

MANAGING
NUTRITION-
RELATED
SIDE EFFECTS

A guide for
people with
colorectal
cancer

Nourish

EXTRA

CANADA'S NUTRITION COMPANION
FOR ONCOLOGY PATIENTS
AND CAREGIVERS



HOW NUTRITION CAN HELP MANAGE SIDE EFFECTS

This guide, written by registered dietitians, will help you manage common side effects of colorectal cancer and its treatment. **Poor appetite, fatigue, diarrhea, constipation, and nausea** are challenges that make it difficult to get enough nutrients to keep your body strong. Side effects not only cause discomfort but can also keep you from eating well. Research shows that people who eat well and maintain a healthy weight during cancer therapy tolerate treatment better, recover faster, and have a better quality of life.

Cancer treatments such as chemotherapy and radiation can damage both healthy cells and cancer cells. To support healing, it is important to eat enough calories and protein. A combination of good nutrition and medications can be effective in reducing many side effects. This pamphlet will discuss tips for maximizing nutrition during treatment.

POOR APPETITE AND WEIGHT LOSS

Loss of appetite (less desire to eat) followed by unplanned weight loss affects many people with cancer. Much of this weight loss experienced by cancer patients involves muscle loss. This loss of muscle mass can lead to more fatigue, decreased function and more treatment related toxicity. It can happen no matter whether a person is underweight, overweight, or normal weight.

You can prevent or slow unplanned weight and/or muscle loss by:

1. Discussing side effects with your health care team. When side effects are well managed it is easier to eat.
2. Making every bite and sip count by choosing nutrient-rich foods and beverages that are high in protein and calories. (**BOX 1**)

If foods do not appeal, try nutrient-rich smoothies. You may find it easier to drink a small shake instead of sitting down to eat a plate of solid food. You may purchase commercial nutritional supplement shakes or make your own. When making a smoothie, you can always add more protein and calories to it. (**BOX 1**)

Have quick, easy snacks available to grab the moment your appetite strikes or to take with you to appointments and other outings (**BOX 2**).

BOX 1

Protein and Calorie Booster Examples

PROTEIN BOOSTERS (each offers 6-8 grams protein)

- Chicken, fish or meat (1oz or 28g)
- Dairy milk or soy beverage (1 cup)
- Dry milk powder (¼ cup)
- Evaporated milk (½ cup)
- Greek-style yogurt (½ cup)
- Hard cheese (1" or 2.5cm cube)
- Hummus or cooked lentils, beans (⅓ cup)
- Liquid pasteurized whole eggs (¼ cup)
- Ricotta or cottage cheese (¼ cup)
- Soft dessert tofu (½ cup)

CALORIE BOOSTERS

- Avocado
- Butter, margarine
- Dried fruits*
- Full fat cream cheese
- Granola, nuts, seeds*
- Heavy cream (35% MF)
- Higher fat dairy foods
- Mayonnaise
- Oils (olive, avocado, hemp, etc)

* avoid if having diarrhea



TRY SMOOTHIES

If you have been told to drink water for hydration, remember plain water does not provide any nutritional value and therefore is not the best choice if you are not eating well. Fluids, such as smoothies, can be a great opportunity to get calories and protein as well as providing hydration. Make your own with the help of our smoothie guide on our website www.nourishonline.ca

FEELING TIRED?

Fatigue is a daily lack of energy and it is the most common complaint that people living with cancer have. Cancer-related fatigue is thought to be caused by both the cancer itself and its treatment, and is not relieved by resting or sleeping more. Try the following:

- **Eat small frequent meals.** Eat regularly, even if you're not hungry, as this will give you a steady source of energy.
- **Move.** Physical activity is one of the best ways to increase energy. Every type of exercise can be beneficial including gentle strength training and daily walks (even in short intervals).
- **Stay hydrated.** Drink small amounts often, adding up to about 2 liters of fluid per day. (Unless otherwise directed by your medical team.)
- **Plan ahead.** Cook larger portions and freeze leftovers for later. Check out grocery delivery or prepared meal services in your area. Accept help from family and friends.

