

Healthy Eating for Head and Neck Cancer Survivors

Head and Neck Cancer Treatment

This handbook lists common symptoms that head and neck cancer survivors may experience, tips to combat these symptoms, and recipes and suggestions to promote a healthy lifestyle.

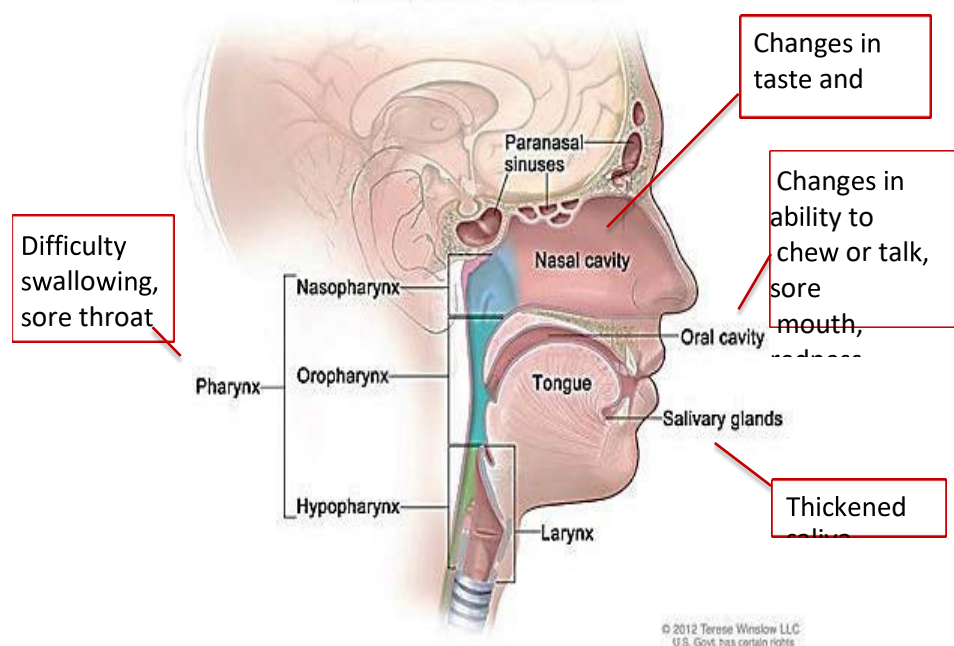
Head and neck cancer patients:

- Have different diet needs, especially during treatment
- Need to increase calorie and protein intake before, during, and after treatment to maintain strength and rebuild tissues
- May have eating challenges that make it difficult to get the calories and protein they need, which may cause unintended weight loss

Eating well during treatment and recovery is important to feel better, keep up strength and energy, maintain weight and nutrition health, minimize side effects, and heal as quickly as possible.

However, foods and beverages included in this handbook may need to be eliminated or minimized based on your swallowing capability as determined by the speech pathologist and/or surgeon or oncologist.

Head and Neck Cancer Regions



Side Effects of Head and Neck Cancer Treatment

Treatments may vary depending on the location of the tumor, stage of the cancer, and age and health of each patient. These treatments are designed to destroy the cancer cells, but they can also damage healthy cells, resulting in changes in eating (appetite, digestion, mouth soreness) and nutrition-related side effects.

Side Effects of Surgery

- Changes in taste and smell
- Dry mouth
- Sore mouth
- Difficulty chewing and swallowing

Side Effects of Radiation Therapy

- Loss of appetite
- Changes in taste and smell
- Dry mouth or thick saliva
- Sore mouth
- Difficulty chewing and swallowing
- Sore throat
- Nausea
- Fatigue

Side effects of Chemotherapy

- Loss of appetite
- Changes in taste and smell
- Sore mouth
- Nausea
- Vomiting
- Constipation
- Diarrhea
- Fatigue

Other common side effects

- Early satiety
- Weight loss

How to Manage Side Effects

Loss of Appetite

Loss of appetite, or anorexia, is when you do not feel like eating a lot or eating at all. Not eating can contribute to weight loss, weakness, and fatigue. It is important to eat as much as possible during this time to maintain a healthy body weight and adequate energy levels.

Tips if You Experience Anorexia

- **When you feel hungry, consume high calorie foods**
- **If possible, eat more at the start of the day, as appetite tends to decrease as the day progresses**
- **Eat foods high in protein and add “extras” to meals (see Foods to Increase Calorie Intake (p.8) and Foods to Increase Protein Intake (p. 9)**
- Prepare large quantities of meals when possible and freeze them, or purchase prepared meals
- Keep a large quantity of favorite foods and easily accessible snacks available
- Try eating foods cold or at room temperature
- Eat a snack before bedtime
- Try an oral nutrition supplement when eating is difficult (p. 20)
- Look into organizations that can deliver meals, like Meals on Wheels
- Invite family or friends to meals to make eating more enjoyable

Early Satiety

Oftentimes, because stomach emptying is delayed, you may be hungry but become full, or satiated, after eating very little. This is very common, but it can result in weight loss and compromise adequate nutrient intake.

Tips to Reduce Early Satiety

- Try having five or six small meals per day or three larger meals with several snacks
- Eat nutrient dense snacks and meals; foods like nuts, seeds, and cheeses
- Liquids are filling, so try to drink beverages after meals
- Maintain a supply of shelf-stable products such as pudding, canned fruit and soup, and oral nutrition supplements
- Eat slowly and pause during meals to avoid feeling too full too quickly
- Do not force meals

Weight Loss

Weight loss is a common problem among cancer patients. Choosing foods with high calorie and protein content is a great way to combat weight loss. Portioning out these foods into several small meals during the day, about 2 to 3 hours apart, makes it easier to eat and digest. However, it is important to eat as much as you want when you feel hungry to prevent weight loss. The tables below provide foods that will increase calorie (p. 8) and protein (p. 9) intake.

