

**MANAGING
NUTRITION AFTER
TREATMENT**

**A guide for
people with
cancer of the
stomach or
gastroesophageal
junction (GEJ)**

Nourish

EXTRA

**CANADA'S NUTRITION COMPANION
FOR ONCOLOGY PATIENTS
AND CAREGIVERS**



ADAPTING TO A NEW “NORMAL”

The end of cancer treatment can be a time of relief but you may also wonder what life will be like now. You may continue to have side effects that affect your ability to eat weeks after finishing treatment, but don't be discouraged! Your body needs time to repair and may also need a little help! This publication, written by Registered Dietitians, is meant to support you on your road to recovery.

Nutrition plays a vital role in recovery after treatment, and while you may not return to eating the way you did before your diagnosis, we want to help you make choices to feel the best you can.

Tips to deal with common side effects

Once these side effects are under control, it will be easier to eat. Have a look at the first publication in our series “Managing nutrition-related side effects”. If any of these symptoms worsen with time, tell your healthcare team as soon as possible.

Nausea, delayed stomach emptying

This is very common after stomach surgery. You may feel full for a long time after eating. If your doctor prescribed medications to help with nausea or to stimulate stomach emptying, you should keep taking them. Try also to:

- **Eat every 2-3 hours** throughout the day
- **Avoid** fatty meals
- **Chew** foods well
- **Do not lie down** for an hour after eating

Dumping syndrome

Cramps, diarrhea, sweating, rapid heart rate, weakness, or dizziness can happen from stomach contents emptying too quickly into your intestines. This can happen mainly after stomach surgery. Try to:

- **Follow** the same advice suggested for nausea
- **Decrease** foods high in simple sugars
- **Add protein and fibre** to your meals
- **Separate** solids and liquids by drinking between meals and snacks

Lactose intolerance

Cramps, bloating, and diarrhea after dairy consumption may be due to lactose (milk sugar) intolerance. Lactase is an enzyme that helps us digest lactose. If your body does not produce enough of this enzyme you may have to limit dairy products. Here are some other tips:

- **Try to decrease** the number of servings or choose lower lactose foods before avoiding them altogether
- **Replace** regular dairy products with lactose-free products
- **Try lactase tablets** to help you digest the lactose in foods you love
- **Slowly reintroduce** higher lactose foods after a few weeks

Fat maldigestion or malabsorption

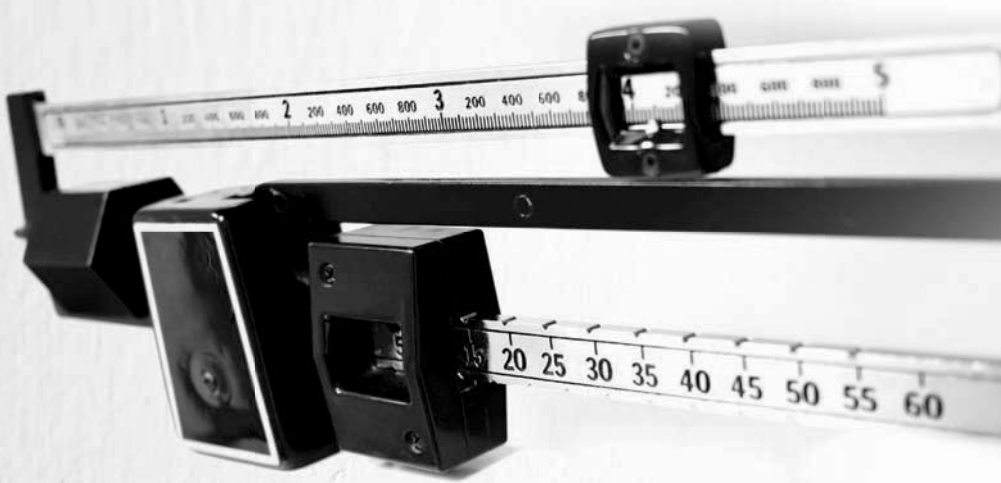
Not having enough digestive enzymes or poor mixing of enzymes with food can give you cramps, diarrhea, floating or greasy stool. Try the following:

- **Spread your fat intake** over all meals and snacks
- **Talk to your doctor and dietitian** about whether you might benefit from enzyme replacement therapy

Acid reflux

Treatments, inflammation and stomach surgery can lead to acid reflux. Try the following:

- **Avoid foods that can aggravate reflux**, such as coffee, alcohol, spicy foods, fatty meals and citrus fruit
- **Wait before lying down** or add pillows if you must lie down after a meal
- **Take acid-lowering medications**, if needed



WEIGHT LOSS

Are you struggling to get your weight back? Weight loss is common following both partial and total removal of the stomach and it is also common with chemotherapy. Some people do not return to their usual body weight. If you are in a healthy body weight range, a reasonable goal would be to achieve increased strength, energy, and muscle mass rather than a specific number on the scale. Speak with your healthcare team if you are continuing to lose weight after treatment without trying.

