

Nutrition Tips for Cancer Patients

Nutrition

Nutrition is of a vital importance to cancer patients. In addition to being affected by cancer itself and its treatments such as surgery, chemotherapy and radiotherapy, nutritional status also affects the disease's progression and prognosis. Your Dietitian will assist you in determining your specific nutritional goals and will provide the various means and possible solutions to attain it. Adequate nutritional status will lead to the following:

- Better response to cancer treatments
- Better handling of cancer treatment related complications
- Decreased onset and degree of experienced complications during the course of treatment
- Better Quality of life
- Decreased risk of acquired infections
- Decreased hospital stay
- Replenishment of nutritional deficiencies
- Maintenance of stable weight and energy
- Decreased fatigue
- Accelerated healing and recovery process

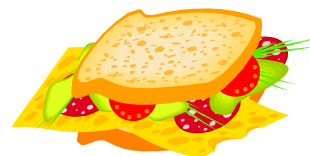
Some of the most common side effects are: weight loss, decreased appetite, taste alterations, mouth dryness, mucositis (oral ulcers) nausea, vomiting, diarrhea, constipation, dehydration, difficulties in swallowing and neutropenia. The following guide provides nutritional tips for the management of each of these symptoms in an attempt to maximize your intake and nutritional status and help you to cope with the treatment's side effects.

Remember, your Dietitian is the best source of information and support to optimize your nutritional status and improve your quality of life.

Nutritional Tips for Management of Weight Loss and Decreased Appetite

- Plan your daily meals ahead of time
- Eat small frequent meals, high in calories and proteins
- Get some help in food preparation

- Increase the caloric and protein content of your food (consult your dietitian for tips to achieve that)
- Avoid drinking during eating
- Pre-prepare your preferred foods in small quantities ahead of time
- Try to achieve at least 1/3 of your daily caloric and protein requirements at breakfast
- Increase your intake of snacks in between meals
- Increase your intake of preferred foods
- Try new recipes for food items and desserts
- Always maintain oral and dental hygiene
- Consult your dietitian for the possible use of nutritional supplements to aid your intake



Nutritional Tips for Management of Taste Alterations

- Eat small frequent meals, high in calories and proteins
- Eat whenever you feel hungry and don't constrain yourself with specific meal timings
- Use plastic instead of metal utensils for eating if you experience a metallic taste
- Increase your intake of preferred foods
- Get others to prepare your meals
- Try to eat with family or friends
- Try new recipes for food items
- Exchange red meat with chicken, fish, eggs or cheese
- Eat fresh fruits and vegetables instead of frozen or canned if feasible
- Vegetarian dishes can provide you with adequate protein intake if nutritionally well planned (consult your dietitian). For example, dishes that contain lentils, chickpeas...etc)



- Have some sugar-free chewing gum or lemon candies if you experience a bitter or metallic taste
- Add spices and sauces to your food
- Season foods with tart flavors such as lemon wedges, lemonade, citrus fruits, vinegar, and pickled foods
- Rinse your mouth with sodium bicarbonate to enhance taste:
 - $\frac{3}{4}$ teaspoon salt + 1 teaspoon sodium bicarbonate in water
- Always maintain oral and dental hygiene
- Try freezing fresh fruits (for example: oranges, grapes, watermelon...etc) and eat them



Nutritional Tips for Management of Mouth Dryness

- Make sure to brush your teeth and rinse your mouth after each meal and before sleeping
- Drink water frequently to moisten your mouth
- Avoid foods and beverages that contain high amounts of sugar or caffeine
- Avoid rinsing your mouth with alcohol-containing products
- Drink fruit nectars instead of fruit juices
- Use a straw to drink fluids
- Try to eat foods that have a soft texture and moist such as: puddings, ice creams, gelatin
- You can moisten your food with sauces, gravies, soups or yoghurt
- Try to cut food into small pieces before eating and chew them well and slowly
- Try having sugarless chewing gum or lemon/mint candies to increase your salivary production



Nutritional Tips for Management of Ulcers of the mouth, gums or Digestive system (Mucositis)

- Eat soft, easy to chew and swallow foods. For example: banana, cooked apples, pears, peaches, apricot nectar, watermelon, soft cheese, potato puree, macaroni with cheese, custard, puddings, jello, milkshakes, scrambled eggs, cooked oats or wheat with milk, cornflakes with milk, blended vegetables such as carrots or peas, blended meats
- Avoid foods or beverages which are acidic and can irritate the mouth or tissues. For example: citrus fruits or juices (orange, lemon, tangerine...etc), tomato sauce, spicy or salty food, dry or hard foods (raw vegetables, hard toast, crackers)
- Cook the food well to obtain a soft texture
- Cut food items into small pieces
- Use the straw for drinking
- Eat the foods cold or at room temperature since hot foods or beverages will irritate your mouth
- Take good care of your mouth hygiene continuously to avoid bacterial growth
- You can moisten your food with sauces, gravies, or soups
- Increase the caloric and protein content of your food (consult your dietitian for tips to achieve that)
- You can decrease the ulcers pain sensation by using ice cubes or popsicles
- Avoid alcohol, caffeine or smoking
- If mouth ulcers are preventing your chewing or swallowing abilities, try pureed or mashed food items
- Consult your dietitian for the use of nutritional supplements



