

Aspartame Studies

Health Problem:

Brain damage/Cognitive skills disruption/Retardation/Neurochemical changes in the brain/Behavioral and Mood Changes/Problems

Reference: <http://aspartame.mercola.com/sites/aspartame/studies.aspx>

- Year Published:** 1970
Full Reference: Brain Damage in Infant Mice Following Oral Intake of Glutamate, Aspartate, or Cysteine; Nature 1970;227-609-610
Funded By: Washington University
Conclusion/Findings: Irreversible degenerative changes and acute neuronal necrosis
Hyperlink to Study <http://www.nature.com/nature/journal/v227/n5258/pdf/227609b0.pdf>
- Year Published:** 2008
Full Reference: Direct and Indirect Cellular Effects of Aspartame on the Brain. European Journal of Clinical Nutrition (2008) 62, 451-462; P. Humphries, E. Pretorius, and H. Naude
Funded By: Not known
Conclusion/Findings: Excessive aspartame ingestion might cause certain mental disorders, as well as compromised learning and emotional functioning
Hyperlink to Study: <http://www.newmediaexplorer.org/sepp/aspartamebrain.pdf>
- Year Published:** 2007
Full Reference: Life-Span Exposure to Low Doses of Aspartame Beginning During Prenatal Life Increases Cancer Effects in Rats, Morando Soffritti, Fiorella Belpoggi, Eva Tibaldi, Davide Degli Esposti, Michelina Lauriola; Environmental Health Perspectives, 115(9) Sep 2007; 115:1293-1297. doi:10.1289/ehp.10271.
Funded By: Not known
Conclusion/Findings: Carcinogenicity proven a second time; with effects increased when exposure to aspartame begins during fetal life.
Hyperlink to Study: <http://ehp03.niehs.nih.gov/article/fechArticle.action?articleURI=info:doi/10.1289/ehp.10271>
- Year Published:** 1984
Full Reference: Effects of Aspartame and Glucose on Rat Brain Amino Acids and Serotonin. Yokogoshi H, Roberst CH, Caballero B, Wurtman RJ. American Journal of clinical Nutrition. 1984 July, 40(1):1-7
Funded By: MIT
Conclusion/Findings: High aspartame doses can generate major neurochemical changes in rats, especially when consumed along with carbohydrate-containing foods
Hyperlink to Study: <http://www.ncbi.nlm.nih.gov/pubmed/6204522>
- Year Published:** 1984
Full Reference: Revelance of Animal Studies to Human Safety. Olney, JW. Neurobehavioral Toxicology and Teratology. 1984; 6:455-462
Funded By: MIT
Conclusion/Findings: Excitotoxins, as used in foods today, may produce blood elevations high enough to cause damage to the nervous system of young children, damage which is not detectable at the time of occurrence but which may give rise to subtle disturbances in neuroendocrine function in adolescence and/or adulthood.
Hyperlink to Study: <http://www.ncbi.nlm.nih.gov/pubmed/6152304>
- Year Published:** 1996
Full Reference: Increasing Brain Tumor Rates: Is There a Link to Aspartame? Olney JW, Farber NB, Spitznagel E, Robins LN. Journal of Neuropatholgy & Experimental Neurology. 1996 Nov; 55(11):1115-23
Funded By: NIH
Conclusion/Findings: Brain tumor incidence in the US implicates the introduction of aspartame into the American diet.
Hyperlink to Study: <http://www.ncbi.nlm.nih.gov/pubmed/8939194>

