



# The Sugar Rush »

By Dan Williams PT, BCN

Sugar is everywhere. We know that sugar is bad for our weight and waistlines; so how much of the sweet stuff should we be allowing our kids to have and why? To answer this, let's first take a look at what sugar is and how it affects the body and mind.

Sugar is a carbohydrate. Carbohydrates supply you with the energy you need for daily activities. The three main types of carbohydrates are: sugars, starches and fiber. The carbohydrates are either called "simple" or "complex" based on their chemical makeup and how your body processes them.

Simple carbohydrates are composed of easy-to-digest, basic sugars, which are broken down quickly by the body to be used as energy. Some of these sugars are found naturally in foods such as fruits, but they are also found in refined or processed sugars, which are often added to products such as candy bars, baked goods, syrups, sauces, dressings, ketchup, yogurts, soda, sports drinks, and so forth. On nutrition labels, these added sugars can

be disguised by several different names including – but not limited to – corn syrup, fructose, glucose, maltose, malt syrup, lactose, sucrose, and honey. The FDA has mandated that, by July 2018, all nutrition labels must clearly identify the amount of added sugars per serving in the product, directly beneath the total sugar count.

Complex carbohydrates are fiber-rich and take a longer time to digest, therefore providing a longer lasting source of energy for the body. They are commonly found in whole plant foods and are often high in vitamins and minerals. Examples of these include green vegetables, whole grains such as quinoa and oats, foods made from whole grains such as oatmeal and whole-grain breads, starchy vegetables such as potatoes, sweet potatoes and pumpkin, and legumes.

Sugar, in moderation, is essential for a healthy body since it is a carbohydrate and helps fuel you with the energy you need for your daily activities. But, at the same time, sugar is also a calorie and if it is consumed in excess, it can have negative effects on

your health. Two of the most obvious and known side effects of overconsumption are fat build-up in the body (eventually leading to obesity if left unchecked) and diabetes, which affects how your body uses blood sugar or glucose.

Most of us are simply eating too much sugar. The World Health Organization recommends that only 5% (roughly 25 grams or 6 teaspoons per day) of daily caloric intake come from free or added sugars. Why are we eating so much sugar? Besides added sugar being found in the majority of our packaged or processed foods in our grocery stores, when a person eats sugar it activates the tongue's taste receptors which send signals to the brain, lighting up reward pathways and causing a surge of "feel-good" hormones, like dopamine, to be released and a cycle to start.

Here is the cycle: Consuming sugar increases blood sugar levels and dopamine is released, triggering our pleasure and reward centers in much the same way as certain drugs do. This is the "sugar high." Insulin is then released into the blood to

escort the glucose out into the body cells. Resulting energy is produced and either used or stored as fat. The body then craves the lost "sugar high" from reduced blood sugar levels. This withdrawal typically comes in the form of a "sugar crash" (not long after the "sugar high" is experienced) where the spikes and subsequent drops in blood sugar levels can cause symptoms such as irritability, mood swings, brain fog, fatigue, and anxiety. The body then demands sugar to satisfy its hunger and the cycle starts over again.

In addition, too much sugar can lead to other detrimental health effects on the body. It can cause tooth decay. It can interfere with the absorption of nutrients, increase bad cholesterol levels and decrease good cholesterol levels. It can stress the heart, kidneys, and liver. It can contribute to cancer cell production. It can cause inflammation and exacerbate arthritis. Simple sugars can suppress the body's immune responses so avoiding sugar is one of the biggest things you can do to help prevent becoming sick.

Research also shows that sugar harms the brain as well as the body. It can lead to difficulty with concentration, reduce learning capacity, and cause learning disorders. A study out of UCLA indicates that fructose alters your brain's ability to learn and remember information in as little as six weeks.

While reaching for simple carbohydrates may feel like the easiest way to fill your stomach or to fulfill a craving, the simple sugars are quick to digest, allowing hunger to quickly return. Remember from the cycle that sugar and sugar alternatives are addictive and the more you consume the more you want to consume. Be mindful of how the sweet stuff can sneak into daily meals and snacks. One should not be relying on energy from added sugars.

Instead, the majority of carbohydrate intake should come from complex carbohydrates and naturally occurring sugars rather than processed or refined sugars. Consider the quality of the food over the energy content alone to meet a child's daily energy requirements. For

instance, eating half an avocado will do more good than a candy bar. Choose whole, unprocessed foods from plant sources. Choosing strawberries instead of chocolate chip cookies, vegetable sticks instead of crackers or chips, oats or oatmeal instead of sugary cereal, and water with a squeeze of lemon instead of soda will ensure you are getting complex carbohydrates, complete with fiber, vitamins, and minerals.

Carbohydrates — both simple and complex ones — are part of a healthy diet. Be sensible about the carbohydrates you choose by considering the levels of sugar and fiber, and focus on healthy whole grains, fruits, and vegetables to get the energy the body needs every day. While the occasional treat is fine, the less added sugar our children consume, the better. ■

Dan Williams, PT, BCN is the Executive Director of SIRRI Developmental Rehabilitation & Learning Center, [www.SIRRIAZ.com](http://www.SIRRIAZ.com), (480) 777-7075. Dan is also a COPE Certified Health Coach at Platinum Health Coaching, [PlatinumHealth.optavia.com](http://PlatinumHealth.optavia.com).

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