BOX 2

Meal and Snack Ideas When You Don't Feel Like Eating

Dry cereal on its own or with whole milk, or soy beverage

Egg salad sandwich

Granola bars or trail mix

Mix tuna with avocado and spread on bread or crackers

Soups with grated cheese

Frozen meals

Cottage cheese with cut up fruit



Muffins, scones, or buns with nut butter or cheese

Cheese and crackers

Quiche or meat pie

Pasta with ground meat or lentil-based sauce

Yogurt or pudding

DIARRHEA

When diarrhea is caused by cancer treatment, it is best managed with medications recommended or prescribed by your healthcare team. Here are some additional tips to help manage diarrhea:

- Stay hydrated, and replenish electrolytes if needed. (BOX 3)
- Choose foods that provide soluble fibre, to help thicken your stool. (BOX 4)
- Consume well-tolerated foods in frequent, regular, small portions (BOX 5). Large meals may trigger diarrhea.
- Sip slowly on fluids between meals.

BOX 3

Homemade Electrolyte Drink

Mix 360ml orange juice (no pulp) + 600ml water + ½ tsp salt

Drink 60ml (¼ cup) every two hours until diarrhea stops.



Fluid and Food Choices to Manage Diarrhea

CHOOSE

- Non-caffeinated, lactose free* beverages
- Plain foods (BOX 5)
- Foods that contain soluble fibre:
 - Barley, oats, oat bran, chia seeds, psyllium (Metamucil®)
 - Cooked root vegetables, such as peeled potatoes, sweet potatoes, carrots and edamame
 - Peeled fruits, such as apples, bananas, pears, peaches, oranges, avocados

AVOID

- Caffeinated beverages, highly sweetened drinks, spicy or greasy foods
- Lactose in milk*
- Wheat bran, corn bran, whole grain breads and cereals, whole nuts, most vegetables, popcorn, berries

* During treatment, some individuals may develop lactose intolerance which can be a temporary inability to digest lactose, a natural sugar found in some milk products. This may worsen diarrhea. Try using lactose-free products or milk alternatives such as soy beverage for a few days to see if your diarrhea improves. Reintroduce lactose once diarrhea resolves.

Meal and Snack Ideas to Manage Diarrhea

MEALS

- Egg salad sandwich on white bread
- Chicken noodle soup
- Grilled chicken or fish with white rice and cooked carrots
- Overnight oats (try our recipe)

SNACKS

- Cheese and plain crackers
- Fruits you can easily peel (such as bananas)
- Oatmeal cookies
- Rice pudding
- Yogurt

CONSTIPATION

Constipation may be caused by a number of factors including eating differently than usual, not drinking enough fluids, or as a side effect of pain medications. Your health care provider may suggest the use of stool softeners and laxatives. Other tips that may help:

- Stay hydrated. It is important to drink enough fluids.
- Increase fibre slowly (Note that adding a fibre supplement is not recommended if you are constipated from medications).
- Choose foods that help relieve constipation (**BOX 6**)
- Establish a routine. Try eating, sleeping, and exercising at regular times.

In some cases, people have a bowel that is narrowed by their cancer. Talk to your healthcare team to learn if you need a special diet to help manage this. Contact your medical team immediately if you experience nausea or vomiting, strong abdominal pain, or notice blood after having a bowel movement.

Foods to Help Relieve Constipation

- Eat 2-3 prunes or drink ½ cup prune juice.
- Eat more vegetables and fruits of all kinds (fresh, frozen, cooked).
- Add 1-2 tablespoons wheat germ, ground flax or hemp hearts to cereals, smoothies, soups, casseroles, etc.
- Choose whole grain breads and cereals.

Always ensure bowels are moving regularly with use of stool softener/laxative before adding more dietary fibre. Check with your medical team for guidance.

When adding dietary fibre, do so slowly and with extra fluids to help your bowels adjust and avoid uncomfortable gas or bloating.

GAS/BLOATING/CRAMPING

When you are constipated, be aware of foods known to cause gas (**BOX 7**).

- Avoid carbonated fluids such as soda.
- Avoid drinking through straws, or chewing gum.
- Eat slowly to swallow less air.
- Limit intake of sugar alcohols (such as sorbitol and xylitol) which are found in many sugar-free products (gums and candies).
- Drink more water and try to move your body as best tolerated.

Some people find it helpful to keep a food journal. If you experience gas and bloating after a meal, take note of what foods you ate. This will help you identify your individual “problem foods” over time. (**BOX 7**) Everyone reacts differently. Just because a food is on this list doesn’t necessarily mean it will give you gas.