7. **Year Published:** 2000
Full Reference: Glutamate and Aspartate Impair Memory Retention and Damage Hypothalamic Neurons in Adult Mice. Cheol Hyoung Park, Se Hoon Coi, et al. Toxicology Letters, Vol. 115, Issue 2, May 19, 2000, pp. 117-125
Funded By: Not known
Conclusion/Findings: Found that aspartate shortens the memory response, impairs memory retention and damages hypothalamic neurons in mice
Hyperlink to Study: http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6TCR-408BJC1-4&_user=10&_coverDate=05%2F19%2F2000&_rdoc=1&_fmt=high&_orig=search&_origin=search&_sort=d&_docanchor=&_view=c&_searchStrId=1456058577&_rerunOrigin=google&_acct=C000050221&_version=1&_urlVersion=0&_userid=10&md5=395a2fc9d4ef0ffceeea475146341607&searchtype=a
8. **Year Published:** 2002
Full Reference: Effect of Aspartame on N-Methyl-D Aspartate Sensitive L-(311) Glutamate Binding Sites in Rat Brain Synaptic Membranes, AV Glushakov, DM Dennis, et al. Molecular Psychiatry, 2002, Vol. 7, No. 4, pp. 359-367.
Funded By: University of Florida
Conclusion/Findings: Shows that aspartate has a role in causing mental retardation, but the mechanism by which it does that is still unknown.
Hyperlink to Study: <http://www.nature.com/mp/journal/v7/n4/full/4000976a.html>
9. **Year Published:** 2006
Full Reference: The Effect of Aspartame Metabolites on Human Erythrocyte Membrane Acetylcholinesterase Activity. Stylianos Tsakiris, Aglaia Giannoulia-Karantana, et al., Pharmacological Research, Volv. 53, Issue 1, Jan. 2006. pp. 1-5.
Funded By: Not known
Conclusion/Findings: Found that high concentrations of aspartame can cause neurological symptoms, including memory and learning problems.
Hyperlink to Study: <http://www.ncbi.nlm.nih.gov/pubmed/16129618>
10. **Year Published:** 2008
Full Reference: Direct and Indirect Cellular Effects of Aspartame on the Brain, P Humphries, E Pretorius and H Naude, European Journal of Clinical Nutrition , 2008, 62, 451-462
Funded By: Not known
Conclusion/Findings: Asserts that excessive aspartame ingestion might be involved in the pathogenesis of certain mental disorders (DSM-IV-TR 2000) and also in compromised learning and emotional functioning.
Hyperlink to Study: <http://www.nature.com/ejcn/journal/v62/n4/abs/1602866a.html>
11. **Year Published:** 1986
Full Reference: Evaluation of Reactions to Food Additives: The Aspartame Experience. MK Bradstock, MK Serdula, JS Marks, RJ Barnard, Nt Crane, PL Remington and FL Trowbridge. The American Journal of Clinical Nutrition. Vol. 43, pp. 464-469, 1986
Funded By: Not known
Conclusion/Findings: Identified some case reports in which the symptoms may be attributable to aspartame in commonly-consumed amounts. Headache, mood alterations (anxiety, agitation, irritability, or depression), insomnia, dizziness, and fatigue were the most frequently reported symptoms, with one case of a child in a double-blind test who became hyperactive after consuming products with aspartame.
Hyperlink to Study: <http://www.ajcn.org/cgi/reprint/43/3/464> and <http://www.ajcn.org/cgi/content/abstract/43/3/464>
12. **Year Published:** 1990
Full Reference: Aspartame: Clinical Update, Potenza DP, el-Mallakh RS, Connecticut Medicine, 1990 Apr;54(4):235-6.
Funded By: Not known
Conclusion/Findings: Raises concern that so many reports of headaches, seizures, blindness, and cognitive and behavioral changes with long-term, high-dose aspartame have

been reported that health officials need to be concerned.

Hyperlink to Study: <http://www.ncbi.nlm.nih.gov/pubmed/2667892>

13. **Year Published:** 1993

Full Reference: Adverse Reactions to Aspartame: Double-Blind Challenge in Patients from a Vulnerable Population. Ralph G. Walton, Robert Hudak, Ruth J. Green-Waite. *Psychiatry*. July 1, 1993. Vol. 34, Issue 1, pp. 13-17.

Funded By: Dept. of Psychiatry Northeastern Ohio, Universities College of Medicine and University Hospital of Cleveland

Conclusion/Findings: Found that individuals with mood disorders are particularly sensitive to this artificial sweetener and its use in this population should be discouraged. In the clinical study, the project was halted by the Institutional Review Board after a total of 13 individuals had completed the study because of the severity of reactions within the group of patients with a history of depression

Hyperlink to Study: <http://www.biologicalpsychiatryjournal.com/article/0006-3223%2893%2990251-8/abstract>

14. **Year Published:** 1986

Full Reference: Seizure and Mania After High Intake of Aspartame

Funded By: Jamestown General Hospital, Jamestown, New York

Conclusion/Findings: Case report of a woman who drank in excessive of 1 gallon per day of iced tea sweetened with aspartame, resulting in manic episode and seizure that led to hospitalization.

Hyperlink to Study: http://psy.psychiatryonline.org/cgi/pdf_extract/27/3/218

15. **Year Published:** 1991

Full Reference: Effect of Aspartame and Protein, Administered in Phenylalanine-Equivalent Doses, on Plasma Neutral Amino Acids, Aspartate, Insulin and Glucose in Man, Svend E. Moller; *Pharmacology & Toxicology*, Vol. 68, Issue 5, pp. 408-412.

Funded By: Clinical Research Laboratory, Denmark

Conclusion/Findings: The study showed that the intake of aspartame in a not unrealistically high dose produced a marked and persistent increase of the availability of Phe to the brain, which was not observed after protein intake. The study indicated, furthermore, that Phe was cleared faster from the plasma after consumption of protein compared with aspartame.

Hyperlink to Study: <http://www3.interscience.wiley.com/journal/122214234/abstract>

16. **Year Published:** 1994

Full Reference: Effects of Diets High in Sucrose or Aspartame on the Behavior and Cognitive Performance of Children. Mark L. Wolraich, Scott D. Lingren, et al. *New England Journal of Medicine*, Feb. 3, 1994; pp. 330:301-307

Funded By: Not known

Conclusion/Findings: Reported that it is possible that there are some children who respond adversely to sugar or aspartame.

