

## Sugar's effect on your health

The average American consumes an astounding 2-3 pounds of sugar each week, which is not surprising considering that highly refined sugars in the forms of sucrose (table sugar), dextrose (corn sugar), and high-fructose corn syrup are being processed into so many foods such as bread, breakfast cereal, mayonnaise, peanut butter, ketchup, spaghetti sauce, and a plethora of [microwave meals](#).



In the last 20 years, we have increased sugar consumption in the U.S. 26 pounds to 135 lbs. of sugar per person per year! Prior to the turn of this century (1887-1890), the average consumption was only 5 lbs. per person per year! [Cardiovascular disease](#) and [cancer](#) was virtually unknown in the early 1900's.

The "glycemic index" is a measure of how a given food affects blood-glucose levels, with each food being assigned a numbered rating. The lower the rating, the slower the absorption and [digestion process](#), which provides a more gradual, healthier infusion of sugars into the bloodstream. On the other hand, a high rating means that blood-glucose levels are increased quickly, which stimulates the pancreas to secrete [insulin](#) to drop blood-sugar levels. These rapid fluctuations of blood-sugar levels are not healthy because of the stress they place on the body.

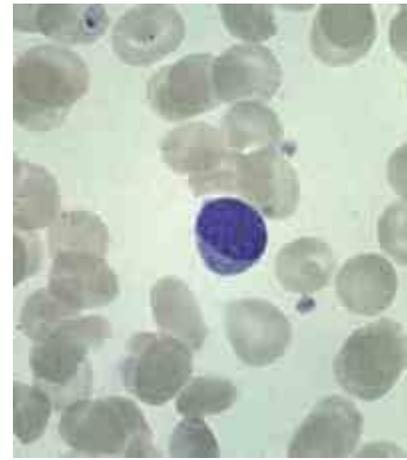
One of sugar's major drawbacks is that it [raises the insulin level](#), which inhibits the release of growth hormones, which in turn depresses the [immune system](#). This is not something you want to take place if you want to avoid disease.

An influx of sugar into the bloodstream upsets the body's blood-sugar balance, triggering the release of insulin, which the body uses to keep blood-sugar at a constant and safe level. Insulin also promotes the storage of fat, so that when you eat sweets high in sugar, you're making way for rapid weight gain and [elevated triglyceride levels](#), both of which have been linked to cardiovascular disease. Complex carbohydrates tend to be absorbed more slowly, lessening the impact on blood-sugar levels.

### **Sugar depresses the immune system.**

We have known this for decades. It was only in the 1970's that researchers found out that [vitamin C](#) was needed by white blood cells so that they could phagocytize viruses and bacteria. White blood cells require a 50 times higher concentration inside the cell as outside so they have to accumulate vitamin C.

There is something called a "phagocytic index" which tells you how rapidly a particular macrophage or lymphocyte can gobble up a virus, bacteria, or [cancer](#) cell. It was in the 1970's that Linus Pauling realized that white blood cells need a high dose of [vitamin C](#) and that is when he came up with his theory that you need high doses of [vitamin C](#) to combat the [common cold](#).



We know that glucose and [vitamin C](#) have similar chemical structures, so what happens when the sugar levels go up? They compete for one another upon entering the cells. And the thing that mediates the entry of glucose into the cells is the same thing that mediates the entry of vitamin C into the cells. If there is more glucose around, there is going to be less vitamin C allowed into the cell. It doesn't take much: a blood sugar value of 120 reduces the phagocytic index by 75%. So when you eat sugar, think of your [immune system](#) slowing down to a crawl.

Here we are getting a little bit closer to the roots of disease. It doesn't matter what disease we are talking about, whether we are talking about a common cold or about cardiovascular disease, or cancer or osteoporosis, the root is always going to be at the cellular and molecular level, and more often than not [insulin](#) is going to have its hand in it, if not totally controlling it.

The health dangers which ingesting sugar on an habitual basis creates are certain. Simple sugars have been observed to aggravate asthma, move mood swings, provoke personality changes, muster mental illness, nourish nervous disorders, deliver [diabetes](#), hurry [heart disease](#), grow gallstones, hasten hypertension, and add arthritis.

