

Nutrition myths about cancer

There is a lot of information about nutrition and cancer and it is sometimes hard to know what to believe. Information given by well-meaning friends and family, as well as what is read on the internet, can often be overwhelming.

Misinformation can cause people to make unnecessary or sometimes harmful changes to their diets that could affect their health.

Your health care team provides you with information that has been proven with research.

In this handout we have “busted” some of the common myths and misconceptions about nutrition and cancer.

Myth #1: Sugar feeds cancer

Fact:

Sugar is naturally found in fruits, vegetables, grains, milk and honey. It is also added to foods to make them sweeter, such as soft drinks and desserts.

All cells in your body use sugar in the form of carbohydrates for energy, whether from a cookie, carrot or a can of pop.

All cells, cancerous or not, use sugar for energy.

Because cancer cells can grow fast, they use a lot of sugar. However, eating foods with sugar does not make cancer cells grow faster nor does depriving your body of sugar slow cancer growth.

If you avoid sugar in your diet, your body will make sugar from your body's muscle and fat stores. This is unhealthy as your cells can also become starved of these important nutrients.

What you should know:

Sugars found in sweets and sweetened drinks are called simple sugars and contain few nutrients. The Canadian Cancer Society recommends you limit simple sugars as increased amounts can lead to poor blood sugar control. Increased amounts can also lead to weight gain and poor nutrition, which are risk factors for some cancers.

On the other hand, foods like whole grains, fruits and vegetables and legumes contain healthy amounts of sugar in the form of complex carbohydrates.

A balanced meal that contains complex carbohydrates with a source of protein such as fish, lean meat, legumes or soy, and a healthy fat such as olive oil or avocado, provides good nutrition and fuel for your body, as well as helps to control your blood sugar.

Myth #2: Artificial sweeteners cause cancer

Fact:

Artificial sweeteners are used instead of table sugar (sucrose) to sweeten foods and drinks. Artificial sweeteners are 30 to 3000 times sweeter than table sugar, so you only need small amounts to make food and drinks taste just as sweet. They are tested for safety by the Canadian Food Inspection Agency. There is no evidence that artificial sweeteners cause cancer in humans.

What you should know:

Health Canada only approves sweeteners when research shows they are safe. There are a number of different artificial sweeteners available and there are guidelines as to how much is safe to consume. The amount of sweetener most people have in a day is well below what is considered unsafe.

Visit EatRight Ontario (www.eatrightontario.ca) for more information or talk to your Dietitian about which sweetener is right for you.

Myth #3: Superfoods prevent cancer

Fact:

Acai, pomegranate, blueberries and green tea have all been said to be “superfoods” that “prevent cancer.” The term “superfood” has made its debut as a well-known marketing term. The truth is, there is no such thing as a “superfood.”

What you should know:

Minerals, vitamins and phytochemicals from a variety of fruits and vegetables **work together** in your overall diet to offer the strongest cancer protection. Fruits and vegetables are relatively low in calories and high in fibre which can help with weight management, as excess body fat can increase cancer risk. Fill your plate 2/3 full with plant foods.

Myth #4: Organic is better

Fact:

Organic foods are grown without the use of pesticides and man-made fertilizers. Non-organic foods are grown with conventional methods that use pesticides and fertilizers. However, once you wash non-organic foods, the amount of pesticide residue is insignificant. There is no evidence that eating organic foods reduces cancer risk.

What you should know:

All fruits and vegetables have cancer-protective benefits. The amount of vitamins, minerals and fibre are similar between organic products and non-organic products. Organic foods cost more because they are more expensive to grow. Organic farming is also better for the environment.

Whether you choose organic or non-organic, **eating 2 cups of fruits and 2½ cups of vegetables daily has shown to reduce cancer risk.** Enjoy a variety of different fruits and vegetables and wash them well before eating.

Myth #5: GMOs cause cancer

Fact:

Genetically Modified Organisms (GMOs) are plant-based organisms that have had their genes (DNA) altered in a way that does not happen naturally in nature and that contain genes from another plant-based organism. Examples of GMOs grown in Canada include corn, canola, soybean and sugar beet. GMOs are used to grow genetically modified food. Foods are genetically modified to improve taste and nutrition or to make crops easier to grow.

At this time, there is no evidence that GMOs cause cancer.

What you should know:

Genetically modified foods in Canada are considered safe for us to eat. Before these foods can be sold, Health Canada makes sure they are safe to eat and safe for the environment.