Hyperlink to Study:

<http://www.nejm.org/doi/full/10.1056/NEJM199402033300501#articleResults>

17. **Year Published:** 1985

Full Reference: Loss of Intellectual Function in Children with Phenylketonuria After Relaxation of Dietary Phenylalanine Restriction, Margretta R. Seashore, Estelle Friedman, Robert A. Novelly P, Vijaya Bapat MD. *Pediatrics* vol. 75, No. 2, Feb. 1985, pp. 226-232

Funded By: Not known

Conclusion/Findings: Shows decrease in intellectual function in children with PKU who have phenylalanine introduced into their diets.

Hyperlink to Study: <http://pediatrics.aappublications.org/cgi/content/abstract/75/2/226>

18. **Year Published:** 1987

Full Reference: Aspartame Effects on Brain Serotonin, RI Wurtman, Letter in *American Journal of Clinical Nutrition*, 1987 April; 45(4):799-803

Funded By: MIT

Conclusion/Findings: Argues that using rodents to disprove aspartame's harm to humans is not relevant, and that it reacts more negatively in humans than in mice

Hyperlink to Study: <http://www.ajcn.org/cgi/reprint/45/4/799.pdf>

19. **Year Published:** 1986
Full Reference: Acute Effects of Oral or Parenteral Aspartame on Catecholamine Metabolism in Various Regions of Rat Brain, Hidehiko Yokogoshi and Richard J. Wurtman, The Journal of Nutrition, November 1986
Funded By: MIT
Conclusion/Findings: Found higher plasma tyrosine and phenylalanine ratios and other effects on the brain.
Hyperlink to Study: <http://jn.nutrition.org/cgi/content/abstract/116/3/356>
20. **Year Published:** 1992
Full Reference: Aspartame Exacerbates EEG Spike Wave Discharge in Children with Generalized Absence Epilepsy, PR Camfield, CS Camfield, JM Dooley, et al;
Funded By: Ontario Ministry of Health
Conclusion/Findings: Neurology 1992:42:1000
Hyperlink to Study: <http://www.neurology.org/cgi/content/abstract/42/5/1000>
21. **Year Published:** 1993
Full Reference: The Effect of Food Chemicals on Cell Aging of Human Diploid Cells in Vitro Culture, Kasamaki A and Urasawa S, The Journal of Toxicological Sciences, 1993 Aug; 18(3):143-53
Funded By: Toxicological Sciences, 1993 Aug; 18(3):143-53. Sapporo
Conclusion/Findings: Showed aging of cells when treated with aspartame.
Hyperlink to Study: <http://www.ncbi.nlm.nih.gov/pubmed/8246307>
22. **Year Published:** 1994
Full Reference: Neuropharmacological Evaluation of Movement Disorders that are Adverse Reactions to Specific Foods Including Aspartame, John W. Gerrard, J Steven Richardson and Jeffrey Donat; International Journal of Neuroscience, 1994, Vol. 76, No. 1-2, pp. 61-69
Funded By: University of Saskatchewan, Canada
Conclusion/Findings: Shows that in susceptible individuals, certain foods or additives, including aspartame, can trigger movement disorders through an action on dopamine and other neurotransmitter pathways in the brain.
Hyperlink to Study: <http://informahealthcare.com/doi/abs/10.3109/00207459408985992>
23. **Year Published:** 1995
Full Reference: Effects of Aspartame on ⁴⁵Ca Influx and LDH Leakage from Nerve Cells in Culture, Sonnewald U, Unsgard G, Petersen SB; Neuropharmacology and Neurotoxicology, 1995, Vol. 6, Issue 2
Funded By: Research Council of Norway
Conclusion/Findings: Showed signs of severe cell damage and other neurological events with aspartame.
Hyperlink to Study: http://journals.lww.com/neuroreport/Abstract/1995/01000/Effects_of_aspartame_on_45Ca_influx_and_LDH.23.aspx
24. **Year Published:** 1996
Full Reference: Increasing Brain Tumor Rates: Is There A Link to Aspartame? JW Olney, Nuri B Farber, et al.; Journal of Neuropathology & Experimental Neurology, Nov. 1996, Vol. 55, Issue 11
Funded By: NIH
Conclusion/Findings: Evidence implicates aspartame as a causative agent of high incidence of brain tumors in aspartame-fed rats.
Hyperlink to Study: http://journals.lww.com/jneuropath/Abstract/1996/11000/Increasing_Brain_Tumor_Rates_Is_There_a_Link_to.2.aspx
25. **Year Published:** 1998
Full Reference: Formaldehyde Derived from Dietary Aspartame Binds to Tissues Components in Vivo, C. Trocho, R. Pardo, I. Rafecas, et al
Funded By: University of Barcelona, Spain
Conclusion/Findings: Showed that aspartame consumption may constitute a hazard

because of its contribution to the formation of formaldehyde adducts.
Hyperlink to Study: http://www.who.net/formaldehyde_from_aspartame.pdf

