

Aspartame Is An Excitoneurotoxic Carcinogenic Drug!

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Dangers of Aspartame

In 1965, a researcher at G.D. Searle pharmaceutical company inadvertently discovered the artificial sweetener aspartame while working on an anti-ulcer medication. It was discovered that the sweetener was about 150X sweeter than an equal amount of sugar. Over the next decade, the research staff at the G.D. Searle Company conducted a series of studies in an effort to get the product approved by the FDA.

Over all this consisted of about 11 different studies. In 1974 aspartame was approved for use only in dry foods. Its approval was based on these studies. Yet, even before these studies were being presented to the FDA, the pharmaceutical giant was under investigation for improprieties associated with several of its other drugs.

During this investigation, Dr. Adrian Gross was placed in charge of examining these studies and Jerome Bressler was assigned to examine three of the studies. This investigation included a thorough examination of the pathology laboratory used in the tests, interviews with the scientists and technicians involved and a careful analytic review of the studies themselves.

In a letter to Senator Howard Metzenbaum, Dr. Gross discussed many of their findings in this investigation. He pointed out that at the heart of the regulatory process was the ability of the FDA to "rely upon the integrity of the basic safety data submitted" to the FDA. Further, he says, "Our investigation clearly demonstrates that, in the case of G.D. Searle Company, we have no basis for such reliance now."

He then pinpoints why he had reached this conclusion, when he states:

"Through our efforts, we have uncovered serious deficiencies in Searle's operations and practices which undermine the basis for reliance on Searle's integrity in conducting high quality animal research to accurately determine or characterize the toxic potential of its products."

Dr. Gross expressed his disdain at the way teratology experiments were conducted. These are critical tests with any new drug because it determines possible dangers to unborn children when their mothers are exposed to the product during pregnancy. He found that technicians responsible for the tests had no formal training in teratology or toxicology. In fact, they were given some books by the company and trained themselves for 3 months. Of most concern was the way the carcinogenicity tests were conducted. These are tests to see if the product could cause cancer. According to the law, any product intended as a food product cannot have demonstrated cancer-causing ability at a dose 100X that commonly consumed.

Even though the tests were poorly conducted they did demonstrate that aspartame was associated with a dramatic, dose-dependent, increase in a variety of brain tumors-mainly astrocytomas-the type commonly seen in humans. This means that the higher the dose of aspartame the more tumors that were found.

The most appalling findings were by Dr. Bressler's investigation group. They found that in several instances malignant tumors were classified as benign and that in others, tumors were removed from rats and tissue slides and reported as normal.

Dr. John Olney, a neuropathologist and neuroscientist, pointed out to FDA investigators that aspartame contained at least two distinct components that could harm the brain-diketopiperazine and aspartic acid. The former is a suspected carcinogen and the latter an excitatory amino acid. As a world expert on excitotoxicity, a process where amino acids such as aspartic acid and glutamic acid causes brain cells to be excited to death, he understood the real danger to babies and small children. His laboratory studies had demonstrated that high dose aspartame could cause the very same brain injury as other excitotoxins.

The 1974 approval was withdrawn and after the results of these investigations were reviewed privately, aspartame was given approval once again in 1981. Ironically, it was approved using the very same studies that resulted in it being banned as too dangerous for human consumption in

1975.

In 1981, Arthur Hull Hayes was appointed commissioner of the FDA and in 1983 he approved aspartame for use in beverages. Three months later he left the FDA and accepted a position as the Senior Medical Advisor to Searle's PR firm of Burson-Marsteller.

Despite Dr. Olney's, and other neuroscientists and pathologists', objections, the product was given approval, essentially for all foods and beverages.

In 1992, Dr. Olney published a study that suggested that the significant rise in human brain tumors was related to the widespread use of aspartame, since it began after the approval of aspartame in foods and beverages. In Searle's original study Dr. Olney found that there was a 47X increase in brain tumors in the rats exposed to high dose aspartame. Even Searle's figures showed a 25X increase in brain tumors. Using existing data Dr. Olney and his co-authors found a 65% increase in brain tumors in humans since aspartame approval. Dr. H.J. Roberts also reported a similar rise in a rare form of brain cancer associated with aspartame use.

