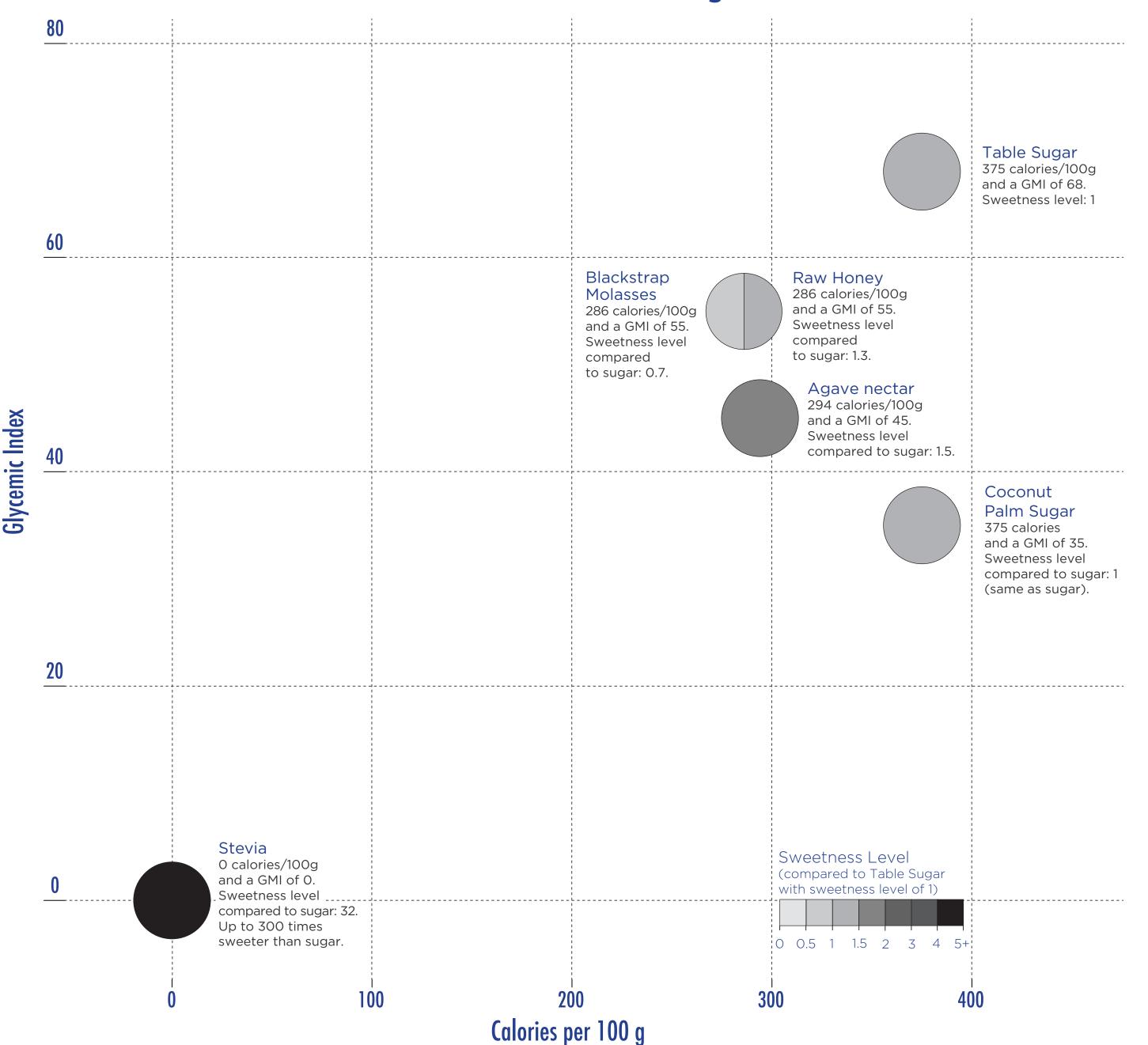
In an attempt to fight the growing problems of obesity, tooth decay and many other health problems, the World Health Organization recently introduced new guidelines for sugar intake, suggesting to drop the former recommended amount of 10% of daily energy intake to 5%. This equals roughly 25 grams (6 teaspoons) of sugar per day for an adult of normal Body Mass Index.

When talking of sweeteners people often think of white table sugar, which is used everywhere around the world. However, not all sweeteners are created equal and have different effects on the body. Though sugars in general should be enjoyed sparingly, differing amounts of glucose and fructose, as well as glycemic index and nutritional value are important factors to take into account when choosing the right sweetener that could replace table sugar as a much better alternative for everyday use.

