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Medical Homoeopathy ISBN (13) 9781874581901 medhom@winterpress.net

SOUTH DOWNS SCHOOL
OF HOMEOPATHY

PROVING OF ASPARTAME

July 2003

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BACKGROUND

This proving was carried out by students at the South Downs School of Homeopathy between January and April 2002. My thanks to the students for their commitment to the proving and diligence in carrying out their roles as provers and supervisors, in what was a very challenging and long last proving. My thanks also to Christian Taylor who did most of the work of writing up this proving, and Gill Bowden who did the research on the remedy substance.

WHY THIS PROVING?

I read a spate of articles in the press and on the Internet about the possible side effects of using this artificial sweetener in our diet obsessed world. It's use is very widespread in diet drinks and foods and I was curious to see first of all if the homeopathic proving mirrored the reported side effects of the material substance, and wondered if there might indeed be an Aspartame constitution or layer engrafted on those who ingested a lot of the substance either directly, or indirectly in the womb.

THE REMEDY

The remedy was made up by Helios Pharmacy. It is an entirely new remedy.

THE PROVERS

The proving was started in January 2002. It was conducted using the guidelines contained in "The Dynamics and Methodology of Homeopathic Provings" by Jeremy Sherr.

The provers were instructed to take up to a maximum of three doses, twice a day, for a maximum of two days and to stop as soon as symptoms appeared. There were seven provers:

Prover	Gender	Potency	Comments
1	Female	6c	
2	Female	Placebo	No symptoms reported
3	Female	30c	
4	Female	12c	
5	Female	12c	
6	Female	30c	
7	Female	6c	

Provers, supervisors and the proving coordinator did not know what potency they were being given. One dose of placebo was also included, and interestingly this proved reported next to no symptoms.

LAYOUT OF PROVING

The following text includes information on the substance itself and the proving symptoms grouped according to key themes using the provers' own language. No attempt is made to integrate this pure information or to suggest a material medica picture. A fuller synthesis suggesting a material medica picture is written separately and will be published in appropriate journals. Toxicological data on Aspartame has not been included at this stage in the repertorisation although it might be beneficial to add this in to expand the picture and suggest additional rubrics if time permits at a later stage. However due to the controversial and anecdotal nature of some of this information it could prove difficult to know what to include and what to exclude.

REPERTORISATION

All rubrics are from the Complete Repertory.

FEEDBACK

Please forward any more information, clinical experience or comments to Richard Bocock at richjb@blueyonder.co.uk

RICHARD BOCOCK
PROVING COORDINATOR

ASPARTAME

L-aspartyl-L-phenylalanyl methyl ester, also known as aspartame, NutraSweet, Equal, Candarel, Spoonful and E951 in Europe.

Chemical Structure

A white, crystalline, odourless powder.
Composed of two amino acids; aspartic acid (40%) and phenylalanine (50%), with a methyl ester bond (10% methanol)

Very stable in it's dry state[1]. At 105 centigrade a loss of approximately 5% (conversion to DKP) occurred after 100 hours of treatment. At 120 centigrade a 50% loss is obtained after 80 hours.

Degradation in solution depends on pH, buffer concentration and[2]. Decomposition products also vary depending on temperature, they are L-aspartic acid (Asp), L-aspartylphenylalanine (Asp-phe), L-Phenylalanine methyl ester (PME), L-phenylalanine (Phe), 3,6-Dioxo5-phenylmethylpiperazine acetic acid (DKP)[3] beta-aspartame [4]

In a buffer solution of phosphate citrate, the degradation is slightly slower at pH2 than at pH4. At between pH2 – 6 the major degradation product is L-Phenylalanine methyl ester[5], although it has previously been reported to be DKP[6]. When repeated at 25 centigrade the result remained that PME was the major product. At pH 7 to 10, the major product is DKP and at pH12 it is L-Aspartylphenylalanine (Asp-Phe) [7]

In solution at 30-80 centigrade it degrades into DKP[8], this leads to loss of sweetness and makes it unsuitable for use in cooking and other high temperature uses.
Breakdown of methyl part of aspartame in small intestine when encounters enzyme chymotrypsin. Absorption is speeded up with the ingestion of free methanol, which is created if aspartame is heated to 30 degrees c (86 Fahrenheit). Methanol is broken down to formaldehyde by alcohol dehydrogenase in the liver[9]. In turn this formaldehyde is converted to formic acid by aldehyde dehydrogenase in liver and by formaldehyde dehydrogenase in the blood.

Uses

Aspartame is classed as a non-nutritive sweetener (i.e. offers no nutritional energy) as its nutritional value is negligible at approx. 4 kcal/g from metabolisation of amino acids. It is high intensity sweetener, which is 160-220 times sweeter than sugar, thus requires little volume to produce sweetness.