And a recent study by one of Europe's most prestigious oncology groups (a million dollar study) found a non-statistically significant increase in brain tumors in 1800 rats tested using aspartame. The control animals, which received no aspartame, developed no brain tumors, whereas the aspartame exposed animals developed 10 malignant gliomas, 1 medulloblastoma and 1 malignant meningioma.

I have had contact with a number of young women who have developed brain tumors (astrocytomas) following heavy use of aspartame products. When we combined the experimental studies with the clinical data it is obvious that aspartame is strongly linked to brain tumors and most likely lymphomas and leukemias.

Of great concern is the study by Trocho and his co-workers from the University of Barcelona, which found that aspartame was absorbed and then broken down into its component parts, including methanol and the methanol was further broken down into formic acid and formaldehyde. Using sophisticated radioactive labeling techniques he proved that the formaldehyde from the aspartame attached itself to the DNA, RNA and proteins of cells and that it was very difficult to removed. Further, they showed that the formaldehyde caused breaks in the DNA.

This has major implications in humans, since DNA damage, as was seen in their study, causes a multitude of cancers in humans as well as worsening of autoimmune diseases, diabetes and neurodegenerative diseases such as Alzheimer's dementia, Parkinson's and ALS. It also causes concern because DNA breaks in the DNA in sperm and ova can cause increased cancer risk and developmental problems in the offspring of mothers and fathers consuming aspartame products.

In the Bressler examination of the Searle tumor study they found that the female animals exposed to aspartame had a very high incidence of uterine polyps, which were rare in rats not exposed. In fact, at even moderate doses, there was a 15X increase in uterine polyps. In addition, they found several ovarian tumors, breast fibroadenomas, several pituitary adenomas, several lymphomas and pancreatic tumors.

The new million-dollar study by Dr. Morando Soffritti and co-workers found a dramatic increase in malignant lymphomas and leukemias in female rats consuming even low doses of aspartame-doses known to be consumed by millions of children, pregnant women and others. Their carefully done study concluded that most likely it was the formaldehyde breakdown product from the aspartame that was causing the cancers, which confirms what Trocho and co-workers had found earlier. Formaldehyde is known to be a powerful toxin and carcinogen, even in low concentrations.

Of great concern was the finding by Trocho, that formaldehyde tends to accumulate in the DNA and is difficult to remove. This means that drinking even a single diet cola sweetened with aspartame can eventually produce significant DNA damage to raise one's risk of cancer and other diseases. Today, over 5000 products contain aspartame. It is also important to appreciate that we are exposed to a number of toxic and carcinogenic chemicals, which can add to aspartame's toxicity.

There are sufficient studies on the effect of aspartame on the developing fetus to draw serious concern about the safety of this product. For example, it has been shown that aspartame in the dose accepted as safe by the FDA (50 mg/kg/day) can produce phenylalanine levels in a large number of women and their babies during pregnancy-large enough to produce abnormal development of the baby's brain. This is because phenylalanine interferes with the normal migration and connections of the developing brain.

In my estimation, pregnant women should never consume foods containing aspartame at any level, for the reasons I have discussed. The aspartic acid,

phenylalanine and methanol are all known to produce abnormal development of a baby's brain.

There is also evidence from the studies done by Dr. Ralph Walton, indicating that depressed people are especially sensitive to the toxic effects of aspartame and that this is especially true of those with suicidal tendencies. In a separate study he has shown that virtually all of the independently conducted studies done on aspartame safety have found problems with the product, yet not a single study funded by the makers of aspartame (now Monsanto) reported even minor problems.

This is especially puzzling when you consider that among all the food-related complaints registered by the FDA, 75 to 85% are related to aspartame. This alone should tell us there is a problem.

There are sufficient independent studies to show that aspartame is a dangerous product and that it should have never been given approval. In fact, it was approved using the same shoddy studies alluded to by Dr. Adrian Gross in his letter to Senator Howard Metzenbaum.