Because refined dietary sugars lack minerals and vitamins, they must draw upon the body's micro-nutrient stores in order to be metabolized into the system. When these storehouses are depleted, metabolization of cholesterol and [fatty acid](#) is impeded, contributing to higher blood serum [triglycerides](#), cholesterol, promoting [obesity](#) due to higher fatty acid storage around organs and in sub-cutaneous tissue folds.

Because sugar is devoid of minerals, vitamins, fiber, and has such a deteriorating effect on the endocrine system, major researchers and major health organizations (American Dietetic Association and American Diabetic Association) agree that sugar consumption in America is one of the 3 major causes of degenerative disease.

### **Honey is a simple sugar**

There are 4 classes of simple sugars which are regarded by most nutritionists as "harmful" to optimal health when prolonged consumption in amounts above 15% of the carbohydrate calories are ingested: Sucrose, fructose, honey, and malts.

Some of you may be surprised to find honey here. Although honey is a natural sweetener, it is considered a refined sugar because 96% of dry matter are simple sugars: fructose, glucose and sucrose. It is little wonder that the honey bear is the only animal found in nature with a problem with tooth-decay (honey decays teeth faster than table sugar). Honey has the highest calorie content of all sugars with 65 calories/tablespoon, compared to the 48 calories/tablespoon found in table sugar. The increased calories are bound to cause increased blood serum fatty acids, as well as weight gain, on top of the risk of more cavities.



[Pesticides](#) used on farm crops and residential flowers have been found in commercial honey. Honey can be fatal to an infant whose immature digestive tracts are unable to deal effectively with Botulinum Spore growth. What nutrients or enzymes raw honey does contain are destroyed by manufacturers who heat it in order to give it a clear appearance to enhance sales. If you are going to consume honey, make sure it is raw, unheated honey. Good to use in special cures, but not as an every day food. It is not much better than white or brown sugar.

### **Here is a list of ways sugar can affect your health:**

- Sugar can suppress the [immune system](#).
- Sugar can upset the body's mineral balance.
- Sugar can contribute to hyperactivity, anxiety, [depression](#), concentration difficulties, and crankiness in children.
- Sugar can produce a significant rise in [triglycerides](#).
- Sugar can cause drowsiness and decreased activity in children.
- Sugar can reduce helpful high density cholesterol (HDLs).
- Sugar can promote an elevation of harmful cholesterol (LDLs).
- Sugar can cause hypoglycemia.
- Sugar contributes to a weakened defense against bacterial infection.
- Sugar can cause kidney damage.
- Sugar can increase the risk of [coronary heart disease](#).
- Sugar may lead to chromium deficiency.
- Sugar can cause copper deficiency.
- Sugar interferes with absorption of calcium and magnesium.
- Sugar can increase [fasting](#) levels of blood glucose.
- Sugar can promote tooth decay.
- Sugar can produce an acidic stomach.
- Sugar can raise adrenaline levels in children.
- Sugar can lead to [periodontal disease](#).
- Sugar can speed the aging process, causing wrinkles and grey hair.
- Sugar can increase total cholesterol.
- Sugar can contribute to [weight gain and obesity](#).
- High intake of sugar increases the risk of Crohn's disease and ulcerative colitis.
- Sugar can contribute to [diabetes](#).

