



ARE YOU HOOKED?

Need a sugar hit to get you through the afternoon? You could have more than just a sweet tooth: evidence suggests sugar acts in similar ways to hard drugs – and you could be addicted without even knowing it

It's an affair like no other. Every day you crave a fix of your beloved, but, we hate to break it to you: your love for sugar is unrequited, and it's never going to treat you right. You're not the only one head over heels. As a nation, we currently sit third, behind Brazil and Mexico, as the largest sugar consumers in the world, scoffing around 53 kilograms each of it every year – that's more than one kilo each per week!

That sweet tooth is costing us more than loose change at the vending machine. Sugar is a 50/50 split of glucose and fructose. "Glucose is the equivalent of fuel for us," states David Gillespie, author of the *Sweet Poison* book series. "Fructose, on the other hand, is converted immediately to fat by our liver. By the time you finish a glass of apple juice [which contains as much sugar as a can of Coca-

Cola], the first mouthful is already circulating in your arteries as fat," he warns.

And that's just the start. By converting into a fat internally, fructose subverts our two main appetite gatekeepers, leptin and insulin, leading to overeating. The circulating fat also raises our blood sugar levels and can make us insulin resistant. As Gillespie warns, "If we become resistant, the more glucose stays in circulation, meaning we have a blood sugar level that is too high – this can lead to the development of type 2 diabetes and, in turn, cognitive diseases such as Alzheimer's."

Plus, sugar compromises your metabolism and immune system, never mind your teeth or the number on the scales. And when the glucose goes, we're left with plummeting blood sugar levels and a body that begins to crave its fix: more sugar.

SIGNS OF ADDICTION

Experts are divided on sugar addiction in humans. But the evidence is mounting. When shown their favourite foods, in a

study by the Brookhaven National Laboratory in the US, participants experienced a surge of dopamine in the same part of their brain that lights up when cocaine addicts are shown a bag of white powder. And researchers know when palatable food is eaten, the brain releases opioid, which brings feelings of euphoria. Dopamine and opioids work together to create a pathway that's activated every time a person merely thinks about the food, regardless of hunger. And sugar is one of the most efficient opioid triggers.

When deprived of an opioid hit, from drugs or food, your grouchy factor can go up. "When we're unhappy, we instinctively know that a sugar hit will work, and it does, temporarily," says Gillespie. "An addict feels enormous relief and pleasure, but really, they're just returning to a state of normality. Ironically, they'd be

in that state the entire time if it wasn't for sugar – most people report mood swings disappearing when they're off sugar."

THE HIDDEN ENEMY

And what do you get in return? "Sugar is nutritionally empty – it provides lots of kilojoules, but no nutrients," explains nutritionist Catherine Saxelby. And you don't have to be chowing down on chocolate to become a victim. You're probably consuming more of the sweet stuff than you think. "We're inadvertently over-consuming sugar," says Professor Kerin O'Dea, director of the Sansom Institute for Health Research at the University of South Australia. With 75 per cent of our sugar intake coming from everyday packaged foods and drinks, and not from the conscious addition of it to our diets, it's hard to notice just how much is passing our lips. "People are surprised to learn honey has roughly the same kilojoules as sugar, while sweet chilli sauce is 70 per cent sugar," states Saxelby.

Even food like mayonnaise can contain up to 25 per cent sugar, a serve of Dolmio pasta sauce is sweeter than a Tim Tam, and a bowl of muesli can have the equivalent to a serve of Froot Loops. In fact, many "healthy" breakfast cereals contain 25 to 30 per cent sugar.

Don't believe the label, either; low fat doesn't mean low kilojoules. "The dietary message of the past 30 years has been 'fat is bad', so it's been largely removed from products and replaced with sugar and salt," adds Gillespie. "Salt is used to balance flavour, which is why some high-sugar foods may not taste that sweet."

SUGAR-FREE SUCCESS

How much sugar should you be consuming? "I don't think we need any refined sugars in our diet," says Professor O'Dea. "We can get sugar from fruit and some vegetables in a form we are less likely to over-consume. At the same time, you're loading up on other important nutrients, like fibre, vitamins and minerals."

If you want to wean yourself off rather than go cold turkey, try nixing obvious sources from your diet – including juices and other "healthy" sweet foods. Next up: build your awareness of how much sugar is in packaged products. Michael Pollan, author of *Food Rules* (Penguin, \$16.95), advises to steer clear of products with sugar listed as one of the first three ingredients. Look at the ingredients list – if a word ends in "ose", such as dextrose or glucose, it's a form of sugar.

Still want your fix? Try pairing sugar with dairy (like fruit with yoghurt), which is low GI, and will delay the absorption of sugar. Mimic nature and eat it with fibre (like jam on wholegrain toast) to encourage fullness. And add protein to every meal – it stops that blood sugar spike (and crash). As Professor O'Dea puts it, "There's never any need to cut anything out completely, but if you can learn to manage your consumption of sugar, you'll find it becomes less important to you." Sweet advice, indeed. ■