It was approved by the FDA for dry use, chewing gum and carbonated drinks in 1981, and for general use in 1996. It is approved for use in over 100 countries, and by organisations such as the World Health Organisation, EC scientific Committee on Foods and the European Parliament. It is found in over 6000 products including puddings, frozen desserts, carbonated soft drinks (70% of demand), breath mints, vitamins and cold preparations. In most products it is combined with either sugar or saccharine, but the trend is towards it's use

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References

[1] O'Brien, Nabors & Gelandi 1991
[2] Hough et al, 1979, Holmer 1984, Prudel et al 1986, Bell & wetzel 1995
[3] Furda et al 1975, Tsang et al 1985, Prodolliet & Bruelhart 1993
[4] Lawrence 1987, Stamp 1989b
[5] Pattanaagson, Chuapradit& Sriskphonraruk, 2001
[6] Prodolliet & Bruelhart, 1993
[7] Pattanaagson, Chuapradit& Sriskphonraruk, 2001
[8] Pattanaargson et al 2000
[9]DHHS 1993a, Liesivuori 1991

as the sole sweetener in processed foods, for example Pepsi & Coca-Cola have announced that they will use only aspartame in their soft drinks.

World-wide sales of aspartame have risen from 72 million dollars in 1981 to 800 million dollars in 2001, with 50% of consumption being in the United States [10] Aspartame is marketed particularly at slimmers, due to it's low calorific value, and at diabetics as it is claimed to satisfy sugar cravings without affecting blood sugar levels and is recommended by the American Diabetic Association. It is claimed be free from any side-effects in the majority of people, though it must be used with care in those suffering from PKU, a rare genetic disorder (we will discuss later).

History

The history of aspartame is extremely controversial, with claim and counter-claim being made by the manufacturers and a number of, mainly, Internet sites as to the safety of aspartame. Each side argues the validity and objectivity of it's own research, and the inaccuracy and bias of the other side. It has been extensively tested but still doubts remain as to its safety, or otherwise.

Aspartame was discovered by James Schlatter, a chemist at G.D. Searle in 1965. While testing a peptic ulcer drug Schlatter spilt some on his fingers and, on licking it off, found the substance to be incredibly sweet. In 1967 G.D. Searle began the safety tests required by the FDA for approval of food additives. [11]Dr Harold Waisman, a biochemist at the University of Wisconsin, conducted safety tests on infant monkeys on behalf of GD Searle. Seven monkeys were fed aspartame mixed with milk, of these 1 died after 300 days and 5 had grand mal seizures [12]The results of this experiment were not submitted to FDA until 18th August 1985, 27 months after aspartame was approved for dry use. Searle maintained that it had been overlooked[13]

In November 1970 Cyclamate, the leading brand of low-calorie sweetener was withdrawn due to a suspected link with cancer. At the same time the safety of saccharine was being questioned, leaving the field open for a new sugar substitute.

In the Spring of 1971, the neuroscientist, Dr John Olney (whose work on the effects of Monosodium glutamate resulted in it being removed from baby foods) informed GD Searle that his studies had revealed that aspartic acid caused holes in the brains of baby mice. These results were replicated by one of Searle's own researchers in a similar study.
Searle applied for FDA approval in February 1973, submitting more than 100 studies to support its claims that aspartame is safe. The FDA reviewed this data but on the 5th of March 1973 stated that "the information provided (by Searle) is inadequate to permit an evaluation of the potential toxicity of aspartame" and calls for further clinical tests. However, on the 26th July 1974 the FDA granted first approval for use in dry goods. In August Jim Turner & Dr. John Olney filed first objections to aspartame approval on safety ground, and in December 1975 the FDA stayed approval until Searle's safety studies could be audited [14]
The Turner & Olney petition triggered a FDA investigation in March 1976, looking at the laboratory practices at GD Searle. The investigation found Searle's testing procedures shoddy, inaccurate and with "manipulated" test results ([15]). On the 10th January 1976, the FDA formally requested that US attorneys office to begin grand jury proceedings to investigate whether indictments should be filed against Searle for "concealing material facts and making false statements" in aspartame safety tests. With grand jury proceedings underway Sidley & Austin, the law firm representing G.D. Searle, begin job negotiations with U.S. attorney in charge of the investigation, Samuel Skinner on the 26th of January 1977. It is worth noting that Skinner's wife already worked for Sidley & Austin. Sam Skinner left the District attorney's Office to take up his new position on the 1st of July 1977; he later went on to be the White House Chief of Staff under George Bush. It is claimed that Skinner's resignation and subsequent departure led to the drawing out of the case until, on the 8th December 1977, the statute of limitations on aspartame charges runs out and the grand jury investigation is dropped.

