The Pilates Connection
Weight Loss Challenge

NEWSLETTER

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THIS WEEK'S TOPIC…
ALL ABOUT ARTIFICIAL SWEETENERS

The Lowdown on Zero-Calorie Sugar Substitutes

-By Becky Hand, Licensed & Registered Dietician, SparkPeople.com

Do you feel like you are surrounded by sweets? Cookies, ice-cream, candy, soda and other sugary treats are everywhere, along with the extra calories and simple carbohydrates they contain. For people with diabetes and those trying to cut calories and carbohydrates, sugar is a big no-no, so the words "sugar free" can be music to their ears—or at least satisfaction for a sweet tooth.

"Sugar free" food products are sweetened by sugar substitutes, which go by many names: non-nutritive sweeteners, low calorie sweeteners, no-calorie sweeteners, artificial sweeteners, and alternative sweeteners. No matter what you call them, they all taste similar to sugar but contain little to no calories and have little glycemic response.

Despite FDA approval, artificial sweeteners have been accused of causing everything from mood and behavioral disorders to headaches, multiple sclerosis, obesity, heart disease and cancer. While some individuals may attribute these symptoms to artificial sweeteners, there are no published, peer-reviewed, controlled scientific studies to support these accusations. According to the National Cancer Institute, there is no scientific evidence that *any* artificial sweeteners approved for use in the United States cause cancer. The American Dietetic Association says that adults can safely enjoy a range of non-nutritive sweeteners when consumed in a diet that is guided by federal nutrition recommendations such as the Dietary Guidelines for Americans.

Before any sugar substitute reaches the market, the U.S. Food and Drug Administration (FDA) reviews several studies (including short and long-term toxicity, carcinogenicity, neurotoxicity, and reproductive toxicity studies) to assess its safety. Currently, the FDA has approved six non-nutritive sweeteners for use in the United States: acesulfame-potassium, aspartame, neotame, saccharin, stevia (Rebaudioside A) and sucralose.

In addition, the FDA establishes Acceptable Daily Intakes (ADI) for each artificial sweetener. An ADI is the amount of artificial sweetener a person can safely consume (per kilogram of body weight) on average, every day, over a lifetime *without* incurring any health risks. This includes a 100-fold safety factor, meaning that the ADI is 1/100th of the actual amount that is considered safe for daily

consumption. So how much artificial sweetener can an adult safely consume each day, according to these ADIs established by the FDA? Here's an example: To reach the ADI for aspartame (which is 50 mg/kg body weight per day), a 150-pound adult would need to consume 20 (12-ounce) cans of diet soda OR 42 (4-ounce) servings of sugar-free, diet gelatin OR 97 packets of tabletop sweetener in a single day.

Artificial Sweeteners and Obesity
Obesity is a complex problem without a single cause. A single component of the food supply, such as sugar, can't be blamed for obesity or weight gain, but research does show that non-nutritive sweeteners may promote weight loss in overweight and obese individuals when they replace the intake of sugar calories (sugar has 16 calories per teaspoon) with sugar substitutes. However, others raise the question of whether a sweet food environment increases the risk of obesity through appetite, intake and food regulation mechanisms. Preliminary studies on animals suggest that high intakes of artificial sweeteners may affect appetite control (i.e. by eating more sweet foods—artificially sweetened or not—you crave more of them). Therefore, the Beverage Guidance Panel recommends that adults consume no more than 32 ounces of artificially sweetened beverages daily. Individuals who want to use artificial sweeteners should do so within the context of a sensible weight-management program that includes a balanced diet and regular exercise.

Artificial Sweeteners and the Glycemic Response
Artificial sweeteners do not affect blood sugar levels or the glycemic response. Therefore, the American Diabetes Association states that non-nutritive sweeteners are appropriate for people with diabetes and may help control calorie intake. Individuals with diabetes should work with a Registered Dietitian and/or Certified Diabetes Educator to develop a customized eating plan. More information is available in SparkPeople's Type 2 Diabetes Resource Center. If you have diabetes or other reasons to watch your sugar intake, check with your health care provider before trying sugar substitutes; sugar-free doesn't always mean safe for everyone.

Let's take a closer look at the six FDA-approved non-nutritive sugar substitutes.