Foods to Increase Calorie Intake	
Milk Products (choose high fat milk products)	Use whole milk or heavy cream in puddings, custards, milkshakes, smoothies, or ice cream – top with whipped cream Add sour cream to mashed or baked potatoes Add cream to soups, sauces, and gravies Make yogurt based dips
Cheese (choose high fat cheeses)	Melt on muffins, bread, tortillas, meats, fish, vegetables, eggs, stewed fruit, pies, omelets Grate to include with soups, sauces, casseroles, and vegetable, potato, rice, and noodle dishes
Eggs	Add to salads, casseroles, and vegetable dishes Add extra eggs to omelets, quiches, puddings, custards, scrambled eggs, and batter
Dried and canned fruit (choose fruit canned in heavy syrup)	Chop and add to salads, oatmeal, muffins, cookies, pies, breads, cakes, rice, noodle, and vegetable dishes, puddings, and stuffing Add to smoothies or eat with ricotta cheese or yogurt
Fats	Use oil or butter to cook or fry foods Add butter to bread, croissants, muffins, pancakes, and waffles Drizzle oil on salads Add mayonnaise to dishes
Extras	Add syrup to pancakes or waffles Add nut butters to smoothies, shakes, muffins, and croissants Add chocolate sauce to ice cream, smoothies, puddings, and custards Add jelly and honey to bread, croissants, muffins, pancakes, and waffles
Oral supplements	Mix Ensure®, Boost®, or another commercially available, high calorie, high protein supplement with oatmeal, cereals, smoothies, and shakes

Foods to Increase Protein Intake	
Hard or semisoft cheese	Melt on muffins, bread, tortillas, meats and fish, vegetables, eggs, stewed fruit, pies, and omelets Grate cheese and add to soups, sauces, casseroles, vegetables, potatoes, rice, and noodle dishes
Cottage and ricotta cheese	Mix with fruits and vegetables Add into casseroles, noodle dishes, and eggs
Whole milk	Add to hot and cold cereals, soups, cocoa, pudding, shakes, and smoothies Use in place of water in drinks and cooking
Ice cream and yogurt	Add to milkshakes, desserts, soft or cooked fruit, and smoothies
Eggs	Add to salads, casseroles, and vegetable dishes Add extra eggs to omelets, quiches, puddings, custards, scrambled eggs, and batter
Nuts, peanut butter, and nut butters	Finely chop nuts and add on salads or casseroles Blend with smoothies or shakes Include nut butters on bread, muffins, fruit and vegetable slices, and ice creams
Beans, legumes, and tofu	Add to casseroles, soups, pasta and salad dishes, and mash with cheese and milk
Meat, poultry, and fish	Chop and add to casseroles, soups, salads, sauces, gravies, omelets, quiches, stuffing, and mashed potatoes

Changes in Taste and Smell

Changes in taste and smell can remove the pleasure associated with eating. Bitter, metallic, or sour tastes in the mouth are common. These unpleasant side effects often reduce the desire to eat. Creative food preparation is important to lessen these negative changes in taste and smell. Practicing proper dental hygiene can also improve food taste.

Tips if You Experience Changes in Taste and Smell

- Experiment with various spices and flavorings, such as different herbs, sauces, gravies, and broths
- Use fruit juice and fruit-based sauces to flavor foods

- Try foods that are sweet or sour, such as pickles and relishes; try adding lemon to water
- Eat foods that smell and taste good, even if it means eating the same foods repeatedly
- Dilute overly sweet fluids with water or seltzer water
- Use a straw to drink beverages
- Make meals attractive with different colored foods and garnishes
- Eat in a room free of strong odors
- Rinse mouth with mix of baking soda and water
(1/4 teaspoon baking soda in 1 cup water)

Tips to Eliminate Metallic and Salty Tastes

- Use sugar in more foods
- Eat meals cold or at room temperature
- Use plastic utensils
- Try marinating meat, chicken, and fish

Dry Mouth and Thick Saliva

Dry mouth, or xerostomia, and thick saliva are a result of salivary gland changes during treatment and can be caused by some medications. Dryness experienced can range from mild to severe. Dry mouth can affect speech, taste changes, and swallowing ability and can contribute to dental cavities or mouth infections. Thick saliva can contribute to trouble swallowing, nausea, vomiting, or poor oral intake.

To Improve Dry Mouth

- Drink 8-10 cups (64-80 fluid ounces) of fluids per day
- Eat moist foods—add extra sauce, gravy, butter, and dressing to moisten foods
- Hard candy, frozen desserts, and ice chips may help
- Tart and sweet foods and beverages may stimulate saliva
- Use a straw to drink beverages
- Practice proper mouth care
 - Avoid rinses containing alcohol

To Improve Thick Saliva

- Hydrate to thin saliva and prevent dehydration
(drink a minimum of 64 fluid ounces per day)
- Add broth, sauce, dressing, gravy, oil, or butter to moisten foods

- Eat small, frequent meals
- Try cold blended meals like smoothies, or thinned cereals, such as Cream of Wheat
- Drink warm liquids such as soup or hot chocolate with meals
- Try sour candy drops, sports drinks, lemonade, and popsicles
- Choose cooked dairy items such as pudding and custard and drink clear beverages after consumption of milk or soy based products
- Limit caffeine and spicy foods
- Limit viscous foods, like thick syrups and nut butters
- Practice proper oral health
- Rinse with club soda or baking soda rinse (1/4 teaspoon baking soda in 1 cup water) before and after eating

Sore Mouth

Sore mouth, or stomatitis, can occur with cancer treatment. Liquids and soft, nonirritating, easy to chew and swallow foods are often the best to eat while recovering from sore mouth. The table below provides common soft, very soft, and liquid foods.

