

# 5 REASONS CANCER CELLS AND SUGAR ARE BEST FRIENDS

## 5 Reasons Cancer Cells and Sugar Are Best Friends (/blog-posts/5-reasons-cancer-and-sugar-are-best-friends)

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**Patrick Quillin, PHD, RD, CNS**, former director of nutrition for **Cancer Treatment Centers of America** in Tulsa, OK, wrote: “It puzzles me why the simple concept ‘sugar feeds cancer’ can be so dramatically overlooked as part of a comprehensive cancer treatment plan” (*Nutrition Science News*, April 2000). I agree. Sugar is cancer’s favorite food. There are at least five reasons that cancer and sugar are best friends.

### 1. Affinity

Cancer cells love sugar! That is why refined carbohydrates like white sugar, white flour, high fructose corn syrup (HFCS) and soft drinks are extremely dangerous for anyone trying to **prevent or reverse cancer** (/blog-posts/cancer-prevention-101-simple-steps-to-prevent-top-three-cancers).

### How Does Sugar Cause Cancer Cells to Grow?

Sugar essentially feeds tumors and encourages cancer growth. Cancer cells uptake sugar at 10-12 times the rate of healthy cells. In fact, that is the basis of PET (positron emission tomography) scans -- one of the most accurate tools for detecting cancer growth. PET scans use radioactively labeled glucose to detect sugar-hungry tumor cells. When patients drink the sugar water, it gets preferentially taken up into the cancer cells and they light up!

## The Link Between Sugar and Tumors

The 1931 Nobel laureate in medicine, German Otto Warburg, PhD, discovered that cancer cells have a fundamentally different energy metabolism compared to healthy cells. He found that malignant tumors exhibit increased glycolysis -- a process whereby glucose is used as a fuel by cancer -- as compared with normal cells.

## 2. Acidity

Warburg's research also found that cancers thrive in an acidic environment. Sugar is highly acidic. With a pH of about 6.4, it is 10 times more acidic than the ideal alkaline pH of blood at 7.4. Maintaining a preventative pH level may require reducing or eliminating dietary sugar.

## 3. Immunity

(/coffee)

Sugar suppresses a key immune response known as phagocytosis -- the Pac-Man effect of the immune system. Consuming 10 teaspoons of sugar can cause about a 50% reduction in phagocytosis.

If you consider the sugar in your cereal, the syrup on your waffles and pancakes, the sugar added to your morning **coffee (/store/coffee)** or **tea (<http://beatcancer.org/tea.html>)**, the sugar in cold beverages like iced tea or lemonade, the HFCS in prepared foods, salad dressing and ketchup, and of course sugary snacks and desserts, you can see how easy it is to suppress your immune systems significantly.



## How Long Does Sugar Impact the Immune System?

Not only the amount of sugar, but also the frequency of ingesting sugar is relevant to immune function. In one study, research subjects were found to have nearly a 38% decrease in phagocytosis one hour after ingesting a moderate amount of sugar. Two hours later, the immune system was

suppressed 44%; immune function did not recover completely for a full five hours.

## 4. Activity

In most people, when sugar in any form is consumed, the pancreas releases insulin. Breast tissue, for example, contains insulin receptors, and insulin is a powerful stimulant of cell growth. One group of Australian researchers concluded that high levels of insulin and insulin-like growth factor (IGF) may actually be causative of cancers of the breast, prostate, endometrium and pancreas.

### Does Sugar Increase the Risk of Breast Cancer?

A broad study conducted in 21 countries in Europe, North America and Asia concluded that sugar intake is a strong risk factor contributing to higher breast cancer rates, particularly in older women. A four-year study at the National Institute of Public Health and Environmental Protection in the Netherlands compared 111 biliary tract cancer patients with 480 healthy controls. Sugar intake was associated with more than double the cancer risk.

## 5. Obesity

Sugar ingestion seriously contributes to obesity, a known **cause of cancer (/blog-posts/what-causes-cervical-cancer-and-how-to-prevent-it-naturally)**. Obesity also negatively affects survival. More than 100,000 cases of cancer each year are caused by excess body fat, according to the American Institute for Cancer Research. These include esophageal, pancreatic, kidney, gallbladder, breast and colorectal cancer.

### Sugar Substitutes

Although I am against sugar, please don't think I recommend artificial sugar substitutes! Sweeteners containing aspartame, saccharin or sucralose have been shown to contribute to bladder cancer, lymphoma and leukemia, according to the **National Institute of Environmental Health Sciences**.

Good sugar substitutes are stevia (an all-natural herb from South America), barley malt, rice syrup, and palm sugar. Even high-glycemic sweeteners like Sucanat, evaporated cane juice, molasses, honey and pure maple syrup are nutritionally superior to refined table sugar or HFCS, and you can avoid sugar spiking if you consume them in the presence of high fiber foods like ground flaxseeds.

## The Sugar and Cancer Connection

There is much evidence showing sugar is linked to cancer, but can sugar cause cancer? Research is still underway to determine if there is a direct causative connection or if sugar is a contributing factor only after cancer cells have developed. Certainly, we do know that sugar is bad for cancer prevention and treatment.

Controlling sugar intake will help create the best environment for a healthy immune response and prevent causative risk factors which are still being discovered. I hope this and the other posts from The Center for Advancement in Cancer Education will help guide you to a rapid recovery, future prevention, and better overall health.

**Join the conversation. Create a topic in our forum. (<http://www.beatcancer.org/forum>)**

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## How Can We Help You?

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