[IMAGE]

Nothing Sweet About Artificial Sugar

By Claudia Anrig, DC

With worldwide obesity rates doubling in the past three decades, is it any surprise that artificial sweeteners have been gaining popularity? Beginning with the creation of saccharin, "sugar substitutes" have become the answer to a dieter’s prayer. Have your cake and eat it, too; it’s a dream come true. Or is it? Let’s take a closer look.

Aspartame – NutraSweet or Equal

This sugar-substitute was discovered in 1965 by accident while chemist James Schlatter was testing an anti-ulcer drug. Aspartame gained FDA approval in 1981 and was approved for use in carbonated beverages in 1983, where it is most commonly found now as the primary sweetener for most diet sodas.

This chemical accounts for over 75 percent of the adverse reactions to food additives reported to the U.S. Food and Drug Administration and has been linked with serious medical reactions. Yet despite and apparently disregarding these startling statistics, the U.K.’s Scientific Committee on Food (SCF), reviewing more than 500 papers published in the scientific literature between 1988 and 2001 and determined that it was unnecessary to revise its earlier "risk assessment" or the acceptable daily intake of aspartame. The committee contended that 40 milligrams per kilogram of body weight per day is an acceptable daily intake and will pose no risk to an adult. This is the equivalent of 14 cans of the average diet soda if the soft drink manufacturer opts to use the full amount allowable per 12-ounce can.

Artificial Sugar - Copyright â Stock Photo / Register Mark The most popular of all sugar substitutes, aspartame is found in more than 6,000 food items on grocery store shelves, many of which you would never expect to contain this chemical: yogurt, chewing gum, energy bars, gelatin snacks and more.

Children and Aspartame

Of bigger concern is the amount of food items marketed to children that contain aspartame. Obviously the concern of childhood obesity has created a market for "diet" and "sugar free" foods that children would want to consume, but there are dangers to children that far outweigh the dangers to adults.

Aspartame releases aspartate (a neurotransmitter) during digestion. Aspartate is an excitatory amino acid that the brain actually needs and so is readily allowed to cross the blood-brain-barrier (BBB), which is the barrier that protects the brain from harmful chemicals. The problem is that the BBB is not fully developed during childhood and may allow seepage of excess aspartate and glutamate into the brain.

Your child's nervous system is designed to control the concentration of excitatory amino acids. It does this by "pumping the excess back into glial cells, which surround the neurons and supply them with energy," according to Russell Blaylock in *Excitotoxins: The Taste that Kills*. A compromised or underdeveloped BBB may eventually allow excitotoxins (such as aspartame) to cross, potentially resulting in several adverse reactions such as the nerves being stimulated to fire excessively by the excitotoxins.

The only way for the body to then restore the system requires normal enzymes, which are actually canceled by the phenylalanine and aspartic acid found in aspartame. These "compulsory enzyme reactions" require a healthy energy system, which has basically been compromised by the actual excessive firing of the neurons. In other words, it is a vicious cycle that begins with the intake of aspartame, potentially damaging the neurotransmitters in your child's brain and overworking their nervous and energy systems.

Hidden Dangers

Understanding the dangers involved with children consuming aspartame, it would make sense that parents are going to avoid anything that says "sugar free" or "low calorie" or "diet" on the label. But, many things include aspartame that you would not expect, such as Wrigley's Chewing Gum (several different flavors), General Mills Fiber One Cereals and Klondike Slim-A-Bear Ice Cream Sandwiches. Other unexpected sources of aspartame include Children's Tylenol (all flavors), PediaCare (all products), most store-brand children's fever reducers and pain relievers, and Flintstones chewable vitamins.

The only chance you have of making sure your children don't ingest any aspartame is to be a label reader. Since aspartame has been proven to cause severe reactions in people with phenylketonuria (a genetic disorder) it is easy to see if an item contains aspartame, as manufacturers are required to put the following warning on the label: "Phenylketonurics – Contains Phenylalanine." Generally, this notification appears right below the nutrition facts.

Sucralose – Splenda

In 1976, this sugar substitute was discovered by Tate & Lyle scientists who were working with Queen Elizabeth College when a young chemist incorrectly thought a researcher told him to taste the powder they were working with and discovered that it was incredibly sweet; as much as 600 times sweeter than standard table sugar.

