

## Breast Cancer and Nutrition

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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 reduce your cancer risk and help you feel your best during 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.

### What are the benefits of a plant-based diet?

A plant-based diet helps keep your digestive system healthy and prevents constipation.

This type of diet has:

- Essential nutrients, such as vitamins, minerals and fiber that helps your 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.
- Phytochemicals have been shown to reduce the risk of various diseases.

A plant-based diet should include a variety of fruits, vegetables, beans and minimally processed grains and cereals each day. Look at your plate at each meal and try to slowly change your eating habits until at least 2/3 of the food on your plate comes from plant sources. An example of good portions on a plate would be a small chicken breast with 1 cup of cooked broccoli and 1 cup of wild rice.

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

A Plant-based diet is not vegetarian/vegan. You can still have meat and animal products in your diet, if you enjoy them.

You can still eat fruits and vegetables during chemotherapy treatment, but it is important to fully wash all fresh produce before you eat it.

## What are Phytochemicals?

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

- Strengthen your immune system
- Slow the growth rate of cancer cells
- Decrease swelling in the body

An easy way to include phytochemicals in your diet is to eat colorful foods like fruits, vegetables, whole grains, spices and tea. Food is the best source for phytochemicals. Dietary supplements taken by mouth as a pill, capsule, tablet, liquid, or powder may not be absorbed as well and may interfere with your treatment. If you take any supplements, it is important to talk with your doctor or pharmacist before your treatment starts.

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

## Tips for a Healthy Diet

- **Set a goal to eat 5-10 servings of colorful fruits and vegetables every day.**
  - ▶ Examples of one serving would be:
    - 1 cup leafy greens, berries or melon chunks
    - ½ cup for all other fruits and vegetables
    - 1 medium fruit/vegetable (i.e. apple, orange)
    - ¼ cup dried fruit
    - ¾ cup 100% or fresh juice

► The chart below lists foods within each color group:

Color	Example of foods
Red	<ul style="list-style-type: none"> <li>• Beets</li> <li>• Red Peppers</li> <li>• Tomatoes</li> <li>• Apples (w/skin)</li> <li>• Cherries</li> <li>• Cranberries</li> <li>• Grapefruit</li> <li>• Pomegranates</li> <li>• Radish</li> <li>• Raspberries</li> <li>• Red Grapes</li> <li>• Strawberries</li> <li>• Watermelon</li> </ul>
Yellow/Orange	<ul style="list-style-type: none"> <li>• Apricots</li> <li>• Cantaloupe</li> <li>• Carrots</li> <li>• Guava</li> <li>• Mango</li> <li>• Oranges</li> <li>• Papaya</li> <li>• Peaches</li> <li>• Pumpkin</li> <li>• Squash (Butternut)</li> <li>• Sweet Potatoes</li> <li>• Tangerine</li> <li>• Turmeric</li> </ul>
Green	<ul style="list-style-type: none"> <li>• Artichokes</li> <li>• Asparagus</li> <li>• Avocados</li> <li>• Bok Choy</li> <li>• Broccoli</li> <li>• Brussels Sprouts</li> <li>• Cabbage</li> <li>• Cilantro</li> <li>• Collard Greens</li> <li>• Greens (Leafy)</li> <li>• Kale</li> <li>• Kiwi</li> <li>• Lettuce</li> <li>• Okra</li> <li>• Parsley</li> <li>• Spinach</li> <li>• Turnip Greens</li> <li>• Watercress</li> </ul>
Blue/Purple	<ul style="list-style-type: none"> <li>• Blackberries</li> <li>• Blueberries</li> <li>• Eggplant</li> <li>• Plums</li> <li>• Prunes</li> </ul>
White	<ul style="list-style-type: none"> <li>• Onions</li> <li>• Cauliflower</li> <li>• Garlic</li> <li>• Mushrooms</li> </ul>

Black/Brown	<ul style="list-style-type: none"> <li>• Flax Seeds</li> <li>• Ginger</li> <li>• Green or Black Tea</li> <li>• Legumes and Dried Beans</li> <li>• Nuts</li> <li>• Whole Soy Foods</li> <li>• Whole Grains</li> </ul>
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▶ It is important to talk with 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 interact 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 have all the parts of the original grain (germ, bran and endosperm).
- ▶ Whole grains have more protein, fiber and phytochemicals than non-whole grain products such as white bread, white rice and white pasta.
- ▶ Look for the word “whole” in the product name or as the first word in the list of ingredients.
- ▶ Choose a variety of natural whole grains, such as barley, buckwheat, oats, quinoa, farro, wild rice, brown rice, millet, for your diet.
- ▶ You may find it helpful to visit [www.wholegrainscouncil.com](http://www.wholegrainscouncil.com) for more information about whole grains.