Health Problem: Headache/Migraines

26. **Year Published:** 1985
Full Reference: Aspartame: Possible Effect on Seizure Susceptibility. Wurtman, R.J. Lancet. Vol. 2, no. 8463, 1060 p. 1985
Funded By: MIT
Conclusion/Findings: Woman who drank large amounts of Diet Coke and other aspartame-flavored beverages experienced headaches, nausea, visual hallucinations, and a grand-mal seizure.
Hyperlink to Study:
<http://md1.csa.com/partners/viewrecord.php?requester=gs&collection=ENV&rcid=1354938&q=Aspartame%3A+Possible+Effects+on+Seizure+Susceptibility&uid=789675711&setcookie=yes>
27. **Year Published:** 1987
Full Reference: The Effect of Aspartame on Migraine Headache. Shirley M. Koehler, Alan Glaros. Headache: The Journal of Head and Face Pain. Vol 28, Issue 1, Nov. 12, 1987
Funded By: Not known
Conclusion/Findings: Ingestion of aspartame by migraine sufferers causes significant increases in headache frequency
Hyperlink to Study: <http://www3.interscience.wiley.com/journal/119449495/abstract>
28. **Year Published:** 1998
Full Reference: Aspartame as a Dietary Trigger of Headache. Richard B. Lipton, MD, Lawrence C. Newman, MD, Joel S. Cohen, MD, Seymour Solomon, MD. The Journal of Head and Face Pain. Vol. 29, Issue 2, pp. 90-92. Sept. 1998
Funded By:
Conclusion/Findings: Finds that aspartame may be an important dietary trigger of headache in some people.
Hyperlink to Study: <http://www3.interscience.wiley.com/journal/119429393/abstract>
29. **Year Published:** 1991
Full Reference: Platelet Glycine, Glutamate and Aspartate in Primary Headache, D'Andrea, G., et al., 1991. Cephalalgia, Vol. 11, pp. 197-200.
Funded By: Not known
Conclusion/Findings: High levels of these amino acids were found in patients with migraine with aura compared to normal subjects and other headache groups
Hyperlink to Study: <http://cep.sagepub.com/content/11/4/197.abstract>
30. **Year Published:** 1997
Full Reference: Chewing Gum Headaches, Blumenthal, H.J., D.A. Vance, Headache, Volume 37, Number 10, pages 665-666. 1997
Funded By: Department of Neurology, University of Oklahoma College of Medicine, Tulsa
Conclusion/Findings: Chewing gum with aspartame provokes headaches
Hyperlink to Study: <http://www3.interscience.wiley.com/journal/119166706/abstract>
31. **Year Published:** 2003
Full Reference: The Diet Factor in Pediatric and Adolescent Migraine, Millichap JG, Yee MM. Pediatric Neurology, 2003 Jan;28(1):9-15
Funded By: Not known
Conclusion/Findings: Aspartame is one of the substances that trigger migraines in children and adolescents
Hyperlink to Study: <http://www.drcordas.com/education/Headaches/1doc.pdf>
32. **Year Published:** 1994
Full Reference: Aspartame Ingestion and Headaches: a Randomized Crossover Trial. S. K. Van Den Eeden, PhD, T. D. Koepsell, MD, MPH, W. T. Longstreth, Jr., MD, MPH, G. van Belle, PhD, J. R. Daling, PhD and B. McKnight, PhD, American Academy of Neurology,

Neurology. 1994;44:1787

Funded By: University of Washington

Conclusion/Findings: This experiment provides evidence that, among individuals with self-reported headaches after ingestion of aspartame, a subset of this group report more headaches when tested under controlled conditions. It appears that some people are particularly susceptible to headaches caused by aspartame and may want to limit their consumption.

Hyperlink to Study:

http://www.neurology.org/cgi/content/abstract/44/10/1787?ijkey=4b59bcfcb6c01af70844762469ca00f7f358c5f&keytype2=tf_ipsecsha

33. **Year Published:** 1990

Full Reference: The Concept of Migraine as a State of Central Neuronal Hyperexcitability, KMA Welch, et al, 1990. Headache, Vol. 8, No. 4, pp 817-828.

Funded By: Not known

Conclusion/Findings: Finds that aspartate can cause migraine with aura associated with a state of central neuronal hyperexcitability

Hyperlink to Study: <http://www.ncbi.nlm.nih.gov/pubmed/1979655>

34. **Year Published:** 2001

Full Reference: Migraine MLT-Down: An Unusual Presentation of Migraine in Patients with Aspartame-Triggered Headaches. Lawrence C. Newman, Richard B. Lipton, Headache: The Journal of Head and Face Pain, Vol. 41, Issue 9, pp. 899-901

Funded By: The Headache Institute, St. Lukes-Roosevelt Hospital Center, New York

Conclusion/Findings: Reports that aspartame may trigger headaches in susceptible individuals, and can worsen an ongoing attack of migraine.