Tips to Help with Sore Mouth

- **Drink plenty of liquids and use a straw**
- **Add gravy, sauce, dressing, broth, or oil to foods to increase moistness**
- **Avoid acidic, spicy, salty, alcohol-based, dry, rough, crunchy, or very hot foods**
- Eat or drink small meals every 2-3 hours
- Cold foods may be soothing. Ice chips and popsicles may help numb mouth
- Try mixing foods in a blender or cooking foods until soft and tender
- Cut foods into small pieces and eat with small utensils to limit bite size
- Try rinsing with a baking soda and water solution (1/4 teaspoon baking soda in 1 cup water)
- Practice good oral care

Common Soft, Very Soft, and Liquid Foods	
Soft Foods	Cereal soaked in milk, scrambled eggs, omelets, quiche, pancakes or French toast with butter and syrup Pasta dishes with cream, butter, or cheese sauce Soft bread with butter, hummus, cream cheese, guacamole, egg /tuna salad Chunky soups or stews, baked beans, fish poached or in sauce, ground beef, pork, lamb, chicken, or turkey with gravy or sauce

	Soft cooked vegetables with cream sauce Melon, avocado, bananas, canned fruit in heavy syrup with cottage cheese
Very Soft Foods	Soft boiled or poached eggs, hot cereals such as oatmeal or cream of wheat, yogurt, cottage cheese Broth based soups, cream soups, split pea, lentil, or bean soup, mashed potatoes, mashed or creamed vegetables Cooked puddings, ice cream, sherbet, frozen yogurt, pudding, applesauce, stewed, mashed, or pureed fruits
Liquid Foods	Meal replacement drinks (Boost, Ensure, and other high calorie, high protein, commercially available supplements) Whole or chocolate milk, soy milk, milkshakes or fruit smoothies, yogurt drinks, buttermilk or eggnog, hot chocolate, broth, juice, iced tea, popsicles, Italian ice

Difficulty Chewing and Swallowing

Difficulty swallowing, or dysphagia, may occur depending on the tumor size and location and treatment type. Head and neck cancer survivors may also have difficulty chewing, which can make eating hard foods difficult. Soft or liquid foods may be helpful when it is difficult to chew or swallow (see Common Soft, Very Soft, and Liquid Foods, p. 12). It may be beneficial to choose high-calorie and high-protein oral supplements to maintain nutritional needs (See Oral Nutrition Supplements, p. 20).

Tips if You Experience Difficulty Chewing or Swallowing

- Try smooth, cold foods like yogurt, pudding, ice cream, or frozen yogurt
- Eat soft foods like bananas, peas, soups, stews, pastas, or eggs
- Mash, blend, or puree foods (if you want foods warm, cook before blending or pureeing)
- Add mashed or blended meats and vegetables to casseroles and soups
- Add gravy, dressing, or sauce to food
- Drink small sips of water while eating
- Cut food into very small bites
- Sit upright when eating or drinking
- Avoid overly seasoned, spicy, tart, and acidic foods
- Try thickening agents (such as gelatin, tapioca, baby rice cereal) to help swallow liquids

Sore Throat

A sore throat may make eating certain foods difficult. The best diet for patients with a sore throat is soft, bland, room temperature or cold foods.

Tips if You Experience a Sore Throat

- **Choose foods that are soft or creamy like cream soups, mashed potatoes, cheeses, yogurts, eggs, custards, puddings, soft cereals, milkshakes, and smoothies**
- **Cook fruits and vegetables to make them softer**
- **Add sauces or gravies to make foods more moist, or add foods to soups or stews**
- Blend, purify, or liquefy foods to make swallowing easier
- Try ice chips or popsicles
- Avoid spicy, acidic, salty, or vinegary foods
- Avoid rough textured foods like granola and toast
- Avoid caffeine, tobacco, and alcohol and be aware of mouthwashes that contain alcohol

Nausea and Vomiting

Nausea and vomiting may be related to the cancer, cancer treatment, food odors, pain, fatigue, medication, or stress. Nausea and vomiting can directly follow treatment and occur hours to days after. Feeling nauseous can directly affect your appetite and food intake and can result in weight loss, dehydration, and loss of electrolytes, such as sodium and potassium.

Tips to Prevent Nausea

- Sip fluids slowly and often through the day
- Eat small amounts of food every 1 to 2 hours
- Eat bland, soft, easy-to-digest foods
- Choose cold or room temperature foods to limit smells
- Avoid spicy, greasy, or fried foods and sweet desserts
- Rinse mouth with baking soda water mouth rinse solution (1/4 teaspoon baking soda in 1 cup water)
- Try crystallized ginger or ginger tea, and hard candies like peppermints and lemon drops
- Do not lie down for at least 1 hour after eating. If you need to rest, sit or recline with a raised head

Constipation

Constipation can be an uncomfortable side effect of cancer treatment, resulting from dehydration or lack of fluids, lack of fiber, physical inactivity, and medications.

Tips to Prevent Constipation

- Drink enough fluids, and limit caffeinated beverages
- Choose foods with natural laxative effects like prunes, prune juice, papaya, and rhubarb
- Eat foods with fiber, such as smoothies made with blended fruits and vegetables
- Take a short walk after meals
- Consume meals at regular times each day
- Consume more of the high-fiber foods listed in the table below

High Fiber Foods	
Fruits	Raw and dried fruits Fruit juice with pulp
Vegetables	Broccoli, Brussels sprouts, cabbage, cauliflower, corn, peas, peppers, radishes, and spinach Raw vegetables
Breads, pastas, cereals	Whole wheat, whole grains, brown rice Cracked wheat and bulgur Any bread with dried fruits or nuts Whole grains, bran, shredded wheat, granola, and muesli Any cereal with dried fruits or nuts
Nuts and nut butters	Whole nuts, chunky nut butter
Legumes	Kidney, navy, garbanzo, lima, and pinto beans Split peas, lentils

Diarrhea

Diarrhea can be a side effect of cancer treatment or emotional distress and may be worsened by undergoing more than one treatment at the same time. Diarrhea for more than two days may be reason to contact a doctor. Uncontrolled diarrhea can contribute to weakness, poor appetite, dehydration, and weight loss.

