Artificial Sweeteners; Is there a Bitter Aftertaste?

Patients are frequently seen for a variety of aches and pains that have gone on for an often prolonged course, fatigue, joint and muscle aches, brain fog. They've often been to many other physicians without relief and a thick stack of lab work, imaging studies and prescriptions that didn't do much to help. Many of them have been lead to believe "it's all in your head". They're often depressed (who wouldn't be with a history like that?), stressed, exhausted and at their wit's end.
Recent exposure to toxins is generally denied. Hours can be spent trying to figure out the cause of their maladies, generally resulting in a frustratingly fruitless exercise in futility.
Let's take a big step backwards for a moment:
What about things that are generally not only considered not toxic, but are so commonly found in the environment that they become darn-near "invisible"?

Such may be the case of the artificial sweeteners that so many of us use on a regular basis.
This isn't an indictment of the natural sweeteners, nor is it a full categorical condemnation of these otherwise helpful agents. Perhaps a balanced approach and an open mind are needed as we review the evidence. Web sites abound extolling the virtues while others condemn these agents. As is so often the case, the truth is found somewhere in the middle.

First a historical note; these agents were initially welcomed as a way in which the "battle of the bulge" could be successfully fought. Diabetics welcome the agents as they allow a lot more latitude in planning meals, going out to eat and generally enjoying food as a source of "free" calories or sweetness in foods.

Perhaps it's really NOT nice to try to fool Mother Nature however. We've also noticed that many people gain weight while using these drugs. Theories abound, probably one of the more popular is that the body senses that after a certain degree of sweetness, there should be a certain gain of energy available. If it's not there, we'll get cravings until it gets there—eating more of many other things to satisfy the perceived, sometimes subconscious need. The net result can actually be weight gain where loss was desired/not the anticipated results at all—and you can get sick in the process!

It also turns out that many times it's actually a lot less expensive to use the artificial sweeteners in products. Some of these agents can be up to 13,000 times sweeter than table sugar! We're seeing more and more "sugar free" items in stores, restaurants, products of various sorts may contain them without our knowledge unless we take the time to carefully read the labels. Briefly, these are the agents (and "trade names");

Saccharine ("Sweet 'n Low")
Aspartame ("Equal", "NutraSweet")
Sucralose ("Splenda")
Stevoside ("Stevia")
Below is a brief summary of the agents involved

Saccharine ("Sweet 'n Low")
Saccharine was the first of these agents to hit the market. It's been around for nearly a century and is 300-500 times sweeter than table sugar . Studies were published in the '70's linking it with bladder cancer. The studies are hard to interpret however as it is difficult to know for certain how many of the "control's" who were not exposed to this chemical were absolutely 100% not exposed to an agent that was very commonly used in so many products. Saccharine is probably one of the safer artificial sweeteners on the market but does have the problem of a bitter aftertaste. It is heat stable and can be used in cooking

Aspartame ("Equal", "NutraSweet")
Aspartame has a sweetness of 100-200 times sweeter than table sugar. One drawback is that it's not heat stable and thus can't be used for cooking. It's development by the Searle pharmaceutical company reads like a spy novel with great subterfuge, many twists and turns of the plot leading to recommendations of a Grand Jury Investigation into the FDA, There have been innumerable false reports filed by Searle which at one point was run by Donald Rumsfeld. Many government officials involved in the approval process left their government jobs and took positions in the company involved in developing Aspartame shortly after it

