

## The High Fructose Corn Syrup Controversy

Here's a quick look at the high fructose corn syrup controversy, especially since coke is going to use cane sugar. Robert Kennedy is putting pressure on companies to switch from High Fructose Corn Syrup (HFCS) to cane sugar. For fun, I'd like to compare the products.

There are two forms of HFCS, one called HFSC 55 with 55% fructose and 45% glucose, and HFSC 42 which as you can guess, is 42% fructose and 58% glucose. Cane sugar is 50% fructose and 50% glucose. Cane sugar lands right in the middle.

To try not to bore you, and to keep this simple, there are several kinds of sugar, but glucose is what your brain and muscle uses for energy. Fructose must be converted to glucose in the liver. Cane sugar, or honey, or high fructose corn syrup all provide lots of fructose. So does apple juice and so does eating an apple. But there are some caveats related to processing.

Fructose metabolism in the liver is a natural process, but it becomes a problem when high levels of fructose are consumed, and the liver can't keep up. Think of 24 ounces of Mountain Dew, or a huge candy bar. If you eat an apple, your digestive system must break the apple cells down and release the fructose which takes time. Maybe mom was wrong, and you shouldn't chew really sweet fruits very well. Drink apple juice, or soda, and all that sucrose is almost instantly absorbed from your GI tract.

The slugging affect over time can cause fat buildup, because when the liver can't convert to glucose it converts the sucrose to fat. Additionally, the slugging effect on insulin production and release, wears the system down leading to diabetes. Approximately 29.2% of adults in the U.S. over 65, have diabetes.

It's not about cane sugar or fruit juice or corn syrup, it's about processing. How fast are the sugars released into your blood stream? For example, starch is just a string of glucose molecules strung together, so the more starch containing foods are processed, or powdered, the more glucose hits your liver, and while not as bad as fructose, the slugging will contribute to the development of diabetes. That's why whole grains are better. By the time you go into the bathroom in the morning to read this newsletter, what you deposit doesn't have any sugar left. The issue is during that 24-hour transit, how slow was the sugar uptake.



### Parking at the Clinic

*I often wonder if the vet schools should teach parking at college. There are 16 vets at our clinic and we're rarely all there at the same time, but when we are, you can drive by and notice the questionable parking choices.*

*Pictured above straight ahead there's room for 4 trucks while Emma takes up 2 spots on the left and Monty takes 2 spots on the right.*

# Western Michigan Medical College Promotes Unusual Meat Allergy Tick

There is a new allergic condition related to meat consumption in the news. The reaction is to a specific sugar in meat called alpha-gal and the resulting allergic reaction is called AGS for Alpha-Gal Syndrome.

Unlike an instant reaction to a bee sting, it is a delayed hypersensitivity reaction that occurs 2 to 6 hours after eating meat, but also some dairy products and some medicines. Some articles restrict the disease to red meat. Supposedly the reaction is set up by being bitten by a lone star tick or perhaps some other tick. The tick connection is new, and research is ongoing. About 13,000 to 20,000 individuals are diagnosed yearly with an increase in incidence, probably because of better diagnostics. The condition was first diagnosed in 2009 which means that the incidence may not be increasing at all, just more hospitals are recognizing it.

The issue relates more to the lone star tick, which is expanding its range mainly because winters are becoming milder. All ticks are nasty, they are the worst vector for disease there is in the North American mammal world (arguably, mosquitos are the worst for humans and animals worldwide). Ticks aren't insects, they're arthropods, like spiders and crabs and are harder to control and kill than insects.

Little is known about how the tick creates the condition or sensitizes some people. People also get the condition that don't live where the tick exists. So, there is more to this story, a lot more.

The interesting note is that the Western Michigan Medical College wrote a paper promoting the disease as a beneficial disease and they don't want the ticks controlled because they maintain that the disease will keep people from eating meat. A quote from the medical college article reads, "then promoting the proliferation of tickborne AGS is morally obligatory." So now it's morally OK to promote human disease and death if it prevents eating animals, this is from a medical college.

## Follow us on Facebook to keep up with the Vets!



We celebrated "National Cow Appreciation Day" and highlighted some cows at area farms with a few of our vets. Pictured at left, Dr. Kelsey is pictured with an 11-year-old cow named "Shack!"

We had a great turnout for our annual appreciation event. At top left, Dr. Kelsey and Dr. Molly are pictured with two 4-Hers who helped check in guests. At right, Dr. Ralph, Dr. Mark S., and Dr. Emma bid at the FDL County Fair Livestock Auction!



The clinic volunteered to park cars at the Dodge County Breakfast on the Farm event at Plum Creek Dairy in June! Dr. Emma and Dr. Jeff are pictured having a blast in the field.