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[10]S. Bizzari, M. Jackel, Y. Yoshida. High Intensity Sweeteners. In: Chemical Economics Handbook. Menlo Park, California, SRI Consulting 1996
[11] www.swankin–turner.com/hist
[12] www.swankin–turner.com/hist
[13] www.psrat.org/aspartame
[14] 40. Fed.Reg. 56907 – Dec.5, 1975
[15] www.swankin-turner.com/hist

In the meantime, GD Searle hire prominent Washington insider, Donald Rumsfeld as CEO in an attempt to turn the company around. Then, on the 1st August 1977, The Bressler Report, compiled by FDA investigators and headed by Jerome Bressler, is released. It finds that in one report 98 of the 196 animals died during one of Searle's studies but weren't autopsied until up to a year after death. Many other inconsistencies are found, including one rat being reported as dead, then alive, then dead again, and a mass, a uterine polyp and ovarian neoplasms were found in the animals but not reported by Searle. On 1st June 1979 The FDA established a Public Board of Enquiry with a remit to rule on the safety issues surrounding aspartame. The panellists were Peter Lampert, Professor & Chairman of the Department of Pathology at the University of California, Vernon Young, PhD of the University of Nutritional Biochemistry at MIT, and Walle Nauta, MD, PhD, Institute Professor of the Department of Psychology at MIT. Dr Olney objected to Dr Young's appointment as he suggested that Young was unqualified in neuropathology and would therefore be unable review aspartic acid's neurotoxicity. However his objections were overruled and the panel was maintained. The panel were told to assess the safety of aspartame only in dry goods, Dr Nauta has stated that he would "definitely" have considered other tests and factors if he had known that aspartame was planned for use in soft drinks [16]. The PBOI concluded unanimously, in September 1980 approval should not be given until further investigation had taken place into possible brain tumours in animals. The board states that it " has not been presented with proof of reasonable certainty that aspartame is safe for use as a food additive".
However on the 21st January 1981, Ronald Reagan was sworn in as the new President of USA. Reagan's transition team, including Donald Rumsfeld (CEO of GD Searle), handpicked Dr Arthur Hull Hayes to be new FDA commissioner. In March 1981an FDA commissioner's panel was established to review issues raised by PBOI. This panel (consisting of Dr Robert Condon, Dr Satya Dubey & Dr Douglas Park, 3 of the 6 in-house FDA scientists) advised against approval of aspartame, stating that the Searle tests are unreliable and not adequate to determine approval[17]. On the 1st July 1981 Dr Hayes, the new FDA commissioner, ignored the PBOI and the recommendation of his internal FDA team, and approved aspartame for dry use. Hayes stated that aspartame has been shown to be safe for it's intended use and says that few compounds have withstood such thorough testing and repeated close scrutiny. This conclusion was based on a Japanese report that the other PBOI panellists had not had access to. The PBOI chairman, Dr Nauta later wrote to Dr Hays that if the panel had had access to this information they would have given aspartame "unqualified approval"[18]

On the 15th October 1982, the FDA [19]announced that Searle has applied for approval as a sweetener in carbonated drinks, other liquids, and children's vitamins. This was followed on the 1st July 1983 by a request by the National Soft Drink Association (NSDA) to the FDA to delay approval pending further testing, as aspartame is very unstable in liquid form. When liquid aspartame is stored at 85 degrees + it breaks down into DKP and formaldehyde, both known toxins. When FDA approval is granted on the 8th July 1983, the NSDA files an objection and requests a hearing, stating that Searle has not provided "responsible certainty" that aspartame and it's degradation products are safe for use in soft drinks.

On the 8th August 1983 Jim Turner of Community Nutrition Institute and Dr. Woodrow Monte, Director of Food Science and Nutritional Laboratories at Arizona State University, filed suit with the FDA objecting to approval on the grounds of unresolved safety issues. This is denied by the FDA[20] In September 1983 the FDA commissioner Hayes resigns under a cloud of controversy about his taking unauthorised rides in the private jet belonging to General Foods, a major customer of NutraSweet. Burson-Marsteller, Searle's PR firm immediately hired Hayes as a senior scientific consultant.

Further objections to the use of aspartame in soft drinks are filed by the Arizona Dietetic Association, the Central Arizona Dietetic Association on the 9th December 1983, as is a supplement to Dr Woodrow Monte's previous objection. The objections are denied by the FDA in February 1984 on the grounds that they fail to raise any genuine or substantial issue of fact [21]

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16 Graves 1984, S5503 of Congressional Record 1985a
17 www.swankin-turner.com/hist
18 www.fda.gov/bbs/topics/answers/ans00772.html)
19 Gordon, 1987 page 499 of US Senate 1987
20 48 Fed.Reg 52899, Nov 16th, 1983.
21 49 Fed Reg. 6672, Feb 17th, 1984

In 1984, it is claimed that the FDA told it's regional offices not to report aspartame toxicity to its Washington D.C. headquarters [22]. These claims are repeated on the 3rd November 1987, when James Turner of the Community Nutrition Institute gave testimony to the U.S. Committee on Labour & Human Resources that the FDA redirected calls regarding aspartame reactions to the AIDS Hotline.

