

Strategies for Improving Food Intake During Cancer Treatment

Maintaining adequate nutrition is a crucial part of your cancer treatment. Eating a variety of foods daily from all the food groups will help you obtain the nutrients you need to maintain your strength, feel better during your treatment, and/or heal any post-operative wounds. However, you may have difficulty consuming some foods either due to the cancer itself or to the side effects of treatment. Therefore, you may need to make some changes to improve your food intake based on your symptoms, as described below. To assure nutrient adequacy, you may be requested to keep a food intake log for a Registered and/or Licensed Dietitian to assess.

Nausea and Vomiting

- ✓ Take your prescribed anti-nausea medication 30-60 minutes before eating.
- ✓ Eat slowly and take small bites or sips.
- ✓ Try a clear liquid diet. Liquids such as apple juice, cranberry juice, lemonade, broth, sports drinks, ginger ale, lemon lime soda, popsicles, gelatin, tea or cola are usually well tolerated.
- ✓ Eat dry foods like toast and crackers, especially after waking in the morning, and preferably even before getting out of bed.
- ✓ Eat smaller portions of foods that are low in fat since they are easier to digest and move through the stomach faster, but eat more often to make up for your calorie and protein needs.
- ✓ Drink a commercial supplement such as Ensure® or Ensure® Plus between meals or as a meal replacement to help meet your nutritional needs.
- ✓ Try salty foods like pretzels or crackers.
- ✓ Limit overly sweet or spicy foods.
- ✓ Eat only solids at meals and liquids between meals. Drink fluids 30-60 minutes before or after eating, but make sure to drink enough fluids. Drink an additional 1/2 -1 cup of liquids for each vomiting episode.
- ✓ Do not lie down flat for at least two hours after eating. It may be helpful to rest after eating since activity can slow digestion and increase feelings of discomfort. If you wish to rest, sit down. If you recline, make sure your head is at least four inches higher than your feet.
- ✓ Reduce nauseating aromas. Choose cold or room-temperature foods, avoid highly aromatic foods (like tuna fish), and create plenty of ventilation (open windows and/or fans) when preparing foods.
- ✓ Eat small, frequent meals (every 2 to 3 hours).
- ✓ Wear loose-fitting clothing and breathe fresh, cool air to help relieve symptoms.

- ✓ Experiment with sour foods such as lemons, sour pickles, sour hard candy or lemon sherbet or sorbet. Rinsing your mouth with a mixture of lemon juice and water, or sucking on fresh lemon wedges may be helpful.
- ✓ Enhance the flavor of foods. Add your favorite *mild* spices, sugar or salt to foods, but avoid very spicy foods.
- ✓ Add ginger to foods, a natural remedy for nausea – fresh, crystallized or powdered.
- ✓ Choose foods that you tolerate well—you'll learn by experience.

Taste Alterations

- ✓ Tart foods will enhance flavors (for those without a sore mouth or throat). Try orange juice, pickles, lemons, limes, vinegar, or tomato juice.
- ✓ If you are not tolerating meats very well, try marinating them in fruit juice, sweet wine, Italian dressing, or sweet-sour sauce for more taste; or try meat alternatives such as eggs, cheese, cottage cheese, tofu, vegetarian meat substitutes, yogurt, and peanut butter.
- ✓ Try various seasonings to enhance flavor.
- ✓ Serve foods chilled or at room temperature.
- ✓ Avoid smoking.

Feeling of Fullness

- ✓ Eat several small meals and snacks throughout the day. Try eating every 2 to 3 hours.
- ✓ Increase the volume of food you eat a little each day, gradually working up to your previous intake, which may take several weeks.
- ✓ Limit fried and greasy foods, butter, and rich sauces if they make you feel worse.
- ✓ Make sure that the liquids you drink have nutritional value. Include juices, milk, milkshakes or commercial supplements such as Ensure® or Ensure® Plus. Avoid diet sodas.
- ✓ Limit the amount of liquid you drink with meals to keep from feeling full (unless needed to aid swallowing).
- ✓ Select foods that are more concentrated sources of calories to make every bite count, for example, whole milk, casseroles, bananas, cheese, and cream soups.

Loss of Appetite

- ✓ Eat several small meals and snacks throughout the day. Avoid eating three large meals a day.

