Sugar V. Sugar Substitute

endocrineWeb.org

We have all heard about the pros and cons of sugar substitutes and sugar. Neither is the answer for each of us and both have serious positives and negatives. In terms of overall weight loss, it is believed that cutting back or out sugar completely is essential to losing weight. Sugar contains 4 calories per gram. All sugar substitutes contain less than this or no calories at all. However, as a tool to promote weight loss in general is negligible. Artificial sweetners are chemically processed to be either nutritive or non-nutritive, delivering little or no calories and having little or no effect on blood glucose levels.

Let’s start with sugar itself. It delivers 4 calories per gram and is a leading factor in weight gain and other complications such as dental decay, heart disease, obesity and diabetes. Sugar is naturally occuring in food we eat, as carbohydrates are the fuel our cells need to function. Carbs turn into glucose, which turns into energy. However, carbs also lead to fat buildup. In a study conducted last year with beverages and sugar intake, 18k people from across the country, with different socio-economic backgrounds, participated by drinking sodas, fruit flavored drinks, fruit juices and other beverages containing sugar. After 7 years in the study and accounting for habits such as smoking, drinking, age, body weight, etc, the rate of death was nearly double that of the individuals who consumed less sugary drinks.

Sugar substitutes are not the answer to all our troubles, though. See the below article.

9 Sugar Substitutes for Type 2 Diabetes

EverydayHealth.com

<https://www.everydayhealth.com/type-2-diabetes/diet/sugar-substitutes-for-diabetes/>

When it comes to sugar substitutes and diabetes care and weight management, not all are created equal.

Sugar substitutes can soothe the sweet cravings we all have, without adversely affecting blood glucose levels. However, not all are calorie or carbohydrate free, which is essential to managing both weight and glucose levels.

Sugar substitutes come in two varieties:

Nutritive: These provide carbohydrates and can raise blood glucose levels.

Non-nutritive: These provide little to no calories ande will not affect blood glucose levels. They are usually hundreds or thousands of times sweeter tasting than sucrose (sugar).

As with all things, moderation! Studies indicate that artificial sweetners can alter the brain responses to sweetness in a way that can leave you feeling unsatisfied when ingesting sweet tasting things. This can put you at a higher risk of eating too much artificial sweetners. The American Diabetes Association suggests leaving the zero or low calorie drinks alone in favor of the regular ones in the short term and drinking more water instead.

Here are 9 to consider:

Sucralose (Splenda): This is the most popular sugar substitute. This is the best one for Type 2 diabetes because it is 600 times sweeter than sugar and will not affect blood glucose levels. It also passes through the body with minimal absorption. The FDA reccommends a daily intake of sucralose at 5 mg per kilogram of body weight. For example, a 132 pound person would consume 23 tabletop packets of Splenda per day.

Saccharin (Sweet N Low): The oldest sugar substitute. These are sold in pink packets. It is 300-500 times sweeter than sugar and has no affect on blood glucose levels. Contrary to long held beliefs, saccharin is not a carcinogen and has been proven not to cause cancer in humans. The original trials and tests were done on animals. A 132 pound person would have to consume 45 tabletop packets of saccharin to reach the acceptable daily intake limit.

Aspartame (Equal or NutriSweet): Not yet acceptable for people with PKU (phenylketonuria (PKU), a rare condition in which they are unable to metabolize phenylalanine (a key component of aspartame), should not consume this sugar substitute). Sold in blue packets. It is a non-nutritive sweetner that is 200 times sweeter than sugar. While it is not zero calorie, it is still low in calories. In spite of rumors that aspartame is not safe to eat, there are too many conflicting studies to make a firm determination. However, there are indications that aspartame can leaed to migraines and stomach upset. It is not clear whether it does also lead to other complications such as leukemia or breast cancer. A 132 pound person would have to consume 75 tabletop packets to reach the acceptable daily intake limit.

