

# Who moved my sugar?

The journey of artificial sugar sweeteners began way back in 1837 with the discovery of saccharin—the grand daddy of sugar substitutes. Now, they are freely available as pellets and powder that you can add at your whim to your favourite foods, without worrying about your waistlines. The essential question remains—is life all about having your cake and eating it too?

Archana Darshan finds...

Six months back Roma Ganguli got diagnosed with diabetes. The diagnosis came as a rude shock because now she had to give up sweets, without which, she couldn't polish off the dinner. But with artificial sweeteners around, she managed to wiggle a way out to indulge in her sweet tooth.

Rohit Gandhi, a 30-year-old, working as Team Leader in BPO wing of Genpact looks ten years more than his age because of his bulging waistline. Naturally, he is worried, however, his night-owl lifestyle leaves little time to hit the gym. In order to control weight he gave up sugar in tea and coffee but couldn't drink the bland beverage. With artificial sweeteners on his side, he enjoys four to five cups of tea and coffee guilt free. Or should he worry?

Let's find out. "Artificial sweeteners are chemicals or natural compounds that offer the sweetness of sugar without as many calories. Since, the substitutes are much-much sweeter than sugar, it takes minuscule quantity to mimic the sweetness of sugar. Naturally, products made with artificial sweeteners have a much lower calorie count than products made with sugar," says Geetu Amarnani, Chief Dietician at B L Kapur Hospital. Artificial sweeteners are often used as part of a weight-loss plan or as a means to control weight gain. They are also good for your dental health because they deter cavities. "Yet, people who are dieting should keep in mind that sugar free doesn't mean calorie free. Just because the label of the chocolate reads sugar free you can't indulge in as many pieces you wish. The food item will have calories," avers Geetu.

Honey Khanna, Senior Dietician with Max says, "Diabetics need to be careful because many food items though devoid of sugar can still manage to increase blood sugar levels, like sugar free yoghurt, due to other carbohydrates or proteins in the food. Some foods labelled "sugar-free" — such as sugar-free cookies and chocolates — may contain sweeteners, such as sorbitol or mannitol, which contain calories and can affect your blood sugar level. Some sugar-free products may also contain flour, which will raise blood sugar levels."

## Sugar free options

Sugar substitutes fall in two categories—nutritive and non-nutritive. Honey, jaggery, fructose, maltose and lactose come under nutritive section and provide

nutrition along with fewer or equal calories as sugar. Non-nutritive sweeteners like sugar do not offer any nutritional value, but also skip the calories. Non-nutritive sweeteners are—

**Saccharin**—It was used during both World Wars. Saccharin tastes 300 times sweeter than sucrose. Yet, if you have saccharin, it leaves a bitter taste after eating. The 1970s research indicated that very large

doses of saccharin were associated with bladder cancer in laboratory animals. Regular users have noticed various side effects with the use of saccharin, which include itchy skin and skin rashes and eczema.

**Aspartame**—As compared to saccharin, aspartame is very young. Invented in 1951, this artificial sweetener is formed of two amino acids and is 200 times sweeter than sucrose.

Aspartame is present in many foods and beverages, like diet sodas; sugar free gums, desserts, milkshakes and fruit spreads. When heated aspartame loses its sweetening properties, hence it is not suited for cooking. Honey Khanna says, "Upon ingestion, aspartame breaks down into natural residual components, including essential amino acid and phenylalanine. High levels of these are a health hazard to those born with phenylketonuria (PKU), a rare inherited disease that prevents phenylalanine from being properly metabolised."

**Sucralose**—Discovered in 1976, sucralose, as the name suggests is made from sugar and is 600 times sweeter than sugar. The positive side of sucralose is that unlike aspartame, it can be used for cooking and baking purposes.

**Stevia**—"This herbal sweetener comes from a plant extract by the same name and has wooed many loyal aspartame and sucralose users. Since it is based on herbs, it doesn't have any serious side effects," says Dr Dheeraj Kapur, Consultant Endocrinology with Artemis Hospital.

## How sweet is too sweet?

When you decide to replace table sugar with sugar substitutes, remember to focus on the nutritional value of the products in which they are used. It is okay to swap diet soda for a regular soda, but diet soda shouldn't be the only beverage you drink.

(Inputs from Honey Khanna, Senior Dietician with Max Hospitals.)

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