Tips to Prevent Diarrhea

- Choose soluble fiber foods, such as oatmeal

- Limit high insoluble fiber foods, such as whole wheat bread
- Consume foods high in pectin, such as applesauce and bananas
- Remove skins and seeds from fruits and vegetables and cook until soft
- Limit gas forming foods: cruciferous vegetables (such as broccoli), legumes (such as beans or lentils), soda, chewing gum, sugar-free candies, and foods with sugar alcohols
- Avoid deep fried, greasy foods and caffeine
- Limit dairy products
- Make sure to follow food safety tips to prevent foodborne illness
- Check out the low fiber foods listed in the table below

Tips if You Experience Diarrhea

- Eat small, frequent meals and snacks every 2-3 hours
- Replace electrolytes (such as sodium and potassium) and fluids as needed with sports drinks, high-sodium foods like broths or soups, and high potassium foods like fruit juices, bananas, canned fruits, or mashed potatoes

Low Fiber Foods	
Fruits	Bananas, applesauce, canned fruits, cooked fruits without skin or seeds, fruit juices without pulp
Vegetables	Best tolerated: asparagus, green beans, and summer squash Sweet potato without skin
Breads, pastas, cereals	Bread products made with refined white flour, pasta/noodles made with refined flour, white rice Rice Krispies, Corn Flakes, Cheerios, Special K, Golden Grahams, Rice and Corn Chex Oatmeal, Cream of Rice, Cream of Wheat, grits
Nuts and nut butters	Smooth nut butters

Fatigue

Fatigue is the most common side effect of cancer and cancer treatment. It can be attributed to the actual cancer or side effects of treatment like diarrhea, dehydration, or infection.

Tips to Prevent Fatigue

- Rest before eating and when you feel the most tired
- Avoid dehydration and drink plenty of fluids throughout the day

- Eat and drink high calorie, high protein foods and beverages during the day
See Foods to Increase Calorie Intake (p. 8) and Foods to Increase Protein Intake (p. 9)
- Keep meals simple and relaxing
- Ask family and friends for help grocery shopping and preparing food
- Try taking a short walk after eating

Preventing Dehydration with Fluids

It is extremely important to take in enough fluids during cancer treatment and to remember to drink even if you do not feel thirsty. A goal of 8 to 12 cups of water each day is ideal. The minimum amount of fluid that you should drink each day is 8 cups. This amount needs to be increased if you experience any vomiting or diarrhea.

Tips to Increase Fluid Intake

- Take a water bottle with you during the day
- Add fruit or juice to water for flavor
- Eat foods that contain fluids like soups or broths, popsicles, or gelatin
- Drink liquids after and/or between meals
- Replace any liquids and electrolytes lost through diarrhea and vomiting with high-salt foods like soup, broth, or sports drinks and high potassium foods like bananas, orange juice, pineapple juice, tomato juice, or mashed potatoes
- Try clear liquid nutritional supplements
- Limit consumption of caffeine

Alcohol

Alcohol should be avoided. Even the small amounts found in some mouthwashes can irritate mouth sores and make your symptoms worse.

Food Safety

Food safety is an important concern for cancer survivors, particularly during treatment, as the immune system is weakened making it harder to fight infection. Survivors should be careful to prevent infection and foodborne illness, or food poisoning, from harmful bacteria, parasites, or viruses. Follow these steps to ensure food safety:

Clean Wash hands often Wash surfaces often Wash fruits and vegetables	Separate Keep meat, poultry, seafood, and eggs separate from other foods
Chill Refrigerate perishable foods within two hours	Cook Ensure that food is cooked to the proper temperature

Foods to Avoid

- Raw (unpasteurized) foods such as juices, milk and milk products, and honey
- Hot dogs, cold cuts, dry-cured uncooked salami, smoked fish, refrigerated pâté
- Deli prepared salads with egg, ham, chicken, or seafood
- Soft cheeses made from unpasteurized milk
- Unwashed fresh fruit and vegetables
- Raw or undercooked meat, poultry, and shellfish
- Types of raw and uncooked fish that may contain mercury (King mackerel, marlin, shark, swordfish, tilefish, and tuna)
- Raw or undercooked eggs or food made with raw egg
- Food from bulk bins and salad bars

Tips to Prevent Foodborne Illness

- Wash hands frequently
- Do not buy swollen, dented, or damaged cans
- Check expiration date on packaging
- Cook foods immediately after thawing
- Buy individually packaged foods to decrease amount of leftovers

Symptoms of foodborne illness include diarrhea, fever, nausea, vomiting, and stomach cramps or pain.

Physical Activity

Exercise during cancer can reduce fatigue and anxiety and improve self-esteem. It is a safe and effective way to help heart and blood vessel fitness, muscle strength, and overall health. Cancer survivors should try to personalize a physical activity regimen to fit their needs and capabilities.

Tips to Increase Daily Physical Activity

- Start slowly – even the shortest amount of activity makes a difference
- Take short walks or try other short exercises throughout the day
 - Riding your bike, doing household chores, and playing with your children or pets are all ways of staying active
- Use a resistance band, light weights, or even household objects such as cans of soup
- Try shoulder shrugs, stretching arms overhead, marching, knee lifts, and toe taps
- Try a new group class like yoga, water aerobics, Pilates, or Zumba®
- Take the stairs
- Make exercise a routine (evening walks after dinner)
- Use a pedometer or other exercise device to track progress
- Make sure to include strength, flexibility, and aerobic fitness
- Make exercise fun and stay motivated by being active with a friend or loved one

Oral Nutrition Supplements

Oral nutrition supplements can be a great source of extra calories or protein for cancer patients experiencing anorexia and weight loss. They typically have a long shelf life, and come in the form of shakes, pudding, and juice. They are also available as powders or liquids. They can be taken anytime, and there are several ways to make these supplements more appealing.

