

MIND
your
BODY

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Cover Story

As in the words of the popular Christmas carol, naughty or nice come to mind and those tantalising log cakes, puddings and chocolates are both nice and "naughty". That is, if you love to sink your teeth into those tempting delights yet fret about the common ingredient they have aplenty – sugar.

While sugar enhances flavour and is found naturally in certain foods like fruits and vegetables, eating too much is bad for your health.

"Excessive calorie intake from eating sugary foods can lead to obesity. Too much sugar means we consume more calories, which cause weight gain," said Ms Pauline Chan, a dietitian at The Nutrition Place.

Sugar, a carbohydrate, contains four calories per gram and comes in two main forms. One is monosaccharides, or sugars like glucose and fructose. The other is disaccharides, which comprise sugars like maltose, sucrose or table sugar and lactose.

The two forms occur in different foods like milk and fruit and possess varying levels of sweetness.

While our bodies can absorb monosaccharides, the disaccharides we consume will have to be broken down into monosaccharides before being absorbed.

Each gram
of sugar contains

4

calories

We are most familiar with sucrose, or table sugar, which comes mainly from sugar cane and sugar beets.

Raw sugar is sugar which has been minimally processed. It has a higher molasses content, which gives it a rich, complex flavour.

Refined sugar is any sugar product treated to remove the molasses – the by-product presents itself in the form of a thick brown syrup.

The different forms of refined sugar include castor sugar, used in making soft drinks, and powdered sugar, used in baking.

Brown sugar is refined white sugar but with added molasses.

Ms Chan said: "It is a common myth that certain types of sugars are healthier than others. All sugars contain the same amount of calories. The only difference is that raw and brown sugar have more minerals than refined sugar but the amount is insignificant."

On the amount of added sugar we can eat in a day, Ms Jaclyn Reutens, a dietitian at Aptima Nutrition & Sports Consultants, said this should not exceed 10 per cent of our daily total calorie intake.

For example, if your daily calorie allowance is 1,600 calories, you should take no more than 40g of sugar (which contains 160 calories) every day.

This is equivalent to eight teaspoons of sugar, or one can of cola, two bubble teas or slightly less than two chendols.

Ms Meryl Gav, a dietitian at the department of dietetics and nutrition services at Singapore General Hospital, added that the American Heart Association said in August that women and men should consume less than 100 calories (about 25g) and less than 150 calories (about 37.5g) of added sugar per day respectively.

Ms Reutens said: "You do not need refined or added sugar in your diet. Your brain and body only accepts glucose as its energy source and this can be obtained from other carbohydrate foods like rice, bread and noodles."



GINGERBREAD MAN (65g)
Sugar: 20g
Calories: 290kcal

FRUITCAKE (1 piece, 43g)
Sugar: 12.83g
Calories: 139kcal

Ah, sweet Christmas

Do you know how much sugar is in that
log cake or that gingerbread man?
Mind Your Body finds out



LOG CAKE (1 slice, 135g)
Sugar: 31g
Calories: 280kcal



Energy for the body

Our bodies run on glucose, which is derived from the digestion of sugar and starch in carbohydrates such as rice, noodles, potatoes, fruits and vegetables.

When you eat carbohydrates, digestion begins in the mouth. An enzyme called salivary amylase is produced which converts the starches in the food to sugars like dextrins, maltose and maltotriose.

Further digestion occurs in the small intestine. The pancreas secretes the enzyme amylase which breaks carbohydrates into simple sugars like maltose, lactose and sucrose.

As these sugars move down the intestine, the enzymes maltase, lactase and sucrase respectively break maltose, lactose and sucrose down into smaller molecules. These are eventually converted to the simplest form of sugar – glucose – and absorbed through the intestinal walls into the bloodstream.

Grow fat and get diabetes

Ms Reutens said: "Glucose is first used by the cells for energy. Any remaining glucose is stored in the liver and muscle tissue as glycogen."

"After glycogen stores are filled, excess glucose is converted to fatty acids and stored as fat tissue. This is the excess weight gain."

Ms Chan said: "Excessive sugar consumption, along with a high-fat, high-calorie diet and a sedentary lifestyle, results in one becoming overweight or obese. Being overweight or obese raises the risk factor for cardiovascular diseases and insulin resistance, which leads to Type 2 diabetes."

Age faster

Too much sugar may also age you. Ms Chan said that some research has shown that glycation, a process caused by sugar attaching to proteins in the bloodstream, forms harmful molecules called advanced glycation end products (AGEs).

Increased intake of sugar leads to the development of more AGEs. Such an accumulation damages protein fibres like collagen and elastin, which give skin its elasticity. AGEs also reduce the amount of natural antioxidant enzymes in the body, resulting in the skin becoming more vulnerable to sun damage.

Curb those cravings

While your body usually knows how much glucose it needs, sugar cravings can hit you now and then.

Such cravings may be physiological or psychological. Ms Reutens said: "Sometimes you want something sweet to end a meal or as comfort food. You can actually function well without it."

"Most people use a need for a quick fix as an excuse but that could add up to 100 calories. It's not worth it to succumb to your cravings."

She advised drinking a glass of water and waiting 20 minutes after a sugar craving hits. If the craving is psychological, it will resolve itself.

However, Mr Derrick Ong, a dietitian at the department of dietetics and nutrition services at Singapore General Hospital, said studies have shown that avoiding a food you crave can lead to intensification of the craving and result in overeating.

He said: "A better way of handling a sugar craving is to slowly enjoy a small portion of the sugary food or eat a lower calorie version of the sugary food."

If you cannot do without a sugar hit, Ms Chan suggested choosing healthier options like fresh or dried fruits, sugar-free sodas, low-fat milk and pure fruit juice.

So go ahead and savour that log cake but remember to keep an eye on your waistline.

You do not need
refined or added sugar
in your diet.

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ST PHOTOS: ASHLEIGH SIM; LOG CAKE, FRUITCAKE COURTESY OF PAN PACIFIC SINGAPORE