

Commonly asked nutrition questions

For people with cancer

This booklet will help answer these questions:

- Why is nutrition important?
- Are there any foods that can help me fight cancer?
- Are there any foods I should not eat?
- Is it OK to eat red meat?
- Is it OK to eat dairy?
- Is it OK to eat soy?
- Does sugar feed cancer?
- Should I eat a ketogenic diet?
- Should I eat only organic food?
- Should I eat a plant-based diet?
- Where can I find more information?



Why is nutrition important?

Eating well when you are living with cancer and during treatment can help you:

- Maintain your strength and energy
- Maintain your weight and muscle mass
- Cope with side effects from your treatment
- Lower your risk of a hospital stay and infection
- Heal and get better faster

Talk to a dietitian if you are eating less than usual or have lost weight without trying. A dietitian can help you:

- Choose higher calorie and protein foods to help you gain or maintain your weight
- Help you manage nutrition-related side effects of cancer and treatment
- Answer your nutrition questions

If you are a patient at the Odette Cancer Centre and you would like more nutrition information, please visit the Patient & Family Support office in TG 230 (T-wing, ground floor, room 230), call 416-480-4623, or visit sunnybrook.ca/cancernutrition

Are there any foods that can help me fight cancer?

When it comes to nutrition and cancer, the best way to help your body fight cancer and heal is to:

- Eat enough calories to maintain your weight
- Eat enough protein to meet your needs
- Drink enough liquid to help your body work properly

After a cancer diagnosis there is no scientific research that any specific food can slow cancer growth or prevent cancer from coming back. Evidence for “cancer-fighting foods” is mostly based on research to prevent cancer. Eating a diet filled with plant-based foods, like vegetables, fruits, whole grains, and legumes, can help lower your risk of cancer.



This booklet uses scientific research to answer commonly asked questions about food and cancer. If you want information about other foods not covered in this booklet, go to the [**American Institute for Cancer Research’s Foods that Fight Cancer™ website.**](#)

Your protein needs are higher during cancer treatment, so try to eat a protein food, like beans, nuts, eggs, or meat, at each meal and snack. Try to follow a healthy pattern of eating instead of focusing on specific foods.

Canada's Food Guide encourages a pattern of eating that includes a variety of healthy foods and is associated with positive health outcomes. Canada's Food Guide Plate shows how these healthy foods can fit into the meals you eat each day. Go to food-guide.canada.ca for more information.

Eat a variety of healthy foods each day

Have plenty of vegetables and fruits

Eat protein foods

Make water your drink of choice



Choose whole grain foods

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Are there any foods that I should not eat?

No food will cause your cancer to grow faster. Try to pick foods that you enjoy eating and meet your nutritional needs.

You may find it helpful to avoid certain foods if you have symptoms like diarrhea, nausea, taste changes, or pain with swallowing. **Talk to a dietitian if you are having trouble eating.** Your health care team will tell you if you need to avoid any foods that may affect your treatment.

Cancer treatment can weaken your immune system making it harder to fight infection. Follow food safety practices to lower your risk of foodborne illness (also called food poisoning). Remember to:

- Wash your hands and surfaces with warm soapy water before and after cooking and eating
- Avoid undercooked or raw meat, poultry, eggs, and seafood, like sushi
- Avoid unpasteurized dairy foods, juice, and home-canned foods
- Cover and refrigerate uneaten food within 1 hour
- Avoid eating food that may be left out for many hours, like buffets and salad bars



If you want more information about food safety for people with weakened immune systems, go to [**Health Canada's food safety website.**](#)

The American Institute for Cancer Research and the World Cancer Research Fund recommends the following before and after a cancer diagnosis:

- **Limit red meat and avoid eating processed meat.** More information is on the next page.
- **Avoid or limit drinking alcohol.** Drinking alcohol increases the risk of many cancers. It is recommended not to drink alcohol.
- **Do not smoke tobacco.** Smoking is the leading cause of cancer worldwide. Not smoking or stopping smoking is the best way to reduce the risk of cancer for you and those around you.
- **Avoid too much sun exposure.** Most skin cancer is caused by damage from ultraviolet (also called UV) radiation from the sun or sunbeds. When outside, wear sunscreen, protective clothing like hats and long sleeve shirts, and avoid staying in the sun for too long.
- **Be physically active.** Physical activity lowers the risk of some types of cancer and has many other health benefits. Try to be active for 30 minutes every day. If you are not active now, start with 5 minutes of physical activity and increase as the activity becomes easier to do.



Is it OK to eat red meat?

Yes, moderate amounts of lean red meat can be part of a healthy diet before and after a cancer diagnosis.



Red meat includes beef, veal, pork, lamb, mutton, horse, and goat.

- Red meat is a source of important nutrients like protein, iron, zinc, and vitamin B12.
- Too much red meat can increase your risk of colorectal cancer and may increase your risk of other cancers.
- **If you eat red meat, limit your intake to three servings each week.** One serving is 4 - 6 ounces (115 - 170 grams) of cooked meat, or about the size of a deck of playing cards.

What about processed meat?

- Processed meat is meat preserved by curing, salting, smoking, or adding preservatives. This includes foods like ham, bacon, pepperoni, deli meats, sausages, hot dogs, and smoked salmon.
- Any amount of processed meat can increase your risk of colorectal cancer and may increase your risk of other cancers.
- **Try to avoid or only eat a little processed meat.**

What about growth hormones?

- Beef cattle naturally make hormones, the same way humans make hormones.
- Farmers sometimes give beef cattle additional growth hormones to produce more meat. Growth hormones must be stopped well before beef cattle are slaughtered so hormone levels can drop.
- When beef is ready to eat hormone levels will be about the same whether it was raised with or without growth hormones.
- Growth hormones are not used in any other food grown or sold in Canada.

What type of protein foods should I eat?

- Meat contains important nutrients that can help your body stay strong during cancer treatment, especially if you are struggling to eat enough.
- If you feel well and your weight is stable, choose plant-based proteins like beans, lentils, and soy, more often.

Is it OK to eat dairy?

Yes, it is safe to eat dairy products before and after a cancer diagnosis. Dairy products include milk, cheese, and yogurt.

- These foods are a source of protein, calcium, and vitamin D.
- Research suggests eating dairy lowers the risk of colorectal cancer and may lower the risk of premenopausal breast cancer.
- There is limited research that shows eating dairy may increase the risk of prostate cancer, but more research is needed. The American Institute for Cancer Research and the World Cancer Research Fund do not recommend avoiding dairy to lower your risk.



Should I be worried about growth hormones or antibiotics?

- No. Farmers are not allowed to use growth hormones in dairy cows that produce milk sold in Canada.
- Sometimes cows are given antibiotics to treat an infection. The milk they make while on antibiotics is thrown out. All milk sold in Canada is tested to make sure it does not have any amount of antibiotics in it.

What type of dairy products should I eat?

- If you feel well and your weight is stable, choose lower-fat dairy products.
- If you have lost weight or have problems eating, choose higher-fat dairy products like whole 3.25% cow's milk and full-fat yogurt or cheese.

Is it OK to eat soy?

Yes, it is safe to eat soy foods before and after a cancer diagnosis. Soy is a source of protein and other important nutrients. Eating moderate amounts of soy does not increase the risk of any cancer.

What is a moderate amount of soy?

A moderate amount of soy is up to 3 standard servings a day. One standard serving is:

- $\frac{1}{3}$ cup (65 g) tofu
- 1 cup (250 ml) soy milk
- $\frac{1}{2}$ cup (125 ml) edamame
- $\frac{1}{4}$ cup (60 ml) soy nuts

What about isoflavones?