- They are available in a variety of flavors—vanilla, chocolate, strawberry
 - Add to smoothies, shakes, oatmeal, or cereals
 - Use in recipes to make eggs, pancakes, custards, puddings, muffins, mashed potatoes, casseroles, soups, sauces, gravies, macaroni and cheese, or hot chocolate
- (Check out some of the recipes provided at the back of this handbook for ideas)

One serving (8 fluid ounces) of a typical oral nutritional supplement provides approximately:

250-350 calories
9-13 grams of protein
24+ essential vitamins and minerals

Commercially available products include:

Abbott Nutrition: Ensure®, Enshake®, Ensure® pudding, Ensure Clear™

Nestle: Boost®, Boost Breeze®, Carnation® Breakfast, Boost® pudding, Benecalorie®

Tube Feedings

If side effects cause eating by mouth to become challenging, tube feeding, or enteral nutrition, may be necessary to provide enough energy and nutrients. Tube feedings provide nutrition directly into the stomach or small intestine. Feeding tubes can be placed through a hole in the abdominal wall called a stoma. Different tube feeding formulas are available to deliver proper calories and nutrients. For more information about tube feedings, see the Tube Feeding at Home section at the end of this handbook (p. 31).

Tube feeding formulas

Powder – mix with water to make a liquid formula

Ready-to-use – already liquid, comes in cans or ready-to-hang feeding containers

- Formulas vary in calorie, protein, water, and fiber content
- Formulas are available for those with food allergies

Follow your tube feeding prescription and make an appointment with a Registered Dietitian (RD) to discuss any questions or concerns about your tube feeding.

Check out this website: www.feedingtubeawareness.org

Recipes

High Calorie Pancakes

- 1 ½ cups all-purpose flour
- 3 Tablespoons sugar
- 1 Tablespoon baking powder
- 1 teaspoon cinnamon
- 1/2 teaspoon nutmeg
- 2 eggs
- 1 ½ cups vanilla oral nutrition supplement
- 4 Tablespoons heavy whipping cream
- 1 Tablespoon lemon juice
- 1/8 cup vegetable oil
- 2 teaspoons vanilla

Mix dry ingredients together and then add wet ingredients.

Cook pancakes in butter in a stove top skillet at medium low heat. Serve with butter and syrup.

From: Hand to Hold nonprofit, High Calorie Recipes

Oatmeal - Steel Cut

- 1 Tablespoon butter
- 1 cup steel cut oats
- 3 cups boiling water
- 1/2 cup whole milk
- 1/2 cup plus 1 Tablespoon buttermilk
- 1 Tablespoon brown sugar
- 1/2 teaspoon cinnamon
- Dried or chopped fruits and nuts of choice (optional)

In a large saucepot, melt the butter and add the oats.

Stir for 2 minutes to toast. Add the boiling water and reduce heat to a simmer. Keep at a low simmer for 25 minutes, without stirring. Combine the milk and half of the buttermilk with the oatmeal. Stir gently to combine and cook for an additional 10 minutes. Spoon into a serving bowl and top with remaining buttermilk, brown sugar, and cinnamon. Add any desired fruits or nuts to oatmeal.

From: Alton Brown, Food Network

Easy Cheesy Eggs

- 2 eggs
- 1/4 cup cream (10% MF)
- 2 Tablespoons parmesan cheese
- 1/4 teaspoon prepared mustard
- 3 Tablespoons flour, all purpose
- 1/4 teaspoon salt
- 4 ounces cheddar cheese, cubed
- 3 ounces cream cheese, cubed

Combine eggs, cream, parmesan, mustard, flour, and salt in blender and mix until smooth. Continue blending and add cheddar cheese and cream cheese. Pour mixture into greased 1 quart casserole or 3 individual dishes. Bake at 375° F for 45-50 minutes (15-20 minutes for small dishes).

From: British Columbia Cancer Agency, Easy to Chew Recipes

Kale and Lemon Barlotto

- 3 Tablespoons olive oil
- 6 medium shallots or 1/2 onion, minced
- 3 garlic cloves, minced
- Salt and pepper, to taste
- 2 cups pearled barley
- 7 cups of hot stock
- 2 Tablespoons lemon juice
- 2 lemons, zested
- 1/2 cup Parmesan cheese + more for garnish
- 1/2 cup plain Greek yogurt

4 cups chopped kale leaves
1/4 cup chopped toasted walnuts

Heat the olive oil in a large, heavy saucepan over medium heat. Add the shallots or onions, garlic and salt and sauté, stirring constantly for about 4 minutes or until the onions begin to soften. Do not let brown. Add the barley to the pot and stir well. Add 1 cup of stock and 2 tablespoons of lemon juice and simmer for 3 to 4 minutes, until the barley has almost absorbed all the liquid. Add the remaining 6 cups of stock, 1 cup at a time, letting the barley absorb most of the stock before adding in more. Stir often, it should take about 30 minutes. Taste the barley to test for doneness. Once the barley is tender, stir in the lemon zest, Parmesan cheese, yogurt and kale leaves. Continue to cook, stirring until the kale is a bright green. Taste for seasoning. Serve with chopped walnuts and some extra grated Parmesan. From: Cook For Your Life

Creamy Macaroni and Cheese

1/2 cup butter
1/2 cup all-purpose flour
1/2 teaspoon salt
1/2 teaspoon pepper, to taste
1/4 teaspoon garlic granules
2 cups half-and-half
2 cups whole milk
2 (10 ounce) packages sharp cheddar cheese, shredded and divided
1 (10 ounce) package extra-sharp cheddar cheese, shredded
1 (16 ounce) package elbow macaroni, cooked

