

Guide to Sugars and Artificial Sweeteners

Americans are getting fatter and added sweeteners may be partly to blame. We consume roughly 100 pounds of sweetener per person per year. Sweeteners come in a variety of forms – table sugar, honey, high-fructose corn syrup (HFCS), fruit juice concentrates, artificial sweeteners and sugar alcohols. Check food labels and chances are you'll find one or more of these sweeteners in a large number of products – some of which might surprise you. Sweeteners are used in everything from cookies, jams, and energy bars to ketchup, salad dressing, bread and pasta sauces to sports drinks, coffee drinks, sodas and chewing gum. So which sweetener to choose?

Let's start with good old sugar – table sugar, honey, maple syrup and corn syrup. These are carbohydrates and contain calories so they will affect blood glucose levels and contribute to your daily calorie intake. If you are diabetic or have insulin sensitivity you will need to consider these sugars as part of your daily carbohydrate intake and if you are watching your weight, don't forget to account for these sweeteners – such as in beverages – as part of your daily calorie intake.

But not all sugars are the same. While table sugar – sucrose – breaks down into 50% glucose and 50% fructose in our bodies, HFCS has a higher percentage of fructose content. Our bodies can metabolize both glucose and fructose however we metabolize them differently and can only handle limited amounts of fructose at one time. Unlike glucose, which is metabolized in cells throughout the body for energy, fructose is metabolized almost entirely in the liver and is more likely to result in the creation of fats – especially the types of fat that increase the risk for heart disease. In addition, HFCS, which is cheaper than sugar and is now the leading sweetener in beverages and processed foods, has been shown to influence the digestive system hormones ghrelin and leptin that control hunger and appetite. Ghrelin tells you you're hungry. Leptin tells your brain that you're full. HFCS has been shown to lower leptin secretion so you never get the message that you're full. And HFCS fails to shut off ghrelin production so that you feel hungry even though you have food in your stomach. All of this can lead to weight gain.

Products sweetened with concentrated fruit juices are not much better because fruit-juice concentrates also have high levels of fructose. Stick with whole fruit or fruit juice diluted with water. Are artificial sweeteners and sugar alcohols better choices than sugar and HFCS? Although artificial sweeteners such as aspartame (NutraSweet, Equal) and sucralose (Splenda) are virtually calorie free, consuming them may lead to a craving for sweetness – a sweet tooth. Sugar alcohols such as maltitol and sorbitol are low in calories because they are not completely absorbed in the digestive tract and sugar alcohols don't affect blood glucose levels as much as sugar does. In addition, sugar alcohols do not contribute to tooth decay so they are used in sugarless gum and toothpaste. Sugar alcohols are also used in other food products such as ice creams and bakery items but are not used as much as sugar, HFCS, aspartame or sucralose because consuming too much sugar alcohol can cause bloating, gas and diarrhea.

So what to do? The best advice is to limit your intake of added sweeteners, especially HFCS. And a good rule of thumb is always "everything in moderation."