The best and the worst ‘natural’ sugars

Now that sugar is in the naughty corner, along with fructose, the most predominant sugar in the fruit kingdom, what are the best natural alternatives, given that the best of all is to eat less sweet foods and, ideally add no sweeteners. Right?

Not necessarily. There are lots of ‘natural’ foods that claim no ‘added’ sugar using very sugary foods such as dates and raisins, which have an extremely high glycemic load (GL), which is what you want to avoid if you're concerned about your weight or developing diabetes or heart disease.

A glass of carrot juice will raise a diabetic’s blood sugar level, and yours, more than a spoonful of sugar. Sure, it has more nutrients than white sugar, but it’s still a big hit on your blood sugar level.

The same point needs to be made about fructose. Recent reports claim that all fructose turns into fat in the liver, and none gets converted to glucose which is our cell’s favourite fuel. In case you didn't know white sugar, sucrose, is a unit of glucose and a unit of fructose. It is the conversion of fructose to glucose that makes it ‘slow-releasing’. A better term would be ‘slow converting’. Now, if you overload the system with fructose some does go straight into fat, raising blood fat levels called triglycerides. But if you don’t have that much, or slow down its release from fruits by eating the whole fruit containing fibres, or eating fruit more slowly and in reasonable amounts, fructose does convert to glucose. So, fructose isn’t ‘bad’ per se, just in excess.

A wonderful example of misinformation is the current love for coconut sugar. It’s mainly derived from the fruit, or blossom and is sometimes lovingly called coconut ‘blossom’ sugar. There was only one small test of its Glycemic Index (indexed to glucose, with a score of 100, white sugar being 65.) from a Philippines research institute, no doubt dependent on the coconut industry, saying it had a GI of 35, which is low. I didn’t trust this, knowing it was predominantly fructose. A more recent and robust test carried out at the University of Sydney gives it a GI score of 55. That makes more sense to me. Also, if you decide to get sugar from coconut you don't end of growing coconuts, so valuable for their water and oil. You can’t do both commercially.

So, now that we’ve ‘warmed up’ which natural sweeteners are best and why? Our favourties, roughly in order, are:

• Chicory root powder (source of inulin)
• Xylose (in ‘pip’ fruits – cherries, plums and berries) and xylitol
• Agave, in moderation, when you ‘need’ a liquid sugar
• Yacon syrup in moderation
• Raw organic honey, maple syrup, brown rice syrup, molasses in moderation

Chicory root powder is a rich source in the resistant starch, inulin. Resistant starches can’t be absorbed, and feed bacteria in the gut which make health promoting fatty acids. They also promote and encourage the growth of healthy bacteria. Inulin has no GL at all, so it’s diabetic heaven. It tastes quite sweet and pleasant, unlike Stevia,

which has a bitter after-taste. (By the way, if you happen to like Stevia go for it. There's nothing wrong with it and perhaps it should be on my list but the taste profile is a problem for me.) You can also buy purified pure inulin but I prefer chicory root powder, which is a bit less sweet.

The only downside is that sme people are sensitive to it, and all would be sensitive to it if you overdosed (above 50 grams). As with Jeruslam artichokes, asparagus and most beans and lentils, 'resistant' starch feeds bacteria which can make gas. That, in itself, is not necessarily a health problem, although perhaps anti-social, but some people, for example with IBS, get too loose bowels. Most people don't. try it for yourself.

Xylose/xylitol is my next favourite and has really stood the test of time. It was originally discovered when Finnish people were starving in World war II and tapped into silver birch sap, a rich source of xylose. As a consequence their teeth became really good. Today, children in Finnish schools are given a xylitol sweet every day and consequently have excellent teeth because bacteria in the mouth can't stick to the teeth when they consume xylitol. It also occurs naturally in berries and stone fruits such as plums and cherries.

This sugar alcohol has a GL of 9, which is extremely low. A teaspoon, 5 grams, which is what I have in my xylitol sachets [link] is only 0.5Gls. My recommended daily allowance for weight maintenance is 60 GLs a day. Nine teaspoons of xylitol equals one teaspoon of sugar in terms of GL. Also, it doesn't feed yeasts in the gut.

Xylitol is great for baking but doesn't caramelise so it's no good for crème brulee. Also, it has a cooling taste so isn't great for chocolate, except perhaps mint chocolate. It's also no good for dogs who can't metabolise it. So keep your hound away.

As for prunes (dried plums) lots of xylose or xylitol can promore regularity. Too much can make you too lose. Again, there are some people with IBS who may have a problem with xylitol, but this is extremely rare.

Sorbitol is another sugar alcohol found in stone fruits, much like xylitol. **Erythritol** is an especially sweet sugar alcohol so very little needs to be used. It is a smaller molecule that is absorbed in the small intestine and ecreted in the urine. It is perhaps less likely to 'aggravate' those rare people who are sensitive to xylitol. It is not a bad sweetener.

Agave is a liquid sugar from the agave cactus. It has mixed reviews and no doubt mixed quality. Essential it is fructose and slower releasing than sucrose of glucose. If I need a liquid sugar this is what I tend to use. **Yacon syrup** in another sugar from an Amazonian root that is quite high in resistant starch, thus feeding bacteria in the gut. It is a valid alternative to Agave.

Honey is 'natural' sugar. Most commercial honey is faster releasing than sugar. But if the honey is raw, thus unheated, and locally produced from bees in a healthy environment, for example on moorlands, the honey will have a lower GL and more nutrients and minerals. If all the honey is taken from the bees, and they are then fed sugar syrup through the winter, it's not so good. You want bee-keepers who leave

some honey for the bees to thrive through the winter. I think Manuka honey is a bit of a con. Manuka is tea tree and if you really want the antiseptic effect of tea tree get some tea tree oil. For many people it is just an excuse to eat sugar. If you do have an infection, by all means use this, with lemon and ginger, for a soothing cuppa. But don't expect miracles. A gram of vitamin c every hour is more effective.

Maple syrup is a fast-releasing sugar with a relatively high GL count but a wonderful taste for the odd pancake or two. All the grain sugars such as **brown rice syrup** and **barley malt** are mainly maltose, a sugar made of two glucose molecules**. Molasses** is a by-product of making sugar from cane. It is brown because sugar is burnt, but quite high in minerals. If consumed infrequently, in small quantities they are OK but they are still sugar, albeit natural.