Nutritional Tips for Management of Nausea

- Try dry food items such as: salted crackers, toast, lemon or lemonade as they may ease the nausea
- Eat frequent and small meals
- Don't lay down directly after eating, keep your head elevated for at least an hour
- Try foods with minimal odors, soft, easy to digest. Avoid foods with high sugar or fat content, or fried or spicy
- Avoid having your meals in a room filled with cooking smells or other odors or with a hot ambiance. The room should be comfortable with adequate ventilation
- Try cold or room temperature foods as this will decrease the odor intensity
- Rinse your mouth before and after a meal
- Try lemon or mint candies to get rid of undesirable mouth tastes
- Cover fluids or beverages that you will have and drink it with a straw
- Have your meals before you reach hunger, as hunger sensation may increase the nauseated feeling
- Avoid combining liquids with food eaten
- Avoid wearing tight clothes
- After vomiting, try to reintroduce food as follows (as tolerated)
 1. 1 teaspoon of clear fluids every 10 minutes
 2. 1 tablespoon of clear fluids every 20 minutes
 3. 2 tablespoons of clear fluids every 30 minutes
 4. full fluids
 5. Foods that are soft on stomach



(Consult your dietitian for food choices to be reintroduced)

- Consult your doctor for prescription of medications to relief nausea or vomiting

Nutritional Tips for Management of Diarrhea

- Increase your intake of fluids, which are of room temperature, throughout the day
- Try to decrease your intake of milk or dairy products to 2 cups per day
- Avoid high fat or fried foods, spicy foods, sweets, raw vegetables or fruits (especially unpeeled ones as they contain a lot of fiber in the peel and seeds)
- Avoid high-fiber foods such as whole grain breads and cereals, raw vegetables, beans, nuts, seeds, popcorn, and fresh and dried fruit
- Try to eat foods containing soluble fibers: cooked apples, bananas, oats, rice, canned fruits (with no added sugars)
- Avoid gas-producing foods or beverages such as: carbonated beverages, gas-producing vegetables (such as cabbage), legumes, gum
- Decrease your intake of sweets or candies containing sugar alcohols (sorbitol)
- Eat food items high in sodium or potassium: bananas, canned peaches, boiled or mashed potatoes (consult with your dietitian)
- Avoid caffeine containing foods or beverages such as: chocolate, coffee, carbonated soda beverages
- Drink at least 1 cup of fluids after each bowel movement
- Consult your doctor for possible use of antidiarrheic medications



Nutritional Tips for Management of Constipation

- Include high fiber foods gradually into your daily meals with adequate fluid intake

- Drink 8-12 cups of fluid per day. The following might be beneficial: prune juice, lemonade, warm juices
- Introduce 2 tablespoons of wheat bran into your food over 3 days, then add an additional tablespoon daily until constipation resolves (don't exceed 6 tablespoons of wheat bran). Wheat bran should be taken with good amounts of fluids
- Maintain a regular exercise such as walking
- Avoid gas-producing food items
- Try to have a regular meal pattern with regular timings
- Consult with your doctor for use of laxatives
- High fiber sources:
 - * Legumes (chickpeas, beans, lentils...etc)
 - * Whole wheat or oats
 - * Vegetables and fruits with peels
 - * Foods baked with bran or whole wheat
 - * Dried prunes or prune juice



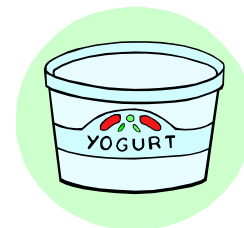
Nutritional Tips for Management of Dehydration

- Drink 8-12 cups of fluid per day, even if not feeling thirsty
- Always keep a bottle of water with you when you go out
- Include in your daily meal pattern food items with high water content such as: soups, gelatin, ice creams
- Minimize your intake of caffeine containing foods or beverages, such as: tea, coffee, carbonated beverages
- Drink your fluids after or in between meals
- Consult your doctor for the use of medications for relief of nausea, vomiting or diarrhea to prevent dehydration



Nutritional Tips for Management of Difficulties in Swallowing

- Drink 6 – 8 cups of thickened fluids per day
- Eat frequent and small meals
- Consult your dietitian for the use of nutritional supplements
- Eat thick and easy to swallow foods such as: puddings, yoghurt, blended vegetables or fruits, blended thick soups, boiled or fried eggs, semolina with milk, honey or jam
- Try cutting foods into very small pieces or even blend them as tolerated to facilitate swallowing
- Try to thicken food with the following items:
 - Gelatin
 - Cornstarch or flour
 - Mashed vegetables and potatoes
 - Cooked rice



Nutritional Tips for Management of Reduction in White Blood Cells (Neutropenia):

- Check expiry dates of food bought
- Avoid buying bloated or bruised canned food
- Use different cutting boards for raw fruits, vegetables or meats
- Defrost frozen food in the fridge overnight and not at room temperature
- Defrosted food items should be directly cooked
- Cooked foods should be refrigerated in a maximum of 2 hours from cooking and discarded if not eaten after 24 hours

- Hot food items should be kept hot (60 – 70 °C) whereas cold foods should be kept cold (4 °C)
- Avoid raw fruits or vegetables unless sanitized
- Avoid unpasteurized dairy products or raw nuts
- Avoid raw eggs or fish
- Meat, chicken, fish and eggs should be cooked well
- Bottled water should be used for constituting or making beverages
- Salt and spices should be added during the cooking process and not after
- Be cautious about eating from outside home. Avoid buffets and preprepared salads
- Individually packaged foods are preferably to be bought
- Avoid going to crowded places
- Hand washing is the key for preventing bacterial spread