- ✓ Keep nutritious snacks available at all times, even when on-the-go. Leftovers make good snacks. Eat a snack before going to bed.
- ✓ Make every mouthful count. Eat mostly high protein, high calorie foods. To add calories and protein easily, mix powdered milk into foods and beverages or drink commercial supplements, such as Ensure® Plus or Ensure® High Protein between meals.
- ✓ Avoid foods that may be gas forming such as salads, cabbage, broccoli, beans and legumes, carbonated beverages, or beer.
- ✓ Avoid drinking fluids with meals. Fluids can produce an early feeling of fullness in your stomach. Limit fluids with meals to 1/2 cup and drink other liquids two hours before or after a meal.
- ✓ Avoid non-caloric liquids such as coffee, tea, water, diet drinks, broth, etc.
- ✓ Avoid foods with strong odors. Choose cold or room-temperature foods and create plenty of ventilation (open windows and/or fans) when preparing foods.
- ✓ Serve all foods attractively and in a pleasant environment. If desired, eat meals with family and friends. Soft music and a glass of wine may help relax you and stimulate your appetite. Remove all unpleasant stimuli from the environment at mealtime such as the emesis basin, bedpan, loud music, or the TV.
- ✓ Eat when you are hungry even if it is not mealtime.
- ✓ Use medications as recommended by your physician.

Sore Mouth and Throat/ Swallowing Difficulty

- ✓ Try a softer diet. Use your favorite foods, but make changes that will soften them such as adding extra fluid or cooking longer until a softer texture is achieved.
- ✓ Use a blender. If you like vegetable soups, for example, first heat, and then blend. Food tastes better if it is cooked before being blended and it is easier to blend warm food. A blender is also great for making smoothies: try a peeled banana, vanilla yogurt, peanut butter, and milk powder or instant breakfast powder.
- ✓ Use margarine/butter, gravies, or cream sauces on meats and vegetables.
- ✓ Choose soft foods such as mashed potatoes, yogurt, scrambled or hardboiled eggs (for egg salad), egg custards, ricotta cheese, milkshakes, puddings, gelatins, cooked cereals, or noodle casseroles (macaroni & cheese).
- ✓ Make sure stews, casseroles, and simmered foods are made with extra liquids and cooked longer to make them softer.

- ✓ Avoid acidic foods such as vinegar, citrus fruits, and tomatoes, which can sting and burn. Try fruits that are low in acid such as bananas and canned pears or peaches; try peach, pear and apricot nectars instead of fruit juice.
- ✓ Avoid very salty foods.
- ✓ Avoid hot spices such as pepper, chili powder, nutmeg, or cloves.
- ✓ Avoid rough or coarse foods such as raw fruits or vegetables and bran.
- ✓ Avoid dry foods such as toast or hard breads unless you soak them first (in a gravy or sauce, for example), as they may scratch your mouth and throat.
- ✓ Eat foods at room temperature or cold rather than piping hot.
- ✓ Liquid nutritional supplements such as Ensure® or Ensure® Plus can be used to provide additional calories and nutrients.
- ✓ Use medications as recommended by your physician.

Diarrhea

- ✓ Eat less fiber, which is the fibrous material in food that is not digested and is passed in bowel movements. If your intestines are irritated, the fiber in your regular diet may be too much for them.
- ✓ Use only cooked fruits and vegetables, avoiding those that are raw.
- ✓ Choose refined grains and cereals such as white bread, white rice, corn flakes, and cream of rice. Avoid high fiber cereals (e.g., bran), and whole grains such as cooked oats, brown rice, and whole wheat bread.
- ✓ Avoid foods with seeds such as berries and popcorn.
- ✓ Avoid foods with tough skins or stalks such as cooked dry beans and legumes, broccoli, celery and corn.
- ✓ Peel tough skins from fruits such as apples and pears before eating.
- ✓ Avoid fatty, highly spiced foods if you find they cause you problems.
- ✓ Potassium is an important mineral in your body and is lost in great quantities when you have diarrhea, which can leave you feeling very weak. Be sure to eat foods that are high in potassium such as: bananas, apricot or peach nectar, fish, potatoes, and meat. If you are unable to eat these foods, your physician may prescribe potassium supplements.
- ✓ Eat several small meals and snacks throughout the day. Avoid eating three large meals a day.
- ✓ Drink liquids between meals instead of with them. Make sure you drink plenty of liquid, since diarrhea causes you to lose fluids and electrolytes (sodium and potassium). Try juices diluted with water, but avoid milk or milk products until the diarrhea has stopped.
- ✓ Liquids should be consumed at room temperature or warmed.

- ✓ Decrease or avoid milk and milk products if they are bothersome. Try lactose-free or lactose-reduced products such as Lactaid®. Some commercial supplements such as Ensure® are also lactose-free.
- ✓ Boiled rice, cream of rice cereal, bananas, dry toast, and potato may help control diarrhea.
- ✓ Use medications as recommended by your physician.