375 375 294 286 286 **Calories** 100 0

CALORIES AND GLYCEMIC INDEX OF SWEETENERS PER 100g



GLYCEMIC INDEX

In the first two hours after a meal, blood glucose and insulin levels rise higher after a high-glycemic load meal than they do after a low-glycemic load meal containing equal calories. However, in response to the excess insulin secretion, blood glucose levels drop lower over the next few hours after a high-glycemic load meal than they do after a low-glycemic load meal. This may explain why 15 out of 16 published studies found that the consumption of low-glycemic index foods delayed the return of hunger, decreased subsequent food intake, and increased satiety (feeling full) when compared to high-glycemic index foods.

Consumption of low-glycemic index foods delays the return of hunger, decreases food intake and increases satiety compared to high GI foods.

This illustrates that low-glycemic load foods are better at curbing hunger or appetite, thus, leading to weight-loss and other long-term health benefits.

FRUCTOSE, GLUCOSE, SUCROSE?

Sucrose, glucose and fructose are carbohydrates, commonly referred to as simple sugars. Sugar is found naturally in whole foods and is often added to processed foods to increase flavor.

Simple carbohydrates are classified as either monosaccharides or disaccharides. Glucose and fructose are monosaccharides, made up of one sugar unit. Together they link to become sucrose, a disaccharide.

Fructose alone can in concentrated doses be harmful, due to the lacking amount of glucose to bind with, as it will not be absorbed into the bloodstream like glucose but is instead metabolized in the liver. It does not raise blood sugar or insulin in the short term, but when consumed in high amounts it leads to insulin resistance—a long-term effect that will chronically elevate blood sugar and insulin levels.

For this reason the fructose content of sugar is a much bigger problem than its glycemic index. Regular sugar contains about 50% fructose, High Fructose Corn Syrup between 45-55%, while Agave is about 70-90% fructose. While the negative health effects of high fructose corn syrup are well documented, Agave syrup has been recently promoted as a "healthy" sweetener. However, most health conscious users don't realize that agave is also a high fructose syrup. Agave syrup can contain up to 95% fructose and 5% glucose, making it one of the worst sweetener choices.

High fructose syrups increase risk of diabetes and cardiovascular disease including heart attack, stroke, high blood pressure, and liver inflammation.



Raw Honey

FRUCTOSE

FRUCTOSE

GLUCOSE

GLUCOSE

26.5%

48%

48%

75%

Blackstrap Molasses

Agave Nectar

TABLE SUGAR is the most

commonly known sweetener.

White sugar is the crystal-

lized sucrose—50% glucose

from either sugarcane or

the sugarcane or sugar

and 50% fructose—extracted

sugar beets. After harvesting

beets, the juice is extracted

and boiled down to remove

moisture. As the moisture

sucrose in the juice begins

this sweetener lacks any

form of nutritional value.

to crystallize. Unfortunately,

diminishes, the natural

Sweeteners

NUTRIENTS

WATER

GLUCOSE

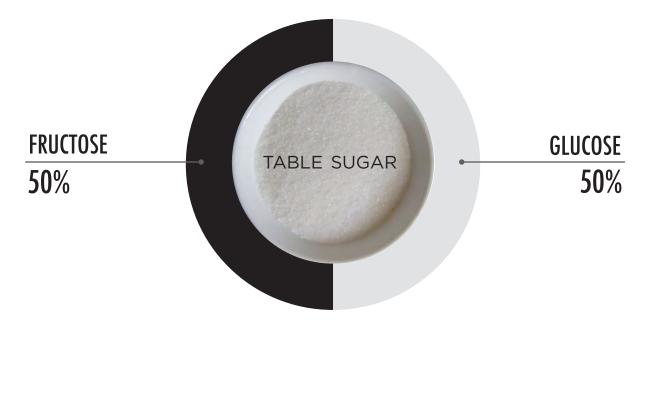
NUTRIENTS

NUTRIENTS

CALORIES OF SWEETENERS PER 100g

Stevia (Powder Extract)

