

Formaldehyde from 11% methanol part of  
aspartame or from red wine  
causes same toxicity (hangover) harm:  
Murray 2006.04.12

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<http://groups.yahoo.com/group/aspartameNM/message/1307>

formaldehyde from 11% methanol part of aspartame or from red wine  
causes same toxicity (hangover) harm: Murray 2006.04.12

"Of course, everyone chooses, as a natural priority,  
to actively find, quickly share, and positively act upon the facts  
about healthy and safe food, drink, and environment."

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<http://groups.yahoo.com/group/aspartameNM/messages>

group with 151 members, 1,327 posts in a public, searchable archive

<http://RMForAll.blogspot.com> <http://AspartameNM.blogspot.com>

Dark wines and liquors, as well as aspartame, provide  
similar levels of methanol, above 120 mg daily, for  
long-term heavy users, 2 L daily, about 6 cans.

Within hours, methanol is inevitably largely turned into formaldehyde,  
and thence largely into formic acid -- the major causes of the dreaded  
symptoms of "next morning" hangover.

Fully 11% of aspartame is methanol -- 1,120 mg aspartame  
in 2 L diet soda, almost six 12-oz cans, gives 123 mg  
methanol (wood alcohol). If 30% of the methanol is turned  
into formaldehyde, the amount of formaldehyde, 37 mg,  
is 18.5 times the USA EPA limit for daily formaldehyde in  
drinking water, 2.0 mg in 2 L average daily drinking water.

<http://groups.yahoo.com/group/aspartameNM/message/1143>

methanol (formaldehyde, formic acid) disposition: Bouchard M  
et al, full plain text, 2001: substantial sources are  
degradation of fruit pectins, liquors, aspartame, smoke:

Murray 2005.04.02

Any unsuspected source of methanol, which the body always quickly and largely turns into formaldehyde and then formic acid, must be monitored, especially for high responsibility occupations, often with night shifts, such as pilots and nuclear reactor operators.

<http://groups.yahoo.com/group/aspartameNM/message/1291>

European Food Safety Authority to decide aspartame safety by May: caffeine diet drinks cause female hypertension, WC Winkelmayr et al, JAMA 2005.11.09: PubMed lists 50 items for "diet soft drinks" since 2004 Oct.: Murray 2006.01.24

<http://groups.yahoo.com/group/aspartameNM/message/1279>

all three aspartame metabolites harm human erythrocyte [red blood cell]

membrane enzyme activity, KH Schulpis et al, two studies in 2005, Athens, Greece, 2005.12.14: 2004 research review, RL Blaylock: Murray 2006.01.14

<http://groups.yahoo.com/group/aspartameNM/message/939>

aspartame (aspartic acid, phenylalanine) binding to DNA:

Karikas July 1998: Murray 2003.01.05 rmforall

Karikas GA, Schulpis KH, Reclos GJ, Kokotos G

Measurement of molecular interaction of aspartame and its metabolites with DNA. Clin Biochem 1998 Jul; 31(5): 405-7.

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<http://www.chem.uoa.gr> [gkokotos@atlas.uoa.gr](mailto:gkokotos@atlas.uoa.gr);

K.H. Schulpis [inchildh@otenet.gr](mailto:inchildh@otenet.gr); G.J. Reclos [reklos@otenet.gr](mailto:reklos@otenet.gr);

<http://groups.yahoo.com/group/aspartameNM/message/1271>

combining aspartame and quinoline yellow, or MSG and brilliant blue, harms nerve cells, eminent C. Vyvyan Howard et al, 2005 education.guardian.co.uk, Felicity Lawrence: Murray 2005.12.21

<http://groups.yahoo.com/group/aspartameNM/message/925>

aspartame puts formaldehyde adducts into tissues, Part 1/2

full text Trocho & Alemany 1998.06.26

Universitat Autònoma de Barcelona : Murray 2002.12.22

<http://groups.yahoo.com/group/aspartameNM/message/1250>

aspartame causes cancer in rats at levels approved for humans, Morando Soffritti et al, Ramazzini Foundation, Italy & National Toxicology Program

of National Institute of Environmental Health Sciences  
2005.11.17 Env. Health Pers. 35 pages: Murray

