

The majority of Dr. Johnson's research has focused on how the number one source of calories in the American diet might cause obesity, high blood pressure, and a number of other common diseases.

He didn't start by looking at fructose however. It began when he realized that uric acid is a major component of obesity high blood pressure and kidney disease.

In fact, he discovered that newly diagnosed adolescents with high blood pressure had elevated uric acid levels 90 percent of the time. And by lowering uric acid in these obese, hypertensive adolescents, he was able to normalize blood pressure in 87 percent of all cases.

The question was: What raises uric acid?

It's been known that meats and purine rich foods can raise uric acid, but it turns out that one of the most potent ways to raise uric acid is via *fructose*!

You probably already know that fructose is a sugar, but you may not realize is that it's distinctly different from other sugars as it's metabolized through very specific pathways that differ from those of glucose, for example, and through its distinct metabolic action, uric acid is generated.

In fact, fructose typically generates uric acid within minutes of ingestion.

But let's take a step back and look at what uric acid is, and how it's linked to fructose consumption.

### What is Uric Acid and How Much is Too Much?

Uric acid is a normal waste product found in your blood. High levels of uric acid are normally associated with gout, but it has been known for a long time that people with high blood pressure, overweight, and people with kidney disease, often have high uric acid levels as well.

It used to be thought that the uric acid was secondary in these conditions, and not the cause – but Dr. Johnson's research indicates that it could be a lead player in the development of these conditions, rather than just a supporting actor, when its levels in your body reach 5.5 mg per dl or higher.

At this level, uric acid is associated with an increased risk for developing high blood pressure, as well as diabetes, obesity and kidney disease.

Interestingly, uric acid functions both as an antioxidant, and as a pro-oxidant once inside your cells.

So, if you lower uric acid too much, you lose its antioxidant benefits. But if your uric acid levels are too high, it tends to significantly increase inside your cells as well, where it acts as a pro-oxidant.

Dr. Johnson believes the ideal range for uric acid lies between 3 to 5.5 mg per dl. As already mentioned, above this range your risk of developing all the problems listed correlate quite well.

In the following statement, Dr. Johnson explains just how closely tied uric acid levels are to fructose consumption:

*"If you give animals fructose, they develop diabetes, hypertension, obesity, and fatty liver. And in most of these conditions, if we lower uric acid, we can prevent many of these conditions, [although] not completely.*

*So lowering uric acid seems to benefit some of the mechanisms by which fructose causes disease.*

*So a very important point is that if you take two animals and you feed one fructose and feed the other one the exact same number of calories but give it as dextrose or glucose, **its only the fructose-fed animal that will develop obesity, insulin resistance, fatty liver, and high triglycerides, signs of inflammation, vascular disease, and high blood pressure.**"*

This bears out in humans as well. Over the last 20 years, we've seen a dramatic increase in fatty liver disease throughout the world, and studies done by Dr. Johnson and a group of researchers at Duke University showed that people who develop fatty liver drink a lot more soft drinks, and ingest far more fructose than the average person in the community.

Folks, this is exactly why I am so passionate about educating you on the dangers of fructose! I am thoroughly convinced that it's one of the leading causes behind the massive rise in needless suffering from poor health and premature death.

One of the people who truly opened my eyes and educated me on this issue is Dr. Robert Lustig, Professor of Pediatrics in the Division of Endocrinology at University of California in San Francisco.

If you still haven't watched his excellent lecture on the dangers of fructose and other sugars, I strongly recommend you take the time to do it. (I've published it in two parts. Click [here for part 1](#), and [here for part 2](#).)

### How Much Fructose are You Consuming?

It's no secret that we are eating more sugar than at any other time in history. In 1700, the average person ate 4 pounds of sugar a year. By 1800, it was 18 pounds. By 1900 it was about 90 pounds.

Today, about 25 percent of all Americans consume over 134 grams of fructose a day, according to Dr. Johnson's research. That kind of consumption equates to more than 100 pounds of sugar per year! And it just so happens this statistic dovetails nicely with the statistics showing that one in four Americans is either pre-diabetic or has type 2 diabetes.

The two main sources of that sugar are high fructose corn syrup (HFCS) and table sugar.

As a standard recommendation, I strongly advise **keeping your TOTAL fructose consumption below 25 grams per day.**

However, for most people it would actually be wise to limit your fruit fructose to **15 grams or less**, as it is virtually guaranteed that you will consume "hidden" sources of fructose from most beverages and just about any processed food you might eat.

Since 55 percent of HFCS is fructose, one can of soda alone would nearly exceed your daily allotment. It is easy to see that anyone who is drinking three, and certainly four will easily exceed 100 grams of fructose per day,

### Are Fruits Good or Bad for You?

Keep in mind that fruits also contain fructose, although an ameliorating factor is that whole fruits also contain vitamins and other antioxidants that reduce the hazardous effects of fructose.

Juices, on the other hand, are nearly as detrimental as soda, because a glass of juice is loaded with fructose, and a lot of the antioxidants are lost.

It is important to remember that fructose alone isn't evil as fruits are certainly beneficial. But when you consume high levels of fructose it will absolutely devastate your biochemistry and physiology. Remember the AVERAGE fructose dose is 70 grams per day which exceeds the recommend limit by 300 percent.

So please BE CAREFUL with your fruit consumption. You simply MUST understand that because HFCS is so darn cheap, it is added to virtually every processed food. Even if you consumed no soda or fruit, it is very easy to exceed 25 grams of hidden fructose in your diet.

