

# SUGAR, SUGAR SUBSTITUTES AND HEALTHIER ALTERNATIVES

Americans consume on the average ½ cup of refined sugar a day. It is estimated that Americans eat and drink about 150 pounds of sugar annually. Sugar, a chemical that is difficult for our bodies to digest and utilize, deserves its reputation as a “white poison.” Humans are not really designed to eat large amounts of sugar in any form; it acts like an addictive drug that beckons even the most well-intentioned person back into its sweet clutches.

Regularly consuming large amounts of refined sugar can cause serious harm. Refined sugars include all the commonly known white sugars, but may also include honey, maple syrup, and rice syrup, if refined. The process of heating, bleaching or purifying will inactivate enzymes as well as deplete important nutrients. Eating refined sugars will fill the body with empty calories, stimulate over-eating and interfere with mineral absorption. Corn syrup and high fructose corn syrup are perhaps the more problematic refined sugars. These are the “natural sweetener” in most bottled juices and many foods. High sugar foods make rapid blood sugar changes, which often lead to emotional outbursts when blood sugar is high as well as depression when it drops. When the blood sugars are high, insulin levels must also increase, which leads to increased fat storage. Ingesting sugar can:

- ✓ Cause hypoglycemia and weight gain, leading to diabetes and obesity in both children and adults.
- ✓ Raise blood pressure, triglycerides and LDL cholesterol
- ✓ Increase the risk of heart disease.
- ✓ Cause tooth decay and periodontal disease, which leads to tooth loss and systemic infections.
- ✓ Make it difficult for a child’s brain to learn, resulting in a lack of concentration.
- ✓ Cause disruptive behavior, learning disorders, and forgetfulness in both children and adults.
- ✓ Initiate auto-immune and immune deficiency disorders such as arthritis, allergies and asthma.
- ✓ Disrupt hormonal balance and support the growth of cancer cells.

According to Dr. Robert C. Atkins, founder of the popular Atkins diet, “Sugar has no nutritional value and is directly harmful to your health. Despite vociferous attempts to defend it, there are studies that clearly show how harmful (and even deadly in the case of diabetics) its effects can be.” According to Nancy Appleton, PhD, author of *Lick the Sugar Habit*, there are 78 metabolic consequences of consuming sugar. Dr. John Yudkin, a leading authority on dietary sugars, says that the detrimental effects of excess sugar in the diet go far beyond rotting teeth and obesity. “For example,” Yudkin says, “Sugar causes irregularities in the insulin response; sugar causes diabetes-like damage to the kidneys; it contributes to degeneration of the retina; it raises blood fat levels and it increases the stickiness of the blood platelets, a common precursor of heart trouble.”

The evidence is overwhelming against the use of sugar, so what do we need to do? Substituting artificial sweeteners can be even more damaging to our health. In addition many artificial sweeteners marketed as a sugar substitute may actually contain sugar, masquerading as dextrose and maltodextrin.

## **TOXIC CHEMICAL SWEETENERS TO AVOID:**

### **SUCRALOSE**

Sucralose, also marketed as **SPLENDA**®, is marketed as a 'healthful' and 'natural' product. It is produced by chlorinating sugar; this involves chemically changing the structure of the sugar molecules by substituting three chlorine atoms for three hydroxyl groups. When ingested, Splenda® breaks down into small amounts of 1, 6 - dichlorofructose, a chemical similar to chlorinated pesticides. There had not been adequate testing of this product before it was released for public use, and many of the post-approval studies are alarming. To read about it, go to ***Sucralose Toxicity Information Center***.

James Bowen, M.D. states about Splenda® "In a simple word you would just as soon have DDT in your food as Splenda®, because sucralose is a chlorocarbon. The chlorocarbons have long been famous for causing organ, genetic, and reproductive damage. It should be no surprise, therefore, that the testing of sucralose, even at less than the levels demanded by FDA rules, reveals that it has been shown to cause up to 40% shrinkage of the thymus: A gland that is the very foundation of our immune system. It also causes swelling of the liver and kidneys, and calcifications of the kidney."

### **SACCHARIN**

Saccharin has been listed on the government's list of suspected carcinogens for more than 2 decades. Studies by the National Cancer Institute concluded that heavy use of saccharin was related to cancer of the bladder. The FDA warning stated on products containing saccharine as follows has been law since 1977: ***"Use of this product may be hazardous to your health. This product contains saccharin which has been determined to cause cancer in laboratory animals."***

### **ASPARTAME**

Aspartame liberates free methyl alcohol and formaldehyde, which causes headache, memory loss, seizures, vision loss, coma and cancer. It worsens or mimics the symptoms of such diseases and conditions as fibromyalgia, multiple sclerosis, lupus, ADD, diabetes, Alzheimer's, chronic fatigue and depression.

