

# Cancer

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## Overview

Cancer refers to a group of more than 100 diseases that are characterized by impaired cellular regulation, resulting in the uncontrolled growth and spread of abnormal cancer cells. Cancer is the second most common cause of death in the United States. Over 1 million people get cancer each year in the U.S. and survival rates vary significantly depending on the type and stage of the cancer. Although certain contributory causes of cancer, such as age, gender, and family history are fixed, a range of modifiable lifestyle and environmental factors can significantly reduce the risk for developing cancers. According to the World Cancer Research Fund, between 30 and 50% of all cancer cases are preventable. Research shows that by achieving and maintaining a healthy weight, eating a balanced diet, avoiding tobacco exposure, and getting regular exercise you can help provide your body with the necessary tools to fight cancer and minimize the side effects from treatment.

## Nutrition and Cancer

Nutrition interventions for cancer patients are highly individualized and are dependent on both the type of cancer you have and your treatment plan. Cancer treatments include radiation, chemotherapy, hormone therapy, immunotherapy, and surgery. While all these treatments kill cancer cells, they also damage healthy cells in the process and can result in side effects that affect dietary intake, often leading to malnutrition. The predominant role of nutrition therapy is to help patients maintain a healthy body weight and ensure adequate nutritional intake that can support repair, recovery, and healing. During cancer treatment your body often needs extra calories and protein to help you maintain your weight and aid in the recovery process. Speak to your health care provider or registered dietitian as your diet may need to be modified to help you withstand the effects of your cancer and its treatment.

## Suggestions to Ensure Adequate Nutrition

### Tips for Managing Common Treatment Side Effects

#### Nausea & Vomiting

- If you are vomiting, do not eat or drink until it has stopped.
- Once vomiting stops, try small amounts of clear liquids, progress to juice or Gatorade, and then try soft and bland foods such as a banana, oatmeal, or plain yogurt.
- Nausea is worse on an empty stomach so small, frequent meals may be better tolerated.
- Eat and drink slowly.
- Foods that tend to be better tolerated: toast, crackers, yogurt, cream of wheat, oatmeal, boiled potatoes, rice, noodles, and clear liquids such as broth.
- Suck on hard candies (e.g. peppermints or lemon drops) if you have a bad taste in your mouth.
- Eat foods cold or at room temperature.
- Avoid fatty, greasy, or fried foods and foods that are very sweet, spicy, or have strong odors.
- Drink fluids between meals to avoid feeling overly full.
- Do not lie flat for at least 2 hours after eating.
- Avoid eating in a room that is stuffy or warm.

# Cancer

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## Diarrhea

- Drink plenty of decaffeinated liquids (e.g. water, sports drinks) to prevent dehydration.
- Replace electrolytes with diluted juice, broth, Gatorade, Pedialyte, or coconut water.
- Eat small, frequent meals.
- Choose a bland diet of plain, low fiber binding foods that can help reduce diarrhea.
- Well tolerated foods include: bananas, rice, applesauce, bread, mashed potatoes, white rice, noodles, potatoes, farina or cream of wheat, eggs (not fried), smooth peanut butter, white bread, skinless chicken, fish, tofu, or eggs.
- Avoid high fiber vegetables such as broccoli, corn, dried beans, cabbage, peas, and cauliflower as they may not be tolerated.
- Avoid greasy, fatty, or fried foods as well as raw vegetables and fruits.
- Avoid caffeine, alcohol, and smoking tobacco.

## Constipation

- Increase fiber consumption by eating a diet high in fruits, vegetables, whole grains, beans, legumes, and nuts.
- Strive for 5-8 servings of fruits and vegetables per day.
- Try eating prunes or mixing ground flaxseeds or chia seeds into foods.
- Drink warm beverages like coffee, tea, and warm prune juice to stimulate bowel activity.
- Increase fluid intake. Aim for eight to ten 8-ounce glasses of water per day.
- Increase physical activity.

## Loss of Appetite or Unintentional Weight Loss

- Eat small, frequent meals and snacks instead of 3 large meals per day.
- Eat “by the clock” (every 2-3 hours) instead of waiting for natural hunger cues.
- Prioritize energy dense, high protein foods and save soups and salads for the end of the meal. Energy dense, high protein foods include: nuts, nut butters, eggs, milk, cheese, and yogurt.
- “Fortify” foods to maximize nutrient density by adding cheese, oil, cream, sour cream, silken tofu, yogurt, avocado, or peanut butter.
- Avoid food that will cause a feeling of fullness such as carbonated beverages and fatty foods.
- Carry pre-portioned snacks and high calorie beverages to be able to eat on the go.
- Drink beverages between meals instead of with meals to prevent early fullness.
- Drink high calorie, high protein drinks such as milkshakes and commercial liquid supplements like *Ensure* or *Boost*.
- Make your meals attractive. Create a pleasant, relaxed eating environment and eliminate offensive smells.
- Increase physical activity. Exercise lightly or take a walk before meals to increase your appetite.