1985 was a mixed year for G.D.Searle, with the company being bought by Monsanto and a number of further reviews into aspartame safety. The FDA's review but failed to find a consistent pattern of symptoms.[23], and The Council of Scientific Affairs of American Medical Association stated "Available evidence suggests that consumption of aspartame is safe and not associated with serious adverse health effects". However, in March in Congressional Record, Dr Wurtman, MIT stated, "Aspartame has been demonstrated to inhibit the carbohydrate induced synthesis of the neurotransmitter serotonin. Serotonin blunts the sensation of craving carbohydrates and this is part of the body's feedback system that helps limit consumption to appropriate levels. Its' inhibition by aspartame could lead to anomalous result of a diet product causing increased consumption of carbohydrates"
In 1996 the FDA granted approval for aspartame to be used in all food & beverages. In order to do this without public notification, the FDA would have to show that they are receiving fewer complaints. The FDA told the Wall Street Journal that they have had only 11 complaints, however it is claimed that the FDA will not accept any complaints regarding aspartame at all (see 1984, 1987).[24]).

In October 2000 Food Advisory Committee in the UK puts aspartame on agenda for discussion; 500 papers were sent to EC Scientific Committee on Food with a suggestion that this is a sufficient number to review. Review expected early 2002.[25](However information is not available at this time). In the same year Monsanto sold all of its aspartame units to an investor group, NutraSweet Co.

Safety & Health Issues

Acceptable Daily Intake set at 40mg/kg body weight/day by WHO committee of Experts on food additives (JECFA), 1980
Underestimated - FDA assessed at 34mg/kg/day intake – a 30kg child drinks 2/3 of a 2 litre bottle of diet coke on a hot day = 23mg/kg (99th centile) – add one of 6000 other aspartame containing products -> excess of FDA "loading dose" [26]o funded trade organisations such as the American Diabetic Association and the American Dietetic Association [27]. (However it is claimed that these agencies are funded by NutraSweet [28]
Amino acids and methyl esters found naturally occurring in meats, milk, fruit & veg – body handles them like those found in food daily[29]
Thoroughly tested[30]) – 74 tests submitted to FDA by GD Searle, no problems but 90 independent studies, 83 problems (www.cfs-recovery.org)

Aspartic Acid
Aspartic acid makes up 40% volume by weight of aspartame. It is claimed that reports of brain damage is built on faulty premise that large amounts of aspartame leads to a build-up of aspartic acid in the blood, which circulates to brain & kills nerve cells by over stimulation. NutraSweet claim that due to the nature of the aspartic acid transport system it doesn't cause any neurotoxilogical effects as, it does not cross the blood-brain barrier and therefore doesn't accumulate in the brain [31]. However Ketchner & Hollenbeck (1991) stated that, although this is normally true, at high doses it can cross into the brain, where it acts as an excitatory

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22 CNI 1984. Letter from Rodney E.Leonard & James S. Turner of Community Nutrition Institute to Dr Frank E. Young, Commissioner of FDA. Reprinted in congressional record 1985b, page S10841
23 www.foodstandards.gov.uk.,
24 www.dorway.com/betty/olney.html
25 www.foodstandards.gov.uk
26 (congressional record, may 7th 1985, pages s5511)
27 www.spunk.org/library/food/sp001157.txt
28 www.dorway.com/betty/olney.html.
29 www.nutrasweet.com
30 www.aspartame-info.com
31 Maher TJ, 1986 "neurotoxicology of food additives", Neurotoxicology, 7(2), 183-196

neurotransmitter and, potentially cause brain damage[32]. High levels of aspartic acid in its unbound form significantly raise blood plasma level of the neurotransmitter, Aspartate. Excess levels of aspartame allow the influx of too much calcium into the cells, which, in turn triggers excess free radicals that kill the cells. Again, the point is made that some parts of the brain are not protected by the blood-brain barrier.[33]
As aspartame has very similar characteristics to Glutamate (as in Monosodium Glutamate), researchers looked into the effects of combined levels of aspartame and MSG. According to Stegink et al (1980) [34]a 200mg/kg body weight dose of aspartame was given resulting in a peak of combined plasma levels of 7mM/100mL. This level is only 1/20th of that necessary to produce brain damage in infant mice[35] [36]. NutraSweet also state that aspartic acid is eliminated through the lungs as CO2 and that even large amounts of aspartame over a long period do not result in large levels of aspartic acid [37], as shown by Stegink (1984) which showed no significant increase in plasma levels of aspartic acid following an orally administered dose of 34mg/kg of body weight of aspartame.[38]