Soy foods contain chemical compounds called isoflavones, which look like human estrogen. Some people worry that isoflavones increase their risk of hormone sensitive cancers like breast and prostate cancer.

There is no research to suggest this is true. In fact, human studies suggest that eating soy foods may lower the risk of colorectal, prostate, and breast cancers. However, more research is needed.

Should I take soy supplements?

No. Soy supplements have much higher levels of isoflavones than soy foods and are not recommended to take.



Does sugar feed cancer?

No. If you have cancer, eating sugar does not make cancer cells grow faster. Sugar is a type of carbohydrate or “carb”.

- All cells in your body, including cancer cells, need energy to grow. Their main source of energy is blood sugar (also called blood glucose).
- When you eat carbohydrates, your body breaks them down into glucose to use as energy.

There are two types of sugar:

- **“Natural sugar”** is found in fruits, vegetables, grains, beans, and dairy
- **“Simple sugar”** or **“added sugar”** is found in foods like soft drinks, candy, and desserts



The relationship between sugar and cancer is complicated.

- Eating too much simple sugar over a long time can lead to more body fat. More body fat has been linked to a higher risk of cancer.
- Some people living with cancer think they can starve cancer cells by avoiding carbohydrates. **This is not true and is not recommended.**
- If you do not eat carbohydrates your body will breakdown protein or fat to use as energy. This can lead to muscle and weight loss, which can lower your energy, delay treatment, and slow recovery.

What type of carbohydrates should I eat?

If you feel well and your weight is stable:

- Choose carbohydrate foods with natural sugars like whole grains, beans, fruit, starchy vegetables, and milk. These foods have vitamins, minerals and fibre that are important for overall health
- Limit foods with added sugars like baked goods, candy, and sugary drinks

If you have lost weight or have problems eating:

- Your dietitian may tell you to choose high-calorie, high-protein foods and liquids
- You can choose any food that tastes good and helps you gain or maintain your weight. This may mean eating more sugary foods like ice cream or dessert, and that is ok

Should I eat a ketogenic diet?

No. There is no major cancer organization that recommends the ketogenic diet before or after cancer diagnosis. A ketogenic diet may be helpful for specific types of cancer, but it may be harmful for other types of cancer.



What is a ketogenic diet?

- A ketogenic or “keto” diet is a very low-carbohydrate, moderate-protein, high-fat diet.
- If strictly followed the body will start using ketones made from fat, rather than carbohydrates, for energy. It is thought that some types of cancer cells cannot use ketones for energy.

What does the research say?

- Most research about ketogenic diets has been done with mice. Only a few small studies using human participants have been done about the ketogenic diet.
- Some of these studies suggest that ketogenic diets may make some cancer treatments work better. Other studies suggest the ketogenic diet may make cancer outcomes worse for other types of cancer.
- The type of cancer and other factors influence if the ketogenic diet is helpful or harmful.
- **There are too many unanswered questions and potential harms to recommend ketogenic diets.** More studies are needed.

What should I know about ketogenic diets?

- They are very high in fat and do not provide enough of some essential nutrients.
- Constipation, upset stomach, changes in bloodwork, malnutrition, and weight loss are common when eating a ketogenic diet. Weight loss during cancer treatment can lead to worse cancer outcomes.
- **You should not try a ketogenic diet on your own.** If you choose to eat a ketogenic diet, a dietitian with experience in this area can help you make sure your body gets enough of the nutrients it needs.

What type of diet should I eat?

- Research shows that a diet that includes mostly plant-based foods and also meets your calorie, protein, and liquid needs is best for most people with cancer.
- Try to follow Canada's Food Guide. Canada's Food Guide Plate and more information about Canada's Food Guide is found on page 5.

Should I eat only organic foods?

Farmers use pesticides to protect their crops against insects, plants, animals, or other pests. Some people worry that pesticides used on non-organic (also called conventional) fruits and vegetables will raise their risk of cancer. **There is no scientific research to show pesticides used to grow food increase your risk of cancer.**

Who decides how pesticides are used?

