UW Medicine

Sweeteners

For people with diabetes

This handout gives information about many common sweeteners and how you may use them in your meal plan.

Types of Sweeteners

Many different products are used to sweeten our foods. Sweeteners are grouped into 2 types: *nutritive* (those with calories) and *non-nutritive* (those without calories).

Nutritive Sweeteners

These are the most common sweeteners that contain calories:

- Sucrose (table sugar)
- Fructose (fruit sugar)
- Honey
- Corn syrup
- High-fructose corn syrup
- Agave and agave nectar
- Sugar alcohols (mannitol, sorbitol, and others)
- Naturally-occurring sugar alcohols (erythritol)

If you eat foods that contain nutritive sweeteners, remember to adjust your intake of other carbohydrates for the day (see page 2).

Non-nutritive Sweeteners

These are the most common sweeteners without calories, and common brand names:

- Sucralose: Splenda
- Aspartame: Equal, NutraSweet
- Saccharin: Sweet 'N Low, Sweet Twin, NectaSweet
- Stevia: Truvia, PureVia, OnlySweet, SweetLeaf
- Acesulfame K: Sweet One, Sunett
- Monk fruit: Monk Fruit in the Raw, Pure Lo, Pure fruit
- Neotame

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4245 Roosevelt Way N.E., Seattle, WA 98105 | 206.598.4882

Sugar Guidelines

Doctors used to tell people with diabetes not to eat any kind of sugar. The American Diabetes Association (ADA) nutrition guidelines now state that people with diabetes do not need to avoid sugar and sugar-containing foods. These foods can be eaten in small amounts, in place of other carbohydrate foods. When eaten at meals or as snacks, they affect your blood glucose levels the same as other carbohydrates.

But, it is still a good idea to limit the use of foods with sugar, since these foods are often higher in carbohydrates and fat than unsweetened carbohydrates. If you eat foods that contain sugar, it is important to know how to adjust your daily intake of other carbohydrates.

When you choose foods made with non-nutritive sweeteners, check the label for other ingredients that contain calories, such as carbohydrates, protein, and fats.

Sweeteners and Safety

All of the non-nutritive sweeteners listed in this handout are considered safe for people with diabetes. The Food and Drug Administration (FDA) has measured their safety and set standards for "Acceptable Daily Intake" (ADI). The ADI is the amount of a food additive that can be safely eaten every day with no ill effects over a person's lifetime.

For example, the ADI for aspartame is 50 mg for every kilogram of body weight per day (50 mg/kg/day). This is equal to 20 cans of diet soda made with aspartame or 97 small packets of aspartame sweetener. The ADI for sucralose is 23 small packets and for stevia, the ADI is 9 small packets.

The FDA and the Council on Scientific Affairs of the American Medical Association agree that women who are pregnant or breastfeeding can safely use aspartame and sucralose.

Other Facts About Sweeteners

Sugar alcohols have calories, but they do not raise blood glucose as much as other sweeteners. Some people are sensitive to them and may have gas, bloating, or diarrhea if they use them too much.

Sugary Drinks

Drinking a lot of sugar-sweetened beverages (SSB) can increase your risk of obesity, diabetes, heart disease, and gout. They are also full of "empty" calories. Cutting back on SSB can help people control their weight.

Also, beware of beverages that make health claims. Beverages that have added vitamins, minerals, antioxidants, and other supplements may contain a lot of sugar or high-fructose corn syrup. And, remember that "natural" sugar affects your body the same way regular table sugar does.

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When you shop for drinks, look for those that have fewer than 20 calories or fewer than 5 grams of total carbohydrate in the whole container.

Nutritive Sweeteners

Sweetener	Calories	Carbohydrate	Notes
Sucrose Beet, brown, cane, date, invert, confectioner's, raw, saccharose, and table sugars: sucanat, turbinado, purinada	16 per teaspoon	4 grams per teaspoon	People with diabetes do not need to completely avoid sugar and sugar-containing foods.
Fructose Fruit sugar, levulose	16 per teaspoon	4 grams per teaspoon	Sweetness varies. May be almost twice as sweet as sucrose. Can be used in baking. High intakes may increase cholesterol levels.
Syrups Corn sugar, corn syrup solids, high-fructose corn syrup, sorghum syrup, sugar cane syrup, unprocessed cane syrup	16 per teaspoon	4 grams per teaspoon	In processed foods and some products used to treat low blood glucose. High-fructose corn syrup is about 50% glucose sugar and 50% fructose sugar.
Dextrose	16 per teaspoon	4 grams per teaspoon (3 to 4 grams per tablet)	Commonly used to treat low blood glucose levels; also found in candy and food products.
Sugar Alcohols Hydrogenated starch hydrolysates, isomalt, lactitol, maltitol, mannitol, sorbitol, xylitol, tagatose	About 8 per teaspoon	On average, about 2 grams per teaspoon	May cause gas, bloating, and diarrhea. Do not usually cause a rapid or marked rise in blood glucose in well-controlled diabetes.
Erythritol A naturally-occurring sugar alcohol, found at natural food markets (Zsweet, Organic Zero)	About 8 per teaspoon	4 grams per teaspoon	About 60% to 70% as sweet as sugar. Made from naturally-occurring sugar alcohols that are fermented and crystallized.
Agave	20 per teaspoon	5 grams per teaspoon	Even though agave has a low glycemic index, it has more calories than table sugar. Agave is about 20% glucose sugar and 80% fructose sugar.
Whey Low	5 per teaspoon	1 gram per teaspoon	Same sweetness as sugar, can be heated, and acts like sugar. Use and measure like sugar. Also comes in brown sugar and powder form, and in packets. Made from sucrose, whey, and fructose.
Miscellaneous Foods Carob powder, honey, maple syrup, molasses, sweetened condensed milk	16 per teaspoon	4 grams per teaspoon	None.

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Non-nutritive Sweeteners

Sweetener	Calories	Carbohydrate	Notes
Sucralose (Splenda)	None	0 grams	600 times sweeter than sugar. Can be used in baking and cooking.
Aspartame (Equal, NutraSweet)	None	0 grams	200 times sweeter than sugar. Loses sweetness when exposed to heat.
Saccharin (Sweet 'N Low, Sweet Twin, Necta Sweet)	None	0 grams	200 to 700 times sweeter than sugar. May have a bitter or metallic aftertaste in some liquids. Not to be used in baking and cooking.
Stevia (Truvia, PureVia, OnlySweet, SweetLeaf)	None	0 grams	200 to 300 times sweeter than sugar. Made of stevia leaf (rebiana) extract.
Acesulfame K (Sweet One, Sunett)	None	0 grams	200 times sweeter than sugar. Can be used in baking and cooking. Often used along with other non-caloric sweeteners.
Monk Fruit (Monk Fruit in the Raw, Pure Lo, Pure Fruit)	None	0 grams	2oo to 300 times sweeter than sugar. Made from the monk fruit gourd grown in China. Also know as lou han go.
Neotame	None	0 grams	7,000 to 13,000 times sweeter than sugar. Used by food companies to improve flavor.

Questions?

Your questions are important. Call your doctor or healthcare provider if you have questions or concerns.

Endocrine and Diabetes Care Center: 206.598.4882

UW Medicine Neighborhood Clinics: 206.520.5000

Other patients: Please call your healthcare provider:

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