Brain Lesions/Tumours
Aspartame doesn't enter blood stream so can't travel to essential organs; it is broken down into aspartic acid, phenylalanine & methanol. American Cancer Society, FDA, National Cancer Association (www.nutrasweet.com)
Brain tumour rates in US risen 17% between 1975 and 1992, in two distinct phases. First in mid-70's, explained by new diagnostic methods. Second 1984, 10% higher rate which has persisted to present. Possibility that is due to aspartame consumption. Not enough evidence exists to prove link, further research needed. Potential risk low as total number of people affected is low. New study shows sudden 10% increase in malignancy and incidence starting 3 years after aspartame introduced. Rise didn't continue, stabilised if larger % of the population not exposed would explain why rates didn't continue to rise. Olney fed to immature rats and found that it destroyed nerve cells in the brain (www.dorway.com/betty/olneyup1). However Olney's research ahs been criticised by a number of scientists (Levy PS, Hedeker D, 1996 "Statistical and epidemiological treatment of SEER incidence data"; J. Neurpathol. Exp. Neurol.; 55(12),1280)(Linet MS, Ries LA, Smith MA, Tarone RE, Devesa SS, 1999 "Cancer Surveillance series: recent trends in childhood cancer incidence and mortality in the United States: J. Natl. cancer Inst.: 91(16), 1382-1390)(Ross JA, 1998 "Brain Tumours and artificial sweeteners? Lesson on not getting soured on epidemiology, Med. Pediatr. Oncol., 30(1), 7-8)(Seife C., 1999 "Increasing Brain tumour rates: is there a link to deficit spending? J. Neuropathol. Exp. Neurol.; 58(4), 404-405) who claim that the conclusions do no stand if all the data between 1975 and 1992 is taken into account. The frequency did rise from 1975 until the mid-80's and then stabilised, no relationship is given between the exposure of the population to aspartame and the frequency of brain tumours. An increase may be due to a number of factors including better diagnostic methods[39]
DKP (a breakdown product) is brain tumour agent. Dr Adrian Gross (1985), the late FDA toxicologist said "In view of all the indications that the cancer causing potential of aspartame is a matter that has been established way beyond reasonable doubt, one can ask: what is the reason for the apparent refusal of the FDA to invoke the food additive the Delaney Amendment to the Food and Drug and Cosmetic Act? Is it not clear beyond any shadow of a doubt that aspartame has caused brain tumours or brain cancer in animals, is it not sufficient to satisfy the provisions of that particular section of the law?"(www.dorway.com/betty/olney).

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[32] Kretchner N, Hollenbeck CB, 1991 "Sugars and Sweeteners", Boca Raton, CRC Press, p. 151-167, 232-237
[33] (Baurua J, Bal A, 1995 "Journal of the Diabetic association of India"; volume 35, no.4 @ www.awod.com/gallery/probono/dorway/barua)

[34] Stegink LD, Filer LJ Jnr, 1980, "Effect of an abuse dose of aspartame upon plasma and erthyrocyte amino acid levels of amino acids in phenylketonuric Heterozygous and Normal Adult Subjects", Journal of Nutrition Volume 110, p.2216
[35] Kretchner N, Hollenbeck CB, 1991 "Sugars and Sweeteners", Boca Raton, CRC Press, p. 151-167, 232-237
[36] www.elvis.engr.wisc.edu/uer/uer98/author2/content
[37] www.nutrasweet.com
[38] Stegink LD, 1984 "Aspartame Metabolism in humans: acute dosing studies. In aspartame: Physiology and Biochemistry, Stegink LD, Filer L (eds.), Marcel Dekker, New York,509-553)
[39] Modan B, Wagener DK, Feldman JJ, Rosenberg HM, Feinlieb M, 1992"Increased mortality from brain tumours: a combined outcome of diagnostic technology and change of attitude towards the elderly" American Journal of Epidemiology; 135, 1349-1357.

