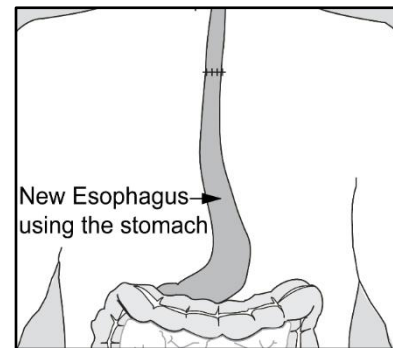


Nutrition during Treatment for Esophageal Cancer

The usual treatment for esophageal cancer is surgery to remove all or part of your esophagus. The surgery is called an esophagectomy.

You might also have chemotherapy and radiation therapy before surgery.



Your doctor will speak to you about the best treatment plan for you.

A registered dietitian is available to help you before, during, and after your treatment.

Contact your registered dietitian or doctor if:

- You are having difficulty tolerating solid foods or liquids.
- You are losing weight.

Your dietitian: _____

Contact: _____

Nutrition during your treatment and surgery

This guide has information on how to eat enough food to meet your body's needs and to help you prepare for upcoming treatments and surgery. Getting enough nutrition can help you:

- Maintain your weight
- Fight infection
- Have fewer side effects
- Heal after surgery

When you have esophageal cancer, you might have some of the following symptoms:

- Difficulty swallowing or pain with swallowing
- Weight loss
- Lack of energy
- Constipation
- Nausea and vomiting
- Acid reflux, which is when stomach acid comes back up your esophagus

Eating enough protein

Protein foods come from animal and plant-based sources. Your body needs protein for:

- growing and maintaining muscles
- healing tissues
- preventing diseases and infections

Try to eat _____ grams of protein each day
or _____ grams at each meal.

Tips for eating more protein

- **Shredded cheese** – sprinkle over vegetables, potatoes, noodles, casseroles, soups, or salads
- **Milk or high protein milk alternative** – use instead of water when making soups, pudding, cocoa, or cooked cereals
- **Ice cream, yogurt, and frozen yogurt** – add to cereals, fruits, gelatin, pies, or milkshakes
- **Hard-cooked eggs** – add to salads, vegetables, or casseroles
- **Left-over meat, chicken, or fish** – add to soups, salads, or omelets
- **Nut butter, nuts, and seeds** – drizzle or sprinkle over vegetables, fruits, salads, yogurt, cereal, and pasta
- **Beans and hummus** – add to salads, pasta, or soups
- **Protein powder or skim milk powder** – add to pudding, soup, milkshakes, and mashed potatoes

Food	Serving	Protein (grams)
Meat, poultry, fish, and eggs		
Beef, fish, poultry and pork	¼ to ½ cup (60-125 mL)	20 to 25 g
Egg, whole	2 large	12 g
Egg, white	¼ cup (60 mL)	7 g
Dairy		
Cheese, firm	2 Tbsp (30 mL)	7 g
Cottage cheese	¾ cup (175 mL)	17 g
Paneer (Indian cheese)	50 g	9 g
Milk, cow's, any % milk fat	1 cup (250 mL)	8 g
Milk, ultrafiltered, any % milk fat	1 cup (250 mL)	14 to 16 g
Yogurt, Greek	¾ cup (175 mL)	15 to 18 g
Yogurt, regular	¾ cup (175 mL)	7 g
Whey protein powder	1 scoop (20 g)	20 g
Beans and lentils (pulses)		
Beans, pinto, kidney, black	¾ cup (175 mL)	12 g
Chickpeas (garbanzo beans)	¾ cup (175 mL)	12 g
Hummus	⅓ cup (80 mL)	7 g
Lentils, green, yellow, red, or black	¾ cup (175 mL)	12 g
Soy foods		
Edamame (young, green soy beans)	1 cup (250 mL)	18 g
Soybeans	¾ cup (175 mL)	17 g
Soy milk, unsweetened	1 cup (250 mL)	8 g
Tempeh (fermented soybeans)	¾ cup (175 mL)	24 g
Tofu, firm	¾ cup (175 mL)	16 g
Tofu, soft	¾ cup (175 mL)	9 g
*most other milk alternatives such almond, cashew and rice, are not high sources of protein.		

Food	Serving	Protein (grams)
Nuts and seeds		
Peanut butter, natural	2 Tbsp (30 mL)	7 g
Almond butter, natural	2 Tbsp (30 mL)	7 g
Seeds, pumpkin or sunflower	¼ cup (60 mL)	11 g
Hemp hearts	2 Tbsp (30 mL)	7 g
Other foods		
Pea milk	1 cup (250mL)	8 g
Nutritional yeast	2 Tbsp (30 mL)	6 to 8 g
Vegetarian protein powder	1 scoop (20 g)	12 to 20 g

Eating enough food

If you are not eating enough or are losing weight, try these suggestions:

- Have a small meal every 2 to 3 hours or eat 6 to 8 meals a day.
- Create a meal schedule. Try to eat even if you are not hungry.
- Try to make your dining experience pleasurable and relaxing.
- Choose high-calorie items such as higher-fat dairy products, nut butters, and avocados.
- Try convenience foods. Keep your freezer, refrigerator, and cupboards full of foods that are easy to prepare or ready-to-eat. Examples are frozen lasagna, pudding cups, and cheese portions.
- Make a list of your favourite foods for meal planning and grocery shopping.