Hyperlink to Study: <http://www3.interscience.wiley.com/journal/120697481/abstract>

35. **Year Published:** 1988

Full Reference: Aspartame as a Dietary Trigger of Headache, Richard B. Lipton, Lawrence C. Newman, Joel S. Cohen, Seymour Solomon, Headache: The Journal of Head and Face Pain, Vol. 29, Issue 2, pp. 90-92

Funded By: Department of Neurology, Albert Einstein College of Medicine, Bronx, NY

Conclusion/Findings: Reports that some patients with migraines reported aspartame as a trigger three times more often than those with other types of headache.

Hyperlink to Study: <http://www3.interscience.wiley.com/journal/119429393/abstract>

Health Problem: Increase in hunger, body weight, BMI

36. **Year Published:** 1991

Full Reference: Chen, L. N., and Parham, E. S. "College Students' Use of High-Intensity Sweeteners Is Not Consistently Associated with Sugar Consumption." *J Am Diet Assoc.* 91(1991): 686-90

Funded By: Department of Human and Family Resources at Northern Illinois University

Conclusion/Findings: In a study of high-intensity artificial sweeteners performed on college students, there was no evidence that artificial sweetener use was associated with a decrease in their overall sugar intake. These results indicate that eating artificial sweeteners simply perpetuates a craving for sweets, and overall sugar consumption is not reduced—leading to further problems controlling your weight

Hyperlink to Study: <http://www.ncbi.nlm.nih.gov/pubmed/2040783>

37. **Year Published:** 2005

Full Reference: "New Analysis Suggests 'Diet Soda Paradox' – Less Sugar, More Weight." UT Health Center San Antonio Press Release. June 14, 2005 · Volume: XXXVIII · Issue: 24

Funded By: University of Texas Health Science Center at San Antonio

Conclusion/Findings: In 2005, data gathered from the 25-year long San Antonio Heart Study also showed that drinking diet soft drinks increased the likelihood of serious weight gain – far more so than regular soda. According to Sharon Fowler, M.P.H: "On average, for each diet soft drink our participants drank per day, they were 65 percent more likely to become overweight during the next seven to eight years, and 41 percent more likely to become obese."

Hyperlink to Study: <http://www.uthscsa.edu/hscnews/singleformat2.asp?newID=1539>

38. **Year Published:** 2004
Full Reference: "A Pavlovian Approach to the Problem of Obesity," Davidson, TL and Swithers Se, International Journal of Obesity and Related Metabolic Disorders 2004 Jul;28(7):933-5.
Funded By: Department of Psychological Science, Ingestive Behavior Research Center, Purdue University
Conclusion/Findings: Found that rats fed artificially sweetened liquids ate *more* high-calorie food than rats fed high-caloric sweetened liquids. The researchers believe the experience of drinking artificially sweetened liquids disrupted the animals' natural ability to compensate for the calories in the food.
Hyperlink to Study:
[http://www.ncbi.nlm.nih.gov/pubmed?term=933\[page\]+AND+2004/07\[pdat\]+AND+Davidson\[author\]&cmd=detailssearch](http://www.ncbi.nlm.nih.gov/pubmed?term=933[page]+AND+2004/07[pdat]+AND+Davidson[author]&cmd=detailssearch)
39. **Year Published:** 1988
Full Reference: Uncoupling Sweet Taste and Calories, Comparison of Glucose and Three Intense Sweeteners on Hunger and Food Intake. Peter J. Rogers, Jo-ASnne Carlyle, Andrew J. Hill and John E. Blundell. Physiology & Behavior. Vol. 43; Issue 5, 1988. pp. 547-552
Funded By: Biopsychology Group, Psychology Dept., University of Leeds, Leeds UK
Conclusion/Findings: Intense sweeteners can produce significant changes in appetite, with aspartame causing the most pronounced effects.
Hyperlink to Study: <http://www.ncbi.nlm.nih.gov/pubmed/3200909>
40. **Year Published:** 1990
Full Reference: Oral Stimulation with Aspartame Increases Hunger, Michael G. Tordoff and Annette M. Alleva, Physiology & Behavior, Vol. 47, Issue 3, March 1990; pp. 555-559.
Funded By: Monell Chemical Senses Center, Philadelphia
Conclusion/Findings: Showed that aspartame can increase the feeling of hunger
Hyperlink to Study: <http://www.ncbi.nlm.nih.gov/pubmed/2359769>
41. **Year Published:** 2010
Full Reference: Gain Weight by "Going Diet?" Artificial Sweeteners and the Neurobiology of Sugar Cravings. Qing Yang, Yale Journal of Biological Medicine, 2010 June; 83(2): 101-108. Department of Molecular, Cellular and Developmental Biology
Funded By: Yale University
Conclusion/Findings: Several large scale prospective cohort studies found positive correlation between artificial sweetener use and weight gain. When matched for initial body mass index (BMI), gender, ethnicity, and diet, drinkers of artificially sweetened beverages consistently had higher BMIs. Similar observations have been reported in children. Artificial sweeteners, precisely because they are sweet, encourage sugar craving and sugar dependence.
Hyperlink to Study: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2892765/?tool=pubmed>
- Other Health Problems:** Multiple symptoms including retinal damage, disruption of odor-associated learning, miscellaneous toxicity problems, elevations in plasma, pre-term delivery, rise in serum methanol
42. **Year Published:** 1985
Full Reference: A Metabolite of Aspartame Inhibits Angiotensin Converting Enzyme. Grobelny D, Galardy RE. Biochemical & BioPhysical Research Communications. 1985: 128(2):960-964.
Funded By: University of Kentucky
Conclusion/Findings: Possibility exists that consuming large amounts of aspartame inhibits angiotensin converting enzyme
Hyperlink to Study: <http://www.ncbi.nlm.nih.gov/pubmed/2986632>
43. **Year Published:** 1986
Full Reference: Serum Methanol Concentrations in Rats and in Men after a Single Dose of Aspartame," Davoli, E., et al., 1986. Food and Chemical Toxicology, Vol. 24, No. 3, pp. 187-189
Funded By: Not known
Conclusion/Findings: Both treatments caused a temporary rise in serum methanol.