Dry Mouth

- ✓ A lack of saliva may make meat, bread products, and other dry foods difficult to eat. Serve these foods with extra gravies or sauces, or soak them in liquids (dip toast or cookies in tea, cocoa or milk, for example).
- ✓ Drink liquids along with meals and between meals to keep daily fluid intake as high as possible.
- ✓ Eat foods with high water content as tolerated such as watermelon, cantaloupe, honeydew melon and grapes.
- ✓ Limit caffeine-containing products and alcoholic beverages, which are diuretics.
- ✓ Chewing gum and sour candies may stimulate the flow of saliva (sugar-free to reduce the risk of dental cavities).
- ✓ Lemons contain citric acid, and can stimulate saliva. Unless you have a sore throat or mouth, try tea or water with lemon, lemonade, lemon candy, or simply suck on a fresh lemon wedge.
- ✓ Suck on frozen grapes, popsicles or ice chips.
- ✓ Avoid mouthwashes and mouth rinses that contain alcohol.
- ✓ Rinse mouth frequently with "normal" saline solution (1-quart water and 1/2 to 3/4 teaspoon salt).
- ✓ Artificial saliva or oral moisturizers may be helpful. Ask your physician.
- ✓ Avoid licking your lips. This increases dryness and chapping.

Weight Loss and Muscle Wasting

- ✓ Make every mouthful count. Eat mostly high protein, high calorie foods.
- ✓ Eat several small, calorie-dense meals and snacks throughout the day. Try eating every 2 to 3 hours. Do not skip meals.
- ✓ Add calories and protein easily by mixing powdered milk into beverages and foods such as meatloaf, casseroles, soups, stews, mashed potatoes, and hot cereals.
- ✓ Always think about what you can add to foods to boost calories and/or protein such as: peanut butter, milk powder, instant breakfast powder,

chopped nuts/seeds, dried fruit, margarine, sour cream sauce, gravy, mayonnaise, yogurt, cheese and eggs.

- ✓ Drink commercial supplements, such as Ensure® Plus or Ensure® High Protein between meals.
- ✓ Use higher calorie versions of foods such as whole milk, yogurt, or ice cream with higher fat content.
- ✓ Snack between meals (choose foods like nuts, peanut butter, and crackers, cheese, ice cream, yogurt).

Constipation

- ✓ Add fiber to your diet by increasing your intake of raw fruits and vegetables, whole grains and cereals, beans and legumes, and nuts.
 - Make substitutions: choose whole wheat bread vs. refined bread; cooked oats vs. cream of rice; raisin bran vs. corn flakes; fresh pear vs. canned pears; raw broccoli vs. cooked broccoli; or navy bean soup vs. cream of mushroom soup.
 - Add fiber-rich toppings: garbanzo beans or nuts on salads; spinach dip on raw vegetables; unprocessed bran or ground flax seed on yogurt; and dried cranberries or raisins on cereal.
- ✓ Increase fluid intake:
 - Drink liquids along with meals and between meals to keep daily fluid intake as high as possible.
 - Eat foods with high water content such as watermelon, cantaloupe, honeydew melon and grapes.
- ✓ Try to keep active by walking regularly (or engaging in some other physical activity you enjoy), even for just 10 minutes at a time.
- ✓ Use medications as recommended by your physician.

Lactose Intolerance

- ✓ Avoid your normal usage of milk and milk products containing lactose if you develop abdominal cramping, gas, or diarrhea symptoms. You might be able to tolerate small amounts of ice cream, yogurt, or cheeses.
- ✓ Use lactose-free milk substitutes such as soy milk, non-dairy creamers, or lactose-free milk.
- ✓ Try over-the-counter pills for improving your tolerance of dairy products (Lactaid®).
- ✓ Try lactose-free, commercial liquid nutritional supplements such as Ensure® or Ensure® Plus.

Thick Saliva

- ✓ Try rinsing your mouth with baking soda and salt water (1 quart water with 1 teaspoon of baking soda plus 1 teaspoon of salt) or try a mixture of club soda with lemon juice.
- ✓ Drink plenty of fluids to loosen mucous. Drink fluids along with meals and between meals. Drink at least 8-12 cups of liquid each day.
- ✓ Try gargling with ginger ale if mucous sticks in your throat.
- ✓ To thin thick saliva secretions, try very sour (lemon) or very sweet foods to help stimulate saliva flow.
- ✓ Use medications as recommended by your physician.

Gas Problems

- ✓ Avoid gas-producing foods such as cabbage, carbonated beverages (including beer), onions, green peppers, Brussels sprouts, broccoli, cauliflower, cucumbers, and dried beans and peas.
- ✓ Eat slowly and chew well.
- ✓ Try anti-gas medications as directed by your physician.

REFERENCES

Adapted with permission from: *Nutrition for Cancer Patients*, The Florida Medical Nutrition Therapy Manual 2005 Edition. Florida Dietetic Association, 2005.

OTHER REFERENCES

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