

Nutrition

Why is Nutrition Important?

Good nutrition is important at every stage of your cancer care, even after your treatment is finished. Eating well during cancer treatment and recovery can help you manage your side effects. Good nutrition will give you more energy and strength to help your body heal and recover from treatment. Nutrition also plays an important role in maintaining and improving the strength of your immune system.

How Can a Dietitian Help?

During treatment, the best diet for you may be different than the best diet for someone else. Registered dietitians can support you in eating well, maintaining a healthy weight, managing side effects and meeting your personal nutritional needs. A dietitian can also help with tube feeding concerns and answer questions about vitamin, mineral and herbal supplements.

How Do I Contact a Dietitian?

Dietitians are part of the Supportive Care program. If you wish to see a dietitian, ask a member of your health care team to set up a referral for you.

- Telephone: **519-685-8622**
- The Supportive Care Office is open **Monday to Friday, 8:30 am – 4:30 pm**

Tips for Eating Well When You Have Cancer

During treatment it is very common to have a smaller appetite or to fill up more quickly. Eating 3 smaller meals and 2 to 3 snacks with protein will help your body get the nutrition that it needs, as well as help protect your lean muscle mass.

A good rule of thumb for minimum protein requirement is 1 gram of protein per kilogram of body weight. If you are losing weight you may need more than this. Your dietitian can calculate your individual protein target and provide additional suggestions to help you maintain weight.

Easy snack and meal ideas:

- Crackers and cheese
- 1/2 sandwich (egg salad or tuna)
- Toast and peanut butter or nut butter
- Single serve frozen entrees
- Fruit and Greek yogurt

- Casseroles*
- Banana or sliced apple with almond butter
- Ready-to-eat soups or stews
- Cereal and milk
- Omelette or quiche
- 1/4 cup of nuts
- Milkshake or smoothie (*Ask your dietitian for these recipes and others)

Drink Plenty of Fluids

Every cell in your body needs water. Fluid requirements vary based on age, weight, and activity levels, but a good rule of thumb is to aim for 8 cups (2L) of total fluid per day.

Meal Replacements

Many people find that high calorie nutrition products such as Boost™ and Ensure™ make very good snacks and help to maintain body weight during treatment. Your dietitian can help you select the best supplement for your needs.

Vitamins, Minerals & Herbal Supplements

Vitamins, minerals and herbal supplements are examples of alternative therapies (a treatment that is used instead of a typical treatment) or a complementary therapy (a therapy that is used together with a conventional treatment).

Some natural health products claim to be able to treat cancer or help reduce side effects of conventional cancer treatment. In most cases, whole food is the best way to get the vitamins and minerals that our body needs. We know that some natural health products can interact with chemotherapy and radiation therapy. This means that your treatment may not work as well as it should or that your side effects may be worse.

There is research to support that the following natural health products can interact or interfere with your radiation or chemotherapy:

- Vitamins and Minerals:
 - Vitamin A
 - Vitamin C
 - Vitamin E
 - Coenzyme Q-10
 - Zinc
 - Beta-carotene
 - Selenium

The vitamins, minerals and herbal products listed above are not a complete list. Tell your health care team about your current or planned therapies. They may be able to help make sure that the therapy is safe during your cancer treatment. If you are

interested in taking any vitamin, mineral or herbal supplements, please talk to your doctor, pharmacist or dietitian.

Herbal Products:

- Essiac tea/Flor-Essence™
- Mushroom extracts
- Acai or mangosteen juice
- Noni or goji berries
- Taheebo
- Laetrile (apricot seed kernels)

Antioxidants During Treatment

Antioxidants are nutrients found in some foods. Antioxidants are also found in vitamin and mineral supplements, some herbal products, some protein powders, fruit and vegetable powders/pills, vitamin water and juices. Antioxidants help your body in many ways by protecting normal cells and helping to repair and prevent damage. Common antioxidants are Vitamin A, Vitamin C, Vitamin E, Coenzyme Q-10, Zinc, Beta-carotene and selenium.

Should I take antioxidants during radiation therapy or chemotherapy?

Radiation therapy and many chemotherapy drugs work to control your cancer by damaging cancer cells. Antioxidants may also protect cancer cells in the same way that they protect normal cells. Antioxidants may reduce how well your treatment works and could also increase your side effects.

It is recommended that you DO NOT take large amounts of antioxidants:

- One week before your first radiation or chemotherapy treatment, if time allows
- During your radiation or chemotherapy treatment
- For two weeks after your last radiation or chemotherapy treatment

What vitamins and supplements can I take?