In a skillet, melt butter over medium-high heat. Whisk flour in gradually until mixture is smooth. Cook and whisk continually for 2 minutes. Add in salt, pepper, and garlic; stir to combine. Gradually whisk in half-and-half and milk. Cook and whisk continually for 8-10 minutes or until mixture is thickened. Add in half of the sharp cheddar cheese; stir. Add in all of the extra-sharp cheddar cheese; stir until smooth. Take skillet off stove burner. Mix together the cooked macaroni and cheese mixture; transfer to a greased 13x9 inch casserole dish. Sprinkle with the remaining sharp cheddar cheese. Bake in a 350° oven for 20 minutes (may need to bake longer for a crispy top). From: Food.com

Mashed Sweet Potatoes

2 medium sweet potatoes, peeled and cubed
1 Tablespoon butter
1/4 cup milk
3/8 cup brown sugar
1 teaspoon cinnamon

Boil potatoes until soft. Remove potatoes, place in bowl. Mash potatoes with potato masher or mixer. Add butter and milk, stir. Add brown sugar and cinnamon, stir. Dish onto bowl or plate. Sprinkle cinnamon lightly over top. From: Ryan Snyder, Food Geeks

Butternut Squash Soup

1 (2 to 3 pound) butternut squash, peeled and seeded
2 Tablespoons unsalted butter
1 medium onion, chopped
6 cups chicken stock
Nutmeg
Salt and freshly ground black pepper

Cut squash into 1-inch chunks. In large pot, melt butter. Add onion and cook until translucent, about 8 minutes. Add squash and stock. Bring to a simmer and cook until squash is tender, about 15 to 20 minutes. Remove squash chunks with slotted spoon and place in a blender and puree. Return blended squash to pot. Stir and season with nutmeg, salt, and pepper.

From: Food Network Kitchen

Egyptian Yellow Lentil Soup

2 cups dried orange split lentils
8 cups low sodium stock, as needed
1 medium tomato, chopped
1 thin-skinned potato (like Yukon gold), cut into a small dice
1 carrot, peeled, cut in a small dice
2 Tablespoons olive oil
1 large onion, finely chopped
1 teaspoon ground cumin
1 teaspoon ground turmeric
1 Tablespoon chopped fresh parsley or cilantro
Salt and pepper, to taste

In a large saucepan, cover the lentils with 5 cups of stock. Add tomato, potato, carrot, and salt and bring to a boil; reduce heat and simmer for 30 minutes, skimming any foam that forms on top. Meanwhile, heat oil in a medium pot over medium-high heat. Add the onion and sauté for about 2 minutes, then turn the heat to medium-low and cook until golden and caramelized, about 8 minutes. The onions should not be burnt. Stir in the cumin and turmeric, cook 1 minute. Set aside. Remove the lentil mixture from heat and purée using a hand-held immersion blender or in batches in the regular blender. Add to the onions and spices along with the 3 cups stock, if you prefer a thicker soup, add less. Bring soup to a simmer and cook for about 10 minutes, or until thickened. Season to taste with salt and pepper. Serve immediately, topped with the pita chips and parsley or cilantro.

From: Cook For Your Life

Almond Avocado Pudding

1 Tablespoons corn starch
2 Tablespoons brown sugar
Pinch of salt
1 ¼ cups milk
2 egg yolks
1 teaspoon almond extract
1/8 teaspoon vanilla extract
1 ripe avocado

In a small, heavy bottomed pot off the heat, whisk together the corn starch, brown sugar, and pinch of salt. Gradually whisk in the milk, making sure that no lumps form.

Whisk in the egg yolk and the almond and vanilla extract. Put the pot over medium heat and gently heat for 10 to 15 minutes, continuously stirring until the mixture is thick and bubbling. Turn off the heat.

Peel and pit the avocado and mash or blend until very smooth. Stir into the warm custard, taste for sweetness, then transfer to a bowl, cover with plastic and allow to cool and set in the refrigerator for at least 1 hour.

From: Cook For Your Life

Banana Pudding

2 ripe bananas
1-2 Tablespoons cane sugar
2 Tablespoons corn starch
Pinch sea salt
1¼ cups low-fat milk
2 egg yolks
¼ teaspoon vanilla extract
Shortbread cookies or vanilla flavored wafers (optional)

Preheat the oven to 350 degrees. Bake 1 banana in its skin on a baking sheet for about 30 minutes, or until the skin has burst. Carefully peel and mash. Set aside. Peel and slice the other banana, set aside. Off the heat, in a small saucepan, mix the sugar, cornstarch, and salt. Gradually whisk in the milk, making sure the cornstarch does not clump. Whisk in the egg yolks. Turn the heat onto medium, and heat the custard. Stir constantly until the custard begins to thicken and bubble, about 10-15 minutes. Be patient—don't turn up the heat, just keep stirring and it will suddenly thicken. Turn the heat down to low and cook for 1 more minute. Remove the custard from the heat and stir in the mashed banana and vanilla extract. Pour the entire mixture into a shallow bowl then top with reserved sliced bananas or if using cookies, pour just enough to cover the bottom. Layer with banana slices and wafers, then cover with custard. Repeat the layers, ending with the custard on top. Chill for at least 1 hour. Serve. From: Cook For Your Life

Easy Chocolate Pudding Recipe

1/2 cup white sugar
1/3 cup unsweetened cocoa powder
3 Tablespoons cornstarch
2 cups whole milk
3 teaspoons vanilla extract

In a microwave-safe bowl, whisk together the sugar, cocoa and cornstarch. Whisk in milk a little at a time so the mixture does not have any dry lumps.

Place in the microwave, and cook for 3 minutes on high.

