Effect Of Added Sugars On The Immune System

As we know, sugar is one of the major culprits when it comes to increasing body weight, obesity, type 2 diabetes, heart disease and other inflammatory health conditions. Currently, only 42% of Americans are limiting added sugar intake to less than 10% of their daily calories. Sadly, that leaves 58% of Americans consuming more than 10% of their daily calories in added sugars. That amounts to 25 teaspoons of added sugars or 420 calories/day. Added sugars come in the form of brown sugar, corn sweetener, corn syrup, dextrose, fructose, glucose, high-fructose corn syrup, honey, lactose, malt syrup, maltose, molasses, raw sugar and sucrose.

So, what are the long and short-term consequences of excessive sugar intake on our immunity? Our immune systems have an innate and an adaptive side. Elevated sugar intake causes the liver to produce free fatty acids, which can trigger the inflammatory process and production of reactive oxidative species or free radicals. The adaptive immune system has immunological memory for reinfections. Sustained hyperglycemia (high blood glucose levels) has been associated with an elevated risk of autoimmune and inflammatory diseases (ie. RA, psoriasis, asthma), as well as cancer. What effect does too much dietary sugar have on the fast-acting immune system? The innate immune system triggers the fastest response against the free radicals. Basically, sugar has a depressive effect on the innate immune system or results in a decreased ability to mount a quick response against bacterial infections.

The leading sources of added sugars in the U.S. are sugar-sweetened drinks, grain-based desserts like candy, cakes, cookies, and dairy desserts like ice cream. Did you know that one 16-oz. bottle of Coca cola has 52 grams or 13 tsp. of added sugar! Let us instead incorporate into our diets a variety of vegetables (both starchy and non-starchy), fruits, high-quality proteins and minimal grains. In other words, a more nutrient-dense diet. Diet is important, but regular exercise is equally as important. Exercise results in efficient glucose storage and use. Studies show that muscular uptake of glucose helps to regulate blood sugar after eating (post-prandially).