- Sugar can contribute to [osteoporosis](#).
- Sugar can cause a decrease in [insulin sensitivity](#).
- Sugar leads to decreased glucose tolerance.
- Sugar can cause [cardiovascular disease](#).
- Sugar can increase systolic blood pressure.
- Sugar causes food [allergies](#).
- Sugar can cause [free radical](#) formation in the bloodstream.
- Sugar can cause toxemia during [pregnancy](#).
- Sugar can contribute to eczema in children.
- Sugar can overstress the pancreas, causing damage.
- Sugar can cause [atherosclerosis](#).
- Sugar can compromise the lining of the capillaries.
- Sugar can cause liver cells to divide, increasing the size of the liver.
- Sugar can increase the amount of [fat in the liver](#).
- Sugar can increase kidney size and produce pathological changes in the [kidney](#).
- Sugar can cause [depression](#).
- Sugar can increase the body's fluid retention.
- Sugar can cause hormonal imbalance.
- Sugar can cause hypertension.
- Sugar can cause headaches, including migraines.
- Sugar can cause an increase in delta, alpha and theta brain waves, which can alter the mind's ability to think clearly.
- Sugar can increase blood platelet adhesiveness which increases risk of blood clots and [strokes](#).
- Sugar can increase [insulin responses](#) in those consuming high-sugar diets compared to low sugar diets.
- Sugar increases bacterial [fermentation in the colon](#).

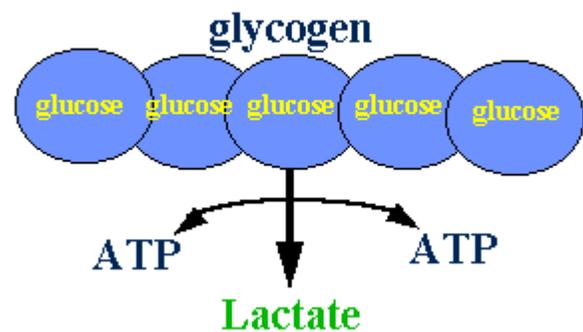
Source: [www.nancyappleton.com](http://www.nancyappleton.com)

## Sugar and cancer

Of the over 4 million [cancer](#) patients being treated in the U.S. today, almost none are offered any scientifically guided nutrition therapy other than being told to "just eat good foods." Many cancer patients would have a major improvement in their conditions if they controlled the supply of cancer's preferred fuel: GLUCOSE. By slowing the cancer's growth, patients make it possible for their [immune systems](#) to catch up to the disease. Controlling one's blood-glucose levels through [diet](#), [exercise](#), supplements, [meditation](#) and [prescription drugs](#) - when necessary - can be one of the most crucial components to a cancer treatment program. The saying "Sugar feeds [cancer](#)" is simple. The explanation is a little more involved.

German Otto Warburg, Ph.D., the 1931 Nobel laureate in medicine, first discovered that cancer cells have a fundamentally different energy metabolism compared to healthy cells. The gist of his Nobel thesis was this: malignant tumors frequently exhibit an increase in "anaerobic glycolysis" - a process whereby glucose is used by cancer cells as a fuel with lactic acid as an anaerobic by-product - compared to normal tissues.(1) The large amount of lactic acid produced by this fermentation of glucose from the cancer cells is then transported to the liver. This conversion of glucose to lactate creates a lower, [more acidic PH in cancerous tissues](#) as well as overall physical fatigue from lactic acid build-up.(2,3) Therefore, larger tumors tend to exhibit a [more acidic PH](#).(4)

## ANAEROBIC GLYCOLYSIS



Hence, [cancer therapies](#) should attempt to regulate blood-glucose levels through [diet](#), supplements, [exercise](#), medication when necessary, gradual weight loss and [stress reduction](#). Since cancer cells derive most of their energy from anaerobic glycolysis, the goal is not to eliminate sugars or carbohydrates entirely from the diet but rather to control blood-glucose within a narrow range to help starve the cancer cells and boost [immune function](#).

### References:

- (1) Warburg O. On the origin of cancer cells. Science 1956 Feb;123:309-14.
- (2) Volk T, et al. pH in human tumor xenografts: effect of intravenous administration of glucose. Br J Cancer 1993 Sep;68(3):492-500.
- (3) Digirolamo M. Diet and cancer: markers, prevention and treatment. New York: Plenum Press; 1994. p 203.
- (4). Leeper DB, et al. Effect of i.v. glucose versus combined i.v. plus oral glucose on human tumor extracellular pH for potential sensitization to thermoradiotherapy. Int J Hyperthermia 1998 May-Jun;14(3):257-69.

Reference website: <http://www.healingdaily.com/detoxification-diet/sugar.htm>