How can I gain or maintain weight?

The following tips will help you to gain and/or maintain weight.

MAXIMIZE CALORIES AND PROTEIN

- ✓ Eat higher calorie and protein foods first, especially if you feel full quickly
- ✓ Limit foods and fluids that are low in calories
- ✓ Add healthy fats like olive, sunflower, canola oil, avocado, nuts or nut butters to meals and snacks
- ✓ Add nuts, seeds, beans, cheese, and eggs to soups and other meals and snacks

EAT A VARIETY OF FOODS

- ✓ Gradually introduce a wider variety of foods into the diet including fruits and vegetables, whole grains, and protein-rich foods
- ✓ Try to pair fruits and vegetables with higher calorie foods
- ✓ Avoid unnecessary diet restrictions

EAT SMALL, FREQUENT MEALS

- ✓ Aim for 6 to 8 meals per day and avoid long periods of fasting
- ✓ Keep nutritious snacks handy if you are on the go
- ✓ Eat by the clock rather than waiting until you feel hungry

CHOOSE NUTRIENT-RICH FLUIDS

- ✓ Choose milk, unsweetened juices or homemade smoothies more often than coffee, tea, or water
- ✓ Consider an oral nutritional supplement to increase calorie and protein intake between meals

How many calories and how much protein do I need?

Calorie and protein requirements are based on age, weight, height, and level of activity. Ask a Registered Dietitian to calculate your requirements, which may be higher during and after cancer treatment. If you continue to lose weight despite eating your target requirements, please contact your healthcare team.

Oral nutritional supplements

Ready-to-drink nutritional supplements can provide vitamins, minerals and additional calories and protein when you cannot eat enough food to maintain or gain weight. They can be taken alone, added to other foods, used as a base for a smoothie or even mixed into savoury recipes. You can find recipe ideas on manufacturers' websites. And try our recipe for a homemade energy drink. Preparing your own supplements means more flexibility with flavour, sugar amount, protein and fat source.

WHAT ABOUT VITAMIN AND MINERAL SUPPLEMENTS?



When eating a variety of foods we usually get all the vitamins and minerals our body needs. Treatment for stomach or esophageal cancer can lead to problems with digesting and absorbing micronutrients such as **iron, calcium, vitamin D, folate and vitamin B₁₂**.

Speak with your physician about whether you need blood tests every 3 to 6 months to monitor these nutrients, especially during the first year following treatment and surgery.

Below is a list of common foods that can help you get enough of these vitamins and minerals.

IRON*	CALCIUM	VITAMIN D**	FOLATE	VITAMIN B ₁₂ ***
Liver	Cow's milk	Cow's milk	Cooked legumes	Liver
~	~	~	~	~
Instant oat meal, breakfast cereals	Rice/cashew/soy beverage, enriched	Salmon (sockeye, pink, Cohoe)	Spinach, cooked	Salmon, red/sockeye
~	~	~	~	~
Spinach, cooked	Gruyere, Swiss, goat, low fat cheddar, mozzarella cheese	Egg, yolk, cooked	Pasta, enriched	Beef, ground, cooked
~				
Tofu, cooked				

* Take with a source of vitamin C (sweet peppers, broccoli, strawberry) to increase absorption from plant sources. Avoid coffee and tea with meals

** If possible, try to have sun exposure (hands, forearm, face) for 10-15 minutes per day without sunscreen

*** It may take up to 6-12 months until a deficiency shows. After a total removal of the stomach you may require B₁₂ injections

If you cannot obtain enough nutrients through food you may need supplements. Always speak to your healthcare team before taking any supplements, to help with proper dosages, and to avoid possible interactions with your medications.

IS EXERCISE GOOD FOR ME OR WILL I LOSE MORE WEIGHT?

Physical activity alone does not necessarily lead to weight loss and can improve muscle strength, fatigue, anxiety, and overall quality of life. Listen to your body — you may want to start with short periods (10 minutes) of mild exercise and increase gradually. Speak with your doctor before starting any exercise.

CAN I EAT SUGAR?

Healthy cells use sugar as energy. Sugar can come from healthy carbohydrates such as fruit, vegetables, whole grains and dairy, and can also come from added sugar in candy, fruit drinks, pop, cakes, and cookies. At this time, it has not been shown that removing healthy sugars from your diet will affect how cancer cells grow.



While there is no direct link between added sugar intake and stomach cancer, food and drinks high in added sugars may lead to becoming overweight, therefore increasing the risk of some cancers.