Sticking to a diet rich in fruit, vegetables and whole grains outweighs any GMO health concerns when it comes to cancer risk.

Myth #6: Hormones in meat and dairy products cause cancer

Fact:

Hormones occur naturally in all animals, people and plants. As such, there are no hormone-free meat and dairy products. There is no evidence that shows hormones used in beef causes cancer.

What you should know:

Health Canada regulates the use of growth hormones in Canada. Hormones are only approved for beef cows, not for use in milk producing cows, poultry or pork. Hormones are used in cattle for leaner meat, to improve growth and to reduce the cost for both the farmer and consumer.

Health Canada, the World Health Organization and the Food and Agriculture Organization of the United Nations have all reviewed the use of hormones in beef and agree that hormones can be used safely in beef production. The levels found in food products, such as beef, are too low to be of risk to human health.

Meat provides a good source of protein and can be included in a healthy diet. Cancer Care Ontario recommends eating less processed meat and red meat as these may increase your risk of cancer. Instead, choose chicken, turkey or fish, as well as meat alternatives such as legumes, tofu and nuts more often.

Myth #7: A raw food diet prevents/cures cancer

Fact:

Some people believe that heating food makes it less healthy. A raw food diet involves uncooked and unprocessed foods including, mostly raw fruits and vegetables, nuts, seeds and sprouted grains. Some include unpasteurized dairy products, raw eggs, and raw meat and fish.

There is no evidence that raw foods prevent or cure cancer. While this diet is high in fruit and vegetables, vitamins, minerals and fibre, cooking your food will not make it any less healthy. In fact, cooking food boosts certain nutrients such as beta-carotene found in carrots and lycopene in tomatoes.

What you should know:

The raw food diet is missing some essential nutrients such as protein, iron, calcium and vitamin B12. It is also very difficult to follow and highly restrictive.

Cooking helps to kill bacteria that can cause food poisoning. Due to the risk of food poisoning, a raw food diet is not recommended for people with weak immune systems such as patients receiving chemotherapy, radiation therapy, young children, seniors, pregnant women and those with chronic medical conditions.

Myth #8: Cleanses help rid my body of cancer

Fact:

You may have heard of cleanse diets such as juice cleansing, the apple cider vinegar cleanse or perhaps even the cayenne pepper cleanse. The idea behind these popular detox diets is that they rid the body of any compounds that may have harmful effects.

Many people with cancer may wonder if they should try cleanses in hopes of clearing their body of cancer cells or harmful toxins that promote tumour growth. There is no evidence that cleanses remove harmful toxins or cancer cells from our body. In fact, cleanses might actually do more harm than good.

What you should know:

The body already does a good job at filtering out harmful toxins. The main functions of our liver and kidneys are to remove harmful toxins from our blood.

You may lose weight from a cleanse diet in the short-term as you are likely eating significantly less calories than you normally would. However, because these diets are so restrictive, you will likely miss out on important nutrients that offer disease-fighting properties and many other health benefits.

Myth #9: Acidic foods cause cancer

Fact:

Some people avoid highly acidic foods due to the belief that cancer thrives in acidic environments and cannot grow in alkaline environments. The pH level of a food determines if it is acidic or alkaline. Acidic foods have lower pH levels and alkaline foods have higher pH levels.

Since our blood is slightly alkaline, some people believe that we should eat only alkaline foods to avoid upsetting the pH balance of our blood. People who want to ensure their body's pH level is always alkaline may use litmus paper on their tongue to test their pH. There is no evidence to support that avoiding acidic foods and eating only alkaline foods can change our body's overall pH level. Likewise, the pH level in our mouths is not reflective of our body's overall pH level as it is highly influenced by what we eat or drink, including brushing our teeth. In fact, our kidneys and lungs tightly regulate our body's pH level.

What you should know:

Your blood may become slightly acidic or alkaline after eating certain foods however, this change is only temporary as our body responds very quickly to return to a healthy pH balance. Excess acid or alkaline substances are removed in our urine.

The acidity or alkalinity of foods does not affect cancer risk. Avoiding foods that are highly acidic can cause you to miss out on important nutrients that are only found in these types of food. For example, vitamin C is mostly found in citrus fruits and vegetables like peppers and broccoli. By avoiding these acidic foods, you miss out on the many health benefits that vitamin C provides for our body, such as its ability to form and repair blood, bones and other tissue and to increase iron absorption from our foods.