<http://groups.yahoo.com/group/aspartameNM/message/1106>

hangover research relevant to toxicity of 11% methanol in aspartame (formaldehyde, formic acid): Calder I (full text): Jones AW: Murray 2004.08.05 rmforall

Since no adequate data has ever been published on the exact disposition of toxic metabolites in specific tissues in humans of the 11% methanol component of aspartame, the many studies on morning-after hangover from the methanol impurity in alcohol drinks are the main available resource to date.

Jones AW (1987) found next-morning hangover from red wine with 100 to 150 mg methanol (9.5% w/v ethanol, 100 mg/l methanol, 0.01%, one part in ten thousand).

<http://groups.yahoo.com/group/aspartameNM/message/870>

Aspartame: Methanol and the Public Interest 1984: Monte: Murray 2002.09.23

Humans suffer "toxic syndrome" (54) at a minimum lethal dose of <1 gm/kg, much less than that of monkeys, 3-6 g/kg (42, 59).

The minimum lethal dose of methanol in the rat, rabbit, and dog is 9.5, 7.0 , and 8.0 g/kg, respectively (43); ethyl alcohol is more toxic than methanol to these test animals (43)."

<http://groups.yahoo.com/group/aspartameNM/message/1302>

The Lowdown on Sweet? (Ramazzini Foundation, M Soffritti proof that aspartame causes cancers), Melanie Warner, The New York Times: Murray 2006.02.12

<http://groups.yahoo.com/group/aspartameNM/message/1303>

David L. Katz MD comments briefly with Diane Sawyer on ABC Good Morning America re Ramazzini aspartame cancer study: excellent opus at Yale U: mainstream research on aspartame (methanol, formaldehyde, formic acid) toxicity: Murray 2006.02.14

<http://groups.yahoo.com/group/aspartameNM/message/1304>

to DL Katz MD, Yale U: M. Soffritti, Ramazzini F., did not mention that

humans are about 10X more vulnerable to aspartame than are rats:  
found methanol and formaldehyde carcinogenicity 2002: human ADI  
levels must be reduced hugely: Katz: Murray 2006.02.15

<http://groups.yahoo.com/group/aspartameNM/message/1306>

ban aspartame speech, Roger Williams MP, UK Parliament

2005.12.14: [www.TheyWorkForYou.com](http://www.TheyWorkForYou.com): Murray 2006.02.20

As a medical layman, I suggest that evidence mandates immediate exploration of the role of these ubiquitous, potent formaldehyde sources as co-factors in epidemiology, research, diagnosis, and treatment in a wide variety of disorders.

Folic acid, from fruits and vegetables, plays a role by powerfully protecting against methanol (formaldehyde) toxicity.

Many common drugs, such as aspirin, interfere with folic acid, as do some mutations in relevant enzymes.

The majority of aspartame reactors are female.

In mutual service, Rich Murray

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<http://groups.yahoo.com/group/aspartameNM/message/1315>

49% consumers want their local store to stock foods free of artificial sweeteners, Steve French, The Natural Marketing Institute, NMIolutions.com: NaturalProductsInsider.com: Murray 2006.03.07

" And consumers are more than eager to support alternative sugar substitutes, evidenced by the fact that over half of U.S. adults (58 percent) indicate using artificial sweeteners over the past year, a steady 25 percent increase in usage since 2002....

However, even with such high usage, half of consumers (55 percent) are concerned about the negative side effects of artificial sweeteners. About half of consumers (49 percent) even want their local store to stock foods that are free from artificial sweeteners, and a quarter (23 percent) prefer not to serve their family anything with artificial sweeteners.

Such dichotomies create challenges for companies throughout the supply chain.

Certain segments of consumers show even stronger conflicting

attitudes, creating even greater challenges for the food and sweetener industries.

