

# Breast Cancer and Nutrition during Active Treatment

Making lifelong lifestyle changes is recommended, including following a healthy plant-based diet, engaging in physical activity, and maintaining a healthy weight for all Americans and cancer survivors. These changes would help reduce the risk of cancer development and progression. However, for those undergoing active cancer treatment, the priority should aim at maintaining one's nutritional well-being (i.e., weight maintenance by meeting daily nutrition goals) and remaining physically active as much as possible to help support one's functional status. All of these will help combat cancer treatment's potential side effects.

Drastic weight loss during treatment is not advisable, even for people who are overweight, as it could lead to muscle loss and eventually compromise one's functional status and immune response. While on active treatment, your nutritional goal should be to maintain your weight as much as possible.

During your cancer treatment, there may be some good and bad days due to the side effects of your treatment. But please remember, we have a team in our oncology department to help support you, and you are not doing it alone! Please be proactive in your care. Let us know how we can help you during your journey. If you have trouble eating and losing weight, please get in touch with your oncologist for a consultation with one of our dietitians. We could work with you to strategize a diet/nutrition plan to help you combat these nutrition-related side effects.

## General Principle:

- On your good days, try to eat a healthy diet as much as you can.
- On days you don't feel quite well: try to eat what sounds appealing to you to help better meet your nutrition requirements to support your weight.

On your good days, try to follow a well-balanced plant-based diet (unless you have symptoms, such as diarrhea, that will prevent you from doing so) to meet your nutrition goals by following these recommendations:

Food Group	Tips
<b>Vegetables</b>	<ul style="list-style-type: none"><li>• Aim to fill ½ of your plate with a variety of colorful non-starchy vegetables</li><li>• Include carotenoid-rich vegetables such as cruciferous vegetables, leafy greens, tomatoes, and red bell peppers</li></ul>
<b>Fruits</b>	<ul style="list-style-type: none"><li>• Aim to have 2-3 servings of whole fruit every day.</li><li>• Include carotenoid-rich fruit such as papaya, cantaloupe, mango, orange, and apricot</li><li>• Limit fruit juices to 4 oz per day if you choose to consume</li></ul>
<b>Starches</b>	<ul style="list-style-type: none"><li>• Choose whole grains such as brown rice, quinoa, whole-grain bread and pasta, oatmeal, or tuber vegetables such as winter squash more often.</li><li>• Try to replace refined grains such as white rice, white bread, and refined and sweetened cereals with these wholesome foods!</li></ul>

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Food Group	Tips
<b>Protein</b>	<ul style="list-style-type: none"> <li>• Choose plant-based protein, such as tofu, beans &amp; lentils, nuts &amp; seeds, more often</li> <li>• Include 1-2 servings of whole soy food per day. 1 serving can be 3 oz soft tofu or tempeh, 1/2 cup edamame, or 1 oz dry roasted soybeans.</li> <li>• When choosing animal protein, leaner sources such as chicken without skin, fish, and seafood. Avoid deep-fried foods.</li> <li>• Every week, include two servings of omega-3 fatty acid-rich foods.               <ul style="list-style-type: none"> <li><i>*One serving can be 3.5 oz of oily fish like salmon, trout, mackerel, herring, and tuna.</i></li> <li><i>*One serving can be one tablespoon of flax seed or 14 walnut halves.</i></li> </ul> </li> <li>• Limit red meat (pork, lamb, veal, beef) to no more than 12 oz cooked per week. Avoid grilled, barbecued, and smoked red meat</li> <li>• Avoid processed meat such as luncheon meats, bacon, and sausages</li> </ul>
<b>Dairy</b>	<ul style="list-style-type: none"> <li>• Choose low-fat or nonfat dairy more often</li> <li>• You may consider some other calcium and Vitamin D-fortified dairy alternatives such as soy milk, nut milk, oat milk, or pea protein milk if you prefer</li> <li>• Aim to meet the daily goal of 1200 mg calcium and 1000-2000 IU vitamin D</li> </ul>
<b>Dietary Fat</b>	<ul style="list-style-type: none"> <li>• Choose healthy fat such as nuts and seeds, olive oil, and avocado more often, and consume them in moderation</li> <li>• Include 1-3 tbsp of ground flaxseed into your diet per day</li> <li>• Limit the use of saturated fat, which is found in a higher percentage in red meat and animal products, as well as in tropical oil such as coconut and palm oil. Avoid trans fat.</li> </ul>
<b>Fast food and sugar-sweetened drinks</b>	<ul style="list-style-type: none"> <li>• Limit if you have no trouble maintaining weight</li> </ul>
<b>Hydration</b>	<ul style="list-style-type: none"> <li>• Keep yourself well hydrated with 8-10 eight-oz glasses of non-caffeinated and non-alcoholic fluid a day</li> <li>• Consider including green tea. Limited research suggests more than 5 cups per day may be beneficial.</li> </ul>
<b>Physical Activity</b>	<ul style="list-style-type: none"> <li>• Try to be physically active as much as possible, to your tolerance!</li> <li>• Based on your capability and as allowed by your medical providers, consider a variety of physical activities such as yoga, Pilates, stretching, aerobic conditioning, weight-bearing exercise, and others</li> </ul>

