



## Diet and Cancer Treatment: Tips for Healthy Eating

Fact Sheet 9.332

Food & Nutrition Series | Health

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### A Plant-Based Eating Pattern

Emphasis on whole foods of plant origin can promote health, provide key nutrients, and support maintenance of a healthy weight. Institutions like the World Cancer Research Fund recommend limiting red meat intake (i.e. beef, lamb, and pork) and avoiding processed meat (e.g. bacon, ham, and hot dogs). See fact sheet [9.313 Diet and Cancer Prevention](#) for more details about healthy eating tips.



### Cancer and Nutrition: The Importance of Healthy Weight Maintenance

Weight loss and malnutrition are common problems for cancer patients, although some cancer treatments may result in weight gain. Even a small loss in body

weight can predict a reduced response to treatment, thus those undergoing treatment for cancer should try to maintain a healthy weight and avoid losses or gains in weight. Research shows that cancer patients who retain a healthy weight and maintain a good nutritional status have fewer complications, regardless of the form of treatment. Fewer complications result in improved response and tolerance of treatment, reduced illness, fewer infections, shorter hospital stays, and an overall higher quality of life. A healthy weight is important for increased energy levels, strength, and coping with the side effects of cancer treatment.

### Dietary Tips for Healthy Weight Maintenance

The following tips are useful for all cancer patients. However, for those experiencing weight loss, maintaining a healthy weight by consuming protein and calorie-rich foods should be a primary goal.

#### Eat a variety of whole foods

An eating pattern that emphasizes whole, plant-based foods is



### Quick Facts

- A largely plant-based diet with limited consumption of alcohol, red meat, and processed meat is recommended for those at risk for or with cancer.
- Side effects from cancer treatment may include reduced appetite, taste alterations, diarrhea, constipation, and difficulty swallowing, which may result in weight loss.
- It is important to maintain a healthy weight during cancer treatment, which may reduce the risk for complications.
- During treatment, immune system function may be compromised, so it is important to always practice safe food handling techniques.

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important for a nutritionally complete diet. Incorporate whole grains, legumes, and lean protein sources, like non-fat or low-fat dairy. Although it is important to eat fruits and vegetables, it may be advisable to choose higher calorie options to avoid weight loss, such as sweet potatoes, squashes, bananas, avocados, and dried fruit.

### **Limit caffeine, sugar, sodium (salt), and alcohol**

Exceptions for this guideline include those experiencing weight loss, as fat is a good source of calories that will aid in weight gain.

### **Hydration**

Drink as many fluids as possible throughout the day, as dehydration may be a problem with nausea, constipation, or diarrhea. Eat foods with high water content, such as vegetables, fruits, soups, smoothies, and popsicles. If weight loss is a problem, try high-calorie fruit smoothies or natural juices. Refer to a medical professional for advice on specific dietary recommendations.

## **Coping with Cancer's Effects on the Diet**

The effects of cancer on the diet fall into two main categories:

1. Dietary side effects of the disease itself
2. Dietary side effects of cancer treatment

### **1. Diet and Cancer — Side Effects of the Disease**

#### **Loss of appetite and weight loss**

Early signs and symptoms of cancer include a decreased ability to eat, digest, or absorb food and nutrients. Cancer cells may use the body's energy reserves, or release chemicals that

alter the way that the body makes energy from food. With a cancer diagnosis, a lack of appetite may also be a result of emotional distress or depression.

#### **Changes in bowel habits or bladder function**

Constipation, diarrhea, or pain when urinating may result from colon, bladder, and prostate cancer. This may interfere with proper nutrient absorption and result in loss of fluids and electrolytes.

#### **Trouble swallowing**

Difficulty chewing or swallowing may result from head and neck cancer, or esophageal cancer. These symptoms may cause vomiting, early satiety, and fluid and electrolyte imbalances.

### **2. Diet and Cancer — Side Effects of Treatment**

#### **Surgery**

The effects of surgery on the diet vary greatly depending on the location of the tumor and the surgical procedure used. If surgery is scheduled, talk to the doctor about what side effects might develop. When a side effect does develop, a doctor or registered dietitian can assist with the diet. Fatigue and weight loss are common symptoms.

#### **Chemotherapy**

Chemotherapy works by destroying rapidly dividing cells, such as cancer cells. It also destroys normal body cells that divide rapidly, such as those in bone marrow and those that line the small intestine. Side effects can include nausea, vomiting, diarrhea, or constipation, all of which may adversely affect dietary intake. Alterations

in taste are also common with patients undergoing chemotherapy. In addition, dry mouth is a frequent symptom, with decreased saliva production impacting the amount of chemicals released from food, contributing to alterations in taste.