## Difficulty Swallowing

- Try bland, moist, easy to chew and swallow foods such as: bananas, applesauce, watermelon, cottage cheese, yogurt, mashed potatoes, noodles, custards, puddings, gelatin, scrambled eggs, and oatmeal.
- Cook foods so they are soft and tender, especially meat and vegetables.
- Cut food into small pieces or puree in a food processor or blender.
- Add broth, sauces, gravies, spreads, and marinades to add moisture.

# Cancer

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- Avoid spicy, acidic, salty, or rough textured foods.
- Try very cold foods. Add ice to milk and milkshakes.
- Drink small amounts of high calorie supplements if unable to meet nutrition needs.
- Chew food well to ease swallowing.
- Maintain meticulous oral hygiene to minimize bacterial growth.
- Consult a Speech and Language Pathologist to determine the extent of swallowing difficulty.

## Change in Taste and Smell

- Try tart foods, like green apple, pickles, sauerkraut, vinegar, yogurt, lemon or BBQ sauce to brighten flavors.
- Try flavorful sauces and seasonings (e.g. garlic, onion, ginger, herbs, spices, citrus zest) with meals to provide depth of flavor
- Add fat (olive oil, butter, cheese, cream) to carry flavors and improve mouthfeel.
- If sweet foods taste too sweet, try salty, bitter or sour foods.
- If foods taste too salty, bitter, or sour, add maple syrup, honey, or fruit to calm the harsh flavors.
- Change the temperature of foods to minimize smell and “off” tastes. Hot food typically has a stronger smell and taste, try serving foods cold or at room temperature.
- Rinse mouth with water or baking soda and salt solution to “cleanse the palate”.
- Avoid metal utensils, cookware, and containers if they produce a metallic taste. Try plastic utensils, chopsticks, glass, wood or non-stick kitchen ware.
- Have caregivers prepare food in a separate room from the patient to avoid off-putting smells.
- Try eating Miracle Berry fruits. They make tart foods taste sweet.
- Ask your doctor about anesthetic lozenges and sprays that can numb your mouth and throat for you to eat meals.

## Tips to Increase the Calorie and Protein Content of Food

- Include foods that are high in protein and calories such as: beans, chicken, meat, fish, yogurt, and eggs.
- Add cheese to sandwiches, soups, eggs, noodles, casseroles, vegetables, and potatoes.
- Add cream sauces to vegetables and other dishes. Use whole milk in place of water.
- Add nuts, seeds, or wheat germ to casseroles, fruit, ice cream, yogurt, cookies, pancakes, and muffins, or eat separately as a snack.
- Spread nut butters (e.g. peanut butter, almond butter) on toast, or add to shakes, dessert mixes, or ice cream. Nut butter also make a great dip for fruits and vegetables.
- Add chopped eggs to dishes when possible. Add extra egg whites to omelets and batters.

## Importance of Food Safety

When you have cancer, or are undergoing treatment, your immune system becomes weak. Be especially careful when buying foods, preparing meals, and dining out in order to prevent food borne illnesses. Following food safety guidelines reduces your risk of exposure to bacteria and other organisms that could multiply and cause serious infections.



# Cancer

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## Make sure to:

- Wash hands frequently
- Keep raw meats separate from produce and ready-to-eat foods
- Cook food to proper temperature
- Refrigerate food promptly, the temperature should be below 40 °F
- Store foods appropriately and consume leftovers within a few days
- Take care when eating at restaurants, especially salad bars, delis, and buffets

## Nutrition and Lifestyle Guidelines for Cancer Survivors

- Aim to achieve and maintain a healthy weight.
- Eat a variety of foods from the major food groups. Use Choose My Plate to guide you in creating balanced meals. [www.choosemyplate.gov/](http://www.choosemyplate.gov/)
- Aim to eat at least 5 portions of non-starchy vegetables and fruits per day and try to eat whole grains or legumes (e.g. beans, lentils) with most meals.
- Limit consumption of red meats (such as beef, pork, and lamb) and processed foods.
- Avoid sugary drinks and foods with added sugar.
- If consumed at all, limit alcohol intake to 1 drink per day for women and 2 drinks per day for men.
- Don't use supplements to protect against cancer. Speak to your registered dietitian to discuss whether a supplement is necessary for you.
- If you are pregnant, it is best for mothers to breastfeed exclusively for up to 6 months if possible and then add other liquids and foods.
- Aim for at least 30 minutes of physical activity every day. Avoid a sedentary lifestyle.
- Avoid tobacco.

*Revised February 2019.*