[Methanol is a highly toxic alcohol](#) commonly found in automobile windshield washer solvent, gas line antifreeze, copy machine fluid, fuel for small stoves, paint strippers, and as an industrial solvent.

Hyperlink to Study: <http://www.ncbi.nlm.nih.gov/pubmed/3957170>

44. **Year Published:** 1977

Full Reference: Effect of a Dipeptide, Aspartame, on Lactic Acid Production in Human Whole Saliva. Y. Mishiro and H. Kaneko. Journal of Dental Research, 1977 56(11):1427

Funded By: Nippon Dental University, Japan

Conclusion/Findings: Aspartame affects levels of saliva lactation and pH levels.

Hyperlink to Study: <http://jdr.sagepub.com/content/56/11/1427.full.pdf>

45. **Year Published:** 2010

Full Reference: Intake of Artificially Sweetened Soft Drinks and Risk of Preterm Delivery: a Prospective Cohort Study of 59,334 Danish Pregnant Women. Halldorsson TI, Strom M, Petersen SB, Olsen SF, American Journal of Clinical Nutrition, June 30, 2010

Funded By: Center for Fetal Programming, Division of Epidemiology, Statens serum Institute, Denmark

Conclusion/Findings: There was an association between intake of artificially sweetened carbonated and noncarbonated soft drinks and an increased risk of preterm delivery.

Hyperlink to Study: <http://www.ncbi.nlm.nih.gov/pubmed/20592133>

46. **Year Published:** 1987

Full Reference: Effects of Oral Aspartame on Plasma Phenylalanine in Humans and Experimental Rodents, RJ Wurtman and TJ Maher. Journal of Neural Transmission, Vol. 70, Nos. 1-2, March 1987, pp. 169-173

Funded By: MIT

Conclusion/Findings: Aspartame causes greater elevations in plasma phenylalanine than plasma tyrosine in humans.

Hyperlink to Study: <http://www.springerlink.com/content/l148w94568vt33hw/>

47. **Year Published:** 1986

Full Reference: Acute Effects of Aspartame on Systolic Blood Pressure in Spontaneously Hypertensive Rats. P.J. Kiritsy and T.J. Maher. Journal of Neural Transmission, Vol 66, No. 2, June 1986, pp 121-128

Funded By: Neuropharmacology Laboratory, Dept. of Pharmacology, Massachusetts College of Pharmacy and Allied Health Science, Boston

Conclusion/Findings: Aspartame elevates blood and brain tyrosine levels, and cause neurochemical changes that lead to tyrosine-induced drop in blood pressure.

Hyperlink to Study:

<http://www.springerlink.com/content/p33231m752721f5x/?p=41116b2cb5284004987aaa24f8a945c9&pi=37>

48. **Year Published:** 1986

Full Reference: Aspartame-Induced Urticaria. Anthony Kulczycki Jr., M.D. Annals of Internal Medicine. Feb. 1, 1986. Volv 104. No 2. pp. 207-208

Funded By: Grant support NIH.

Conclusion/Findings: Aspartame-induced urticaria confirmed by double-blind challenge.

Hyperlink to Study: <http://www.annals.org/content/104/2/207.extract>

49. **Year Published:** 1989

Full Reference: Behavioral Assessment of the Toxicity of Aspartame, Mark D. Holder, Pharmacology Biochemistry & Behavior, Vol. 32, pp. 17-26

Funded By: Memorial University of Newfoundland

Conclusion/Findings: Found that aspartame may have adverse effects when intrapeitoneally injected.

Hyperlink to Study: <http://pluto.huji.ac.il/~msrazy/PDF/HolderPBB89.pdf>

50. **Year Published:** 1989

Full Reference: Impaired Performance on Odor-Aversion Testing Following Prenatal Aspartame Exposure in the Guinea Pig, Diana L. Dow-Edwards, Louise A. Scribani and Edward P. Riley, Neurotoxicity and Teratology, Vol. 11, Issue 4, July-August 1989, pp. 413-

Funded By: Dept. of Neurosurgery State University, New York

Conclusion/Findings: These data indicate that aspartame exposure at 500 mg/kg throughout gestation disrupts odor-associative learning in 15-day-old guinea pigs.