If you experience cramps in your abdomen due to constipation, drink more water. Being hydrated keeps digestion going.

It is important to address constipation as soon as possible, as it can cause other issues including abdominal cramping, pain, bloating, loss of appetite, and nausea.

BOX 7

Gas Promoting Foods

LIMIT FOODS WHICH CAN PROMOTE GAS, SUCH AS:

- Broccoli
- Brussel sprouts, and cabbage
- Cucumbers
- Green peppers
- Legumes such as lentils and chickpeas
- Onions
- Prunes



NAUSEA

Nausea may be a side effect of your chemotherapy. Prescribed medications, taken as directed, are most important for managing nausea. Here are some other tips that may help:

- **Eat and drink small amounts often;** going too long with an empty stomach can worsen nausea.
- **Nibble on dry crackers or toast** to help settle your stomach.
- **Avoid favourite foods** so you don’t develop an aversion.
- **Try clear fluids and bland foods** (**BOX 8**). Sip fluids out of a covered cup.
- **Avoid strong food smells;** cold foods may be better tolerated.
- **Avoid greasy foods and strong flavours,** such as spicy, sweet or acidic.
- **Relax and take your time;** get fresh air.

Note that nausea can be an early sign of dehydration. Replacing lost fluids is very important especially if you have been vomiting or have diarrhea. Sip on fluids throughout the day. Flavour your water if it does not taste good.

BOX 8

Fluid and Food Choices to Manage Nausea

CLEAR FLUIDS TO TRY IF NOT KEEPING DOWN SOLID FOODS

- Broth
- Diluted fruit juices or sports drinks
- Ginger tea, or any tea you feel soothing
- Jello
- Popsicles
- Soft drinks such as ginger ale that have gone flat
- Water

BLAND FOODS TO TRY WHEN YOU START FEELING BETTER*

- Canned or cooked fruit (no skins)
- Mashed potatoes
- Plain crackers
- Plain oatmeal
- Pretzels
- White bread, toasted
- White rice or pasta

* Try one at a time, in small amounts.

RESOURCES

BC Cancer: Type “Symptom & side effect management resource guide” in search field.

www.bccancer.bc.ca

Sunnybrook: Type “Manage cancer-related fatigue” in search field.

<http://health.sunnybrook.ca>

Colorectal Cancer Canada:

www.colorectalcancercanada.com

Nourish Extra guides for people with colorectal cancer: Part 1: What to eat and drink after ostomy surgery, Part 2: Managing nutrition-related side effects, Part 3: Eat well after treatment.

View/download www.nourishonline.ca

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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.**
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Nourish Extra was made possible through an educational grant provided by Taiho Pharma Canada, Inc.

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OVERNIGHT OATS

Try these for breakfast or a snack any time of day.

Preparation Time: 5 minutes Servings: 2

INGREDIENTS

¾ cup rolled oats

1 tbsp honey, maple syrup,
or sweetener of choice (optional)

¾ cup whole milk or
milk alternative (e.g. soy,
rice or almond beverage)

1 tbsp chia seeds

PREPARATION

Place all ingredients in a mason jar, shake or stir and place in fridge overnight. Enjoy the oats cold or heat them in the microwave the following morning. Add more liquid, if necessary.

INCREASE THE PROTEIN CONTENT

Mix a tablespoon of protein powder or skim milk powder with your milk, replace the milk with a high protein yogurt, or add liquid pasteurized* eggs, ground nuts or almond flour before eating.

**Don't use unpasteurized liquid eggs due to food safety concerns.*

TRY THE FOLLOWING FLAVOUR VARIATIONS

Peanut Butter and Banana: add ½ sliced banana and 1 tbsp peanut butter

Cinnamon Apple: add 1 tsp cinnamon and 1 apple, peeled and diced

Peaches and Cream: add peach 'fruit cup', drizzle with melted almond butter

Pumpkin Spice: add 2 tbsp of canned pumpkin, ½ tsp cinnamon, and a drop of vanilla extract

TIP: Double the batch and make ahead. Store in the fridge in airtight containers for up to two days.

Nutrition facts for ½ of recipe when prepared with whole milk:

228 calories, 7g fat, 3g saturated fat, 8g protein, 5g sugar, 5.5g fibre