References:

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2. Rock, C. L. et al. Nutrition and physical activity guidelines for cancer survivors. CA: A Cancer Journal for Clinicians 2012;62:242-74.
3. World Cancer Research Fund / American Institute for Cancer Research. Food, Nutrition, Physical Activity, and the Prevention of Cancer: a Global Perspective. Washington DC: AICR, 2007.
4. Importance of Protein. http://www.bccancer.bc.ca/nutritionsite/Documents/Patient%20Education/importance_of_protein.pdf (Accessed Feb 10, 2017)
5. Isom KA et al. Nutrition and metabolic support recommendations for the bariatric patient. Nutrition in Clinical Practice 2014;29:718.

HOW CAN I LOWER THE RISK OF MY CANCER COMING BACK?

Most studies look at how diet and lifestyle choices can reduce the risk of developing cancer in the first place, but there is little research to guide those who want to slow cancer growth or prevent it from coming back. While not enough is known to say that certain diet choices will prevent stomach cancer from coming back, cancer prevention diet recommendations can have positive effects on health overall. This table lists foods and lifestyle choices that may have an impact on the risk of developing stomach cancer.

DECREASE IN CANCER RISK

- Be as lean as possible without becoming underweight
- Be physically active for at least 30 minutes daily
- Avoid sugary drinks
- Eat more of a variety of fruits, vegetables and legumes
- Limit consumption of red meats and avoid processed meats
- If consumed at all, limit alcoholic drinks to 2 for men and 1 for women per day
- Limit consumption of salty foods and foods processed with salt
- Eating citrus fruit

INCREASE IN CANCER RISK

STRONG EVIDENCE

- Drinking three or more alcoholic drinks per day
- Being overweight or obese
- Eating foods preserved by salting (e.g., pickled vegetables, salted fish)*
- Regular intake of processed meat*

LIMITED EVIDENCE

- Eating grilled or barbecued meat or fish
- Eating little or no fruit

* Certain types of stomach cancer

Reference:

World Cancer Research Fund International/American Institute for Cancer Research. Continuous Update Project Report: Diet, Nutrition, Physical Activity and Stomach Cancer. 2016



AM I ON THE RIGHT PATH?

Here are some signs that can be a guide as to whether you are on the right track:

- Can I prepare my meals without having to rest or do I still need help?
- Are my symptoms improving?
- Is my weight stabilizing?
- Do I feel like eating and drinking regularly?

And remember ...

- Start with small portions
- Choose foods that you enjoy, are well tolerated and contain protein and calories
- Don't be hard on yourself; give your body time to heal and adjust

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RESOURCES

- Dietitians of Canada: Food sources of iron, calcium, vitamin D, folate, and vitamin B12. www.dietitians.ca
- EatRight Ontario: My Menu Planner. www.eatrightontario.ca
- Stomach Cancer Foundation of Canada. www.mygutfeeling.ca

My Gut Feeling was founded in 2016 by two survivors, Teresa Tiano and Ekaterina Kosyachkova. We are the first non-profit organization for patients, survivors and caregivers in Canada dedicated solely to stomach cancer. Our mission is to help those on the stomach cancer journey by providing awareness, education and advocacy through peer-to-peer support and monthly support groups.

info@mygutfeeling.ca

Nourish Extra is a publication of the *Nourish: Canada's Nutrition Companion for Oncology Patients and Caregivers* series: Information relating to nutrition and cancer and advice from registered dietitians who are working in oncology centres across Canada. **Nourish is a free publication which is available in print and online.** www.nourishonline.ca

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Disclaimer: The information in this publication is not intended as medical advice nor should it replace advice, expertise and information given by a member of your healthcare team.

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MAXIMIZE YOUR ENERGY DRINK

This nutritious drink provides you with protein and calories on days when your appetite is not great!

Preparation: 10 minutes Servings: 1

INGREDIENTS

- ½ cup milk (2%)
- ⅓ cup pasteurized liquid eggs
- ¼ cup strawberries, sliced
- 1 tbsp oats
- 1 tbsp vegetable oil
- 2 tbsp honey

DIRECTIONS

1. Place all ingredients in a blender.
2. Mix until smooth.
3. Serve immediately.

Nutrition Facts

Serving Size: 1 cup

Amount	% Daily Value
Calories 400	
Fat 17g	22%
Saturated 2.5g + Trans 0g	13%
Cholesterol 10mg	3%
Sodium 190mg	8%
Carbohydrate 52g	19%
Fibre 2g	7%
Sugars 42g	
Protein 15g	
Vitamin D	0%
Calcium 162mg	10%
Iron 1mg	6%
Potassium 299mg	6%

Nutritional values were calculated with The Food Processor, ESHA Research, version 11.2