It is physiologically impossible for aspartame to be carcinogenic – digested in GI tract to small amounts of amino acid, aspartic acid and phenylalanine, all of which present in larger amounts in common food – aspartame never enters bloodstream – no analysis as to whether brain tumour patients ingested aspartame – brain tumour rates increasing in those age 70+, most aspartame users young-middle-aged – exclusion of data points 1973/4; would show that rate of increase higher pre-aspartame than post – no correlation between plotted line for cancer incidence and aspartame use (www.nutrasweet.com/infocenter/medialib/statements/nutrasweetstatement.asp)

Depression

In a study of 13 depression patients, Walton [40] concluded that administration of 30mg/kg/day for 7 days caused severe side effects, including nervousness, trouble remembering, nausea, depression and malaise and as such depressive patients should avoid aspartame. However 5 non-depressive patients did not show enough difference between placebo and aspartame to be significant. Walton's earlier report in 1986 [41] reported a case of epileptic seizure and serious behavioural problems in a woman being treated with anti-depressants who consumed large quantities of tea containing aspartame. ([42]

Walton states, "When aspartame is ingested with a carbohydrate rich meal the usual physiologic increase in tryptophan is blocked while brain levels of phenylalanine and tyrosine are increased. These changes in amino acid neurotransmitter precursors could, I believe, alter indoleamine /catecholamine balance, and thus have a profound effect on mood and cognition…depressed mood, anxiety, dizziness, panic attacks, nausea, irritability, impairment and concentration"

Decreased serotonin levels in brain are also thought to cause altered mind state resulting in insomnia, depression, anxiety, panic attacks, hallucinations, suicide attempts, hostility and psychopathic states [43]

Diabetes

Beneficial to insulin dependent diabetics as satisfies sweet cravings without affecting blood sugar ([44])

American Diabetic association approves aspartame in moderation for diabetics, increases dietary choice – doesn't affect long or short term blood sugar levels ([45].

Diketopiperazine (DKP) Toxicity

According to JECFA (1980)[46], the daily acceptable intake of DKP has been established at 7.5mg/kg body weight, this is based on a level of 750mg/kg as established through long-term study on rats divided by safety factor of 100 [47].

In solution, when stored at temperatures ranging from 30-80 degrees[48]. Or at pH 5 and above aspartame is progressively degraded into DKP. As not all solutions are pH neutral (e.g. Water =pH7) and aspartame is often used in non-ideal conditions, e.g. in hot tea and coffee, increasing the breakdown of aspartame into DKP, stability in solution is an area that requires further study [49]. Soft drinks are mainly acidic (pH<7) and are therefore suitable for aspartame use, however high levels of DKP may be produced if they are stored for long periods (in excess of 260 days) or exposed to high temperatures (in excess of 30 degrees).

In Olney's research on brain tumours it was reported that when DKP is nitrosated in the gut it produces a compound similar to N-nitrosourea, a brain tumour causing chemical.

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[40] Walton RG, Hudak R, Green-Waite RJ, 1993 "Adverse reactions to aspartame: double blind challenge in patients from a vulnerable population" Biol. Psychiatry:34(1-2), 13-17 – (N.B. available on www.mindfully.org/health/aspartame-adverse-reactions-1993.htm)

[41] Walton RG, 1986 "seizure and mania after high intake of aspartame" psychosomatics:27(3)218,220

[42] www.afssa.fr/ftp/basedoc/aspartamgb.pdf

[43] (Roberts HJ, "Aspartame Disease: An ignored epidemic)

[44] www.nutrasweet.com

[45] www.nutrasweet.com

[46] JECFA,1980 "Toxicological evaluation of certain food additives: aspartame" WHO food additive series No.15, Report series No.653

[47] www.afssa.fr/ftp/basedoc/aspartamgb.pdf

[48] Pattanaargson S., Sanchavanakit C, 2000 "Aspartame degradation study using electrospray ionisation mass spectrometry" Rapid Commun. Mass spectrom.; 14(11), 987-93

[49] www.elvis.engr.wisc.eu/uer/uer98/author2/content

Also, according to Verrett, an FDA toxicologist, it is implicated in uterine polyps and changes in blood cholesterol. [50]

Formaldehyde Toxicity

Formaldehyde accumulates in body with repeated ingestion, causing immune system & nervous system changes, headaches, poor general health, genetic damage and a number of other health problems [515253]. Wantke 1996, showed chronic exposure to formaldehyde caused systemic health problems in children at air concentration of only 0.043 – 0.070 parts per million.[54]

Gradual damage to nervous system, immune system, irreversible genetic damage at low-level long term use. Causes retina damage, interferes with DNA replication, causes birth defects [55] Stored in fat cells, swelling of optic nerve & degeneration of ganglion cells in retina

Headaches

28.7% of reported aspartame toxicity to U.S. Food and drug administration Adverse Reaction Monitoring System[56] Schiffman –Duke University, funded by NutraSweet, 30mg/kg body weight (equivalent 10 soft drinks for 70kg/154lb body weight) = no difference in subjective complaints asp v. placebo, placebo group complained of more headaches, statistically significant study[57])[58]). A small double-blind study over 4 weeks showed increase in frequency of headaches after ingestion of 1200mg/d[5960])

Van Eeden, 1994 – 30mg/kg in subjects sure that aspartame caused their headaches – statistically significant study – result; aspartame causes headaches in small number of people aster long term large quantity use[61])