References

1. Letter to Senator Howard Metzenbaum from Dr. Adrian Gross, dated October 30, 1987.
2. Jerome Bressler, *The Bressler Report*, 4/25/77 to 8/4/77
3. Olney JW. Excitotoxins in foods. *Neurotoxicology* 1994;15:535-544.
4. Olney JW, et al. Brain damage in mice from voluntary ingestion of glutamate and aspartate. *Neurobehavioral Toxicology* 1980; 2: 125-129.
5. Reynolds WA. Et al. Hypothalamic morphology following ingestion of aspartame or MSG in the neonatal rodent and primate: a preliminary report. *Environmental Health* 1976;2: 471-480.
6. Brunner RL, et al. Aspartame: assessment of developmental psychotoxicity of a new artificial sweetener *Neurobehavioral Toxicology* 1979;1: 79-86.
7. Wurtman RJ. Aspartame: possible effect on seizure susceptibility. *Lancet* 1985;9
8. Maher TJ, et al. Possible neurologic effects of aspartame, a widely used food additive. *Environmental Health Perspectives*. 1987;75: 53-57.
9. Walton RG, The possible role of aspartame in seizure induction. In, Wurtman RJ, Ritter-Walker E. (eds); *Dietary Phenylalanine and Brain Function*. Birkhauser, Boston, 1988, pp 159-162.
10. Changes in physiological concentrations of blood phenylalanine

- produce changes in sensitive parameters of human brain function. In, Wurtman RJ, Ritter-Walker E. (eds); *Dietary Phenylalanine and Brain Function*. Birkhauser, Boston, 1988, pp187-195.
11. Christian B, et al. Chronic aspartame affects T-maze performance, brain cholinergic receptors and Na⁺, K⁺-ATPase in rats. *Pharmacology Biochemistry and Behavior* 2004;78:121-127.
 12. Nakao H, et al. Formaldehyde-induced shrinkage of rat thymocytes. *Journal of Pharmacological Science* 2003; 91: 83-86.
 13. H.J. Roberts. Does aspartame cause human brain cancer? *Journal Advancement in Medicine* 1991; 4: 231-240.
 14. Trocho C, et al. Formaldehyde derived from dietary aspartame binds to tissue components in vivo. *Life Sciences* 1998;63:337-349.
 15. Scoffritti M, et al. Aspartame induces lymphomas and leukemias in rats. *European Journal of Oncology* 2005; 10: (in press)
 16. Sabelli HC and Javaid JI. Phenylaethylamine modulation of affect: therapeutic and diagnostic implications. *Journal of Neuropsychiatry* 1995; 7: 6-14.
 17. Scharma RP, et al. cerebrospinal fluid levels of phenylacetic acid in mental illness: behavioral associations and response to neuroleptic treatment. *Acta Psychiatr Scand* 1995; 91: 293-298.
 18. Robain O, et al. Experimental phenylketonuria: effect of phenylacetate intoxication on number of synapses in cerebellar cortex of rats. *Acta Neuropathol (Berl)* 1983; 61: 313-315.
 19. Matalon R, et al. Aspartame consumption in normal individuals and carriers of phenylketonuria. In, Wurtman RJ, Ritter-Walker E. (eds); *Dietary Phenylalanine and Brain Function*. Birkhauser, Boston, 1988, pp41-52.
 20. Monte WC. Aspartame: methanol and public health. *Journal of Applied Nutrition* 1984; 36: 52.
 21. Walton RG, et al. Adverse reactions to aspartame: double-blind challenge in patients from a vulnerable population. *Biological Psychiatry* 1993; 34: 13-17.
 22. Olney JW, Farber NB, Spitznagel E, Robins LN. Increasing brain tumor rates: is there a link to aspartame? *J Neuropathology Experimental Neurology*. 1996;55:1115-23.

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On autism: <http://www.dorway.com/blayautism.txt>

On brain problems: <http://www.dorway.com/blayart1.txt>

Excitotoxins, Neurodegeneration and Neurodevelopment:

<http://www.dorway.com/blayenn.html>

Miami Herald Letter, Exposing Calorie Control Council, front group:

http://www.wnho.net/mh_aspartame_letter.htm

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