Myth #10: Intravenous vitamin C supplements slow cancer growth

Fact:

Some people believe that intravenous (IV) vitamin C improves the effects of chemotherapy and reduces its toxicity. When vitamin C is taken into the vein, it can reach much higher levels in the blood compared to when the same amount is taken by mouth.

Vitamin C is found in foods such as fruit and in vitamin supplements. It is an antioxidant, which means it helps protect your cells against the effects of free radicals. Free radicals develop when the body breaks down certain foods such as oils used in deep-frying and processed meats, and alcohol. Free radicals can damage cells that could lead to cancer. Antioxidants can protect cells by preventing and repairing the damage caused by free radicals.

Free radicals are also produced during radiation treatment and cause damage to the cancer cells. In the same way that antioxidants can protect normal cells, they can also protect cancer cells. Taking large amounts of vitamin C can reduce the effects of radiation treatment on cancer cells.

There have been very few studies on IV vitamin C. Of those studies, there is no consistent evidence to suggest any anticancer effects. There is a risk of vitamin C toxicity or even death with this procedure.

What you should know:

The best way to get antioxidants is from your diet. Vitamin C, vitamin E, beta-carotene and selenium are all antioxidants. These antioxidants are found in a number of foods including fruit and vegetables, milk and nuts.

It is important that you tell your doctor what vitamin/mineral supplements you are taking because they could interact with your treatment.

Myth #11: Taking a multi-vitamin lowers my cancer risk

Fact:

There is no evidence to suggest that taking a multivitamin lowers your risk of cancer more than eating a balanced, healthy diet. There is also no evidence that taking a multivitamin in addition to eating a healthy diet enhances your body's ability to fight off disease. If you get enough nutrients from your food, you could do more harm to your body with extra supplementation.

Eating a diet rich in vegetables, fruits, whole grains, fish, nuts and legumes can provide you with all the essential vitamins and minerals you need.

What you should know:

All people, whether they have cancer or not, need vitamins and minerals in order to maintain a healthy body. A multivitamin may be good for those who are unable to eat enough nutrients from their food to meet their needs.

If you are interested in taking a multivitamin, speak with your Oncologist or Registered Dietitian to find out which one is right for you as some supplements may interfere with cancer treatment.

Myth #12: Microwaves cause cancer

Fact:

Many people are concerned with microwaves and their effects on cancer risk. The concern comes from the belief that the radioactive waves produced by microwaves to cook your food cause cancer.

Your food and the microwave itself do not become radioactive from the waves produced by the microwave during the cooking process. Once the cooking process is complete, the waves in the microwave disappear. They do not remain in the food you eat or in the microwave.

What you should know:

Although using a microwave for cooking does not put you at greater risk for cancer or cause cancer cells to grow faster, Health Canada recommends only heating your food using microwave-safe containers. Heating your food in plastic containers or with plastic wrap that is not labelled as microwave safe may cause the chemicals in the plastic to leak into the food it holds. It is these chemicals that show possible cancer-causing features.

Health Canada tests the safety of all plastic containers sold with food or drink in them before allowing these products to be sold in Canada. To make sure you are heating your foods safely in the microwave, visit Health Canada's website for microwave cooking guidelines (www.hc-sc.gc.ca).



Myth #13: Leaving water bottles in my car will cause cancer

Fact:

Many people worry that if they leave a plastic water bottle in a vehicle too long, harmful chemicals will leak into the water if the bottle freezes or is exposed to summer heat. Dioxins are one of the chemicals thought to cause cancer through this process.

There are many studies that show leaving disposable water bottles out in extreme temperatures for a long period of time is not harmful to your health. There is also no evidence that plastic water bottles sold in Canada contain dioxins.

What you should know:

There is no concern with disposable water bottles when it comes to cancer risk. That being said, there is still concern around bacteria growth if the water in these bottles is left out in a warm area after being opened or if reusing the bottle and not cleaning properly. To reduce your risk of contamination, make sure the bottle is not damaged before opening, avoid refilling disposable water bottles, check the best before date and refrigerate shortly after opening.

In summary

About 1/3 of all cancers can be prevented by eating well, staying active, and maintaining a healthy body weight. Reduce your risk of cancer or cancer recurrence by:

- Eating a balanced diet with a variety of fruits and vegetables and whole grains and limiting your intake of refined sugar and processed foods
- Staying physically active
- Maintaining a healthy body weight
- Avoiding smoking and limit your alcohol intake

Talk to your Oncologist, Nurse or Registered Dietitian for more information on healthy diet and lifestyle changes