Sweeteners - The Pros and Cons

Nutritive Sweeteners-provide energy (calories) and carbohydrates		
Sweetener	**Origination**	**Information**
Rapadura/Sucanat	Sugarcane/sugar beet	Commercial name for dehydrated cane sugar juice Processed with herbs to remove impurities & then sun dried an dehydrated to create crystals Minerals from the sugarcane are preserved
Molasses	Sugarcane/sugar beet	Extracted from sugarcane grown in well-fertilized soil During processing sugarcane juice is centrifuged to separate the (molasses) juice from crystals. Rich in many minerals-iron, calcium, zinc, copper, chromium, magnesium, potassium
Turbinado, raw, natural sugar	Sugarcane/sugar beet	Once the sugar cane has been cut, the stems are split open and the juice is extracted through a boiling process. The end result is a natural sugar with only some of the minerals removed during the processing
Granulated sugar	Sugarcane/sugar beet	Melting raw sugar and purifying, which strips the minerals from the original sugar cane/beet. The type of sugar depends on the size of crystals. Brown sugar has molasses added to it for color.
Powdered sugar	Sugarcane/sugar beet	
Brown sugar	Sugarcane/sugar beet	
Corn syrup	Starch of corn (usually genetically modified)	used to soften texture, add volume, prevent crystallization of sugar, and enhance flavor corn starch & water go through enzymatic processing to create the end product, fructose & glucose
High fructose corn syrup	Starch of corn (usually genetically modified)	Corn syrup with enzymatic processing to increase the percentage of fructose It is suggested that the excess fructose consumption is linked to obesity and fatty liver disease It is very inexpensive and increases the shelf life of products
Honey	Bee hives	Sweeter than actual table sugar, however the sweetness depends on the composition of the honey Contains vitamins, minerals, & enzymes not found in refined sugar Honey that has not been heated over 117 degrees, which is labeled “organic” or “raw” still contain (amylase) enzymes that break down carbs, yet this will still affect blood sugar Should not be fed to infants 1 year due to their GI tract’s favor the growth of botulism
Maple syrup	Maple tree	Comes from the sap of varying varieties of maple trees contains primarily sucrose Rich in trace minerals (potassium, calcium, zinc, manganese) & phenols (antioxidants), some of which have not been found in any other place in nature

Agave nectar	agave plant	Primarily fructose & glucose; is 1.4x sweeter than sugar The juice is extracted from the core of the plant, filtered, & heated, then concentrated into a liquid with varying colors depending on the degree of processing. Can also be processed without heat to preserve the naturally occurring enzymes. Considered to be as detrimental to health as high fructose corn syrup.
Non-Nutritive Sweetener-do not provide energy (calories) or carbohydrates		
Stevia *Recommended for sweetening beverages*	herbs and shrubs in the sunflower family Truvia PureVia	Natural sweetener with a negligible effect on glucose which is 250-300 times sweeter than sucrose, heat & ph stable The leaves can be consumed directly Commercial production-plants are dried, go through a water extraction process, then treated with methanol or ethanol as a solvent to crystallize the other molecules Sold as partial component of Only Sweet, PureVia, Reb-A, Rebiana, SweetLeaf, & Truvia Stevia occurs naturally and requires no patent to produce it **Sweet Leaf brand (preferably liquid) is pure stevia and is the preferred alternative sweetener**
Saccharin	Sweet 'N Low	First non-nutritive sweetener to be discovered Is foreign to the body and is not metabolized but is excreted through the urine 300x sweeter than sugar Most studied non-nutritive sweetener (>2000 studies); classified as "anticipated human carcinogen" by the FDA, however no one has been able to show draw a link between saccharin and cancer in humans May cause reactions to people who have sulfa drug allergies because of its sulfonamide compound
Aspartame	Equal, Nutrasweet	Most widely used, mostly in soft drinks and added sweeteners to many foods 180x sweeter than sucrose Lots of safety concerns as it has been found to be a neurotoxin, with possible link to a variety of diseases & conditions including mental confusion Alzheimer's disease. There are questions about the safety of the breakdown products of aspartame (phenylalanine, methanol, aspartic acid)
Acesulfame K	Sunette, Sweet & Safe, Sweet One	200x sweeter than sucrose Not metabolized by the body, excreted unchanged in the urine Stimulates insulin secretion resulting in possible hypoglycemia

		Used as tabletop sweetener & ingredient in baked goods, frozen desserts, alcoholic beverages, & candy; Pepsi One Very limited testing done by any group
Sucralose	Splenda	600x sweeter than sucrose The sugar molecule undergoes a complex process where several hydrogen atoms are replaced by chlorine atoms. Research shows about 20-30% gets absorbed & metabolized Has the fewest independent studies Is said to be safe to take for people who have diabetes, however some studies suggest it significantly increases HgbA1c

Sugar Alcohol					
Arabitol	Glycol	Isomalt	Malitol	Sorbitol	
Dulcitol	Glycerol	Lactitol	Polyglycitol	Threitol	
Erythritol	Iditol	Mannitol	Ribitol	Xylitol	

Occur in nature on a very small amount, and may react differently in the body when taken out of their natural environment
Synthesized by the hydrogenation of sugar
Less than ½ the sweetening power of sugar
Absorbed slowly & incompletely from digestive tract; may ferment in the bowel and lead to stomach cramping, soft stools, or diarrhea
Can promote dehydration & electrolyte loss, feeling excessively thirsty
Inhibit rapid rise in blood sugar (can still raise blood sugar to a lesser extent); safe for people with diabetes & hypoglycemia
Lower in calories than sugar
Non-contributory to tooth decay & growth of intestinal yeast