- **Limit the amount of red meat and processed meats that you eat.**

- ▶ If you choose to eat red meat (beef, pork or lamb) choose a lean cut. Three ounces (the size of a deck of cards) or less of red meat each day is advised or less than 18 ounces total each week.
- ▶ Limit eating processed meats as much as possible. This would include foods like bacon, sausage, pepperoni, salami, spam and pre-sliced lunch meats.
- ▶ Talk to your dietitian about any questions or concerns you may have about your protein needs during treatment.

- **Limit fast food, processed foods and added sugars in your diet.**
  - ▶ High calorie foods often have greater amounts of fat and sugar, but very few nutrients. This would include foods like chips, candy bars, snack cakes, processed baked goods, fried foods, pop or sweet tea, frozen meals and boxed meals.
  - ▶ It is easier to keep a healthy weight and energy level if you limit how much of these foods you eat.
  - ▶ Tell your doctor or dietitian if you have more than 2 servings a day of vitamin water, coconut water, electrolyte drinks, energy drinks or energy bars. These products have ingredients that may interfere with your treatment.
  
- **Do not use supplements to reduce cancer risk.**
  - ▶ Supplements are likely not needed if you follow these diet guidelines. Before your treatment starts, tell your health care team about any herbal, botanical or nutritional supplements that you take.
  - ▶ To learn more, ask for the patient education handout, *Breast Cancer: Precautions for Use of Dietary/Herbal Supplements*.
  
- **Limit alcohol use.**
  - ▶ If you drink at all, it is recommended that women have no more than one drink a day with a limit of 3 drinks a week. Research shows a higher risk of recurrence in post-menopausal women who have 4 or more drinks each week.

## Other Common Questions

### Is it safe to consume soy?

- Whole soy has been shown to be safe for breast cancer survivors. In fact, whole soy may help to protect you against a cancer recurrence due to the phytochemicals, called isoflavones, which are in whole soy. It is safe to eat up to 2-3 servings of whole soy each day. Whole soy foods include tofu, edamame, tempeh, soy milk and soy nuts.
- It is best to stay away from processed soy called “soy isolate” and “soy isoflavone”. These forms of soy are commonly found in protein shakes, powders, or bars. If you wish to use these products, look for ones made with whey protein or a plant-based blend.

- Soy lecithin, soybean oil and soy sauce are safe to eat. These products do not have any phytoestrogens, so they are fine to have in your diet.
- Do not take soy pills or supplements made with soy isoflavone or other “plant estrogens” such as Diadzen or Genistein.

### **Does sugar feed cancer?**

- Both healthy cells and cancer cells 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 may increase your risk for cancer. Added sugar in the diet 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 breast cancer. Talk with your cancer care team if you have questions about this type of diet.

### **Can I eat fermented foods?**

- Naturally fermented foods such as yogurt, kefir, kimchi and sauerkraut are healthy and safe to eat. Fermented foods have higher amounts of probiotics, which help your overall gut health. Research has shown a positive link between your gut health and overall health.
- If you drink kombucha tea, make sure it is pasteurized to reduce your risk of illness.
- If you eat fermented foods on a regular basis, there is no need for you to also take a probiotic supplement.
- If you are currently on immunotherapy, talk to your cancer doctor before taking a probiotic supplement. Use of this product may be harmful or make your cancer treatment less effective.

## **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 purchase juice from an outside vendor, be sure that it is pasteurized to reduce your risk of infection from a food borne illness.
- Any unused homemade juice should be thrown away after 24 hours.

## **Are raw and unpasteurized foods safe?**

- Raw and unpasteurized foods are a greater risk to your health. Pasteurization heats foods to an appropriate temperature to kill off bacteria so it is healthy for you to eat. You should never use raw milk or dairy products. If you are in active treatment for your breast cancer, we do not recommend that you drink unpasteurized juice bought at a smoothie bar or juice bar. It is perfectly safe to make your own juice at home.
- Do not eat raw meat or sushi if your cancer treatment lowers your immune response.

## **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 create 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 a diet of whole, unprocessed foods including 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 our 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, magnesium that work to regulate your heart and other body systems. Do not use cleanses or detoxification products.

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.