### Radiation therapy

The dietary side effects of radiation therapy depend on the location of the tumor. For instance, therapy for a head or neck tumor often causes nausea, fatigue, loss of appetite, swallowing pain, and dry mouth. Also, radiation can damage taste cells and inhibit proliferations of new cells. Thus, a frequent side effect of patients undergoing radiation therapy is taste alteration.

### Changes in Food's Flavor and Odor

Cancer and treatment often result in taste alterations. For example, chemotherapy can result in the reduced ability to taste sweetness and a higher sensitivity to

bitterness. This changes the flavor of foods like sweets, desserts, fruits, and vegetables. Some individuals may experience an unusual dislike for certain foods, flavors, or odors; this may develop when unpleasant symptoms are tied to a food recently eaten. Some studies indicate that zinc supplementation may protect against taste disorders.

Overall, these side effects can result in decreased calorie intake and not meeting daily energy and nutrient requirements, causing weight loss. In addition to effects on appetite and body weight, psychological well-being can also be affected. The pleasure associated with eating can be negatively impacted, resulting in social and emotional impacts. Taking steps to improve nutrition and the eating experience can thus help improve physical and emotional well-being. Everyone is different, but Table 1 presents potential side effects and coping strategies:

**Table 1. Diet and Cancer —Potential Side Effects and Coping Strategies**

Side Effect	Coping Strategies
Weight loss	<ul style="list-style-type: none"><li>• Eat smaller, more frequent meals throughout the day.</li><li>• Try high-protein, high-calorie foods and snacks, like peanut butter, hard-boiled eggs, liquid nutritional supplements, or trail mix.</li><li>• Keep nutrient-dense foods in the home, and snack frequently.</li></ul>
Nausea or vomiting	<ul style="list-style-type: none"><li>• Eat slowly.</li><li>• Eat small portions frequently, instead of larger meals.</li><li>• Avoid hot, stuffy places and tight clothing.</li><li>• Drink beverages before meals instead of with meals.</li><li>• Eat dry or salty foods, like toast, crackers, corn chips, or pretzels.</li><li>• Avoid high-fat, greasy, spicy, or highly sweetened foods.</li><li>• Avoid foods with strong odors.</li><li>• Eat bland and soft foods on treatment days.</li><li>• Avoid favorite foods when nauseated to prevent new food aversions.</li><li>• Drink liquids to stay hydrated, especially if vomiting.</li></ul>

Constipation	<ul style="list-style-type: none"> <li>• Drink plenty of fluids (8 cups per day). Hot beverages may help relieve constipation.</li> <li>• Incorporate more light or moderate physical activity into your day.</li> <li>• Include foods high in fiber: raw fruits and vegetables, whole grains, and legumes.</li> </ul>
Diarrhea	<ul style="list-style-type: none"> <li>• Drink plenty of clear, non-carbonated liquids.</li> <li>• Avoid fried, spicy, greasy, and very sweet foods.</li> <li>• Eat foods that are easy to digest, such as applesauce, bananas, yogurt, and rice.</li> <li>• Avoid foods very high in fiber, slowly resuming these foods when diarrhea abates.</li> <li>• Maintain adequate hydration.</li> <li>• Try eating salty snacks, like pretzels and crackers.</li> <li>• Avoid foods that may cause gas or cramping, such as beans, cabbage, broccoli, spicy foods, and carbonated beverages.</li> </ul>
Sore throat or sore mouth	<ul style="list-style-type: none"> <li>• Eat foods that are soft and moist, and avoid dry, rough foods.</li> <li>• Avoid alcohol and highly acidic foods (e.g. citrus and vinegar).</li> <li>• Consume food at a soothing temperature.</li> </ul>
Fatigue	<ul style="list-style-type: none"> <li>• Snack frequently; keep nutrient-dense foods on hand.</li> <li>• Try small servings, which take less energy to eat.</li> <li>• Dehydration can worsen fatigue, so drink ample fluids throughout the day.</li> <li>• Moderate activity can help combat fatigue.</li> </ul>
Dry mouth	<ul style="list-style-type: none"> <li>• Use broths, soups, gravies, and yogurt to moisten foods.</li> <li>• Drink plenty of fluids, bringing a bottle with you wherever you go.</li> <li>• Suck on hard candies or chew gum to stimulate saliva production.</li> <li>• Limit caffeine intake.</li> <li>• Take a swallow of beverage with each bite of food.</li> <li>• Use artificial saliva.</li> </ul>
Taste changes	<ul style="list-style-type: none"> <li>• Add extra seasoning or condiments.</li> <li>• Emphasize texture in meals, such as crisp lettuce, creamy potatoes, or crunchy toast.</li> <li>• Try new recipes.</li> <li>• Maintain good oral hygiene to help foods taste better.</li> <li>• If metallic taste is a problem, replace metal silverware with plastic.</li> <li>• Sippy cups can be used to divert smells.</li> <li>• Try serving foods cold or at room temperature to decrease their tastes and smells.</li> </ul>

