

ON SWEETENERS:

Most folks are aware of the basic dangers of eating sugar in terms of its detrimental effects to the body's chemistry. If you need a refresher I'd recommend this riveting to-the-point article by Nancy Appleton, PhD:

<http://articles.mercola.com/sites/articles/archive/2005/05/04/sugar-dangers-part-two.aspx>

What we're going to talk about here, in simple terms, is how sugar relates to the fat burning process.

Sugar has been listed with the FDA as an addictive drug for many years. Sugar is a toxic substance and when you eat it your body works hard to get rid of it as quickly as possible. It will initially attempt to burn it as fuel. If you eat a tiny bit of sugar and you've been active this may work. What happens is that the liver converts sugar to glycogen and the muscles use this for fuel. If you eat more sugar than your body can use for fuel (the normal case), then your body will store the rest of the glycogen as fat (through a process involving insulin).

This is why athletes can get away with eating simple sugars during and immediately after a training or performance session – the sugar converts to glycogen and is immediately sucked up by the depleted muscles.

While the body works hard on using glycogen and storing it away it can't burn body fat. Your body is MADE to burn stored fat for fuel, and it can't do that when too much glycogen is around because it raises insulin levels. It is impossible to burn fat in the presence of high insulin. This is a contributing factor in slowing your metabolism. Finally the body gets so used to burning glycogen for fuel that it does not know how to burn fat for fuel anymore.

The usual human response to fat gain is to eat less food. Unfortunately while the usual response of a healthy body is to burn stored fat for fuel, you won't. Your body will still try to burn sugar for fuel. If there is not enough sugar (in the form of glycogen) available in the body, then the body will turn to the muscle itself and burn that for fuel. While this is going on, the body will still store fat! This is what is known as the 'famine response'. This is also how people who barely eat and do hours of exercise will still end up gaining fat.

The only way off this train is to stop eating sugars that increase insulin levels – this includes refined carbohydrates that convert directly to glycogen – and to keep the blood sugar stable by eating every few hours.

Which brings us to the question: **WHAT DO I USE INSTEAD OF SUGAR??**

A popular method of sweetening without sugar is the use of what is known as sugar alcohols – or **artificial sweeteners**. Artificial sweeteners have been proven in research to increase obesity by raising the chemicals in the brain that trigger sweet cravings, as well as a host of physiological complexities. I highly recommend doing some heavy research if you eat these chemicals. In my experience, people get healthier and drop fat quicker when they are not using artificial sweeteners.

Xylitol is a sweetener that, in its best form, is made from birch bark. It has 1/2 the calories of sugar, but more importantly won't raise your insulin levels. Excessive quantities can have a laxative effect – and I'd suggest that if you're eating enough to experience that, then you need some more radical change in your diet anyway. However, in 'reasonable' quantities and assuming you're not eating sweet baked goods every day,

then you're fairly safe. You can use it one to one, as you would sugar in recipes. I say use xylitol as a training tool to reduce your cravings and usage of sweets. It's granular and has no aftertaste. It's a great weaning tool.

Stevia is a wonderful, pure plant extract that, in its natural state, is 300 times sweeter than sugar. I love this stuff. It is used in minute quantities, and I've found that in baking, while it is stable, it has a slight aftertaste. I don't mind it, but folks coming right off sugar may. Stevia will not substitute for sugar one to one in baking, and takes practice to perfect. I do highly recommend it for sweetening your tea, coffee, and shakes. To avoid the aftertaste, experiment with both powdered and liquid stevia, as well as the amount that you use to sweeten.

Raw Honey is better than sugar, in that it raises your insulin slower and contains trace minerals and vitamins. But it still raises your insulin and will not help you lose fat. For an occasional treat once your body is no longer burning sugar exclusively for fuel, this is great.

Agave Syrup (or nectar) is a natural sweetener that advertises itself with a low glycemic index. However, it's been found to closely resemble corn syrup when consumed due to the hydrolyzation at higher temperatures that result in the product containing 90% fructose. Truly raw agave is better, but elusive. We recommend avoiding this sweetener.

Coconut Nectar is a relatively new kid on the block for sweetening. It is simply the sap from coconut trees. It is best raw (like honey) so that it is enzymatically alive. Far more nutritionally superior than agave syrup, this product is truly low glycemic.

Coconut or Palm Sugar is the granulated version of coconut nectar.

Organic sugar is still sugar. So is brown sugar. So is raw sugar. Evaporated cane juice is also sugar, so is organic evaporated cane juice.

Be aware that if you use 'sugar free' products you are still consuming sugar alcohols (artificial sweeteners), that do affect your body. They still contain calories, plus large doses of negligible chemicals that will not lead your body to health. If you read labels on 'sugar free' products, you will also note that they frequently contain large amounts of fat – larger amounts than their sugared counterparts. So the caloric content is still quite high. Also be aware that if said 'sugar free' product contains refined carbohydrates, your insulin is still going for a ride.