- Health Canada makes laws to ensure pesticides are used properly and food grown with pesticides will not cause health problems.
- The Canadian Food Inspection Agency monitors food that is sold to make sure it meets these safety laws.
- Pollutants are found on both conventional and organic foods. Clean your fruits and vegetables by rinsing them under clean, running water before eating or cooking.

What does the research say about organic foods and cancer?

One large study showed that people who eat more organic foods had a lower risk of developing cancer. Another large study showed no difference between people eating conventional or organic foods and their risk of cancer.

It is not clear if it was eating organic foods or making other healthy choices that lead people in the first study to have a lower risk of cancer. More research is needed.

What about genetically modified foods (GMOs)?

- Genetically modified foods (also called genetically modified organisms or GMOs) are plants whose DNA has been changed using genetic engineering. These changes can make plants easier to grow, more nutritious, or taste better.
- Like pesticides, Health Canada assesses all new genetically modified foods to make sure they are safe and nutritious before allowing them to be sold in Canada.
- **There is no scientific research to show a connection between GMO foods and risk of cancer.**



What type of fruits and vegetables should I eat?

- Eating mostly plant-based foods, whether organic, conventional or GMO, is one of the best ways to lower your risk of cancer through food.
- If your weight is stable and you do not have problems eating try to fill half your plate with fruits and vegetables at each meal.
- Pick fruits and vegetables that fit your budget. Fresh, frozen, low-sodium canned vegetables, or no-added sugar canned fruits are all good choices.

Should I eat a plant-based diet?

Yes. Eating mostly plant-based foods is the best way to decrease your risk of cancer through food. Plant-based foods include fruits, vegetables, grains, legumes like lentils, dried beans, and peas, nuts, and seeds.

- **No single food can reduce your risk of cancer. Try to focus on a healthy pattern of eating.**
- Some cancer survivors are at higher risk of disorders like diabetes, heart disease, and weight gain. Eating a plant-based diet can help prevent and manage these disorders.
- Research consistently shows that plant-based diets are a healthy way of eating with minimal side effects for people that have a good appetite.

How do I eat a plant-based diet?

- Eat animal foods, like meat, dairy, and eggs, less often or in smaller amounts. Choose plant-based protein foods, like legumes, soy, nuts, and seeds, instead.
- Add high-fibre foods, like fruit and vegetables, slowly. Extra fibre can temporarily cause gas and bloating.
- Include fruits and vegetables in a variety of colours.
- Choose whole or minimally processed foods most often. For example, choose oatmeal topped with berries instead of sugar-sweetened breakfast cereal.
- Canada's Food Guide can help you make healthy eating choices. More information is on page 5.

Where can I find more information?

Keeping informed is helpful for making decisions when you are living with cancer.

When searching for information, make sure to always look at trustworthy sources. The following websites offer reliable information that is based on scientific research. You can feel confident the information you read on these websites are true.

- Odette Cancer Centre: sunnybrook.ca/cancernutrition
- Cancer Care Ontario: cancercareontario.ca
- Canadian Cancer Society: cancer.ca
- World Cancer Research Fund: wcrf.org
- American Institute for Cancer Research: aicr.org
- National Cancer Institute: cancer.gov
- American Cancer Society: cancer.org
- Memorial Sloan Kettering Cancer Centre – About Herbs, Botanicals & Other Products: mskcc.org/cancer-care/integrative-medicine/about-herbs-botanicals-other-products

This booklet and information found online is general information. It does not take the place of medical advice. Contact your dietitian or health-care team if you need help understanding how this information applies to you.

Nutrition topics I want to learn more about:



If you are a patient at the Odette Cancer Centre and you would like more nutrition information, please visit the Patient & Family Support office in TG 230 (T-wing, ground floor, room 230), call 416-480-4623, or visit sunnybrook.ca/cancernutrition

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