Aspartame is a chemical concoction made up of:

- ✓ 40% aspartic acid - an excitotoxin that excites or stimulates neural (brain) cells to death
- ✓ 50% phenylalanine - an amino acid normally found in the brain but dangerous to humans when concentrated at high levels
- ✓ 10% methanol - wood alcohol known to be a deadly poison (methanol converts to formaldehyde in the system, which is a toxic xenoestrogen)

For more information see the ***Aspartame (NutraSweet) toxicity Info Center***.

## **ACESULFAME-K**

Acesulfame-K is another dangerous chemical that is being added to many products, especially gum, as a sweetener. It has been proven to cause cancer in laboratory animals.

*If you suspect these chemicals could be causing any health concerns for you, stop using them for 60 days (that's how long it will take to get out of your system) and see if you have improvement.*

In addition to products containing artificial sweeteners touted as 'sugar-free' lining grocery shelves, a new problem now comes in the form of "fat-free" and "low-fat" products. When the fat was either completely or partially removed from the products, they no longer tasted good. To compensate for the lack of fat, companies packed their "fat-free" or "low-fat" products full of sugar.

## **SWEETENER OPTIONS**

So, what are we to do? The obvious answer is to reduce sugar intake. Begin by substituting healthier sweeteners for white and artificial sugars. Unrefined honey, molasses, raw cane sugar and maple syrup are sweeteners that still retain their nutritional value and can be used in many recipes by substituting them for sugar. When using honey, reduce the amount of water in the recipe by 1/4 cup per cup of liquid sweetener used, then add ½ teaspoon of baking soda for each cup. This helps to cut the honey's natural acidity. Reduce baking temperature by 25 degrees to prevent over browning.

### **STEVIA** (Stevia Rebaudiana Bertoni)

Stevia – an herb native to the rainforests of South American and part of the daisy family – can be used as a natural sweetener. The leaves of stevia hold its sweetness, each being approximately 30 times sweeter than an equal amount of sugar. Stevia is unique in that it contains zero calories, zero carbohydrates, and has a zero glycemic index rating, all without the drawbacks of either sugar or artificial sweeteners.

### **XYLITOL**

Also known as birch sugar, Xylitol, is a naturally occurring sweet compound found in fruits and vegetables. Xylitol is not only devoid of the downside of typical sugars, but also boasts a range of health benefits. Unlike table sugar or fruit sugar, both of which should only be consumed in minimal amounts, xylitol actually promotes our health, and is something we can consume every day. Because xylitol is completely natural, it is devoid of the undesirable side effects seen with artificial sweeteners. Xylitol may well be the ideal sweet compound for those with intestinal yeast overgrowths, because xylitol does not feed yeast as sugar does.

Xylitol is a five carbon sugar alcohol. Sugar alcohols naturally occur in foods such as berries, and have no relation to regular alcohol. Xylitol is a natural substance found in fibrous vegetables and fruit, as well as in corn cobs and various hardwood trees like birch. It is a natural, intermediate product which regularly occurs in the glucose metabolism of man and other animals, as well as in the metabolism of several

plants and micro-organisms. Xylitol is produced naturally in our bodies; in fact, we make up to 15 grams daily during normal metabolism.

Xylitol is really sugar's mirror image, although xylitol tastes and looks exactly like sugar, which is where the similarities end. While sugar wreaks havoc on the body, xylitol heals and repairs. It also builds immunity, protects against chronic degenerative disease, and has anti-aging benefits. Xylitol as a five carbon sugar has an antimicrobial action, preventing the growth of bacteria. While sugar is acid-forming, xylitol is alkaline enhancing. All other forms of sugar, including sorbitol, are six-carbon sugars, which feed dangerous bacteria and fungi.

Approved by the FDA in 1963, xylitol has no known toxic levels. The discomfort that some sensitive people may notice initially when taking large amounts is increased bowel movements, mild diarrhea or slight cramping, which usually disappears within a few days as the body's enzymatic activity adjusts to a higher intake.

Xylitol has 40% fewer calories and 75% fewer carbohydrates than sugar and is slowly absorbed and metabolized, resulting in very negligible changes in insulin. Xylitol has a rating of 7 on the Glycemic index. Xylitol looks, feels, and tastes exactly like sugar, and leaves no unpleasant aftertaste. It is available in many forms. In its crystalline form, it can replace sugar in cooking, baking, or as a sweetener for beverages. It is also included as an ingredient in chewing gum, mints, toothpaste, mouthwash and nasal spray.