400

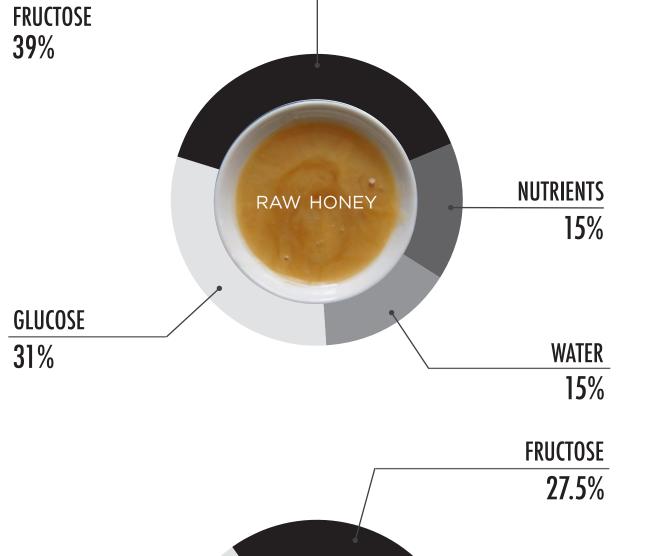


AGAVE

AGAVE NECTAR ranks relatively low on the glycemic index because it has a high content of fructose—in fact, higher than any other common sweetener, more even than high fructose corn syrup (HFCS). Fructose does not readily raise blood sugar (glucose) levels because the body doesn't metabolize it well, leading to deranged liver function and obesity. The nutrients in agave are insignificantly small and do not justify the use of it.

COCONUT PALM SUGAR is the natural sugar made from sap, which is the sugary circulating fluid of the coconut plant. It is often confused with Palm Sugar, which is similar but made from a different type of palm tree. It contains a fiber called Inulin, which may slow glucose absorption and explain why coconut sugar has a lower glycemic index than regular table sugar.

*Small Amounts of: Calcium, Zinc, Iron, Copper, Manganese, Thiamine amongst others



BSM

crystallize quickly due to the fact that it is unfiltered.

*Small Amounts of: Vitamin B 6, Vitamin K, Vitamin A, Carotene beta, Riboflavin, amongst others

BLACKSTRAP MOLASSES is the dark liquid byproduct of the process of refining sugar cane into table sugar. It is made from the third boiling of the sugar syrup and is therefore the concentrated byproduct left over after the sugar's sucrose has been crystallized, and is rich in nutrients and minerals.

* 8.4 mg of Zinc, Copper, Manganese, Thiamin (vitamin B-1), Riboflavin (vitamin B-2),

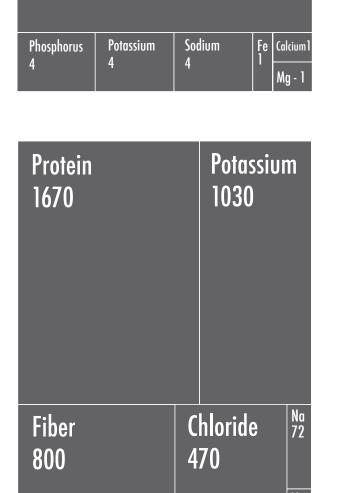
NUTRIENTS in mg/100g

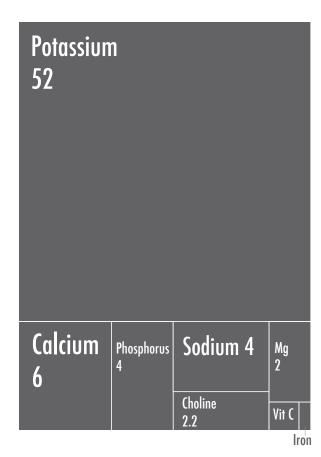
Table Sugar

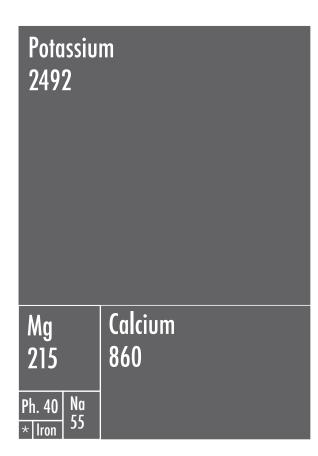
Coconut Palm Sugar



Protein







HONEY that is sold as raw contains all the pollen, enzymes and other micronutrients that are usually filtered out or destroyed by heat when the honey is processed. Traditionally, honey is heated and filtered so that it will remain liquid much longer. Raw honey will

Vitamin B-3, B-5, B-6

ANI AGHAJANYAN DAI 523 INFOGRAPHICS, PROFESSOR TANG & TROGU SOURCES: Stanhope, K. L., et al. doi:10.1172/JCI37385, • 0-web.b.ebscohost.com. opac.sfsu.edu • healthymealcoach.com • nutrition.com • nutriti