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## **Bottom line:**

- Try to eat a rainbow of the color of food that would help you optimize your consumption of various cancer-fighting nutrients, including phytochemicals and antioxidants.
- Choosing wholesome, minimally processed foods more often. These foods should be the base of your daily diet.
- Avoid highly processed foods, especially processed meat and prepackaged processed foods. Stay active and maintain a healthy weight.

## **Some of the common nutrition impact symptoms associated with cancer treatment**

Here are some dietary strategies to help you manage possible treatment side effects. Please note that these strategies DO NOT replace any advice and medication your medical provider gives. Also, if you have any persistent symptoms you cannot manage at home according to professional guidelines, you should contact your doctor immediately.

## **Nausea/vomiting**

Foods to try:

- Low-fat, low-fiber foods such as
  - ◆ Plain toast, crackers, dry cereal, pretzels, bagels
  - ◆ Banana, apple sauce, juices, sherbet
  - ◆ Eggs (cooked without fat), yogurt
- Choose bland, dry, cold/room temperature foods
- Eat small portions but every hour or two
- Slow to meals and chew food well
- Try candied ginger, ginger tea, or ginger ale
- Try drinking cool, clear liquids between meals and sip slowly
- Let someone else do the cooking or preparing meals ahead of time

Foods to avoid:

- Spicy or acidic foods
- High-fat, fried, or greasy foods
- Foods with strong odors or hot foods
- High fiber or foods that are too sweet for you

Additional tips to try:

- Suck on ice chips or popsicles
- Allow for fresh air in your home
- Sit up while eating and one hour after
- Mindful of positional changes
- Rinse the mouth before and after eating
- Wear loose clothing, including your tops, pants, and bra

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## Constipation

Cancer treatment can increase stress on the body, which may cause bowel irregularity. Some anti-nausea drugs, such as Zofran, and pain medication may cause constipation. If you are experiencing constipation, here are some tips for you.

Important: adequate fluid consumption, adequate fiber intake, and physical activity.

If able, try:

- Drink more fluids
- Eat higher-fiber foods
  - ◆ Fruits, vegetables, whole grains
  - ◆ Flax seed meal, chia seed
  - ◆ Beans and lentils
- Avoid refined carbohydrate food
- Avoid foods that cause you more gas
- Try to have a bowel movement at the same time each day
- Try fiber supplement
- Exercise if you are able

## Diarrhea

Foods to try:

- BRATT diet as needed with banana, rice, unsweetened applesauce, toast, and herbal tea
- Drink liquids at room temperature
- Choose low-fiber foods: white rice, noodles, white bread, mashed potatoes, and saltine-type crackers. Avoid whole grains.
- Choose foods with soluble fiber: applesauce, banana, canned peach or pear, instant oatmeal, cooked carrots
- Eat fruits without skins and cook vegetables well
- Drink lots of fluids: water, diluted juice, broth, decaffeinated tea, diluted sports drinks
- Try: broth, saltine crackers, or pretzels

