

Are artificial sweeteners better than regular sugar?

Should you be consuming sugar or replace it with artificial sweeteners? Here's what experts suggest

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Do you have artificial sweeteners? Here's what you need to know. (Source: Getty Images/Thinkstock)

Most of us like to kick-start our day with a cup of tea or coffee, usually sweetened with sugar to add to the taste. But many fitness enthusiasts opt for sugar substitutes or **artificial sweeteners** to sweeten their brew. But are such sugar substitutes healthy and should you be consuming them? If such questions have been on your mind, you are in the right place. Below is a comprehensive guide that will help you with answers to all your question.

What is sugar?

Sugar is a simple carbohydrate that the body converts into glucose and uses for energy. Since added sugar is broken down by the body during the digestion process, the sugar levels tend to rise rapidly, unlike the case with naturally-occurring sugars which have minimal effect on our body's **blood sugar levels**. This is why experts always express concern over the consumption of added sugars.

What are sugar substitutes or artificial sweeteners?

A sugar substitute is a food additive that duplicates the effect of sugar in taste but usually has less food energy, as per a 2011 study by National Center for Biotechnology Information (NCBI).

“Neotame, saccharin, aspartame, acesulfame potassium, sucralose and advantame are some of the artificial sweeteners. When people use these, it not only adds to their calories but makes the product very sweet due to the use of high-intensity artificial sweeteners. As consumers have these products, they tend to develop a distaste for healthier options like fruits that are mildly sweet. This makes them add a large number of calories to their diet,” Dr Mayank Uppal, consultant, Internal Medicine, Sitaram Bhartia Institute of Science and Research, Delhi told indianexpress.com, in an earlier interaction.

Sandhya Pandey, chief clinical nutritionist, Fortis Memorial Research Institute Gurgaon shared how these low-calorie sweeteners are “600 times sweeter than sugar”. “So, the amount required is in very small quantity,” she added.

While a fair share of studies hold some **sugar substitutes** as harmful, others suggest they are fit for human consumption if consumed in a limited way determined by per kilogram of body weight. Simply put, a child's consumption would be less than that of a man, and so on.

However, the NCBI study also highlighted how “most of the studies have limitations such as effects shown only in animals, not in humans, small sample size, high doses, statistically non-significant or borderline significant, etc.”

Why is it a concern?

Having too much sugar can lead to problems, ranging from trouble in concentrating, mood swings, sudden drop and rise in blood sugar level, inflammation in the body to chronic illnesses like heart problems and diabetes. In fact, according to the United States' Food and Drug Administration (FDA), the added sugar-intake recommendation should not be more than 10 per cent of one's daily calorie intake. But World Health Organisation (WHO) reduced this percentage from 10 to five per cent. For an adult who has a normal BMI, WHO recommends no more than five teaspoons of sugar.

According to a 2014-study published in *Research Gate* titled *Sugar Intake, Obesity, and Diabetes in India*, there is a "strong relationship between calorie intake and obesity". "In India, the prevalence of obesity is increasing at a rapid pace due to an increase in energy intake owing to increased purchasing power and availability of high fat, energy-dense foods, along with a reduction in the energy expenditure consequent to urbanisation and mechanisation. Parallel to the rise in **overweight** and obesity, the prevalence of metabolic syndrome and type 2 diabetes mellitus (T2DM) is also increasing in India, and has reached epidemic proportions. India has more than 65 million diabetics, second only to China worldwide," it noted.

So, should you opt for artificial sweeteners?

Liver disease expert, leadership educator and Professor of Medicine, Harvard Medical School, Boston, Dr Sanjiv Chopra, MD explained in a video interview to DiagnosticDetectives.com that how it is better to opt for regular sugar instead of artificial substitutes. "Artificial sugars are turning out to produce worse glucose intolerance, because it actually changes the microbiome in the GI tract. This is one of the hottest topics in medicine. Microbiome has been called the "second human genome", the inner bacterial rainforest. There are trillions of bacteria in our GI tract. In aggregate, their weight is three pounds. So, if you want to have a coco-cola, have it, but one-third, enjoy it, savour it rather than having a diet coke which has only one calorie but has many injurious health effects."

However, Pandey mentioned that there is no "conclusive evidence to suggest how microbiome" is affected.

Certified nutritionist Rashi Chowdhary also shared some facts in an Instagram post recently. "There are plenty of low-calorie sweeteners available in the market, but are they really healthy? Sweeteners such as Malitol (found in nutrition bars, skinny icecreams) Aspartame (diet coke) and Sucralose (Splenda) might be low in calories but are worse than sugar!"

According to Chowdhary, Malitol causes indigestion, nausea, stomach pain, diarrhea and ‘bubbleguts’ – the sound your stomach makes when it’s trying hard to digest. Aspartame causes headaches, dizziness, seizures and depression, whereas Sucralose has negative impacts on the gut friendly-bacteria.

Chowdhary went on to recommend a few “acceptable” options.

Stevia

This calorie-free sweetener is better than others as it’s extracted from a plant. It also has little to no carbs and doesn’t spike your blood sugar levels. And it also decreases your triglycerides and increases HDL – the good kind of cholesterol.

Monk fruit extract

This one’s quite a hit amidst Keto lovers. It’s natural and has zero calories. But what makes it even better is a specific type of mogroside called mogroside V – which has antioxidant and anti-inflammatory properties.

Xylitol

Xylitol is a naturally occurring sugar alcohol, a type of carb, found in fruits, vegetables and hardwood trees. It has no harmful additives or artificial chemicals, and is the champion of sugar alcohol sweeteners. Unlike sugar which has six carbons, Xylitol only has five and it is also better for your dental health. However, you need to be careful as it can cause bloating and, diarrhea.

How to pick what suits you?

Always check the products you buy for hidden ingredients. Pandey said, “Exercise caution, maintain the daily limit. Also, one should note that a lot of times, things including chewing gums, candies and juices have it without mentioning the quantity,” she said.

She further mentioned that instead of just looking at individual sugar content, it is necessary to look at the entire food one consumes in terms of overall calories and nutrition. “Problems are because of excessive consumption of calories and one of the calorie components is sugar. Because when you add sugar to food, the calorie content goes up,” said Pandey.

If you have a sensitive gut or have an auto-immune disease, is best to turn to natural sweeteners like **dates**, dark chocolate, **munakka** or honey, suggested Chowdhary