Hyperlink to Study: <http://www.ncbi.nlm.nih.gov/pubmed/2796897>

51. **Year Published:** 2006

Full Reference: Aspartame Products as a Potential Danger to Infants, Children & Future Generations, Dr. HJ Roberts, director, Palm Beach Institute for Medical Research

Funded By: No funding

Conclusion/Findings: Aspartame causes a variety of disease in children including headaches, convulsions, unexplained visual loss, rashes, asthma, gastrointestinal problems, obesity, marked weight loss, hypoglycemia, diabetes, addiction (probably largely due to the methyl alcohol), hyperthyroidism, and a host of neuropsychiatric features. The latter include extreme fatigue, irritability, hyperactivity, depression, antisocial behavior (including suicide), poor school performance, the deterioration of intelligence, and brain tumors.

Hyperlink to Study: <http://www.rense.com/general70/duut.htm>

52. **Year Published:** 1986

Full Reference: Plasma Amino Acid Levels After Single Dose Aspartame Consumption in Phenylketonuria Mild II Hyperphenylalaninemia and Heterozygous State for Phenylketonuria. The Journal of Pediatrics, Vol. 109, No. 4, pp. 668-671, October 1986. Benjamin Caballero, Barbara E. Mahon, Frances J. Rohr, Harvey L. Levy, and Richard J. Wurtman. M.D

Funded By: MIT

Conclusion/Findings: Plasma phenylalanine concentrations may increase to unacceptable levels when patients with PKU on phenylalanine-restricted diets consume aspartame-containing soft drinks or after loading doses of the sweetener

Hyperlink to Study: <http://wurtmanlab.mit.edu/publications/pdf/673.pdf>

53. **Year Published:** 1985

Full Reference: Aspartame-Induced Granulomatous Panniculitis. Nelson Lee Novick, MD. Annals of Internal Medicine., Vol 102, No. 2, pp. 206-207

Funded By: Mt. Sinai Medical Center; New York

Conclusion/Findings: This report describes the first confirmed case of aspartame-induced granulomatous panniculitis

Hyperlink to Study: <http://www.annals.org/content/102/2/206.short>

54. **Year Published:** 1984

Full Reference: Aspartame: Methanol and the Public Health. Woodrow C. Monte. Journal Applied Nutrition 36(1):42-54

Funded By

Conclusion/Findings: Consumption of aspartame sweetened drinks at levels commonly used to replace lost fluid during exercise yields methanol intake between 15 and 100 times normal intakes.

Hyperlink to Study: <http://www.dorway.com/wmonte.txt>

55. **Year Published:** 1989

Full Reference: Excitoxins: A Possible New Mechanism for the Pathogenesis of Ischemic Retinal Damage, George H. Bresnick, Archives of Ophthalmology, 1989; 107(3):339-341

Funded By: NIH

Conclusion/Findings: Reports that aspartame is a possible mechanism to cause retinal damage.

Hyperlink to Study: <http://archophth.ama-assn.org/cgi/content/summary/107/3/339>

56. **Year published:** 1987

Full reference: Plasma Amino Acid Concentrations in Normal Adults Administered Aspartame in Capsules or Solution: Lack of Bioequivalence, Lewis D. Stegin, L.J. Filer Jr, E.F. Bell, and E.E. Ziegler, Metabolism Volume 36, Issue 5 May 1987, Pages 507-512

Funded by: Supported in part by a grant-in-aid from G.D. Searle

Conclusion/Findings: The data indicate different plasma phenylalanine and aspartate pharmacokinetics between aspartame in solution and capsule administration of aspartame. Peak plasma phenylalanine levels were significantly higher and were reached significantly

earlier when aspartame was administered in solution than when it was administered in capsules. Administration in solution also produced a significantly higher ratio of plasma phenylalanine concentration to the sum of the plasma concentrations of the other large neutral amino acids. Similarly, peak plasma aspartate concentrations were significantly higher and were reached significantly earlier when aspartame was administered in solution.
Hyperlink to study: <http://www.ncbi.nlm.nih.gov/pubmed/3574137>

57. **Year published:** 1984

Full reference: Evaluation of Consumer Complaints Related to Aspartame Use, MK Bradstock, MK Serdula, JS Marks, RJ Barnard, NT Crane, PL Remington and FL Trowbridge, American Journal of Clinical Nutrition, November 1984, Vol 43, 464-469

Funded by: Division of Nutrition, Center for Health Promotion and Education, Centers for Disease Control

Conclusion/Findings: In some case reports, the symptoms may be attributable to aspartame in commonly-consumed amounts