For instance, over three-quarters (78 percent) of consumers who use organic foods/beverages on a daily basis are concerned about the negative side effects of artificial sweeteners, while just under three-quarters (73 percent) also desire foods with no sugar added.

While 73 percent of diabetics use artificial sweeteners for a diabetic diet, half (49 percent) are indeed concerned about the negative side effects. So what's a consumer to do? "

<http://www.naturalproductsinsider.com/articles/631feat05.html>

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Divergent Sweetener Attitudes Highlight Emerging Opportunities  
by Steve French

<http://groups.yahoo.com/group/aspartameNM/message/1312>

the beginning of the end? USA diet soda volume sales up only 0.4% last 52 weeks, after years of big jumps -- awareness of aspartame as toxic methanol, formaldehyde, formic acid source?:  
Melanie Warner, New York Times: Murray 2006.03.03

"After milk, eggs, bread and bananas, soda is the highest-volume item in grocery stores. In recent years, sales of regular soda have been declining, while sales of diet soda have boomed. But even more recently, diet soda sales have tapered off, with unit volumes up just 0.4 percent for the 52 weeks that ended Jan. 28, according to ACNielsen."

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<http://groups.yahoo.com/group/aspartameNM/message/1316>

PubMed abstract: aspartame (methanol becoming formaldehyde) causes many cancers in rats, Ramazzini Foundation, M Soffritti et al:  
Murray 2006.03.06

<http://www.ehponline.org/members/2005/8711/8711.html> free full text

Environ Health Perspect. 2006 Mar; 114(3): 379-85.

First experimental demonstration of the multipotential carcinogenic effects of aspartame administered in the feed to sprague-dawley rats.

Soffritti M, Belpoggi F, Esposti DD,

Lambertini L, Tibaldi E, Rigano A.

Cesare Maltoni Cancer Research Center, European Ramazzini

Foundation of Oncology and Environmental Sciences, Bologna, Italy.

The Cesare Maltoni Cancer Research Center of the European Ramazzini Foundation has conducted a long-term bioassay on aspartame (APM), a widely used artificial sweetener.

APM was administered with feed to 8-week-old Sprague-Dawley rats (100-150/sex/group), at concentrations of 100,000, 50,000, 10,000, 2,000, 400, 80, or 0 ppm.

The treatment lasted until natural death, at which time all deceased animals underwent complete necropsy.

Histopathologic evaluation of all pathologic lesions and of all organs and tissues collected was routinely performed on each animal of all experimental groups.

The results of the study show for the first time that APM, in our experimental conditions, causes

a) an increased incidence of malignant-tumor-bearing animals with a positive significant trend in males ( $p \leq 0.05$ ) and in females ( $p \leq 0.01$ ), in particular those females treated at 50,000 ppm ( $p \leq 0.01$ );

b) an increase in lymphomas and leukemias with a positive significant trend in both males ( $p \leq 0.05$ ) and females ( $p \leq 0.01$ ), in particular in females treated at doses of 100,000 ( $p \leq 0.01$ ), 50,000 ( $p \leq 0.01$ ), 10,000 ( $p \leq 0.05$ ), 2,000 ( $p \leq 0.05$ ), or 400 ppm ( $p \leq 0.01$ );

c) a statistically significant increased incidence, with a positive significant trend ( $p \leq 0.01$ ), of transitional cell carcinomas of the renal pelvis and ureter and their precursors (dysplasias) in females treated at

100,000 ( $p \leq 0.01$ ), 50,000 ( $p \leq 0.01$ ), 10,000 ( $p \leq 0.01$ ), 2,000 ( $p \leq 0.05$ ), or 400 ppm ( $p \leq 0.05$ );

and d) an increased incidence of malignant schwannomas of peripheral nerves with a positive trend ( $p \leq 0.05$ ) in males.

The results of this mega-experiment indicate that APM is a multipotential carcinogenic agent, even at a daily dose of 20 mg/kg body weight, much less than the current acceptable daily intake. [ 50 mg/kg bw ]

On the basis of these results, a reevaluation of the present guidelines on the use and consumption of APM is urgent and cannot be delayed.