Koehler (1988) carried out a double-blind study on patients with medical diagnosis of migraine. After a period of tracking their headaches and diets, a dose of 330mg where given 4 times/day for four weeks. The placebo group had no increase over their baseline level of headaches, whilst approximately half of the subject group had a large increase in numbers of headaches [62]

Hyperactivity/ADHD

Several studies have shown no relationship between aggressive and hyperactive behaviours, thus children with ADHD needn't avoid aspartame[63])[64]([65]

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[50] Testimony of Dr Jacqueline Verrett, FDA toxicologist before the senate Committee on labour & Human Resources, November 1987)

[51] Fujimaki, H., et al 1992 – " Mast cell response to formaldehyde", International Archives of Allergy & Immunology, Volume 98, No.4, page 324-331

[52] He, LJ, Jin LF, Jin HY, 1998 " Detection of cytogenetic effects in Peripheral Lymphocytes of Students exposed to formaldehyde with Cytokinesis-Blocked Micronucleus Assay" Biomedical Environmental Science, Volume 11, No.1, pages 87-92

[53] John EM et al., 1994 – "Spontaneous abortions amongst Cosmetologists", Epidemiology, Volume 5, No.2, page 147-155

[54] www.psrast.org/aspartame

[55] (US Court of Appeals for the District of Columbia Circuit, no.84-1153 Community Nutrition Institute & Dr Woodrow Monte, Dr Mark Novich, acting Commissioner, US FDA (9/24/85)

[56] DHHS 1997 "Summary of Adverse Reactions attributed to Aspartame (1980-1996)"Memorandum from DHHS Technical Information Specialist (HFS-728) to Health Hazard Evaluation Board on June 26, 1997

[57] Schiffman S, 1987, "Aspartame Susceptibility to headache", New England Journal of Medicine

[58] www.aspartametruth.freeservers.com

[59] Koehler SM, Glaros A, 1988 "The effect of aspartame on migraine headache"- New England Journal of Medicine 1987;317;1181-1185

[60] www.aap.org/policy/re9706

[61] www.aspartametruth.freeservers.com

[62] Koehler SM, Glaros A,1988 "The Effect of Aspartame on Migraine Headache", Headache, Volume 28,p10-14

[63] Kruesi MJ, Rapoport JL, Cummings EM et al.,1987 – "Effects of sugar and aspartame on aggression and activity in children", American Journal of Psychiatry; 144:1487-1490

Magnesium

Magnesium deficiency causes a number of symptoms ranging from high blood pressure, irregular heartbeat, cramps, cold hands and feet and increased risk of heart attack and stroke[66]. According to Kovatsi & Tsouggas (2001)[67]aspartame ingestion leads to imbalance in magnesium levels in the body, with accumulation occurring in some organs and tissues (heart, kidneys, lungs, adrenals, hair and blood) and deprivation in others, such as the liver and testes. Aspartame use also decreases the concentration of magnesium in both urine and faeces, thus affecting excretion levels from the body.[68]

Methanol toxicity

Methanol accounts for 10% of aspartame by weight. Metabolised into formaldehyde, formic acid and CO2. 1 litre of diet drink produces approx. 48mg of methanol whereas a litre of fruit juice contains approx. 20-280mg of methanol.
Small amounts of methanol are produced when aspartame is ingested (also in fruit, veg & juice; 1 cup of tomato juice contains 6x more methanol than 1 cup of aspartame sweetened soft drink) – needs 240-600 litres (675 – 1690 cans to produce toxic levels[69])
Methanol, wood alcohol is toxin – methanol = formic acid +formaldehyde – formaldehyde is neurotoxin - EPA assessment; "methanol is a cumulative poison due to low rate of excretion once it is absorbed" – recommended max = 7.8mg/day – 1 litre of aspartame drink provides 56mg of methanol (www.dorway.com) – all natural sources of methanol also provide ethanol, the antidote to methanol toxicity (www.dorway.com) – formic acid slowly accumulates in body, inhibits oxygen metabolism (www.dorway.com
Ethanol, natural antidote to methanol, found in natural food at concentrations 5 to 500,000 times that of aspartame [70]
Trocho et al., 1998, Life Sci, 63(5), 337-349 – Radioactive tracer study – 10mg/kg given to rats, who have greater aspartame tolerance than humans (Roe 1982; methanol is 10x more acutely toxic in rats than humans) equivalent to 1 or 2 mg/kg – aspartame leads causes binding of formaldehyde into tissues forming adducts with DNA in brain, liver & retina cells ([7172]. This leads to the conclusion that repeated ingestion may lead to problems with toxicity and carcinogenicity over the longer term. Criticisms levied at this report are that high doses have not lead to liver cancer in rats, and that Trocho did not identify the radioactivity found in the proteins and DNA [73]