Prepare extra portions so you have leftovers. Freeze the extra portions.

Liquid nutrition supplement

If you have trouble eating enough food, drinking a liquid nutrition supplement can be an easy way to get more nutrition.

If you are able to eat solid food at mealtimes, it is best to take these drinks between meals. If you take them with or before a meal, they might be too filling and stop you from eating your food.

If you are not able to eat any solid foods, speak to your dietitian about how much liquid nutrition supplement you need.

Nutrition supplement (237 mL container)	Calories (Kcal)	Protein (grams)
Ensure Regular	235	9
Ensure Plus	355	14
Boost Original	230	10
Boost Plus	360	14
Glucerna	225	11
Carnation Breakfast Essentials	240	10
Boost Protein +	270	27
Boost Soothe	300	10

*All of the nutrition supplements listed above are low in lactose, except Carnation Breakfast Essentials which contains lactose.

High-calorie, high-protein shakes and puddings

You can make your own nutritional shakes and puddings using these recipes.

Combine all ingredients in a blender and blend until smooth.

Fruit and Cream

1 cup (250 mL) 3.25% milk
1 cup (250 mL) vanilla
ice cream
1 cup (250 mL) canned fruit
such as peaches, apricots
or pears

Chocolate Peanut Butter Pudding

1 cup (250 mL) chocolate pudding
½ cup (125 mL) peanut butter
2 Tbsp (30 mL) milk powder
1/3 cup (80 mL) 3.25% milk

Chocolate Peanut Butter Shake

1 bottle (237 mL) Boost or
Ensure
2 Tbsp (30 mL) peanut butter
2 scoops vanilla ice cream

Mango Banana Smoothie

1 cup (250 mL) mango
½ banana
½ cup (125 mL) Greek yogurt
½ cup (125 mL) 3.25% milk

Strawberry Yogurt Frappe

1 cup (250 mL) strawberries
½ cup (125 mL) strawberry
yogurt
½ cup (125 mL) 3.25% milk
¼ cup (60 mL) orange juice

Greek Yogurt Fruit Smoothie

1 cup (250 mL) berries
1 banana
½ avocado
½ cup (125 mL) Greek yogurt
½ cup (125 mL) fruit juice

Eating when swallowing is difficult

Your team will work with you to find the texture, type, temperature, and amount of food that will work best for you.

- Try pureed or soft foods.

Soft foods are foods that need less chewing.

Pureed foods are foods that do not need to be chewed and are usually blended to a smooth texture.

- Add cream, milk, broth, juice, butter, or gravy to blend your foods.
- Add smooth nut butters to smoothies.

When you are having difficulty swallowing, you might find the foods in the column on the left easier to eat:

✓ Easy to swallow	✗ Not easy to swallow
Grains and cereals	
Hot cereals made with 3.25% milk	Cold cereal with nuts, seeds, granola, or dried fruit
Cold cereal softened in 3.25% milk	Hot cereal with nuts, seeds, or dried fruit
Waffles or pancakes (can be pureed) with syrup and butter	Fresh or doughy untoasted breads, rolls, muffins or bagels
Mashed potatoes with butter and gravy	Fried, brown, or wild rice
Soft cooked pasta, rice, or noodles with sauce or broth	Dry biscuits, crackers with seeds
Cookies, dipped in warm liquid	Sweet rolls, coffee cake, or donuts
Soda crackers, softened in soups	Hard taco shells
Congee or rice pudding	Granola bars

✓ Easy to swallow	✗ Not easy to swallow
Meat and meat alternatives	
Tender cooked meats or pureed meats, with gravy	Whole or ground meats with no sauce or gravy
Soft cooked eggs	Fried or hard boiled eggs
Smooth nut butters	Chunky nut butters
Soft cooked lentils or dahls	Whole nuts or seeds
Hummus	Hot dogs, sausages, or luncheon meats
Soft tofu	Hard beans like chickpeas or dahl that are not soft cooked
Yogurt (choose Greek and higher fat)	Stock soups with big chunks
Cottage or ricotta cheese	Chilli
Soft cheeses like cheddar, mozzarella, Swiss	
Paneer in sauce	
Pureed or smooth soups	
Fruits	
Fruit juices	Fruits with the skin
Fruit sauce, such as apple or pear	Dried fruits such as raisins, cranberries, or apricots
Canned fruit	Fruit leather
Soft fruits like bananas, raspberries, strawberries, or avocados	

✓ Easy to swallow	✗ Not easy to swallow
Vegetables	
Well-cooked, soft or pureed vegetables with butter	Salads
Vegetable juice	Raw vegetables
Pasta sauce with no seeds	Tomato sauce with seeds
Milk and milk products	
Custard or pudding made with 3.25% milk	Ice cream with chunks or pieces
Pie fillings without crusty pastry	Pie with crust
Ice cream without chunks or pieces	
Beverages	
Nutrition supplements	Smoothies or shakes with chunks
Smoothies made with high fat Greek yogurt or 3.25% milk or protein powder	Carbonated beverages
Milkshakes made with ice cream	
3.25% milk	
Lattes and coffee beverages made with cream or 3.25% milk	
Kefir or yogurt drinks	
Chai made with 3.25% milk	

Monitoring your weight

Weigh yourself once a week and keep a record on the chart below. If you do not have a scale, weigh yourself when you visit your doctor.

Date	Weight	Energy Level	Notes

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This information does not replace the advice given to you by your healthcare provider.

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