was approved. July 1981 saw the initial approval of the sweetener for dry foods under great controversy. It's currently approved for all uses despite well-documented toxicity.
If you are using aspartame and have headaches, depression, slurred speech, loss of memory, fibromyalgia, loss of sensation or shooting pains in lower legs, loss of equilibrium, vertigo, anxiety attacks, chronic fatigue, vision loss, floaters, retinal detachment, seizures or heart palpitations, your symptoms may well be due to this sweetener! Many physicians diagnose multiple sclerosis what is simply methanol poisoning from aspartame, mimicking MS. MS is not a death sentence but methanol poisoning is! Heart problems can be triggered causing abnormal heart action that can lead to complete heart failure and sudden death. Aspartame is a molecule composed of three components: aspartic acid, phenylalanine and methanol. Once ingested, the methanol (wood alcohol that has killed or blinded thousands of skid row drunks) converts to formaldehyde, then formic acid [ant sting poison]. Formaldehyde is deadly embalming fluid, a Class A Carcinogen. Phenylanine and aspartic acid are toxic when unaccompanied by the other amino acids in proteins. Aspartic acid caused brain lesions in experimental animals. The FDA report listed 92 documented symptoms from Aspartic acid excess. People have suffered aspartame-related disorders with doses as small as that carried in a single stick of chewing gum. A pilot who drinks diet sodas is more susceptible to flicker vertigo or to flicker-induced epileptic activity. It also means that all pilots are potential victims of sudden memory loss, dizziness during instrument flight and gradual loss of vision." Aspartame is sold by Monsanto Chemical Co. as NutraSweet and EQUAL, and now under other names by other producers. People suffering from a hereditary condition known as PhenylKetonUria (PKU) can have irreversible brain damage after exposure to this product.
Neotame is chemically similar to the popular artificial sweetener aspartame, but is used at vastly lower levels and is much more stable. Chemically, it has a 3,3-dimethylbutyl group attached to the amino group of the aspartic acid portion of the molecule. Peptidases, which would typically break the peptide bond between the aspartic acid and phenylalanine moieties, are essentially blocked by the presence of the 3,3-dimethylbutyl moiety, thus reducing the production of phenylalanine, thereby eliminating concerns those who suffer from phenylketonuria.
Neotame was approved by the Food and Drug Administration (FDA) for general use in July 2002, but is not yet widely used in food products.

Sucralose ("Splenda")
In 1977 an Indian chemist was working on development of a new insecticide being made by adding Chlorine, a strong poison to sugar. He had been told to run tests on that particular compound, but due to language difficulties he thought was encouragement to *taste* this poison he was developing. It was sweet! It turns out to be 600 times sweeter than sugar and is heat stable. Within a few years it was being marketed as a sweetener in the US & Canada. There are side effects, although not quite as numerous, severe and frequent as with Aspartame, including: Flushing or redness of the skin, Burning feeling of the skin, Rashes, Itching, A panicky or shaky feeling, Swelling, Blisters on the skin, Welts, Nausea, Stomach cramps, Dry heaves, Becoming withdrawn, Loss of interest in usual activities, Feeling forgetful, Moodiness, Dulled senses, Unexplained crying, Acne or acne-like rash, Anxiety, Panic attacks, Feelings of food poisoning, Headache, Seeing spots, Mental or emotional breakdown, Altered emotional state, i.e. feeling irate, impatient, hypersensitive, Pain (body, chest), Bloated abdomen, Diarrhea, Trouble concentrating/staying in focus, Feeling depressed, Vomiting, Seizures, Shaking, Feeling faint.
This is probably no great surprise considering the agent was initially developed as an insect poison!

Stevia
Stevia is derived from a south American wild perennial shrub *Stevia rebaudiana* indigenous to the Amambay Mountain region that is widely grown and harvested. It's used in many other countries as a sweetener. Since it's a naturally occurring artificial sweetener with 300 times the sweetness of table sugar, it stands to reason that it is safer than man-made artificial sweeteners in terms of toxicity and side effects. In fact the side effects that have been documented sound more therapeutic than toxic! Stevia can lower blood pressure and increase glucose tolerance improving diabetes control. It may also have anti-tumor and anti-bacterial effects on gram positive bacteria. Some web-articles suggest dizziness, headache, muscle weakness, bloating, nausea, muscle tenderness and kidney toxicity as its side effects or toxic effects. Some of these side effects are also symptoms of hypoglycemia that could be a potential therapeutic effect of this chemical if it were used as a medication. The fact that it occurs naturally means chemical companies can't make huge profits on it.

Rebiana is the trade name for a patent-pending, calorie-free, food and beverage sweetener derived from stevia and developed jointly by The Coca-Cola Company and Cargill. In May 2007, Coca-Cola announced plans to obtain approval for its use as a food additive within the United States by 2009. This makes sense when you consider that Stevia has been blocked by the political process (subject to intense lobbying) and that only altered chemicals, not naturally occurring molecules can be patented, thus garnishing higher profits and prices to consumers.

Just as stress is a common symptom of life in this era of humanity, many of the symptoms that are seen by physicians and possibly erroneously attributed to stress may actually be signs of invisible toxicity, invisible in that it's not being properly diagnosed. It's likely that we shouldn't be trying to fool to much with Mother Nature. If you have symptoms listed above, take a close look at what you eat and drink, these sweeteners are in almost every product sold, even found in spices and condiments. Generally when dealing with poisons, the higher the dose, the worse the effect. A therapeutic elimination trial for a period of 2-3 weeks may be very telling in terms of sensitivities. There is a form of muscle-testing that can be done as well which can give a rough idea of what substances a person may be sensitive to.
Stay Healthy!
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