

## The Real Truth About Non-Nutritive Sweeteners

Source: LSU AgCenter

Sugar, or sucrose, is one of the most widely used ingredients in the foods we buy. All other sweeteners basically are compared to how they stack up against sugar.

### **Nutritive Versus Non-Nutritive**

Sugar and other sweeteners like fructose, dextrose, lactose, maltose, honey, corn syrup and concentrated fruit juice sweeteners are called nutritive sweeteners. Sugar alcohols, including sorbitol, mannitol, xylitol, maltitol and erythritol, also are considered nutritive sweeteners.

Nutritive sweeteners add energy (calories) to the diet. Non-nutritive sweeteners don't add energy.

The FDA has approved five non-nutritive sweeteners: saccharin, aspartame, acesulfame-K, sucralose and stevia (the latest).

### **What Do Dietitians Say?**

The American Dietetic Association (ADA) states that diet quality suffers when intakes of nutritive sweeteners exceeds 25 percent of total energy.

The ADA's position on non-nutritive sweeteners states that "consumers can safely enjoy a range of nutritive and non-nutritive sweeteners when consumed in a diet that is guided by the current federal nutrition recommendations, such as the Dietary Guidelines for Americans and the Dietary Reference Intakes, as well as individual health goals. Dietetics professionals should provide consumers with science-based information about sweeteners and support research on the use of sweeteners to promote eating enjoyment, optimal nutrition and health."

The 2005 Dietary Guidelines for Americans recommend "foods and beverages with little added sugars or caloric sweeteners."

### **The Upside and the Downside**

There are many benefits of using non-nutritive sweeteners. They:

- Can contribute pleasurable sweet sensations without increasing energy intake.
- Do not increase the incidence of dental caries and may even prevent cavities.
- Do not affect blood sugars.
- Decrease calorie content of food.
- Can be used in non-food items to make them taste more pleasurable.
- Can be used to replace sugar in cooking or baking.
- Only require small amount to sweeten foods and beverages.
- May aid in weight control.

There is a downside of using non-nutritive sweeteners, however. Among those points:

- They may cause an aftertaste.
- They are not all good substitutes for sugar in cooking and baking.
- Limited history of some means not all is known beyond the Accepted Daily Intake.
- There is limited research on the safety during pregnancy.
- Warning label is required on foods that contain aspartame.
- Sweetener or sweet taste may increase appetite.
- They may alter metabolism, which could lead to overeating.

FDA Approved Non-Nutritive Sweeteners					
Sweetener	Trade Name	Relative Sweetness to Sugar	Energy (kcal/g)	Acceptable Daily Intake	Approved Uses
Saccharin	Sweet 'N Low Sugar Twin Necta Sweet	300-450	0	5 mg/kg of body weight	Tabletop sweetener; wide range of foods, beverages and non-food items. Heat stable. Can be used in baked foods. Not proven safe for pregnant or lactating women. No limitations by the FDA for children or for diabetics.
Aspartame	Nutrasweet in food products; Equal as a tabletop sweetener	200	4	50 mg/kg of body weight	General-purpose sweetener in all foods and beverages. Not heat stable. Safe to use in moderation during pregnancy and lactation. Can be used by diabetics. Warning to people with PKU.
Acesulfame Potassium (Ace-K)	Sunett in food products; Sweet One and Swiss Sweet as tabletop sweeteners	200	0	15 mg/kg of body weight	Used in dry beverage mixes, chewing gums, instant coffees, teas, gelatins, puddings and non-dairy creamers. Safe for pregnant women and diabetics.

Sucralose	Splenda	600	0	5 mg/kg of body weight	General-purpose sweetener in all foods. Stable at high temperatures. Can easily be substituted for sugar. Safe for everyone to use, including pregnant women.
Stevia	PureVia, Truvia	200-300	0	12 mg/kg of body weight	FDA approved as GRAS. General-purpose sweetener. Not yet proven to be safe for pregnant or lactating women. Safe for diabetics.
Neotame	Neotame	8,000	0	18 mg/kg of body weight	Used in baked goods, beverages, chewing gums, candies, frostings, frozen desserts, gelatins, puddings, jams, jellies and syrups. Safe for pregnant and lactating women, children and diabetics.