

Overview: Properties of sugars and sugar alternatives

	"sugar"	sweet-ness in %	GI ¹	insulin effect ²	tooth-friendly	advantages	disadvantages	application possibilities
Monosaccharide	Grape sugar (glucose)	50-70	100	high		fast energy source for all cells	rapid blood sugar rise; caries promoting	
	Fruit sugar (fructose)	120	19-23	moderate		low blood sugar rise	Increases uric acid and triglyceride levels; possible food intolerance; caries promoting	
	D-Galactose (natural compound of milk sugar; obtained from milk sugar)	40-70	20	low	(✓) ³	energy source for brain cells ; also suitable for lactose and fructose intolerance		as an ingredient in food and beverages or two-times daily 1 heaped teaspoon between meals
	D-Tagatose (natural sugar in honey, fruits etc.; obtained from milk sugar)	30	0	low	(✓) ³	low-calorie; also suitable for lactose and fructose intolerance	slight laxative effect at high consumption	can be used as conventional sugar in food and beverages (note: browns faster during baking)
Disaccharide	D-Ribose (natural sugar in the body; obtained from corn sirup)	100	70	no		Provides a basic element for the regeneration of energy carriers in the cell.	laxative effect when overdosing; slight blood sugar decrease (caution: insulin dependent diabetes)	0.5-1 teaspoon (2-5 g) as required in beverages or cold dishes (e.g. yogurt); Ideal 15 min before and after the sport
	Cane sugar glucose + fructose (sucrose)	40	32	high			rapid blood sugar rise; caries promoting	
	Trehalose glucose + glucose (natural sugar in mushrooms, yeast products etc.; obtained from plant starch)	45	67	moderate	(✓) ³	energy source with moderate insulin effect; pure glucose source; slight hygroscopic	no caramelisation/ browning during baking	(Sports) drinks, baking, cake glazes, sorbits, ice cream (imparts creaminess), prolongs shelf life of food
sugar substitute	Erythritol (natural sugar alcohol in honey, fruits etc.; obtained from sugars)	50-70	0	no	✓	calorie-free, no effect on blood sugar; well tolerated; sweet as cane sugar	does not provide any energy; no caramelisation/ browning during baking	Beverages, jams, ice cream, fruit preparations, desserts, pastries, etc. natural sweetening without calories
	Erylite® Stevia 1:1 (Erythritol + Stevia)	100	0	no	✓	calorie-free, no effect on blood sugar; well tolerated; sweet as cane sugar	does not provide any energy No caramelisation/ browning during baking	substitutes sugar 1:1 in: Beverages, jams, ice cream, fruit preparations, desserts, pastries, etc. natural sweetening without calories

¹ Glycemic index (GI): measure of the blood glucose enhancing effect compared to glucose (glucose).

² Insulin effect: describes the effect on the insulin blood level.

³ The currently available studies could not establish a caries-promoting effect.