Hyperlink to study: <http://www.ajcn.org/cgi/content/abstract/43/3/464>

Health Problem: Seizures/Convulsions

58. **Year Published:** 1987

Full Reference: Possible Neurologic Effects of Aspartame, a Widely Used Food Additive; Timothy J. Maher and Richard J. Wurtman. Environmental Health Perspectives, Vol. 75, pp 53-57, 1987

Funded By: MIT and Federal Government

Conclusion/Findings: Shows that aspartame can induce seizures

Hyperlink to Study:

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1474447/pdf/envhper00434-0053.pdf>

59. **Year Published:** 1991

Full Reference: Interspecies and Interstrain Studies on the Increased Susceptibility to Metrazol-Induced Convulsions in Animals given Aspartame, L. Diomede, M. Romano, et al, Milan, Italy, Food and Chemical Toxicology, Vol. 29, Issue 2, 1991; pp. 101-106

Funded By: Istituto di Richerche, Milan, Italy

Conclusion/Findings: Showed that they are more susceptible to convulsions when given higher doses of aspartame

Hyperlink to Study: <http://www.ncbi.nlm.nih.gov/pubmed/2010138>

Letters and Other Commentary from Health Sources

60. **Year Published:** 1995

Full Reference: Emerging Facts about Aspartame. Dr. J. Barua, Dr. A Bal. Journal of the Diabetic Association of India. 1995; Vol. 35, No. 4

Funded By: No funding

Conclusion/Findings: Cites numerous studies showing dangers of aspartame

Hyperlink to Study: <http://dorway.com/dorwblog/doctors-speak-out/emerging-facts-about-aspartame/>

61. **Year Published:** 2004

Full Reference: Aspartame: An FDA-Approved Epidemic, HJ Roberts, Palm Beach Institute for Medical Research.

Funded By: No funding

Conclusion/Findings: Cites thousands of consumer complaints to the FDA that include serious adverse events, that the FDA and CDC refused to acknowledge as substantive.

Hyperlink to Study: <http://www.aspartame.ca/epidemic-s3.pdf>

62. **Year Published:** 1991

Full Reference: Recurrent Vulvovaginitis Resulting from Heavy Dietary Use of Aspartame, Strathman I, The Journal of Reproductive Medicine. 1991 Aug;36(8):572

Funded By: No funding

Conclusion/Findings: (This is a letter; title implies that vulvovaginitis was triggered by heavy use of aspartame)

Hyperlink to Study: <http://www.ncbi.nlm.nih.gov/pubmed/1941798>

63. **Year Published:** 1985
Full Reference: Interaction of Aspartame and Carbohydrates in an Eating Disordered Patient. Ferguson A Jr. A Letter in the American Journal of Psychiatry. 1985, Feb. 142(2):271
Funded By: Not applicable
Conclusion/Findings: Reports a clinical case where aspartame combined with carbohydrates causes headaches and other symptoms typical of elevated CNS level of tyrosine.
Hyperlink to Study: <http://ajp.psychiatryonline.org/cgi/reprint/142/2/271a.pdf>
64. **Year Published:** 1995
Full Reference: A Health Alert: Emerging Facts About Aspartame, Dr. J Barua, Dr. A Bal, The Journal of the Diabetic Association of India, 1995: Vol. 35, No. 4
Funded By: No funding
Conclusion/Findings: This article summarizes a number of other people's studies on aspartame.
Hyperlink to Study: <http://smfi.is/media/misc/article-on-aspartame.pdf>
65. **Year Published:** 1996
Full Reference: Aspartame as a Cause of Allergic Reactions, Including Anaphylaxis, Archives of Internal Medicine, 1996; 156(9):1027
Funded By: Not known
Conclusion/Findings: Letter arguing that aspartame should have been included as a causative agent of allergic reactions. Cites FDA 7,300-person database of complaints.
Hyperlink to Study: <http://archinte.ama-assn.org/cgi/content/summary/156/9/1027-a>
66. **Year Published:** Updated April 23, 2008
Full Reference: Is Aspartame Safe? From an FDA Q&A about aspartame
Funded By: Not applicable
Conclusion/Findings: While denying that aspartame is an allergen, the FDA says: However, certain people with the genetic disease phenylketonuria (PKU), those with advanced liver disease, and pregnant women with hyperphenylalanine (high levels of phenylalanine in blood) have a problem with aspartame because they do not effectively metabolize the amino acid phenylalanine, one of aspartame's components. High levels of this amino acid in body fluids can cause brain damage. Therefore, FDA has ruled that all products containing aspartame must include a warning to phenylketonurics that the sweetener contains phenylalanine.
Hyperlink to Study: <http://answers.hhs.gov/questions/3011>
67. **Year published:**
Full reference: Scientific Abuse in Methanol/Formaldehyde Research Related to Aspartame
Funded by: no funding
Conclusion/Findings: Exposes studies "proving" safety of aspartame as deceptive, erroneous, and based on industry research using outdated plasma methanol measuring tests. No date of publication.
Hyperlink to Study:
<http://thetruthaboutstuff.com/pdf/%2847%29%20Scientific%20Abuse%20in%20Methanol.pdf>