

Aspartame: A Taste of Danger (July 2004)

You may know aspartame under one of its following trade names: Equal, NutraSweet, Spoonful or Equal-Measure. It is the main sweetening ingredient found in many well-known products such as Diet Coke, Crystal Light, Flintstone's Vitamins, some brands of sugar free gum and thousands of other diet foods. Despite its being everywhere, however, many people are not aware of its possible dangers.

That's one reason for the fairly recent upsurge of consumer safety advocates who are trying to make up for what many perceive as the failure of the F.D.A. to warn the public. The critics of aspartame blame the artificial sweetener for everything from causing headaches to mimicking Alzheimer's symptoms. But what really is aspartame, how does it affect the brain and body, and who should we believe?

Independent research tells a different story

Aspartame is a synthetic chemical composed of methanol and the two amino acids aspartic acid and phenylalanine. According to the F.D.A. and websites or newsletters affiliated with the companies who market products with aspartame in them, it is a perfectly safe chemical that poses no health risks except for those with phenylketonuria, a rare metabolic disorder that doesn't allow people to metabolize phenylalanine.

Dr. Russell Blaylock, the author of *Excitotoxins: The Taste That Kills*, is one independently funded researcher who strongly disagrees with this conclusion. He has found that the excess amounts of phenylalanine that are in aspartame can decrease levels of serotonin, a chemical in our brains that regulates sleep patterns, our moods, and the menstrual cycle in females. This can lead to depression and other emotional disorders.

In addition to describing the danger posed by excess phenylalanine, Blaylock coined the term "excitotoxin" to describe what chemicals like aspartic acid and glutamate (MSG) do in our brain. Aspartic acid acts as a neurotransmitter by enhancing the transmission of information between neurons. Too much aspartic acid can lead to excessive amounts of free radicals, which "excite" the neural cells to death. Long term exposure to excitatory amino acid damage can cause memory loss, hormonal problems and symptoms that mimic those of MS and dementia, among others.

Aspartame's methanol classified as severe poison

The third component of aspartame is the most inherently toxic chemical of the three. Methanol (wood alcohol) makes up 10% of aspartame and is classified as a severe metabolic poison and narcotic. Most defenders of aspartame note the fact that high amounts of methanol occur in fruits and vegetables. But when it does appear naturally in fruits or other foods, methanol is always accompanied by its antidote ethanol.

When it is metabolized without ethanol, it is much more unstable and has been shown to be converted to formaldehyde, among other toxic chemicals. This dangerous residue ends up being stored in fatty acids where it is said by the EPA to be "considered a cumulative poison due to the low rate of excretion once it is absorbed."

Dr. Woodrow Monte discusses the effect that methanol in aspartame has on the body in a 1984 report entitled *Aspartame: Methanol and the Public Health*, which appeared in the peer reviewed *Journal of Applied Nutrition*. He writes, "When diet sodas and soft drinks, sweetened with aspartame, are used to replace fluid loss during exercise and physical exertion in hot climates, the intake of methanol can exceed 250 mg/day or 32 times the Environmental Protection Agency's recommended limit [for methanol]."

The ingestion of free methanol is even more toxic. Free methanol is formed when an aspartame containing product is heated above 86 degrees Fahrenheit. This readily occurs during improper storage or in foods that are regularly heated above this temperature.

Symptoms of methanol poisoning include headaches, tinnitus, dizziness, nausea, digestive disturbances, weakness, vertigo, chills, vision problems, as well as retinal damage, blindness and memory lapses. Coincidentally, most of these conditions appeared on a list of reported symptoms associated with aspartame use that the F.D.A. was forced to release in 1995 through the Freedom of Information Act. As of 1995, aspartame was the culprit of 75% of all complaints the F.D.A. received on food additives.

Is F.D.A. aspartame support economically motivated?

Even in the face of this evidence, other reputable scientists and doctors (F.D.A. advisors) still criticize the "anecdotal" evidence of isolated cases involving aspartame toxicity and cite industry funded research to provide their information. In order to refute this categorical dismissal of many well-crafted studies, Ralph G. Walton, M.D., Chairman of The Center for Behavioral Medicine, analyzed the results of 164 studies using MEDLINE and other databases to examine the role that industry funding plays in skewing the results of aspartame research. Almost all of the studies that found a problem with aspartame (83 out of 90) were non-industry funded. On the contrary, all 74 of the industry-sponsored studies reported no dangerous findings with aspartame.

Unfortunately, the doctors who have done extensive and unbiased research to prove that aspartame is toxic have not gained enough clout to sway the F.D.A.'s staunch support of the sweetener, support that many believe is economically motivated and not safety driven. As you can see, this is a topic that is difficult for the consumer to resolve because there is a lot of contradictory information that passes variably for the truth, the facts on aspartame can seem as unstable as the chemical itself.

If you are wary, however, of the hollow assertions offered by the F.D.A., you can always find alternative ways to satisfy low-cal sweetener needs. A short list of some herbal and natural alternatives to look into includes: stevia (an herbal sweetener), barley malt, fruit juice, honey, rice syrup, licorice root, amasake, and fructooligosaccharides (FOS). Keep in mind that herbal use also requires understanding and guidance from reputable sources. Equal vigilance in all possible remedies is your personal responsibility.

by Reuben Burger

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