healt smarts

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Sweet Substitutes

Oh, sugar! It's just so yummy and

delicious. How could anything that tastes so good be so bad for us? Well, refined sugar is harmful, and it's in everything — even in savory foods, such as crackers, spices, breads and condiments.

Sugar is considered to be as addictive as cocaine, which is why so many of us find it so hard to resist. The problem with sugar is that it's linked to numerous health problems from diabetes, heart disease and obesity to depressed immune systems, cancer and tooth decay.

These problems are also common secondary health complications associated with individuals with spinal-cord injury and disease (SCI/D). Diabetes, for example, is 20% higher in people with SCI/D than it is in the general population.

Today, the average American consumes almost 6 cups of sugar a week. Nutritionists suggest Americans should be taking in 13.3 teaspoons of sugar per day (just under 2 cups a week).

However, that recommendation doesn't factor in people with SCI/D. This group struggles with carbohydrate metabolism and glucose intolerance, making their ability to process sugars more difficult and predisposing them to problems like diabetes. Therefore, their sugar intake should actually be even lower.

While it's best to keep sugar to a minimum in your diet, when that sweet craving does hit, you'll be happy to know there are some sweeteners that can be better choices to help minimize calories and blood sugar spikes. These are stevia, Swerve, erythritol and monk fruit.

Stevia

Stevia is an extract from a plant that is approximately 200 to 300 times

sweeter than sugar. It has gained popularity in the last few years and is becoming more widely available at local stores across North America.

Stevia has a glycemic index of zero, which means it doesn't affect blood sugar (insulin) at all.

When purchasing stevia, consumers should be wary that the product may be mixed with other forms of sweeteners or bulking agents, such as maltodextrin. That agent has a whop-

One tablespoon of stevia contains:

- Zero glycemic index
- 12 calories
- 0.8 grams of carbohydrates
- 0.8 grams of sugar

Swerve

Swerve is a natural sweetener made from non-genetically modified organism, or non-GMO, ingredients.



People with spinal-cord injury and disease should limit their sugar intake.

ping 110 glycemic index, which will definitely have an impact on your blood sugar levels.

It's best to buy stevia in either its powdered form (rather than granular) or as liquid drops to reduce the chances of having it mixed with other ingredients. The downside with stevia is that it tends to carry a bitter aftertaste, but this can be mitigated with the liquid drops.

It contains two natural sweeteners, erythritol and oligosaccharides. Oligosaccharides (inulin) are a type of prebiotic fiber that naturally occur in various plants and have zero calories.

Oligosaccharides may hold promise for reducing insulin levels. A 2016 double blind, randomized controlled study published in *AMB Express* found participants supplementing oligosaccharides at

10 grams per day had significantly reduced fasting insulin levels.

Swerve works well as an allpurpose sugar substitute in baking because it measures cup for cup, and it doesn't have stevia's bitter aftertaste.

One tablespoon of Swerve contains:

- Zero glycemic index
- Zero calories
- Zero grams of carbohydrates
- Zero grams of sugar

Erythritol (Sugar Alcohol)

Despite the name, there's no alcohol in sugar alcohols. Sugar alcohols can, however, cause an upset stomach and have a laxative effect, so use with caution.

The reason why it doesn't provide calories to its consumer is because the body actually can't break it down. Even though erythritol travels through your body, it doesn't get metabolized.

Erythritol can cause side effects such as diarrhea, headache and stomachache in some people and/or when consumed in large doses. It naturally occurs in some fruits and fermented foods, but the variety being added to food and beverages today is typically manmade from GMO cornstarch, resulting in an ultra-processed food.

If you choose this product, pick a non-GMO version and start with smaller doses to monitor for side effects.

One tablespoon of erythritol contains:

- Zero glycemic index
- Zero calories
- Zero grams of carbohydrates
- Zero grams of sugar

Monk Fruit

Monk fruit (also known as luo han guo) is a fruit from Southeast Asia



and looks almost like a lime or melon combination. The fruit is usually dried and then used to make medicinal drinks, such as Liang Cha.

The extract is about 150 to 200 times sweeter than sugar and contains minimal calories, as well. You can purchase the dried fruit at Chinese herbal stores, but if you want to put it in your coffee, you'll probably want an extract powder or liquid form. Monk fruit's mogrosides, the compounds that give it its intense sweetness, are also powerful antioxidants.

Using monk fruit is a natural way to fight inflammation. Many studies prove its anti-inflammatory powers are most likely the reason it can positively affect so many other diseases and disorders.

Aside from being a proven antihyperglycemic (which helps bring down blood glucose levels in the body), studies have also shown targeted antioxidant abilities toward pancreatic cells, allowing better insulin secretion.

One tablespoon of monk fruit contains:

- Zero glycemic index
- Six calories
- 1.2 grams of carbohydrates
- 1.2 grams of sugar

For more information on nutrition specific to SCI/D, visit eatwelllivewellwithsci.com.

Kylie James and Joanne Smith are certified nutrition practitioners and co-authors of the Paralyzed Veterans of America-supported book Eat Well, Live Well with Spinal Cord Injury and Other Neurological Conditions.



Our Research Center of Excellence. housed at the University of Miami Miller School of Medicine is dedicated to finding effective treatments, improving the quality of life of individuals with spinal cord injuries, and ultimately, finding a cure for paralysis.

To be considered for current and future research studies, please visit our website:

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