Stevia (Truvia or Pure Via): A natural sweetner option. Steviol glycosides or Stevia is derived from the leaf of the stevia plant, found in Central and South America. Truvia and Pure Via, derivatives, are calorie free and stevia is often used as a sweetner in foods and beverages. Studies indicate this non-nutritive sweetner has little to no affect on blood glucose. Some people have indicated gastrointestinal side effects from Stevia, but current studies have not yet proven these claims have merit. The FDA aproves a 4 mg per kilogram of weight per day. A 132 pound person would have to consume 9 tabletop packets to reach acceptable daily intake limits.

Sugar Alcohols: These are derived from the natural fibers in fruits and vegetables. Commonly used sugar alcohols in so-called sugar free desserts, gums and candies are : sorbitol, xylitol, mannitol and isomalt. Although sugar alcohols are low in calories and blood sugar friendly, they often have a laxative affect and can cause indigestion, bloating and diarrhea. Sorbitol and mannitol foods must contain warning labels about these possible affects. These side effects are caused because sugar alcohols are not completely absorbed in the digestive tract. This is because those carbohydrates that are not absorbed are worked on by the digestive system in the large intestines and it causes gases within. It is recommended that everyone try a little bit first to see how the body reacts before incorporating sugar alcohols into your diet. Additionally, they contain carbohrdrates and will affect blood glucose levels. A tip: If you count carbs, it is recommended that you subtract the half the amount of sugar alcohol carbs from the total amount of carbs listed.

Erythritol: A sugar alcohol with fewer side effects. Unlike other sugar alcohols, it has less than 1 calorie per gram and doesn’t have a big impact on blood glucose levels. It is also an ingredient in Truvia and is marketed under4 the brand name Swerve. Swerve measures cup for cup like sugar and can be used like table sugar in cooking and baking . It is a better option if sugar alcohol gives you the gas, bloating and diarrhea because less of it, about 10% ends up in the colon and doesn’t go through the fermentaition process. There is no acceptable daily intake recommended by the FDA, but it is listed as safe.

Monk Fruit Sweetners: A natural sweetner that is zero calorie and comes from a plant native to China. It is 150 to 200 times sweetner than sugar. Popular brand names are Monk Fruit in the Raw and Lakanto. The FDA has no acceptable daily intake limit and takes the claims of the manufacturer that it is generally safe.

Acesulfame Potassium: Popular in diet sodas. AKA Ace-K is about 200 sweeter than sugar, is zero calorie and is found in sodas such as Coke and Diet Mountain Dew. Its brand name is Sweet One. The FDA recommends an acceptable daily limit of 15 mg per kilogram of weight. A 132 pound person would have to consume 23 tabletop packets of Sweet One to achieve this limit.

Allulose: No longer considered an added sugar. It is an extremely low calorie sweetner that in small amounts, is found in raisins, figs, wheat, molasses and brown sugar. The FDA recently declared it is not an added sugar, so it has been removed from the total sugar part of nutrition labels. It has 90% less calories and 70% of the sweetness of other sugar substitutes. Recent studies also indicate that allulose is not metabolized in the same way as table sugar, thus it is no longer considered an added sugar. Its calories per gram has been reduced to 0.4 per gram, rather than sugar’s 4 calories per gram.

What does all this mean?

Everything we ingest has an impact on our health. Those impacts can vary as each of us are individual. However, the mantra to remember is everything in moderation. People say you can’t have too much of a good thing…well that is not really true. There is no quick fix to weight loss, but nutrition can play up to an 80% role in whether we lose weight, maintain or gain. Most of this information seems to focus on beverages because that is where we usually have the least control over content. We can all prepare meals that have a healthy balance of meat, starch, vegetable and so on, but many of us buy our beverages at the store. Whole foods and drinking more water is the best bet. Be conscious of how much sugar and sugar substitute you intake each day. Listen to your body; it will tell you what’s what.