Stir, then cook at 1 minute intervals, stirring between cooking times for 2 to 4 minutes, or until shiny and thick. Stir in vanilla.

Place a piece of plastic wrap directly on the surface of the pudding to prevent a skin from forming, and chill in the refrigerator. Serve cold with whipped cream and chocolate shavings. From: Allrecipes.com

Ginger and Honey Gelato

1 cup plain full fat Greek yogurt
1/2 cup candied ginger
1/3 cup milk
1 Tablespoon honey

Line a shallow baking pan with parchment paper and spread the yogurt into it. Put it in the freezer until fully frozen, about 1½ hours depending on how thick the layer of yogurt is.

Once the yogurt is frozen, put the ginger, honey and milk into a food processor and pulse until the ginger is chopped and the honey and milk have blended.

Break the yogurt into medium sized chunks and add to the ginger mixture. Pulse until well blended. The consistency should end up like soft gelato. Serve immediately or return to the freezer. Let soften for 10 minutes in the refrigerator before eating. From: Cook For Your Life

Traditional Juice Spritzer

1 cup fruit juice

1 cup seltzer water

1 teaspoon sugar or honey (optional)

Mix ingredients together. Top with fresh fruit.

Fruit Shake

1 cup plain whole yogurt

1 ripe banana

Few drops of vanilla extract

1 teaspoon honey

1 teaspoon coconut (optional)

Combine ingredients in a blender. The banana may be replaced with frozen strawberries, raspberries, half of a papaya or mango, or a few chunks of pineapple. Add a handful of kale or spinach to make a green fruit shake.

Peanut Butter Banana Smoothie

1 cup almond milk

3 Tablespoons vanilla protein powder

3 Tablespoons creamy peanut butter

1 banana

1/4 cup dark chocolate chips (optional)

1 cup ice

Place all ingredients in a blender and blend until desired consistency. From: Cook For Your Life

Banana Orange and Kiwi Smoothie

1½ medium sized bananas

1 kiwi, ripe, flesh only (no skin)

3/4 cup orange juice

1/4 cup canned coconut milk

3 Tablespoons vanilla protein powder

1 Tablespoon agave syrup

1 cup ice

Place all ingredients in a blender and blend.

From: Cook for Your Life

Energy Drink (Dry Mix)

1 cup peeled (blanched) almonds
1 cup sesame seeds
3 Tablespoons protein powder (soy or whey)

Combine ingredients in a blender and blend until fine. This mix can be refrigerated for up to two weeks in a sealed jar. Blend with 8 ounces of chilled Fresh Mix (recipe below) and drink as a meal enhancer or replacement. Use protein powder alone if other ingredients are not available.

Energy Drink (Fresh Mix)

1 ripe banana
1 cup fruit juice (apple, cranberry, or similar)
1/2 cup mineral water
Honey to taste (optional)

Combine ingredients with 1 Tablespoon of the dry mix (recipe above) in a blender. Sip slowly. Add fresh berries to give oral nutrition supplements (such as Ensure) additional flavor.

From: Cancer Nutrition Center

Fruit Juice Smoothie

2 cups apple juice
1 ripe banana
1/2 cup fresh or frozen strawberries
1/2 cup pineapple juice

Combine ingredients in a blender. Add ice if desired. Sip slowly with a straw.

Resources and Support

American Cancer Society

- Physical Activity and the Cancer Patient
- Nutrition and Physical Activity Guidelines for Cancer Survivors Prevention
- Nutrition for the Person with Cancer

All available for download at www.cancer.org or call **1-800-227-2345** to request a free copy

The National Cancer Institute

- Eating Hints: Before, During, and After Cancer Treatment (great nutrition tips/recipes)

Download: www.cancer.gov/publications/patient-education/eating-hints
Also available free of charge in the Resource Center (1st floor of main hospital, inside the cafeteria) **716-845-1729** or call the NCI at **1-800-4-CANCER** and request a free copy

UCSF Health

- Nutrition Tips for Patients Receiving Head and Neck Radiation Therapy
Available at: www.ucsfhealth.org/education

To Find a Registered Dietitian (RD)

- Call the Academy of Nutrition and Dietetics at **1-800-877-1600** or go to the website (www.eatright.org). Click on the link “Find a Registered Dietitian”
- Call “Dietitian on Call” at **1-800-227-2345** to speak with a registered dietitian specializing in oncology for free nutrition counseling, a service provided by the American Cancer Society

Support Groups for Head and Neck Cancer Survivors

- The Oley Foundation: www.oley.org (tube feeding and IV nutrition support)
- American Cancer Society “What Next”: www.cancer.org
- Support for People with Oral and Head and Neck Cancer: www.spohnc.org

Tube Feeding at Home

Good nutrition is an important part of your cancer care. Sometimes, however, due to the type of cancer you have or the treatment you are receiving, it may be difficult to eat enough by mouth to meet your nutritional needs. You may need to receive nutrition—calories, protein, carbohydrates, vitamins, and minerals—through a feeding tube.

In addition to a feeding tube, some patients can continue to eat some food or liquids by mouth (orally). And regardless of whether the feeding tube provides all, or only some of your nutrition, it can be vital to helping you complete treatment, avoid further weight loss and complications, and have a good recovery after treatment.

What is Tube Feeding?

For some people with cancer, eating, drinking, and swallowing may become difficult or impossible. If a person cannot eat, or eat enough, he or she will need to get nutrition through a feeding tube.

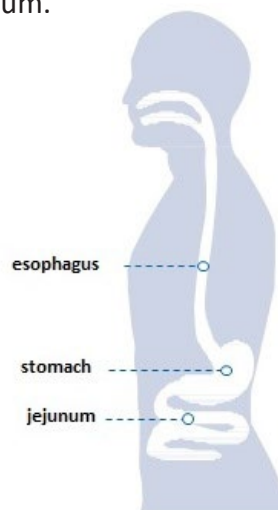
During tube feeding, formula goes directly into the stomach or into the small intestine. Most feeding tubes are placed by a gastroenterologist or by an interventional radiology team. Putting in a feeding tube is typically done as an outpatient procedure.

