

Nutrition and Blood Cancer

Good nutrition is an important part of your cancer treatment. Eating the right kinds of foods before, during, and after cancer treatment can help you feel better and stay stronger. Your diet can help lessen side effects of treatment and improve your energy and healing. This handout includes information on how nutrition can help you feel your best during cancer treatment.

The nutrition needs of people with cancer vary from person to person. Your cancer care team can help you plan ways to meet your nutrition goals.

Tips for a Healthy Diet

Eating well means eating a variety of foods to get the nutrients your body needs to fight cancer. These nutrients include proteins, fat, carbohydrates, water, vitamins and minerals.

- **Set a goal to eat 5-10 servings of colorful fruits and vegetables every day.**
 - ▶ Examples of one serving would be:
 - 1 cup raw leafy greens
 - ½ cup for all other fruits and vegetables
 - 1 medium fruit or vegetable (i.e. apple, orange)
 - ¼ cup dried fruit
 - ¾ cup 100% or fresh juice
 - ▶ All fresh fruits and vegetables need to be washed well before eating. Wash them for 20 seconds under running water and scrub with friction.

This handout is for informational purposes only. Talk with your doctor or health care team if you have any questions about your care.

- ▶ Organic fruits and vegetables are okay to eat if that is your choice. There is currently no research that shows eating organic foods prevents cancer. Organic fruits and vegetables still need to be washed well before eating.
- ▶ Talk to your doctor or pharmacist if you eat grapefruit, Seville oranges (often used in jams/jellies) and star fruit or drink grapefruit juice. These foods can interfere with certain medicines and increase your risk of side effects during treatment. Other kinds of oranges and citrus fruit are safe to eat.
- **Eat more whole grains.**
 - ▶ Whole grains can be found in whole wheat bread, brown rice, whole wheat pasta, whole wheat crackers, oats, quinoa, barley, buckwheat, farro and millet.
 - ▶ Limit the amount of refined sugars that you eat, such as white bread, white rice, white pasta, chips, candy bars, snack cakes, processed baked goods, fried foods, pop or sweet tea, frozen meals, boxed meals, juice and regular soda.
 - ▶ Whole grains have more protein, fiber, and phytochemicals than refined (non-whole) grains.
 - ▶ To know if something is a whole grain, look for the word “whole” in the first word on the ingredient list.
 - ▶ Steroid medicines may be part of your cancer treatment. These medicines may raise your blood sugar. Whole grains are not absorbed as quickly as refined grains and can help with blood sugar control, if eaten regularly (every 2-3 hours) during the day.
- **Choose healthy protein sources.**
 - ▶ Lean protein foods include:
 - Lean beef, pork, or lamb
 - Chicken or poultry
 - Fish and seafood
 - Eggs
 - Dairy products such as milk, yogurt, cottage cheese, cheese, ice cream
 - Nuts, seeds, and nut butters
 - Beans, legumes, and peas
 - Dips such as bean dip or hummus
 - Whole grains such as oats, brown rice, quinoa, barley
 - Soy products such as tofu, edamame, tempeh, soy milk

- ▶ Limit the amount of processed meats that you eat as much as possible. This includes foods like bacon, sausage, pepperoni, salami, spam, pre-sliced lunch meats, etc.
- **If you are having trouble eating or are losing weight, you should choose high calorie, high protein foods.**
 - ▶ Protein and calories are needed to build, maintain and repair body tissue. When there is a need to build new tissue, like skin or muscle, your calorie, protein and nutrient needs increase. High calorie and high protein diets can help your body work better if you have lost weight or need to heal wounds.
 - ▶ Eating more fats will increase calories in your diet. Add extra olive oil, butter or margarine to breads, vegetables, pastas and eggs. Use plenty of gravies, cheese, mayonnaise and salad dressing. Choose full-fat versions of food such as milk, yogurt, dressings, etc.
 - ▶ Nuts, seeds, nut butters, dried fruits, avocados, beans, hummus, lentils, Greek yogurt and olive oil are healthy choices that are high in calories.
 - ▶ Eat generous amounts of the protein foods listed above. Have a serving of protein at every meal and snack. Use dry milk powder or protein powder as a protein supplement.
 - ▶ You may need to drink an oral nutrition supplement, such as Ensure, Boost, Glucerna or Carnation Breakfast Essentials. Talk to your doctor or dietitian about which supplement is best for you.
 - ▶ Talk to your dietitian about any questions or concerns you may have about your protein needs during treatment.
- **Follow the immunocompromised diet when you are neutropenic or taking immunosuppressant medicines.**

This special diet helps to reduce your risk of getting an infection from the bacteria in food when your immune system is weak. You should follow this diet if:

- ▶ Your absolute neutrophil count (ANC) is less than 1,000.
- ▶ You are taking any immunosuppressant medicines, such as steroids.
- ▶ You have had a bone marrow or stem cell transplant. Talk to your doctor or dietitian about how long you need to follow this diet.

Ask for the patient education handout “Immunocompromised Diet for Cancer Patients” to learn more.

Common Questions

What is a plant-based diet?

- A plant-based diet focuses on eating whole grains, fruits, vegetables, beans, nuts, seeds and legumes.
- Includes eating foods as close to their natural state as possible and eating fewer processed foods.
- A plant-based diet does not mean vegetarian or vegan. It can include meat and animal products if you enjoy them.
- This diet promotes changing your eating habits to have 2/3 of the food on your plate from plant sources (fruit, vegetables, whole grains, beans, nuts, soy products) and the other 1/3 with animal sources (lean meat, fish, chicken, dairy, eggs).
- During chemotherapy treatment, you do not need to stop eating fruits and vegetables, but it is important to wash all fresh produce well before you eat it.

What are the benefits of a plant-based diet?

