

# Why is your food so sweet?

Adding sugar is not the only way in which food manufacturers sweeten their food. Here are some common sweeteners and where they can usually be found.



## Sugar

There are a wide range of sugars in this category, ranging from fructose – which is commonly found in fruits – to sucrose, which is the main component of standard table sugar. Sugar typically contains 4 kcal per gram, and can be found in a wide variety of foods from jam to breakfast cereal.



## Sugar alcohols

These are naturally found in plant products such as fruits, although they are used in larger amounts as commercial sweeteners in foods. Examples include xylitol and sorbitol, which can be found in dried fruits or extracted and added to candy. These sugar alcohols typically contain 2.4 kcal per gram.

## Artificial sweeteners

These are often far sweeter than sugar that is found naturally. For example, one of the most popular artificial sweeteners, aspartame, is 200 times sweeter than sugar. Because they are so sweet, only a small amount is needed and hence they effectively have no calories. They are commonly found in diet versions of soft drinks.



## Natural sweeteners

Popular natural alternatives to sugar include honey and date sugar, which is made from crushed dried dates. Both have around 3 kcal per gram. Another option is stevia, which is extracted from the *Stevia rebaudiana* plant. Stevia is growing in popularity because it is also much sweeter than sugar.

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# Beware of sugar souring your health

Know what added sugar, artificial sweeteners and natural alternatives mean

### Linette Lai

The word "sugar" may conjure up images of the sweet additive that you stir into your morning coffee, but the reality is far more complex.

In our food, sugar appears in various forms. Sometimes, alternatives such as artificial sweeteners are used. But in that case, how do we make sense of food labels with claims such as "no sugar added" or "reduced sugar"?

And how do natural sugar alternatives – such as honey or date sugar – stack up against artificial sweeteners like aspartame?

First, say the experts, people need to understand what "sugar" means. Nutrition labels often refer to "total sugars", which includes both sugar that is naturally occurring in the product as well as sugar that has been added.

For example, fruit juice may contain a type of sugar known as fructose, which is naturally present in fruits. In contrast, products such as yogurt may have extra sugar added to further sweeten them.

"There are 60 different ways to refer to added sugar," said Ms Bibi Chia, principal dietitian at Raffles Diabetes and Endocrine Centre.

Some of these other names for added sugar include high fructose corn syrup, maltodextrin, maltose and cane sugar.

Still, it is good practice to go for low-sugar products. "In general, anything below 5 per cent is considered low," said Ms Chia.

However, consultant dietitian Law Chin Chin warned that even products with no added sugar may not be as healthy as they seem.

"Having no sugar added doesn't necessarily make it a healthier product, as it could be high in calories due to a high amount of fat... or sodium," said Ms Law, who is from Thomson Medical Centre.

### LOW-CALORIE SWEETENERS

A growing concern about sugar and its potential ill effects on health has led to food and drink manufacturers using alternatives such as sugar alcohols and artificial sweeteners instead.

While these are said to be healthier than standard sugar because they have fewer calories, the jury is still out when it comes to their impact on overall health.

Sugar alcohols, such as xylitol and sorbitol, are often used as sugar-free sweeteners in chewing gum and hard candy.

### WATCH THE ADDED SUGAR

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**MS BIBI CHIA**, principal dietitian at Raffles Diabetes and Endocrine Centre.

These chemicals are naturally found in small amounts in some fruits and vegetables, but are often extracted for commercial use, said Ms Claudine Loong, who is a lecturer from Nanyang Polytechnic's School of Chemical and Life Sciences.

Unlike sugar, which has 4 kcal per gram, she added, xylitol has only 2.4 kcal per gram – making it a lower calorie option.

These are typically considered safe sugar substitutes unless they are consumed in large amounts, when they can act as a laxative.

Artificial sweeteners, such as aspartame and saccharin, are another different category of chemicals that have been chemically synthesised to replace sugar.

They can be hundreds of times sweeter than sugar, meaning that only a tiny amount is needed to sweeten food.

Mr Louis Yap, a dietitian from Parkway East Hospital, said that such sweeteners also contain 4 kcal per gram. However, such small amounts are used that their calorie count is in fact "near negligible".

But other experts pointed out that some studies have found that such artificial sweeteners cause health problems, and suggested that they be taken in moderation.

"The use of these artificial sweeteners has been controversial as some studies have shown their adverse effects on health," said Dr Heng Kiang Soon, who is a lecturer in Republic Polytechnic's School of Applied Science.

### HONEY IS BETTER?

A growing trend among consumers is also to opt for natural sugar alternatives such as honey, stevia and date sugar instead.

However, the experts stressed that even sweeteners that come from natural sources should not be consumed indiscriminately.

Both honey and date sugar – which is made from crushed dried dates – contain around 3 kcal per gram, said Ms Chia. In contrast, sugar contains 4 kcal per gram.

And while honey is often held up as an ideal sweetener for diabetics who require low glycaemic index foods, much depends on the specific blend, said Dr Geeta Bansal, a lecturer at Ngee Ann Polytechnic's School of Life Sciences and Chemical Technology.

The glycaemic index refers to the rate at which foods make a person's blood sugar levels rise.

Honey's glycaemic index depends on the ratio of two types of sugars present in it – glucose and fructose. Typically, Dr Geeta said, honey with more fructose has a lower glycaemic index.

"The glycaemic index of honey is generally less than sucrose, but it is still quite comparable," she added.

One sweetener that is growing in popularity is called stevia, which is extracted from a plant known as *stevia rebaudiana*.

Unlike honey, said Dr Geeta, stevia does not contain any calories. It also does not affect a person's glycaemic index, she added.

But experts suggested that those who are really health conscious look to a healthier diet overall.

"Individuals who have got used to consuming foods with high sweetness can actually train their palate to accept foods with lower sweetness," said Dr Heng.

"Therefore, it is not really about finding sweeteners to replace sugars, but rather to adjust our tastes to healthier foods."

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### How to read food labels

What should you look out for in the supermarket if you want to avoid excessively sugary foods?

For a start, look beyond claims that a certain food has "reduced sugar" and scrutinise food labels instead.

"Lower sugar doesn't mean that there is no sugar present," said Ms Law Chin Chin, a consultant dietitian at Thomson Medical Centre.

For example, products with the Healthier Choice Symbol simply have 25 per cent less sugar compared with similar products on the market.

If you are comparing two products, added Mr Louis Yap, a dietitian at Parkway East Hospital, make sure that you are looking at the correct column on the nutrition label. "We should be using the column that says per 100ml or per 100g when comparing similar products, such as different brands of juice or cereal," he said.

This is because manufacturers often print the nutrition values for each serving of that food, even though serving sizes can vary.

On top of that, consumers should also take note of the other entries on such labels, added Ms Law, who is also a senior dietitian at Food & Nutrition Specialists. "Choose the healthier products which are also lower in calories, fat and sodium, and higher in fibre," she said.

Apart from nutrition labels, shoppers should also look at ingredient lists, suggested Ms Claudine Loong, a lecturer from Nanyang Polytechnic's School of Chemical and Life Sciences.

In addition to items that contain the word "sugar", they should also keep an eye out for ingredients such as fruit concentrate, high fructose corn syrup, cane juice or agave.

"If any of (these) are at the top of the ingredient list, the product is likely to be high in sugar content," Ms Loong said.

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