Foods that may worsen diarrhea:

- Spicy
- Alcohol
- Caffeine
- High sugar-containing food or beverages
- Greasy/fatty/fried
- Dairy products (yogurt & buttermilk may be ok)
- Sugar-free products (sorbitol, mannitol, xylitol)
- Gas-forming foods: dry beans, broccoli, corn, cabbage, cauliflower, brussels sprouts, onion
- High-fiber foods: whole wheat bread, brown rice, bran, raw fruits & vegetables

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## Myelosuppression

Cancer and cancer treatment can weaken your immune system, so you may be at a higher risk of getting a foodborne illness. Therefore, patients undergoing active treatment are advised to follow food safety guidelines, including:

- Clean your hands often
- Food choices:
  - ◆ Avoid raw or undercooked animal products
  - ◆ Eat/drink pasteurized milk products, juices, honey
  - ◆ Check expiration dates on all foods and beverages
- Food preparation:
  - ◆ Wash fruits & vegetables well
  - ◆ Use separate cutting boards for meats and produce
  - ◆ Change sponges and towels often
  - ◆ Use a food thermometer for meats
  - ◆ Thaw frozen items in the microwave or refrigerator
- Food storage:
  - ◆ Avoid cross-contamination
  - ◆ Throw out prepared foods that are more than three days old
  - ◆ **Bottom line:** if you are in doubt, throw it away.

## Weight gain

- Exercise if able
- Avoid fried/greasy foods
- Aim for ½ of your plate to be non-starchy vegetables
- Avoid highly processed foods
- Choose low-fat or non-fat milk products
- Watch portion sizes
- Choose lean meats, remove fat and skin
- Include more fiber: fruits, vegetables, whole grains, beans, and legumes

## Additional Lifestyle and Nutrition Factors

### Alcohol

It is advised that patients undergoing active treatment should AVOID alcohol.

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## Soy

Soy contains various healthful nutrients such as protein, fiber, calcium, and vitamin Bs. It is also a source of antioxidants and isoflavones.

Consuming moderate amounts of natural soy products such as edamame, tofu, tempeh, unsweetened soymilk, and soy nuts are considered safe, along with a low-fat diet with plenty of fruit and vegetables. However, processed soy products, such as soy sausage and patties, should be limited as they are processed foods. In addition, it is recommended that women at risk of developing breast cancer or breast cancer survivors avoid high-dose isoflavone supplements or soy supplements, such as soy protein isolate.

Individuals with Estrogen Receptor Positive breast cancer can still safely include natural soy products in their diet in moderation if limiting these foods to 1-2 servings, no more than 100 mg of isoflavones per day. One serving (average ~7 gm protein, 25 mg isoflavones) can be:

- 1 cup unsweetened calcium-fortified soymilk
- 1/3 cup ~3 oz tofu
- 1/2 cup edamame
- 1/4 cup or 1 oz. soy nuts

<https://www.aicr.org/cancer-prevention/food-facts/soy/>

## Supplement

Your medical provider might advise you to take specific vitamin or mineral supplements, such as calcium, vitamin D, and iron, based on your medical condition. Otherwise, the person undergoing chemotherapy or radiation therapy is advised NOT to use high-dose antioxidant supplements during their treatment as these could potentially interfere with treatment efficacy.

## Stress

Stress and anxiety accompany any medical condition, including a cancer diagnosis. Often, these natural responses may result in a lower quality of life. Many techniques and ways to manage stress include:

- Exercise
- A good sleep schedule
- A support group
- Daily relaxing time
- Simply doing things you enjoy

Choose the one that feels right to you and be consistent—utilizing mindfulness, a relaxation technique that works for you. Consult with your provider if you think you need more help. The Health Education Departments at Kaiser Permanente also offer many classes and resources to help you manage your emotional well-being. Please visit [kp.org](http://kp.org) or contact our Health Education department at 415-833-3450 to learn about available resources!

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