If you are a raw food advocate, have a pristine diet, and exercise very well, then you could be the exception that could exceed this limit and stay healthy. But in my experience that is far less than one in 1,000 people and probably closer to 1 in 10,000 people.

So please, carefully add your fruits based on the table below to keep the total fructose from fruit below 15 grams per day.

Fruit	Serving Size	Grams of Fructose	Fruit	Serving Size	Grams of Fructose
Limes	1 medium	0	Boysenberries	1 cup	4.6
Lemons	1 medium	0.6	Tangerine/mandarin orange	1 medium	4.8
Cranberries	1 cup	0.7	Nectarine	1 medium	5.4
Passion fruit	1 medium	0.9	Peach	1 medium	5.9
Prune	1 medium	1.2	Orange (navel)	1 medium	6.1
Apricot	1 medium	1.3	Papaya	1/2 medium	6.3
Guava	2 medium	2.2	Honeydew	1/8 of med. melon	6.7
Date (Deglet Noor style)	1 medium	2.6	Banana	1 medium	7.1
Cantaloupe	1/8 of med. melon	2.8	Blueberries	1 cup	7.4
Raspberries	1 cup	3.0	Date (Medjool)	1 medium	7.7
Clementine	1 medium	3.4	Apple (composite)	1 medium	9.5
Kiwifruit	1 medium	3.4	Persimmon	1 medium	10.6
Blackberries	1 cup	3.5	Watermelon	1/16 med. melon	11.3
Star fruit	1 medium	3.6	Pear	1 medium	11.8
Cherries, sweet	10	3.8	Raisins	1/4 cup	12.3
Strawberries	1 cup	3.8	Grapes, seedless (green or red)	1 cup	12.4
Cherries, sour	1 cup	4.0	Mango	1/2 medium	16.2
Pineapple	1 slice (3.5" x .75")	4.0	Apricots, dried	1 cup	16.4
Grapefruit, pink or red	1/2 medium	4.3	Fias. dried	1 cup	23.0

## Glucose Makes Fructose Even More Potent!

Fructose consumption clearly causes insulin resistance, whereas straight glucose does not. Insulin resistance can eventually lead to full blown diabetes.

Interestingly, glucose actually accelerates fructose absorption. So when you MIX glucose and fructose together, you absorb more fructose than if you consumed fructose alone.

This is an important piece of information for people who want to make a better effort at controlling their weight. With an epidemic of obesity going on in this country – two out of three people are overweight, and one out of three is obese – it has become clear that fructose is the single most important factor in this epidemic.

## A Second Uric Acid Trigger

In his studies, Dr. Johnson found one more common substance that also elevates uric acid levels, namely beer!

It turns out that the yeast and all that's used to make beer work together to make beer another powerful uric acid trigger.

The classic "beer belly syndrome," is also quite similar to metabolic syndrome, and includes abdominal obesity, hypertriglyceridemia (high triglycerides), high blood pressure, and even insulin resistance.

While this concept is still new, pilot studies support Dr. Johnson's findings, so beer consumption is also something to definitely consider when you're watching your weight and trying to improve your health.

## How to Restrict Fructose Consumption

In his book, [The Sugar Fix](#), Dr. Johnson reviews the effectiveness of reducing fructose intake to help prevent or treat obesity. He provides detailed tables showing the content of fructose in different foods – an information base that isn't readily available when you're trying to find out exactly how much fructose is in various foods.

The fructose content of fruits that I included above came from his work.

The results of following the suggestions in this book are backed up by a controlled clinical trial, in which overweight people who followed the diet saw significant improvements in weight and blood pressure.

Reducing sugar in your diet can be tough for some people. After all, [sugar is just as addictive as cocaine!](#) But it's possible, and Dr. Johnson provides helpful guidelines for doing so in his book.

It calls for following a very low fructose diet for two weeks, which has the effect of "rebooting" your system. Sugar activates its own pathways, and the more sugar you eat, the more sensitive you become to it, and the more your body starts absorbing. By cutting out sugar for a period of time, you can reduce the hyperactive metabolic system that has developed, and start over.

## What Sweeteners Can You Use?

It's worth noting here that some alternatives that would appear healthy to most people are still loaded with fructose.

[Agave syrup](#), for example, is being falsely advertised as "natural." It is actually HIGHLY processed and is *80 percent fructose*. The end product does not even remotely resemble the original agave plant and has virtually no nutritive value. For more information about agave, please see my previous [in-depth report](#) on this topic.

Likewise, honey is very high in fructose. Although its fructose content varies, it typically contains about the same amount as HFCS, or more. So even though honey contains many other beneficial nutrients, you'll want to use honey very sparingly.

A far safer alternative is to use pure glucose.

You can buy [pure glucose \(dextrose\)](#) as a sweetener for about \$1 a pound. It is only 70 percent as sweet as sucrose, so you'll end up using a bit more of it for the same amount of sweetness, making it slightly more expensive than sucrose—but still well worth it for your health as it has ZERO grams of fructose.

Remember, glucose can be used directly by every cell in your body and as such is far safer than the metabolic poison fructose.

Another option is to use the herb [stevia](#).

While you're making this fresh start, you will want to learn as much as possible about [reading labels](#), which I've addressed in many previous articles, and becoming familiar with the fructose content of everything you eat.

Trust me, this isn't the last time we'll be talking about fructose, or hearing about Dr. Johnson's work. I'm passionate about helping you [take control of your health](#) and sharing this vital information with you, which can radically change your health for the better.