Unusual dislike for meat	<ul style="list-style-type: none"> <li>Replace beef or pork with legumes, eggs, dairy products, fish, or poultry.</li> <li>Marinate meats to tenderize them.</li> <li>Cook meats in sauces or with tomatoes.</li> </ul> <p>Eat meats cold or at room temperature.</p>
Increased likeness for tart flavors	<ul style="list-style-type: none"> <li>Add lemon juice or vinegar to foods.</li> <li>Drink tart beverages, like 100% grapefruit juice and cranberry juice.</li> </ul>
Poor appetite	<ul style="list-style-type: none"> <li>Eat during best times, when feeling hungry.</li> <li>Eat foods you like at any time during the day – for example, try your favorite breakfast foods for dinner.</li> <li>Choose foods that are easy to prepare and eat.</li> <li>Eat smaller, more frequent meals.</li> <li>If liquids are more tolerable than solids, consume nutritionally adequate, high-calorie liquids.</li> <li>To help prevent feeling full early, avoid too many liquids with meals.</li> <li>Eat foods that are nutrient-dense.</li> <li>Be physically active, which may serve as an appetite stimulant.</li> <li>Eat in a pleasant environment. If possible, remove caretaking items like bedpans that people would not want to eat around.</li> </ul>
Difficulty swallowing or chewing	<ul style="list-style-type: none"> <li>Choose soft, moist, or blended foods that are easy to chew.</li> <li>Alter foods and drinks.</li> <li>Use a blender.</li> <li>Double swallow for safety. Drink with a straw.</li> <li>Add sauces or liquids to help swallow.</li> </ul>

## Cancer and Nutrition: Guidance Before, During, and After Treatment

### Before Cancer Treatment

- Make sure your body is well-nourished before treatment begins.
- Plan ahead and stock your kitchen with foods you can easily prepare.
- Cook in advance, freezing meal-sized portions.

- Stock nutritious snacks in case you do not feel like preparing a meal, including snacks you can eat even when not feeling well.
- Have a support group ready to help with preparing meals and grocery shopping.
- Look into a grocery delivery service for your home.

## **During Cancer Treatment**

- Eat a healthy diet rich in nutritious foods to help your body function at its best.
- Between treatments, nourish your body well when an appetite is present.
- Incorporate lots of whole, plant-based foods, such as legumes, whole grains, vegetables, and fruits.
- Maintain a healthy weight and remain physically active.
- Be patient when coping with side effects such as changes in taste preference and the loss of taste and smell.



## **After Cancer Treatment**

- Cancer survivors are at an increased risk for developing other cancers; therefore it is important to minimize one's risk through a nutrient-dense diet, healthy weight maintenance, and living a physically active lifestyle. For more information, see fact sheet [9.313 Diet and Cancer Prevention](#).
- Following the USDA Dietary Guidelines is recommended for proper nourishment, which can help rebuild strength after treatment.

## **Additional Resources**

Keep the doctor informed of diet problems, treatment difficulties, and changes in condition. Hospital registered dietitians and those in private practice can help with dietary problems. They help patients better understand the effects of cancer and its treatment may have on diet.

The American Cancer Society can provide names of support groups or other services, such as Meals on Wheels, available to cancer patients in the community. Contact the American Cancer Society at: 1-800-227-2345, or visit their website at: [www.cancer.org](http://www.cancer.org).

The National Cancer Institute offers a helpful booklet called *Eating Hints for Cancer Patients: Before, During, and After Treatment*. This document can be accessed online at:

[www.cancer.gov/cancertopics/coping/eating-hints](http://www.cancer.gov/cancertopics/coping/eating-hints). Free copies can be obtained by calling 1-800-638-6694.

The Oncology Nutrition Dietetic Practice Group of the Academy of Nutrition and Dietetics: [www.oncologynutrition.org](http://www.oncologynutrition.org)

For additional help and information, call the Cancer Hotline at 1-800-4-Cancer.

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