- This type of diet provides essential nutrients, such as vitamins, minerals and fiber that help the body function.
- Plant foods are packed with nutrients. For example, broccoli contains vitamins A, C, and K, potassium, folate, fiber, magnesium, beta-carotene, as well as many other phytochemicals, yet is only 30 calories per cup.
- Plant foods contain phytochemicals, which have been shown to reduce the risk of various diseases, including cancer.
- A plant-based diet is rich in fiber, prebiotics and probiotics, which helps keep your digestive system healthy.

What are Phytochemicals?

Phytochemicals are commonly found in fruits, vegetables, nuts, seeds, legumes and whole grains. They are the natural compounds that give plants their color, taste, smell and texture. Phytochemicals can:

- Strengthen your immune system
- Slow or stop the growth rate of cancer cells
- Decrease inflammation in the body
- Destroy abnormal cells

The best way to increase phytochemicals in your diet is to eat a variety of colorful foods including fruits, vegetables, whole grains, spices and tea. Food is the best source for phytochemicals. If you take supplements, it is important to talk with your doctor or pharmacist since supplements may not be absorbed as well by your body and may interfere with certain cancer treatments.

Does sugar feed cancer?

- Eating sugar does not cause your cancer to grow or spread.
- Both healthy cells and cancer cells will use sugar for fuel. Cancer cannot be “starved” by simply removing sugar from your diet. If sugar or carbohydrates are taken out of the diet, the body will use dietary fat or protein to make sugar.
- While sugar alone is not a direct cause of cancer, high amounts of added sugar in your diet over a long period of time can cause weight gain, elevated blood sugar and the inability for your cells to use insulin effectively (insulin resistance). Over time, this extra insulin can increase your risk for certain cancers. It is best to have a balance of carbohydrates, protein, and fats in your diet by eating healthy carbohydrates such as fruits, vegetables, whole grains and beans, while limiting added sugar products, such as soda, candy, baked goods and heavily processed foods. Limited amounts of these foods will likely not affect cancer growth.
- At this time, there is not enough research about a ketogenic diet and leukemia (blood cancer). Until more research is done, the keto diet is not recommended for most cancer patients. Talk with your hematology care team if you have questions about this type of diet.

Will juicing help me fight cancer?

- Juicing fruits and vegetables can be healthy, especially if it helps you meet the goal of eating 5 or more servings of fruit and vegetables each day. One negative result of juicing is that it removes the fiber and bulk of the plant and leaves only the concentrated sugar to drink. It is always best to eat fruits and vegetables whole.
- If you buy juice from an outside vendor, make sure that it is pasteurized to reduce your risk of infection from food borne illness.
- Any unused homemade juice should be thrown away after 24 hours.

What is an alkaline diet and does it help fight cancer?

- It is thought that certain foods you eat can change the body's pH level. Some say that eating acidic food creates an environment where cancer cells thrive, while others say alkaline food creates an environment where cancer cells are not able to survive. The fact is that the acid-base balance in the blood is very strongly controlled by our lungs and kidneys. Certain foods can have an effect on the acidity of urine, but this does not change the pH of our blood or tissues. Rather than focus on which diet is better (acidic or alkaline), you should eat whole, unprocessed foods and a variety of fruits, vegetables, whole grains, beans, nuts and seeds.

Should I do a cleanse or use a detox product?

- Cleanses or detoxification treatments are not needed because our liver, kidneys, lungs and gastrointestinal system all work together to clear the body of toxins on a regular basis. Using additional cleanses or detox products is costly and could actually be harmful to your health. For example, some products promote diarrhea, which can lead to dehydration and the loss of essential nutrients such as potassium, sodium and magnesium that work to regulate your heart and other body systems. Do not use cleanses or detoxification products.

Should I be taking any supplements to help my body fight cancer?

- Dietary supplements are not recommended to treat or prevent cancer or a cancer recurrence.
- Research shows that the ingredients in supplements do not offer the same benefits as eating whole foods. When you eat whole food, your body absorbs a range of nutrients, such as vitamins, minerals, fiber and antioxidants, that work together to help your body and improve your health. When a nutrient is included in a supplement, it may not be absorbed as well by your body.
- Many dietary supplements have ingredients that may interfere with certain cancer treatments and medicines. Always talk to your doctor or pharmacist before taking any dietary supplements, such as vitamins, minerals, herbal supplements, ingested essential oils, etc.

Are there any foods or supplements I can take to raise my blood counts or boost my immune system?

- Protein provides amino acids, which are the building blocks for all of the cells in our body, including our blood counts (white blood cells, red blood cells, platelets, etc.). Good quality protein is important to have in your diet to help your body make new cells.
- Some vitamins and minerals, such as vitamin C and zinc, can promote a healthy immune system. It is important to know that these nutrients, if taken in supplement form, may interfere with certain cancer treatments and medicines. Food is the best source for the vitamins and minerals that can help boost your immune system.
 - ▶ Good food sources with zinc include: meat, poultry, some seafood, like lobster and crab, liver, eggs, milk, whole grains, tofu and fortified cereals.
 - ▶ Good food sources with vitamin C include: citrus fruits, orange juice, tropical fruits (guava, papaya and mango), red and green peppers, broccoli, spinach, collard greens, strawberries, tomatoes and peas.
- Some research has shown that vitamin D levels in your blood are related to immunity. Ask your doctor to check your vitamin D level and if it is low, ask if you should take a vitamin D supplement.
- If your diet is poor, or if it is hard for you to eat well during treatment, ask your doctor if you should take a multivitamin and a mineral supplement with vitamin B12 and folate.

For more information about healthy eating during and after cancer treatment, visit the [JamesCare for Life](#) website to learn about our nutrition programs and cooking classes.