coverage?
4. How much will I have to pay for my treatment? What help is available to pay for medicines and other treatment?
5. Who can help me with my concerns about work or school?
6. How can I connect with others and build a support system?
7. Who can I talk to if I don't feel safe at home, at work, or in my neighborhood?

Resources

AIM at Melanoma

AIMatMelanoma.org

AIM at Skin Cancer

AIMatSkinCancer.org

Bag It

Bagitcancer.org

Be the Match

BeTheMatch.org/one-on-one

BMT InfoNet

Bmtinfonet.org

Breastcancer.org

Breastcancer.org

Cancer Active, Inc. dba Throwing Bones

Throwing-bones.org

Cancer Hope Network

Cancerhopenetwork.org

DiepC Foundation

DiepCfoundation.org

National Bone Marrow Transplant Link (nbmtLINK)

nbmtlink.org

National Coalition for Cancer Survivorship

Canceradvocacy.org

National Ovarian Cancer Coalition

Ovarian.org/find-support

Ovarcome

Ovarcome.org

Ovarian Cancer Research Alliance

Ocrahope.org

The Leukemia & Lymphoma Society

LLS.org/PatientSupport

Triage Cancer

triagecancer.org

Unite for HER

Uniteforher.org



Words to know

antimicrobial

A drug that kills or stunts the growth of germs.

body mass index (BMI)

A measure of body fat based on height and weight.

cancer screening

Ongoing testing to detect cancer before it causes symptoms.

cancer survivor

A person who has or had cancer.

immune system

The body's natural defense against disease.

inactivated vaccine

A disease-preventing agent that contains a killed germ.

infection

Invasion into the body by a harmful germ.

late effect

A cancer- or treatment-related health issue that occurs long after diagnosis or treatment.

live attenuated vaccine

A disease-preventing agent that contains a weakened germ.

lymphedema

A buildup of a bodily fluid called lymph.

metabolism

Chemical processes in the body that are needed to live.

nutrient

A substance in food that your body uses to live.

ostomy

A surgically created change in the way stool or urine leaves the body.

peripheral neuropathy

A type of nerve damage.

processed food

Food that has been changed from its natural state.

prophylaxis

Prevention of a disease.

resistance training

A set of exercises that are repeated to strengthen muscles.

saturated fat

A fat that is unhealthful when eaten in large amounts.

stoma

A surgically created hole in the wall of the abdomen.

subunit vaccine

A disease-preventing agent that contains a part of a germ.

supplement

An edible product that contain nutrients.

surveillance

Ongoing testing for the return or a worsening of cancer.

survivorship care

Interventions to improve the health and well-being of people who have or had cancer.

toxoid vaccine

A disease-preventing agent that contains a product of a germ.

trans fat

A fake fat that is bad for your health.

unsaturated fat

A type of fat that is good for your health.

vaccine

A biological agent that prevents disease.

NCCN Contributors

This patient guide is based on the NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®) for Survivorship, Version 1.2024. It was adapted, reviewed, and published with help from the following people:

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NCCN Cancer Centers

Abramson Cancer Center
at the University of Pennsylvania
Philadelphia, Pennsylvania
800.789.7366 • pennmedicine.org/cancer

Case Comprehensive Cancer Center/
University Hospitals Seidman Cancer Center and
Cleveland Clinic Taussig Cancer Institute
Cleveland, Ohio
UH Seidman Cancer Center
800.641.2422 • uhhospitals.org/services/cancer-services
CC Taussig Cancer Institute
866.223.8100 • my.clevelandclinic.org/departments/cancer
Case CCC
216.844.8797 • case.edu/cancer

City of Hope National Medical Center
Duarte, California
800.826.4673 • cityofhope.org

Dana-Farber/Brigham and Women's Cancer Center |
Mass General Cancer Center
Boston, Massachusetts
617.732.5500 • youhaveus.org
617.726.5130 • massgeneral.org/cancer-center

Duke Cancer Institute
Durham, North Carolina
888.275.3853 • dukecancerinstitute.org

