

Satisfying Your Sweet Tooth

According to the American Heart Association (AHA) Americans, on average consume more than double the daily recommended amount of added sugars. A report from the latest National Health and Nutrition Examination Survey database showed that Americans get about 22.2 teaspoons of sugar a day or about 355 calories. Based on AHA recommendations, an appropriate amount for an individual with an energy requirement of 1,800 calories per day (most women) would be no more than 100 calories from added sugars (6.25 teaspoons). An individual with a requirement of 2,200 calories per day (active men) should eat or drink no more than 150 calories from added sugars or 9.4 teaspoons. Sugar substitutes can be a way of satisfying your sweet tooth.

Sugar Twin, Sprinkle Sweet and Sweet & Low (Pink): The oldest sugar substitute, and about 300 times sweeter than sugar made from saccharin, works better in baked goods like cookies and cakes. It has an excellent shelf life, stable in storage and at its melting point of 228 degrees, combines well with other sweeteners, and suitable for incorporation in dry and liquid mixtures.

Some people experience a metallic aftertaste with saccharin. The after taste can be reduced by combining saccharin with a different kind of sweetener.

A caution: some brands of saccharin use sodium as an ingredient in the formulation. If you are on a restricted sodium (salt) diet, you need to read the label to avoid brands that include sodium.

Can be measured like regular granular sugar, substituting up to $\frac{3}{4}$ cup. When a recipe calls for 1 cup or more of regular sugar, it's best to use less sugar substitute to avoid a bitter aftertaste. As a general rule, decrease the amount of sugar substitute by about $\frac{1}{4}$ cup per cup of sugar.

Brown Sugar Twin: works in recipes like sauces and stir-fry that need brown sugar for sweetness but not for tenderness.

Liquid Sweeteners: blend easily with other ingredients and are especially good for dressings and marinades.

Equal and NutraSweet (Blue): made from aspartame, made from two commercially produced amino acids. About 180 times sweeter than sugar, the amounts ingested are small enough for aspartame to be considered virtually non-caloric. It will lose some sweetness in high heat, so they work better in recipes that have short cooking times. It loses its sweetness in liquids gradually, the rate of change being determined by temperature and acidity. You don't get the aftertaste that you get with some saccharin based products. They work well in making sweets like frostings and glazes or flavoring to desired sweet taste at the table in room temperature or cold items.

People with PKU (phenylketonuria) should restrict their intake of aspartame.

Splenda (Yellow): Splenda Granular measures just like sugar – cup for cup, spoonful for spoonful. Sugar contributes volume to many recipes. Whenever you use Splenda Granular instead of sugar you may notice a smaller yield.

Granular Splenda can be used wherever you use sugar in cooking and baking. However, it works best in recipes where sugar is used primarily for sweetening, like fruit fillings, custards, sauces and marinades.

When the recipe calls for beating ingredients together — for example, butter, sugar and eggs – you may need to beat the ingredients a bit longer to get enough air into the mixture to result in a fluffy, even texture.

Baked goods made with Splenda will last longer if stored in the refrigerator.

Recipes made with Splenda Granular may bake more quickly than those made with sugar. Check your baked goods for doneness a bit earlier than the recipe calls for --- generally 7 to 10 minutes for cakes and 1 to 2 minutes for cookies.

There are three ways to successfully incorporate Splenda Granular into a recipe:

1. Combine thoroughly with the other dry ingredients
2. Dissolve in the liquid
3. Beat together with butter or other fat

Truvia/Purvia-Stevia: The newest sweetener on market, it was approved by FDA in 1995 as dietary supplement but not as a food.

If used sparingly, once or twice a day, the risks are low. If marketed widely and used in diet sodas Truvia could be a potential health threat.

Can add a bitter aftertaste in the foods made with it. Truvia lacks ability to add texture, caramelize, feed the fermentation of yeast and help tenderize a batter, all properties possessed by sugar.

One packet of stevia contains about half a teaspoon and one teaspoon of powdered stevia equals one cup of sugar. Strengths vary among brands so it is recommended to follow the conversion chart on the package or use recipes designed for use with that product.

Cookies:

- always preheat the oven
- crisp shortbread types cookies give the best results
- for chewier cookie add canned pumpkin, uncooked oatmeal, or peanut butter

Cakes:

- always preheat the oven
- separate eggs
- whip egg whites to very stiff peaks to increase volume
- immediately invert pan onto cooling rack after baking

Breads:

- yeast breads will take longer to rise, if at all
- quick breads will tend not to rise as well
- increase the amount of baking powder or baking soda

SUGAR (Granulated) Sucrose	EQUAL (Powdered) Aspartame	SUGAR TWIN (Granulated) Saccharin	SWEET'N LOW (Granulated) Saccharin	SPLENDA (Granulated)	SPLENDA BLEND (Granulated)	TRUVIA (Stevia) (Granulated)
1 teaspoon (16 calories)	1/2 packet (2 calories)	1 teaspoon (1-1/2 calories)	special spoon (2 calories)	1 teaspoon (2 calories)		3/8 teaspoon
1/4 cup (192 calories)	6 packets (24 calories)	1/4 cup (18 calories)	1 teaspoon (17 calories)	1/4 cup (24 calories)	2 tablespoons	1 tablespoon plus 2 teaspoons
1/2 cup (385 calories)	12 packets (48 calories)	1/2 cup (36 calories)	2 teaspoons (34 calories)	1/2 cup (48 calories)	1/4 cup	3 tablespoons plus 3/4 teaspoon
1 cup (770 calories)	24 packets (96 calories)	1 cup (72 calories)	4 teaspoons (68 calories)	1 cup (96 calories)	1/2 cup (384 calories)	1/3 cup plus 1 tablespoon

Secrets of Low Sugar Baking:

Baking with sugar substitutes is the easiest way to convert most of your favorite treats to fit within your meal plan. Equal, Sugar Lite, and Splenda Blend for Baking are blends that incorporate sugar for better baking, while still reducing total carbohydrates.