Acesulfame-Potassium (Acesulfame-K) goes by the brand names **Ace-K, Sunett** and **Sweet One**. It is a combination of organic acid and potassium that is often blended with other sugar substitutes.

- 200 times sweeter than sugar
- 0 calories per gram
- Heat stable (can be used in cooking and baking)
- Produces no glycemic response
- ADI: 15 mg/kg body weight per day

Aspartame goes by the brand names **Equal** and **NutraSweet**. It is composed of two amino acids (proteins), aspartic acid and phenylalanine. Aspartame is one of the most thoroughly tested food additives, according to the FDA. People with the rare heredity disease phenylketonuria (PKU) should not consume aspartame.

- 160-220 times sweeter than sugar

- 4 calories per gram (metabolized as a protein), but because such a small amount is needed to sweeten foods and beverages, the calories provided by aspartame are considered negligable.
- Not heat stable (cannot be used in cooking or baking)
- Produces a limited glycemic response
- ADI: 50 mg/kg body weight per day

Neotame is one of the newest artificial sweeteners approved for use in packaged foods and beverages.

- 7,000-13,000 times sweeter than sugar
- 0 calories per gram
- Heat stable (can be used in cooking and baking)
- Produces no glycemic response
- ADI: 18 mg/kg body weight per day
- Rapidly metabolized and excreted

Saccharin goes by the brand names **Necta Sweet, Sugar Twin** and **Sweet 'N Low**.

- 200-700 times sweeter than sugar
- 0 calories per gram
- Heat stable (can be used in cooking and baking)
- Produces no glycemic response
- ADI: 15 mg/kg body weight per day

Stevia (Rebaudioside A) goes by the names **PureVia, Sun Crystals** and **Truvia**. It is a steviol glycoside, one component of the stevia plant that provides sweetness. Click here for SparkPeople's in-depth article on stevia.

- 250-300 times sweeter than sugar
- 0 calories and 0 carbohydrates per gram
- ADI: 0-4 mg/kg body weight per day
- Metabolized by the body into steviol, which is not absorbed in the blood and therefore leaves the body unchanged

Sucralose goes by the brand name **Splenda**.

- 600 times sweeter than sugar
- 0 calories per gram
- Heat stable (can be used in cooking and baking)
- Produces no glycemic response
- ADI: 5mg/kg body weight per day
- Poorly absorbed and excreted unchanged

Sugar substitutes can offer calorie-conscious consumers a way to enjoy the taste of sweetness with little or no calories and no glycemic response. They may assist in weight management, blood

glucose control, and the prevention of dental caries. Foods sweetened with sugar substitutes are lower in calories than food sweetened with caloric sweeteners and can be one component of a weight loss program. But remember, you need to control *calories* in your entire eating plan to lose weight. Removing the sugar from a soda, cookie or candy bar does not turn it into a health food. Without monitoring your portion size, you can still get too many calories and zero nutritional benefits from foods and drinks that contain artificial sweeteners.

Weight Loss Challenge Winner of the Week: Cheryl Truman

is this week's biggest loser. She lost 1.23 %! Congratulations ! Enjoy your two free classes. and Tom Truman lost .24%...way to go!

RECIPE

PECAN CHICKEN

1/3 cup finely chopped pecans
1/3 cup dry bread crumbs
1/2 teaspoon dried thyme
1/2 teaspoon paprika
1/2 teaspoon salt
4 boneless skinless chicken breast halves (4 ounces *each*)
3 tablespoons Dijon mustard

MAPLE-DIJON SAUCE:
1/4 cup maple syrup
1 tablespoon Dijon mustard

1. In a shallow bowl, combine the pecans, bread crumbs, thyme, paprika and salt. Place Dijon mustard in another shallow bowl. Coat chicken with mustard, then roll in pecan mixture.
2. Place in a greased 13-in. x 9-in. baking dish. Bake, uncovered, at 375° for 30-35 minutes or until juices run clear. In a small bowl, combine sauce ingredients; serve with chicken.

Serve with a large green salad and light dressing.

Servings 4. 207 Calories**,** 10 g. Fat, 23 g. Carbohydrate, 2 g. Fiber, 9 g. Protein

R**ecipe from tasteofhome.com.**

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