Not all vitamin and mineral supplements have antioxidants. Calcium, vitamin D, vitamin B12 and iron are not antioxidants and are safe to take at recommended levels during radiation and chemotherapy treatment.

Taking small amounts of antioxidants, like those found in some multi-vitamins, may be okay to take during your radiation or chemotherapy treatment. Check the product labeling to make sure the amount of each antioxidant is not more than 100% of the daily value (%DV). This information is usually listed on the bottle. It is important to continue taking any vitamin or mineral supplements that have been prescribed by your doctor. If you have any questions, please talk to your doctor, pharmacist or dietitian about what you can take during treatment.

It is safe to use meal replacements such as Ensure® or Boost® because they provide similar amounts of vitamins and minerals as food sources.

Can I eat foods with antioxidants?

Yes! It is okay to eat normal amounts of foods with antioxidants as a part of your diet. A normal healthy diet involves eating a variety of fruits, vegetables, protein foods including nuts and seeds, and whole grains.

Generally food sources are safe; just do not eat excessive amounts of antioxidant rich foods or beverages on a regular basis. One example is Brazil nuts which contain more than two days' worth of selenium in one nut. Another example is an orange or a kiwi which each provide nearly a days' worth of vitamin C. This does not mean you need to avoid these foods, but try to avoid eating too much of any one fruit or vegetable.

You should have 7–8 servings per day of fruit or vegetables from all sources. This includes whole fruits and vegetables, fruit smoothies, juice and purees. One serving of fruit or vegetable is about ½ cup (125 mL). It is important to avoid excessive juicing and use caution with any supplement (pill or powder) that is made from plant extracts or dried and concentrated plant powders.

Where can I get more information?

Talk to your healthcare team if you have questions about antioxidants and your treatment. Bring an updated list of your vitamin, mineral, or herbal supplements with you.

Key points to remember:

- Large amounts of antioxidants may protect cancer cells against radiation therapy and chemotherapy. This could make your cancer treatment less effective.
- Stop taking antioxidant supplements 1 week before your first radiation and/or chemotherapy treatment
- Do not take antioxidant supplements during your radiation and/or chemotherapy treatment and for 2 weeks after

Food and Drug Interactions

Some cancer medications can interact with other medications, foods, or natural health products. These interactions can make your treatment less effective or cause severe side effects. Cancer Care Ontario has a drug library that provides access to information on over 100 cancer drugs available for use in Canada. You can look up your cancer medication and see if there are any food or drug interactions that you need to be aware of by visiting this Cancer Care Ontario

webpage: <https://www.cancercareontario.ca/en/drugformulary/drugs>

Alternative Diet and Nutrition Myths

Although you may hear about many special diets that cure cancer, there is no research to support these claims. Some of these special diets can be unsafe and lead to weight loss and malnutrition. If you are thinking about starting an alternative or special diet, talk to a dietitian or another member of your health care team.

The Acid / Alkaline Diet

This diet suggests that avoiding 'acid-producing' foods such as meat, dairy, eggs, sweets, caffeine, alcohol, refined flour, and processed foods, will slow the growth of cancer cells. While there are general health benefits to limiting some of these less healthy foods, no diet will dramatically or permanently change the pH (acid/alkaline level) of your blood.

Myth: Sugar Feeds Cancer

This myth suggests that eating sweets or foods sweetened with sugar (glucose) will feed cancer cells, causing them to grow faster. All cells in the body, including cancer cells, do live on blood glucose. Even healthy foods like bread, rice, pasta, potatoes and fruit are broken down into glucose. This does not mean that eating small amounts of these foods (including sweets or sweetened foods) will cause cancer cells to grow faster.

Recommended Resources

- BC Cancer Agency, website: <http://www.bccancer.bc.ca/>
- Dietitians of Canada, website: <https://www.dietitians.ca/>
- Health Canada: Canada's Food Guide, website: <https://food-guide.canada.ca/en/>
- Patient & Family Resource Centre

Books:

- *Cooking with Foods that Fight Cancer* by Dr. R. Beliveau
- *Eat Well – Stay Nourished: A Recipe and Resource Guide for Coping with Eating Challenges* by Nancy E. Leupold
- *Goes Down Easy: Recipes to Help You Cope With the Challenge of Eating During Cancer Treatment* by Elise Mecklinger
- *The Essential Cancer Treatment Nutrition Guide* by Jean LaMantia
- Canadian Cancer Society booklets: *Complementary Therapies – A guide for people with cancer*