Reactions to Sugar Substitutes:

For those who can't use sugar substitutes, there are other ways to adapt recipes to use less sugar. Here are some tips:

1. Add dried fruit puree' to replace some of the sugar and fat in soft, chewy cookies. Boil pitted prunes or dates until soft and purée until soft in a food processor or blender.
2. Experiment with reducing the amount of sugar by one quarter to one third in most drop cookie recipes.
3. Slice bar cookies into bite size portions.
4. Take advantage of the natural sweetness of dried, chopped fruit instead of the candied variety to add to your favorite baked goods.
5. Portion smaller amounts of cookie dough (for instance, 1 teaspoon instead of 1 tablespoon) for mini versions of your favorite treats. Bake at a lower temperature for a shorter time.
6. Try these decorating tips:
 - a. Drizzle a bit of chocolate icing made from melted bittersweet chocolate and nonfat half-and-half.
 - b. Press tops of reduced sugar cookies into fine-grain colored sugar crystals or crushed sugar-free candies before baking
 - c. Brush top of cookie lightly with glaze of no-sugar-added jam thinned with a small amount of juice or water

To Reduce Sugar in Recipes:

- Cut the amount of sugar called for by 1/2; reduce the amount of liquid by 1/4
- When fruit juice is called for, use apple juice and reduce the amount by 1/4
- Add a touch of vanilla flavoring or extract, almond flavoring or extract, or a dash of cinnamon to a recipe calling for fruit to increase the sweet taste of the fruit.
- Heat up any low sugar dessert prior to serving, when possible, to increase the sweet taste without adding sugar.

Guidelines for Minimal Sugar and Fat in Recipes

Sugar and fat can have an important impact on food we prepare in terms of tenderness, browning, texture and flavor. Many of us would do well to make our recipes leaner. Here are some suggestions for just how much you can cut back and still have an acceptable product. Of course, some would say that the products are too lean, but adding more spices like cinnamon and cloves helps retain flavor. It's a good idea to gradually cut sugar and/or fat in recipes and see your family's reaction.

Product	Minimum Sugar/Result	Minimum Fat/Result
Quick Breads	1 or 2 tablespoons per cup of flour, tends to dry out, less tender and more tunneling	1 tablespoon per cup of flour, coarser texture
Cakes	1/2 cup sugar per cup of flour, more open texture, pale crust, drier	2 tablespoons per cup of flour, less tender, less moist
Breads	0-1 tablespoon per cup of flour, less tender and moist	1 tablespoon per cup of flour, lower keeping quality
Rolls	1 teaspoon per cup of flour less tender and moist, browns slowly	1 tablespoon per cup of flour, lower keeping quality
Cookies	1/3 cup per cup of flour, less tender, paler and less spreading	1/4 cup per cup of flour, less tender
Custards/Puddings	1 1/2 tablespoon per cup of milk, firmer, shorter cooking time	None

Additional resources:

- www.equal.com
- www.splenda.com
- www.sweetnlow.com
- www.truvia.com
- Artificial Sweeteners 101 at http://supermarketsguru.com/index.cfm/go/sg.viewArticle/articleId/2033?utm_source=...
- UNL Extension *NebGuide* “Sweeteners” G1458 and “Stevia” G1634 available at: www.ianrpubs.unl.edu

References:

- Artificial Sweeteners 101 at: http://supermarketsguru.com/index.cfm/go/sg.viewArticle/articleId/2033?utm_source=...
- “Baking with Low Calorie Sweeteners”, *Diabetes in the News*, June, 2003, p. 9.
- “Can Drinking Too Much Soda Pop Increase Diabetes Risk? If So How Much?” *Tufts University Health and Nutrition Letter*, October, 2004, Vol. 22, No. 8, p. 1 & 8.
- “Cooking and Baking is Sweet with Splenda”, *Diabetes Cooking*, March April, 2003, p.52-62.
- Hackfeld, Linda M.P.H., R.D., and Betsy Eykyn, M.S., *Cooing Ala Heart*, Appletree Press, Mankato, MN. 1992, p. 51-61.
- “How Much Sugar is Right? Less”, *Tufts University Health and Nutrition Letter*, June, 2004, Vol. 22, No. 4, p. 1 & 8.
- Jones, Georgia, “Stevia”, *NebGuide*, University of Nebraska- Lincoln Extension Publication G1643, May 2010.
- Jones, Georgia, “Sweeteners”, *NebGuide*, University of Nebraska- Lincoln Extension Publication G1458, May 2010.
- “Low Calorie Sweeteners Resource Kit”, International Food Information Council Foundation, Washington, D.C., October 2008.
- Magee, Elaine, “which Artificial Sweetener is Right for You?” cited 5 May 2011 at <http://www.medicinenet.com/script/main/art.asp?articlekey=56790>.
- Miller, Jeannette, and Carol Van Waardhuizen, *The Healthy Holiday Cookbook*, American Heart Association Iowa Affiliate, 1987, p. 14-15.
- Roberts, Shauna S., “Sweet Selections”, *Diabetes Forecast*, June, 2003, p. 95-102.
- “Secrets of Low-Sugar Baking”, *Diabetes Cooking*, November-December. 2004, p.20-42.
- Smith, Belinda Maness, “Sugar Substitutes Not Alike”, *Diabetes in the News*, February, 1992, p. 50-51.