Key words: artificial sweetener, aspartame, carcinogenicity, lymphomas, malignant schwannomas, rats, renal pelvis carcinomas.  
PMID: 16507461 Feb 24 2006 04:49:50

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We thank the U.S. National Toxicology Program for convening a group of pathologists at the National Institute of Environmental Health Sciences

to provide a second opinion for a set of malignant lesions and their precursors related to aspartame treatment, and for their help in statistical analysis.

We also thank all of the staff involved in the project.

This research was supported by the European Ramazzini Foundation of Oncology and Environmental Sciences.

The authors declare they have no competing financial interests.

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<http://www.ehponline.org/members/2005/8711/tab1.jpg>

[ transcribed to plain text ]

Table 1. Beverages and diet products studied at the CMCRC/ERF: status of studies.

Study-----	No. of bioassays	
---Products-----	Species-----	No. Study status
1 Water in polyvinyl chloride bottles-----	2 rat a-----	2,200 P b
2 Coca-Cola-----	4 rat a-----	1,999 RP
3 Pepsi Cola-----	1 rat-----	400 E
4 Ethyl alcohol-----	4 rat, mouse a-----	1,458 P c
5 Sucrose-----	1 rat-----	400 E
6 Aspartame (APM)-----	6 rat, mouse a-----	4,460 BO, PP d
7 Sucralose (Splenda)-----	1 mouse *-----	760 BO
8 Caffeine-----	1 rat-----	800 E
9 Vitamin A-----	5 rat-----	5,100 E
10 Vitamin C-----	5 rat-----	3,680 E
11 Vitamin E-----	5 rat-----	3,680 E
12 Feed sterilized by gamma radiation-----	1 rat a-----	2,000 E
Total-----	36-----	26,937

#### Abbreviations:

BO, biophase ongoing

E, in elaboration

P, published

PP, partially published

RP, ready for publication

a, treatment started from embryonic life

b, data from Maltoni et al. (1997)

c, data from Soffritti et al. (2002a)

d, data from Soffritti et al. (2005).

\*, data from Soffritti et al. (1992)



Investigations into the metabolism of APM have shown that, in rodents, nonhuman primates, and humans, it is metabolized in the gastrointestinal tract into three constituents -- aspartic acid, phenylalanine, and methanol -- which are absorbed into the systemic circulation (Ranney et al. 1976).

For each molecule of APM, one molecule of each constituent is produced.

After absorption, they are then used, metabolized, and/or excreted by the body following the same metabolic pathways as when consumed through the ordinary diet:

aspartate is transformed into alanine plus oxaloacetate (Stegink 1984);

phenylalanine is transformed mainly into tyrosine and, to a smaller extent, phenylethylamine and phenylpyruvate (Harper 1984);

and methanol is transformed into formaldehyde and then to formic acid (Opperman 1984).

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in order to provide a second opinion  
for a set of lesions of malignancies and their precursors  
related to the APM treatment, and for the help in statistical analysis.

<http://groups.yahoo.com/group/aspartameNM/message/1250>  
aspartame causes cancer in rats at levels approved for humans,  
Morando Soffritti et al, Ramazzini Foundation, Italy &  
National Toxicology Program of National Institute of Environmental  
Health Sciences 2005.11.17 Env. Health Pers. 35 pages: Murray

<http://groups.yahoo.com/group/aspartameNM/message/1226>  
USA National Institutes of Health National Toxicology  
Program aids eminent Ramazzini Foundation, Bologna, Italy,  
in more results on cancers in rats from lifetime low levels  
of aspartame (methanol, formaldehyde), Felicity Lawrence,  
[www.guardian.co.uk](http://www.guardian.co.uk): Murray 2005.09.30