There are two main types of feeding tubes.

- G-tubes (gastrostomy tube), which feed the formula directly into the stomach through a hole (stoma) created in the abdominal wall. One common type of G-tube is a PEG tube.
- J-tubes (jejunostomy tube), which bypass the stomach, feed the formula directly into the jejunum, which is the first section of the small intestine. J-tubes typically go directly into the jejunum through a stoma, or through a G-tube, which then feeds into the jejunum.

Tube feedings are also possible through an NG (nasogastric) tube. NG tubes go through the nose, down through the throat and into the stomach. They are usually used for short periods.

Work with your health care team, and especially with a registered Dietitian (RD), to determine which tube feeding formula is right for you. Contact a Certified Specialist in Oncology Nutrition (CSO) or an oncology dietitian for more information. www.oncologynutrition.org



What Types of Tube Feeding Formulas Are Available?

A well-balanced diet is needed to maintain optimal health. With tube feeding, you can get the nutrition you need from a special medical nutritional product delivered through the tube. This is called a tube-feeding formula. It contains all of the nutrients you need in liquid form - just like a well-balanced diet.

A wide variety of formulas are available. Some are specially designed for particular diet needs, such as the needs of people with lung disease or kidney disease. Your health care team, including a registered dietitian nutritionist (RDN), will select the formula and the calories that are the best for your needs. Formulas come in two types.

- Powder, which you mix with water to make a liquid feeding.

- Ready-to-use, which is already a liquid and often comes in 8-ounce cans or in pre-filled, ready-to-hang containers. This is the most commonly used type.

How and Where Do I Provide My Tube Feedings?

Some people like to provide their tube feeding in the company of their family or other care providers. Other people prefer to provide their tube feeding alone. Talk with your family and friends to decide what works best for you.

Be sure to find a place in your home that is comfortable for you, such as the living room, kitchen, or bedroom. Several positions are safe and comfortable for tube feeding:

- sitting up in a chair
- propped up in bed or on a couch in a half-sitting position
- standing or even walking around

When you are lying down, your upper body and head should be raised at least 30° from the bed during tube feeding (see picture). Work with your health care team to learn the proper methods of giving your tube feeding. Be sure to include your family if they plan to help.

How Should I Clean My Feeding Tube?

Daily care of your feeding tube is important. Not taking care of your feeding tube every day can lead to infection and interruptions in feeding.

How to clean your feeding tube

1. Wash your hands.
2. Gather the materials you need to clean the tube site: mild soap, a clean cloth, cotton-tipped swabs and warm water.
3. Clean skin with a clean cloth and soap and water. Start at the tube and work outward in circles.
4. Clean under the skin disk or external hub (if there is one) with a cotton swab and mild soap and water.
5. Rinse with warm water and allow it to dry completely.
6. If your doctor or nurse has instructed you to use a dressing, apply as directed. Change your dressing every day, and change it immediately if it becomes wet or soiled.
7. In some cases, when a feeding tube is placed, pledget stays (pads) or sutures are inserted through the skin around the stoma to keep it in place. Ask your health care team when these can be removed.

Practice Good Oral Hygiene

- Baking soda and salt rinses may be recommended, or a non-alcoholic mouth rinse.
- Clean mouth after meals (rinse, brush, floss).

- Use soft-bristle tooth brush or soak toothbrush in hot water to soften it.
- Brush your teeth 2 – 3 times per day.
- Use mild-tasting toothpaste to prevent mouth irritation.
- Use moisturizer on your lips to prevent drying.

What if My Feeding Tube is Clogged?

To lessen the chances of your feeding tube getting clogged, never put anything other than formula and water into the tube. If you need to take medications through your tube, ask your pharmacist if there are liquid formulations for each medication.

If liquid formulations are not available, ask your nurse if you can crush and dissolve tablets or capsules into water for administration through your feeding tube. **Never place crushed or dissolved medication into your tube without first discussing it with your medical team.** Some medications are time-released, and crushing the tablets can alter how they are absorbed and used by the body.

What to do if your feeding tube becomes clogged

- Never insert anything into the tube to clear it.
- Use warm water and a syringe to flush the tube. Move the plunger on the syringe in and out a few times to clear the clog.
- Do not use soda or cola to clear a clogged feeding tube.
- If warm water does not clear the clog, ask your nurse or dietitian about products designed to clear feeding tubes.

What if My Feeding Tube Comes Out Partially or Completely?

First, familiarize yourself with the proper placement for your feeding tube. If it is kept in place with a skin disk, make sure it is not too tight against the skin. Check its position using the markings on the tube.

Make sure the tube turns all the way around freely, and moves up and down slightly. The tube should have in-and-out “play” of about 1/4 inch.

<p>If your feeding tube is partially out of place...</p>	<ul style="list-style-type: none"> • Do not use the tube - Check to see how much the tube has shifted by comparing its markings to your records. • Tape the tube to your skin to prevent further movement. • Call Roswell Park at 716-845-2300 as soon as possible and follow their directions.
<p>If your feeding tube is completely out of place...</p>	<ul style="list-style-type: none"> • Call Roswell Park immediately at 716-845-2300 and they will direct you where to go. • Take the feeding tube with you.

When to Call Your Doctor or Nurse

- Your feeding tube is partially or completely out of place.
- You have unusual weakness.
- You see blood in or around the feeding tube.
- Formula or stomach contents are leaking around the tube site.
- The tube site is red, sore, or swollen.
- You have a tube clog that you can't flush out with warm water.
- You see thick or bad-smelling pus or drainage from the stoma.

