



### **All sugars are not created equally.**

Natural sweeteners like honey, agave, or cane sugar are not any better for you than "other" sugars.

There is a widespread belief that "natural" is better - and that natural *things* can't be bad for you.

Sugar is one of those very wrong assumptions.

Many, many times I've heard people in the supermarket remark that agave or honey is better for you because they're "natural" sugars.

But is it true?.

### **Your Body On Sugar: Natural Sweeteners 101**

Glucose is the main energy source of your body. Your brain requires glucose to function, and in fact, a huge percentage of your daily calories go to powering your brain. Pretty cool huh?

So there's glucose - the "sugar" in your blood that gives you energy.

Your body generally gets it from eating carbohydrates (although the body can make it from other sources if it has to).

Then there's **dextrose** - glucose produced from plant sources (like corn).

Then you've got **fructose** - fructose is the form of sugar generally found in fruits and honey. (Think F = Fruits)

Then there's **sucrose**, which is half glucose, half fructose - following me?

Sucrose is **table sugar**, the white grainy stuff you usually associate with being sugar.

*So here are the general rules:*

**Glucose** = from carbs.

**Fructose** = from fruits, honey, agave, and high fructose corn syrup.

**Dextrose** = usually produced commercially then added to food to sweeten it.

**Sucrose** = white table sugar, produced from the sugar cane plant (& other sources).

## **Natural Is ~~Better~~ Is Not Better - The Truth Behind Brown Sugar, White Sugar, Raw Sugar, Agave, Honey, High Fructose Corn Syrup**



**Sugar in its varying processing phases: White refined, unrefined, brown, unprocessed**

People mistakenly have the idea that natural sweeteners and natural sugars are somehow different from "other" sugars, so they go ahead and load up on raw cane sugar, honey, or agave and aren't worried about dumping it in everything they drink or eat.

The problem is that, metabolically, they're basically the same in your body (with one exception, see below).

**So where in the heck do all these sugars come from?!**

**Here's a quick 101 on what you're eating:**

### **Cane Sugar**

Cane sugar comes from the *sugar cane* plant. It then goes through a refining process in order to turn it into the nice white sugar you're familiar with. Cane sugar is table sugar.

Composition: Sucrose (50% glucose 50% fructose)

### **Raw Sugar**

Raw sugar is just cane sugar that has been processed less - it's harvested earlier on in the processing/refining process when the sugar is taken from the plant to the final product. This is just table sugar earlier in the process.

Composition: Sucrose (50% glucose 50% fructose)

### **White Sugar**

White sugar is just refined through the process I described above (taking it from plant form to smooth and grainy), and then washed several times (or sometimes bleached) to give it that extra white appearance. One of the reasons they do this is that it gives it a more neutral (flavorless) taste and allows it to have a longer shelf life.

It's the same as cane sugar just further down the refining process - this is still natural and comes directly from a plant.

Composition: Sucrose (50% glucose 50% fructose)

### **Brown Sugar**

Brown sugar is just white sugar that has molasses added. The darkness of the brown is related to how much molasses is in there.

Composition: Sucrose (50% glucose 50% fructose)

### **Honey**

Honey is made up of fructose and glucose (like high fructose corn syrup).

Composition: 20% water, 30% Glucose, 40% Fructose

### **High Fructose Corn Syrup**

HFCS comes from corn and consists of glucose and fructose - which depends on which version of high fructose corn syrup is being used.

If you're drinking it in soda, you're probably getting a variety that is 55% fructose and 42% glucose (the rest being water).

Why do we use it? Fructose is many, many times sweeter than normal white sugar, and it's cheaper for companies to use it.

### **Agave**

Agave is made from the same plant that we get *Tequila* from.

Composition: Agave is 70%+ fructose - which is actually *more* than high fructose corn syrup.

[**Side note:** Honey, brown sugar, sugar in the raw and sugar in general provide little to no nutritional benefits.]

## **All Sugars Do Not Have the Same Effect On Your Body (Lay Off That Agave, Folks!)**



In [one study](#), scientists gave people a beverage that was sweetened with either glucose or fructose. The drink was 25% of their daily total calories, and they were told to drink it for 10 weeks to see if there would be any differences in weight/fat gain.

At the end of the study, the weight gain was similar in the two groups, but what was interesting was that only the fructose group had numerous other negative effects.

For example, in only the fructose group, fat synthesis in the liver increased, *in addition* to abdominal fat gain.

In the fructose (not glucose) group, it also led to:

- Increased triglycerides levels
- Increased levels of apoB, LDL Cholesterol, and a half dozen other biomarkers of heart disease risk

### **Fructose and insulin sensitivity**

When your body is insulin resistant, the natural processing of sugars and regulation of blood sugar is impaired.

Chronic insulin resistance leads you down the road to diabetes (and you're generally overweight a long time before this sets in).

In this particular study, fructose totally whacked out the body and started showing signs of insulin resistance. In men, it led to more fat gain, and in women was linked more to insulin resistance.

Fructose actually promotes the elevation of cholesterol and triglycerides much worse than glucose.

Fructose has been [proposed](#) as one of the implicating causes of nonfatty liver disease.

Another study showed that fructose, not glucose, [provokes increased food intake](#).

There's also [loads more evidence](#) showing that one of the main reasons why drinking soda is making you overweight is because of the insane amount of fructose in it (thanks High Fructose Corn Syrup!)

And in another study done, this time on Agave, [the researchers concluded](#):

"Even moderate consumption of fructose-containing liquids may lead to the onset of unfavorable changes in the plasma lipid profile and one marker of liver health, independent of significant effects of sweetener consumption on body weight."

**Agave is actually worse than high fructose corn syrup because of its insanely high fructose levels.**

It's easy to think "Oooh, Agave comes from a plant, so that must be healthier than this chemical high fructose corn syrup crap!" Unfortunately, that's exactly what the genius marketers behind Agave wanted you to think. And it worked.

## **Sugar (Any Kind) = Early Death**

Don't fall into the trap thinking that natural sweeteners and natural sugars are somehow better for you. Consuming sugar (of any kind) in excess is one of the main players in weight gain, [heart disease](#) and [diabetes](#) - which then *dramatically* raises your risk of dying from everything else - like cancer.

Being overweight raises your risk of more than a dozen types of cancer, and for some specific cancers, 50% of the cancer cases were attributed to being overweight. ([cancer.org](http://cancer.org))

## **I Gotcha. Sugar is Bad. Blah Blah ...So What Sugar Should I Add to My Morning Coffee!?**

If you're not consuming that much sugar in general, a tablespoon of honey a day obviously isn't going to kill you especially if you are eating healthy otherwise. Just remember that honey and "raw sugar" are not any better than any other sugar - and that agave seriously rivals high fructose corn syrup in terms of how bad it is. Reducing how much sugar you eat (from any source - natural or otherwise) is craaaaaazy important.