5 Common Cancer Nutrition Myths

A look at several enduring misconceptions about the effects of different types of foods on cancer

August 10, 2020 By Danielle Penick

A few months ago marked the 3rd anniversary of Survivors' Table! To celebrate I'm writing about the top 5 cancer nutrition myths that I'm asked about. Each of these topics I have written about more extensively and include the link for reference to read more about each idea that may interest you.

1. Sugar feeds cancer…

This is the number one question that my patients ask me and the answer is complicated. Sugar does feed cancer, but that's because sugar feeds every cell in our bodies. We get sugar or carbohydrates from simple sugars, like white table sugar, and more complex carbohydrates that come in fruits, vegetables, and whole grains. Whether we eat plain sugar, simple carbohydrates, or complex carbohydrates, our body will turn almost all of these carbs into glucose for our body to use as energy. Everyone needs a certain amount of carbs for healthy cell function, especially for brain function. If you are undergoing cancer treatment, your healthy cells will need energy as cancer saps up resources. Many cancer types require more calories than usual, but sugar and carbs feed our whole bodies—so you cannot pick and choose which cells get which fuel.

Carbs come from two primary sources: our food and our body stores. If you don't eat carbs or sugar, then your body will start breaking down protein from your muscles and fat from your fat stores to create the energy it needs. This will weaken your immune system and potentially hurt your cancer treatment. In the end, there is partial truth that sugar feeds cancer, but that does not mean sugar and carbohydrates should be avoided at all costs. Extreme diets can hurt cancer treatment if they result in malnourishment, cause patients to avoid healthy fruits, starchy vegetables, beans, and whole grains or lead to guilt. For more details on the topic and further recommendations you can read the post here.

2. The alkaline diet or alkaline water cures cancer…

Have you heard that cancer cannot survive in an alkaline environment? Some people claim that that an acidic environment in the body causes disease and that an alkaline (or basic) diet is the only way to fix this. The prescribed ratio for the alkaline diet is 80% "alkaline forming foods" and 20% "acid forming foods." The alkaline forming foods include many fruits and vegetables. Grains have been identified as "slightly acid forming," and the highest acid forming foods were meat, fish, dairy, sugar, salt, alcohol, and anything that contains caffeine. When you break it down, the

alkaline diet sounds reasonable. It's hard to argue with a diet that encourages eating more fruits and vegetables and less sugar, alcohol, and meat. But, the details do matter.

The pH scale ranges from 0 to 14, with 7 being neutral, anything less than 7 being acidic, and anything over 7 being basic (aka, alkaline). Every organ in the body has a different pH range needed for the organ to function and pH values vary greatly within the body. Some organs are acidic and some are alkaline. This was my first clue that shifting the body's pH one direction or another might not be a good idea. Your stomach, for example, is highly acidic (a pH of 1.5-3.5) because hydrochloric acid is needed to break down food. Your blood pH has a slightly alkaline pH within a very narrow range (7.35-7.45). A change in blood pH anywhere outside of this will cause you to end up in the hospital extremely sick and in extreme cases you will likely end up on dialysis or life support. So even if you could change your diet to shift your blood pH, it might not be a good idea.

You can't change most of your body's pH with diet – the exception is your urine and saliva. Your body tightly regulates the pH in every organ, whether using secretions from your stomach, gallbladder, liver, or kidneys. Any rise or fall in pH sets off a chain reaction that your body quickly works to correct. If you eat too many acidic foods (or too many alkaline foods), your body will recalibrate to balance your pH to keep you alive. The alkaline diet is healthy because it's based on real and unprocessed foods, but it has absolutely nothing to do with being acidic or alkaline. If you want to follow the diet, you can and if you choose to, you will probably eat better. But unfortunately it's not a magic cure. For more on the topic read here and here.

3. GMOs (Genetically Modified Organisms) cause cancer…

As a registered dietitian I hear statements from my patients ranging from "GMOs are poison", "they cause cancer", and "are unsafe", while, some report their safety and benefits. Because of the back and forth public debate, many feel confused and conflicted about what to eat. We are also surrounded with marketing such as the non-GMO verified label, which has become increasingly popular. If you weren't worried about your food before, you might be now. Grocery shopping and meal planning can be hard enough, let alone the anxiety that's added with a cancer diagnosis. These labels make you question if genetically modified organisms are in everything at the store—but many people are surprised to learn there are actually only 11 commercial GMOs in the US.

Many activists make very bold black and white statements, but as with most things in science, there is a lot of nuance that gets missed in the public discussion. To learn more about what a GMO is, the extensive research behind this technology, and the data to help you make a better informed decision read my prior post here.

4. Vitamin B17 cures cancer…

There is a lot of controversy surrounding Vitamin B17 and cancer. You may have seen websites or books proclaiming the wonders of vitamin B17 and how it can cure or prevent cancer. But is there

any merit to this and is vitamin B17 even really a vitamin? To learn more about the history of the supplement, the crackdown of the market, and what the scientific evidence shows read here.

5. Natural remedies cure cancer and should be used as they can never be made into a medicine, or that the use of synthetic and unnatural medicines are toxic…

With a cancer diagnosis comes much curiosity about what treatments exist and which are best for you. Depending on the websites you visit, who you talk to, or what book you read, you may hear many different opinions or personal testimonies about what you should do or what has worked for others. Some advocate for conventional therapies only, natural therapies only, or even a blend of the two.

A common theme for treating cancer is the idea that natural therapies in the form of juicing, supplement protocols, topical salves, essential oils, herbs, homeopathy, the alkaline diet, a diet free from sugar, or other specific diet should be used because they cannot ever be patented into medicine. You may even hear things like “pharmaceutical companies will never study alternative medicines or natural cures because there is no money to be made, they can’t be patented, or even that there is a global scheme to suppress their use.”

Western medicine or conventional medicine is often labeled as toxic or poisonous or it’s labeled as chemical and synthetic. But it is important to note that even vitamins are semi-synthetic and everything, including water, is a chemical. There are side effects from synthetic products, but the same applies to natural products as well. And whether a chemical is natural or synthetic our bodies are not able to distinguish the difference.

Natural remedies were all we had prior to modern day medicine and they have been the backbone of traditional healing throughout the world. Among some of these remedies are ones that gave way to some of the most important pharmaceuticals we have today. People have been treated with whole forms or extracts of flowers, barks, herbs, and beneficial microbes. However, they were given based on observation or experience because they were being used long before the scientific method existed. We also didn’t have the technology then to produce nature into medicine like we do today. But as technology has improved the use of synthetic products has increased due to environmental supply concerns, lower production costs, time effectiveness, higher quality control, and strict regulations.

Despite synthetic chemistry as a tool to discover and create drugs, the role of natural sources in disease treatment and prevention is still massive. Mother Nature is currently a key source of pharmacologically active compounds for drugs. Greater than 60% of all anti-cancer drugs in clinical use originate from either natural products or medicines derived directly from natural products, such as plants, marine organisms, and microorganisms. At this point in time there are many medical compounds prescribed by Western doctors that have come from Mother Nature as a result of being made into medicine once shown to be effective. For more details about how natural remedies were and are made into medicine read here.

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