<http://groups.yahoo.com/group/aspartameNM/message/1186>  
aspartame induces lymphomas and leukaemias in rats, full plain text,  
M Soffritti, F Belpoggi, DD Esposti, L Lambertini: Ramazzini  
Foundation study 2005.07.14: main results agree with their previous  
methanol and formaldehyde studies: Murray 2005.09.03

<http://groups.yahoo.com/group/aspartameNM/message/1189>  
Michael F Jacobson of CSPI now and in 1985 re aspartame  
toxicity, letter to FDA Commissioner Lester Crawford;  
California OEHHA aspartame critique 2004.03.12; Center for  
Consumer Freedom denounces CSPI: Murray 2005.07.27

<http://groups.yahoo.com/group/aspartameNM/message/1016>  
President Bush & formaldehyde (aspartame) toxicity:  
Ramazzini Foundation carcinogenicity results Dec 2002:  
Soffritti: Murray 2003.08.03 rmforall

p. 88 "The sweetening agent aspartame hydrolyzes in the  
gastrointestinal  
tract to become free methyl alcohol, which is metabolized in the liver

to formaldehyde, formic acid, and CO<sub>2</sub>. (11)"  
Medinsky MA & Dorman DC. 1994; Assessing risks of low-level  
methanol exposure. CIIT Act. 14: 1-7.

Ann N Y Acad Sci. 2002 Dec; 982: 87-105.  
Results of long-term experimental studies on the carcinogenicity of  
formaldehyde and acetaldehyde in rats.  
Soffritti M, Belpoggi F, Lambertin L,  
Lauriola M, Padovani M, Maltoni C.  
Cancer Research Center, European Ramazzini Foundation for Oncology  
and Environmental Sciences, Bologna, Italy. [crcfr@ramazzini.it](mailto:crcfr@ramazzini.it)  
Formaldehyde was administered for 104 weeks in drinking water  
supplied ad libitum at concentrations of  
1500, 1000, 500, 100, 50, 10, or 0 mg/L  
to groups of 50 male and 50 female Sprague-Dawley rats beginning at  
seven weeks of age.  
Control animals (100 males and 100 females) received tap water only.  
Acetaldehyde was administered to 50 male and 50 female  
Sprague-Dawley rats beginning at six weeks of age at concentrations  
of  
2,500, 1,500, 500, 250, 50, or 0 mg/L.  
Animals were kept under observation until spontaneous death.  
Formaldehyde and acetaldehyde were found to produce an increase  
in total malignant tumors in the treated groups  
and showed specific carcinogenic effects on various organs and  
tissues.  
PMID: 12562630

Ann N Y Acad Sci. 2002 Dec; 982: 46-69.

Results of long-term experimental studies on the carcinogenicity of  
methyl alcohol and ethyl alcohol in rats.  
Soffritti M, Belpoggi F, Cevolani D,  
Guarino M, Padovani M, Maltoni C.  
Cancer Research Center, European Ramazzini Foundation for Oncology  
and Environmental Sciences, Bologna, Italy. [crcfr@ramazzini.it](mailto:crcfr@ramazzini.it)  
Methyl alcohol was administered in drinking water  
supplied ad libitum at doses of  
20,000, 5,000, 500, or 0 ppm to groups of male and female  
Sprague-Dawley rats 8 weeks old at the start of the experiment.  
Animals were kept under observation until spontaneous death.  
Ethyl alcohol was administered by ingestion in drinking water at a  
concentration of 10% or 0% supplied ad libitum to groups of male and  
female Sprague-Dawley rats; breeders and offspring were included in

the experiment.

Treatment started at 39 weeks of age (breeders), 7 days before mating,

or from embryo life (offspring) and lasted until their spontaneous death.

Under tested experimental conditions, methyl alcohol and ethyl alcohol were demonstrated to be carcinogenic for various organs and tissues.

They must also be considered multipotential carcinogenic agents.

In addition to causing other tumors, ethyl alcohol induced malignant tumors of the oral cavity, tongue, and lips.

These sites have been shown to be target organs in man by epidemiologic studies.

Publication Types: Review Review, Tutorial PMID: 12562628

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