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Cooking and Baking with Sugar Substitutes

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All carbohydrates—including starches, naturally occurring sugars, and added sugars—are broken down into simple sugars, like glucose, during digestion. One of the primary goals in diabetes management is controlling blood glucose, which means controlling carbohydrate intake.

Individuals with and without diabetes should get less than 10% of their total calories from added sugar. People with diabetes may desire to lower their carbohydrate, added sugar, and calorie intake by using sugar substitutes, including ***nutritive*** (low calorie) or ***nonnutritive*** (no calories) sweeteners. These can come from natural sources, like stevia and monk fruit, or be synthesized in a laboratory, like sucralose, aspartame, and saccharin.

Lower calorie nutritive sweeteners, including sugar alcohols, and nonnutritive (no calorie) sweeteners may help you lower your carbohydrate and calorie intake. The American Diabetes Association says that using these nonnutritive sweeteners is acceptable "if it reduces overall calorie and carbohydrate intake" (2024a).

Nutritive Sweeteners

Nutritive or caloric sweeteners are sweeteners that provide energy, including sugar, honey, coconut sugar, raw sugar, monk fruit, high-fructose corn syrup, invert sugar, cane sugar, and agave syrup. The body gets energy (measured in calories) from these foods.

These sweeteners will increase blood glucose. In general, a similar amount of carbohydrate from any of these sweeteners will increase your blood sugar by about the same amount.

Sugar alcohols are nutritive sweeteners used in food processing, including sorbitol, xylitol, mannitol, maltitol, and others. These sweeteners provide fewer calories than regular sugar. These sugar alcohols may affect your blood glucose differently than regular sugar. Track your food to see what happens in your body. Note that:

In large amounts, sugar alcohols can cause digestive upset.
Sugar alcohols do not promote tooth decay.

Nonnutritive Sweeteners

Nonnutritive sweeteners are sweeteners that provide no energy (calories), including saccharin, aspartame, acesulfame-K, sucralose, neotame, advantame, and stevia.

Nonnutritive and lower calorie sweeteners may be found in prepackaged and prepared foods, and you can purchase some for cooking and baking. If you use them in cooking and baking, it is important to know they might perform differently than regular lower-calorie sweeteners and

result in a product that is different in taste, texture, or shape than the original recipe.

Tips for Using Sugar Substitutes

- Always test a recipe made with a sugar substitute before serving it for a special occasion. It may not meet your standards. This is true even for recipes from the product manufacturer.
- Do not replace more than half the sugar in baked goods recipes with a sugar substitute.
- Sugar substitute blends that contain some real sugar typically give baked goods a better texture, volume, and moisture than using the sugar substitute alone.
- Add aspartame after cooking or combine with other sweeteners to preserve its sweetness. Aspartame is not heat stable.
- Know that foods cooked or baked with sugar substitutes may not brown as much as foods cooked with regular sugar.

Tips When Using Granulated Sucralose for Baking Blends:

- Flatten cookies before baking.
- Try baking cookies, brownies, and breads 3–5 min **less** than the original recipe time.
- Try adding 1 teaspoon of vanilla per cup of granulated sucralose blends for a more "natural" flavor.
- Try adding 1 tablespoon of honey or molasses to quick breads for taste and browning.
- Spray dough or batter with nonstick vegetable spray to aid browning.

How Sugar Substitutes Affect Your Blood Sugar

All foods with carbohydrates will impact your blood sugar. The goal is to eat foods that nourish your body and help you meet your glycemic and other health goals. It is important to remember:

- Speak with your healthcare provider for your individualized glycemic targets.
- Check your blood glucose 2 hours after eating food with added sugars or sugar substitutes. It should be less than 180. If it is not, eat a smaller portion or try a different food in the future.
- Monitor your blood glucose when having food or drinks with different kinds of low-calorie or nonnutritive sweeteners to see how they affect you.
- Talk with your doctor, registered dietitian, or diabetes educator to find out if you should count carbohydrates from sugar alcohols differently.

We are born with a preference for sweet tastes, and it is important to find foods that satisfy our tastes and preferences. No matter how you satisfy your sweet tooth, monitor your blood glucose regularly so you know how these foods affect you, and keep your appointments with your doctor.

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