Artificial Sugar - Copyright â Stock Photo / Register Mark Sucralose is advertised as being made from sugar and thus has avoided the "bad press" that comes with being a chemical, when in fact it's exactly that, a chemical. Created by a patented chemical reaction (chlorination process) that, in simplified terms, removes three molecules of hydrogen and oxygen (or hydroxyls) and replaces them with chloride, sucralose is a manufactured product.

Research has said that it's "safe", and McNeil Nutritionals claims that it's not digested or metabolized by the body so it has no calories. But the latest research is showing that up to 15 percent is absorbed in the digestive system and into fat cells.

Saccharin – Sweet and Low

Discovered in 1879 by researchers at Johns Hopkins University, saccharin's initial appeal came from its ability to sweeten foods without causing a glucose reaction. After World War II and on into the 1960s, when interest in weight control blossomed, saccharin became even more popular.

It was only a short time later that saccharin became a health concern and a study in 1977 determined that it was causing cancer in lab mice. This resulted in a cancer warning being added to all items that contained this chemically produced sweetener. However, recent studies have been published claiming that those lab results were inaccurate or overexaggerated, and suddenly saccharin has been deemed "safe" in some circles.

However, according to a report written by the Center for the Science in Public Interest (CSPI), removing saccharin from the list of potential carcinogens is a mistake; the main concern being that doing so gives the public a "false sense of security." The CSPI report states, "If saccharin is even a weak carcinogen, this unnecessary additive would pose an intolerable risk to the public."

Agave

The next sugar substitute to hit the shelves was agave, and it's possible that it's just as bad for you as chemically created sweeteners. Made from the same plant as tequila, this syrup is generally not made from

the sap, as is commonly believed, but from the pineapple-like root bulb using a process very similar to how cornstarch is converted to high-fructose corn syrup.

Once processed, agave has such a high fructose content that it’s almost as bad for your body as high-fructose corn syrup. Although agave has become popular in the past few years as a "natural" sweetener, the question still arises, what is the source? If it isn’t the sap taken directly from the leaves, then it should be considered unhealthy.

No Sugar

Many parents might read this and think that regular sugar is acceptable because it’s not a chemical and it’s not going to cause a chemical reaction in your child’s brain. But the truth is that the average child, even with these artificial sweeteners being so prevalent, is consuming more sugar than is healthy.

The average child consumes twice the amount of recommended daily sugar intake and more than 42 percent of the added sugars in a daily diet are from sugary beverages. The childhood obesity epidemic has become a serious concern, resulting in the Federal Trade Commission and the Department of Health and Human Services releasing restrictions on marketing unhealthy food products to children.

Very simply, things that are sweet should be a treat. These are not items that should be consumed daily, and whether it’s an artificial sweetener, sugar or even natural sugar from whole fruit, things that are sweet should not be a major part of a child’s daily diet.

Natural Sweeteners

Artificial Sugar - Copyright â Stock Photo / Register Mark Although it’s best to leave things in its natural state, there might be times that you would like to sweeten something, or perhaps you want to bake and need a good sugar substitute. For those times, many wellness practitioners would recommend Stevia. The most natural of all low-calorie sweeteners, this plant is found in South America and has been used in Paraguay for centuries and Japan for decades. As with all sweeteners, the difference is where and how it’s produced. Be sure to purchase al-natural Stevia.

Natural sweeteners are generally anything that is found sweet in its original form and do not require a chemical reaction to make it so. This does not include "corn sugar," which is just another name for high-fructose corn syrup and is not natural. (Read "Weird Science: When Corn Sugar Becomes

High-Fructose Corn Syrup online at ToYourHealth.com for more information.)

Eating items that are chemically created is generally not a good idea. Artificial sweeteners such as saccharin, aspartame and sucralose have been reported to cause various adverse reactions. Furthermore, research is showing that while our taste buds may be fooled by the sweet-tasting, calorie-free treats we're allowing ourselves, our brains might not. Studies have shown that it's possible consuming low-calorie sweeteners may actually cause weight gain by confusing the body's ability to estimate caloric intake and resulting in overindulgence later.

The takeaway for any parent is that a diet rich in whole, living foods is the only way to ensure that you and your children are practicing a healthier lifestyle. A good rule of thumb is, that if it tastes sweet, but has no calories or carbs, you can assume that it chemically created sweetness and should be avoided. Talk to your doctor for more information.

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