Fox Chase Cancer Center
Philadelphia, Pennsylvania
888.369.2427 • foxchase.org

Fred & Pamela Buffett Cancer Center
Omaha, Nebraska
402.559.5600 • unmc.edu/cancercenter

Fred Hutchinson Cancer Center
Seattle, Washington
206.667.5000 • fredhutch.org

Huntsman Cancer Institute at the University of Utah
Salt Lake City, Utah
800.824.2073 • healthcare.utah.edu/huntsmancancerinstitute

Indiana University Melvin and Bren Simon
Comprehensive Cancer Center
Indianapolis, Indiana
888.600.4822 • www.cancer.iu.edu

Mayo Clinic Comprehensive Cancer Center
Phoenix/Scottsdale, Arizona
Jacksonville, Florida
Rochester, Minnesota
480.301.8000 • Arizona
904.953.0853 • Florida
507.538.3270 • Minnesota
mayoclinic.org/cancercenter

Memorial Sloan Kettering Cancer Center
New York, New York
800.525.2225 • mskcc.org

Moffitt Cancer Center
Tampa, Florida
888.663.3488 • moffitt.org

O'Neal Comprehensive Cancer Center at UAB
Birmingham, Alabama
800.822.0933 • uab.edu/onealcancercenter

Robert H. Lurie Comprehensive Cancer Center
of Northwestern University
Chicago, Illinois
866.587.4322 • cancer.northwestern.edu

Roswell Park Comprehensive Cancer Center
Buffalo, New York
877.275.7724 • roswellpark.org

Siteman Cancer Center at Barnes-Jewish Hospital
and Washington University School of Medicine
St. Louis, Missouri
800.600.3606 • siteman.wustl.edu

St. Jude Children's Research Hospital/
The University of Tennessee Health Science Center
Memphis, Tennessee
866.278.5833 • stjude.org
901.448.5500 • uthsc.edu

Stanford Cancer Institute
Stanford, California
877.668.7535 • cancer.stanford.edu

The Ohio State University Comprehensive Cancer Center -
James Cancer Hospital and Solove Research Institute
Columbus, Ohio
800.293.5066 • cancer.osu.edu

The Sidney Kimmel Comprehensive
Cancer Center at Johns Hopkins
Baltimore, Maryland
410.955.8964
www.hopkinskimmelcancercenter.org

The UChicago Medicine Comprehensive Cancer Center
Chicago, Illinois
773.702.1000 • uchicagomedicine.org/cancer

The University of Texas MD Anderson Cancer Center
Houston, Texas
844.269.5922 • mdanderson.org

UC Davis Comprehensive Cancer Center
Sacramento, California
916.734.5959 • 800.770.9261
health.ucdavis.edu/cancer

UC San Diego Moores Cancer Center
La Jolla, California
858.822.6100 • cancer.ucsd.edu

UCLA Jonsson Comprehensive Cancer Center
Los Angeles, California
310.825.5268 • uclahealth.org/cancer

UCSF Helen Diller Family
Comprehensive Cancer Center
San Francisco, California
800.689.8273 • cancer.ucsf.edu

University of Colorado Cancer Center
Aurora, Colorado
720.848.0300 • coloradocancercenter.org

University of Michigan Rogel Cancer Center
Ann Arbor, Michigan
800.865.1125 • rogelcancercenter.org

University of Wisconsin Carbone Cancer Center
Madison, Wisconsin
608.265.1700 • uwhealth.org/cancer

UT Southwestern Simmons
Comprehensive Cancer Center
Dallas, Texas
214.648.3111 • utsouthwestern.edu/simmons

Vanderbilt-Ingram Cancer Center
Nashville, Tennessee
877.936.8422 • vicc.org

Yale Cancer Center/Smilow Cancer Hospital
New Haven, Connecticut
855.4.SMILOW • yalecancercenter.org



We want your feedback!

**Our goal is to provide helpful and
easy-to-understand information
on cancer.**

**Take our survey to let us know
what we got right and what we
could do better.**

NCCN.org/patients/feedback

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