THE TUESDAY MINUTE

IT'S TIME TO FEEL GOOD AGAIN

THIS WEEK'S TOPIC

The Dangers of

High Fructose Corn Syrup

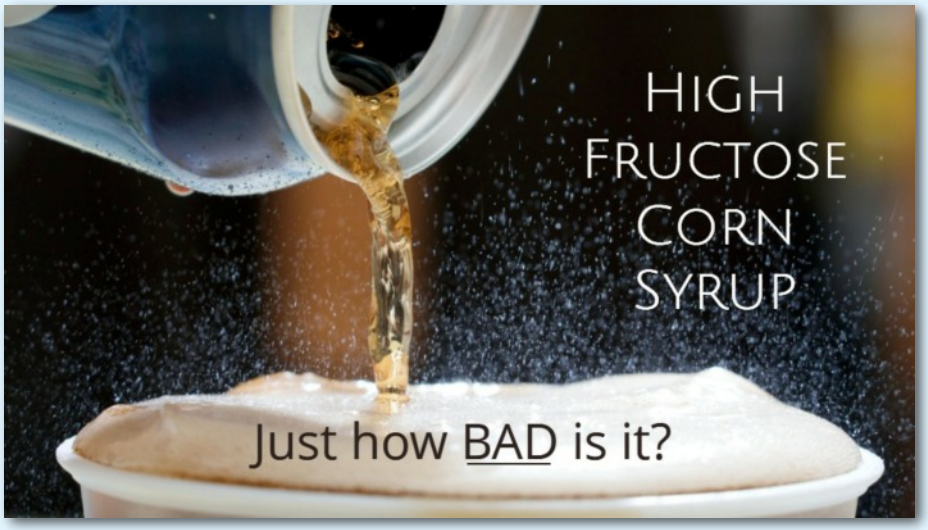
"If this study can cause these results in just 2 weeks, what happens in 2 years?"

What do the Atkins diet and the Japanese diet have in common? The Atkins diet is high fat, low carbs. The Japanese diet is low fat, high carbs. Yet both display the ability to reduce chronic disease. The common link, both diets are low in "fructose."

So, here's the next question. What simple sugar causes an increase in uric acid, hypertension, leptin resistance, reductions in energy or ATP, elevated triglycerides, insulin resistance, fatty liver, inflammation, and vascular disease? Let's add to that list the number one risk factor for the development of obesity? Have I got your attention?

The answer, according to Dr. Richard Johnson, is fructose. Dr. Richard Johnson is a researcher and clinician at the University of Colorado Denver and author of the book The Sugar Fix.

Let's look closer at why fructose is one of the major factors that increases uric acid. Fruit contains fructose. As the fruit ripens the amount of fructose goes up. However,



natural fruits contain vitamin C and other factors that are needed to break down and counteract the effects of fructose. So, two, three, or even four fruits a day are not a problem for most people. Each piece of fruit contains around 8 grams of "natural fructose." But high fructose corn syrup (HFCS) or the combination of sucrose and HFCS is a problem.

Sucrose or table sugar is a disaccharide and contains approximately 50% glucose and 50% fructose. But according to Dr. Johnson, the sugars are bound together. High fructose corn syrup contains 55% fructose. But the fructose is not tightly bound and gets absorbed instantly and goes right to the liver.

Studies at Duke University show people who drink soft drinks have a higher percentage of fatty liver disease primarily due to fructose. The average American ingests 70 grams of fructose a day. That's the average American. But 25% of Americans ingest 130 grams or more of fructose daily.

Dr. Johnson shared a study where participants ingested 200 grams of fructose for a mere 2 weeks and found

elevations of triglycerides, increases in blood pressure and insulin resistance, and decreases in the healthy HDL cholesterol. Fortunately, these changes were reversed after abstaining from fructose. This is a profound study even though the amounts of fructose were excessive.

Dr. Johnson states that glucose increases insulin production, but fructose increases insulin resistance. If this study can cause these results in two weeks, what happens in two years? We may not ingest 200 grams of fructose daily, but the more sugar we eat, the more our bodies up regulate the ability to absorb it, and we become more sensitive to it as we age.

Dr. Johnson suggests we set 25 grams of fructose per day as a goal, one third of what is consumed every day by the average American. Just to give you an idea, one 12 ounce can of soda contains around 25 grams of fructose. One liter of soda would yield approximately 75 grams of fructose. Because fruit juice is so concentrated and processed, it's almost as bad as soda. Dr. Richard Johnson's book gives tables on all the fruits and hidden sources of fructose that we frequently overlook.

In another study, Dr. Johnson found in newly diagnosed obese adolescents with elevations in hypertension. 90% of the time they had elevated uric acid. Blood pressure was reduced 87% of the time by reducing their uric acid.

Next to fructose, the second greatest factor to raise uric acid is beer. Somehow the yeast and fermentation process has a powerful effect on uric acid. Dr. Johnson emphasizes that uric acid is a great screen. He believes the levels should be 3.0 - 5.5; and if levels exceed that threshold, there is an increased risk for diabetes, obesity, hypertension, and kidney disease. Testing is inexpensive and can be used as a great motivating factor to encourage patients to make lifestyle changes.

Uric acid has some antioxidant properties, so we would like to have an optimal level. When uric acid levels are elevated, uric acid seeps into the cell and becomes a pro-oxidant. So, outside the cell it is an antioxidant and inside the cell it is a pro-oxidant. To reduce uric acid, especially when seen with gout, black cherries, lithium, B12, folic acid, and kidney support are effective. When uric acid is low, consider using molybdenum, B12, and folic acid. Check below for dosage and specific applications.

I get so excited and re-motivated when I hear information like this. We are making a difference when we coach our patients to reduce refined foods. The effects of fructose and how it relates to uric acid is one more example that basic principles DO make a difference.

Thanks for reading this week's edition. I'll see you next Tuesday.