Parkinson's Disease
Mission Impossible International & Aspartame Consumer Safety Network, FDA have received numerous reports of aspartame worsening Parkinson's[74]– possibly due to effects of excitotoxins in combination with

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[64] Shaywitz BA, Sullivan CM, Anderson GM, Gillespie SM, Sullivan B, Shaywitz SE, 1994 "Aspartame, Behaviour and cognitive function in children with attention deficit disorder", Pediatrics;93;70-75
[65] www.aap.org/policy/re9706
[66] James B. Pierce, Ph.D., "Heart Healthy Magnesium; your nutritional key to cardiovascular wellness
[67] Kovatsi L, Tsouggas M "The effect of oral aspartame administration on the balance of magnesium in the rat" Magnes Res., September 2001; 14(3):189-94
[68] www.alkalizeforhealth.net/lsweetdebate24
[69] www.nutrasweet.com
[70] Monte WC, 1984 "Aspartame: Methanol, and the Public Health", Journal of Applied Nutrition, vol.36 (1); 42-54
[71] www.presidiotex.com/barcelona/index.html
[72] www.alkalizeforhealth.net/Lsweetdebate10.html
[73] Tephly TR, 1999 "Comments on the purported generation of formaldehyde and adduct formation from the sweetener aspartame", life sci.:65(13), 157-60
[74] Stoddard, Mary Nash of Consumer Safety Network, 1995

formaldehyde metabolite – excitotoxins implicated in development & worsening of Parkinson's symptoms[75]– alt. theory by Pardridge, (1986) free-form (i.e. unbound to protein) phenylalanine is absorbed quickly and can spike levels of aspartame in the blood[76])([77])([78]). This sudden rise in phenylalanine levels interferes with L-DOPA used to treat Parkinson's patients [79]
Karstaedt 1993 states, " Aspartame consumption in amounts well in excess of what is consumed by heavy users of aspartame-sweetened products has no effect on PD (Parkinson's Disease) patients" [80]Criticisms of this research: 1. Study only lasted 1 day. Neurological effects of aspartame use usually take middle to long-term use to appear in patients[8182]2. Aspartame was given in capsules, which has been proven to eliminate sudden absorption of aspartame breakdown products)[83] Since the experiment was designed to test whether the spike of phenylalanine effected Parkinson's patients, it was necessary that this spike occurred not eliminated.
3. The claimed "high dose" of aspartame given was 20 – 40% of the FDA acceptable daily level of 50mg/kg/day. The estimation was based on projected of aspartame intake published shortly after aspartame was licensed for use in carbonated beverages [84]
[85]

Phenylalanine / Phenylketonuria (PKU)
Phenylalanine makes up 50% by weight of aspartame. It is claimed that although some phenylalanine is excreted as CO2, most is incorporated into the pool of amino acids where it is used for protein synthesis
However the adverse neurological effects of aspartame may be due to phenylalanine. The ability of phenylalanine to reach brain differs depending on whether it originates from aspartame or from dietary sources[8687] .In aspartame the phenylalanine is in free-form, i.e. not bound to protein, it is absorbed quickly and can spike blood plasma levels of phenylalanine[888990]. This rush does not occur when ingesting food as protein is

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[75] Blaylock, R "Excitotoxins: The taste that kills", 1994, Choi, D. "Amyotrophic Lateral sclerosis and Glutamate – Too much of a good thing", 1992,Kurland, L.T. "Amyotrophic Lateral Sclerosis and Parkinson's Disease Complex on Guam Linked to an Environmental neurotoxin", Trends in Neuroscience, Volume 11, p51-54, 1988
[76] Cabarello, B et al "Plasma Amino Acid Levels After single dose aspartame consumption in Phenylketonuria , milk hyperphenylalaninemia and Heterozygous State for Phenylketonuria", Journal of Paediatrics, volume 190, No.4 p. 668-671, 1986
[77] Matalon, R et al "aspartame Consumption in Normal Individuals and Carriers for Phenylketonuria, presented at "Dietary phenylalanine and Brain function, 1987 and reprinted in "Dietary Phenylalanine and Brain Function", 1988, Birkhauser, Boston, MA, USA, p 41-52
[78] Stegink, LD et al "Plasma Amino Acid Concentrations in Normal Adults Administered Aspartame in Capsules or Solution: Lack of Bioequivalence" Metabolism, volume 36, No.5, p 507 – 512
[79] Pardridge, WM "Potential Effects of the Dipeptide sweetener Aspartame on the Brain", "Nutrition and the Brain, volume 7"edited by R.J.Wurtman and J.J. Wurtman, raven Press, NY, 1986 p. 199-241
[80] Karstaedt, P, Pincus J, "Aspartame Use in Parkinson's Disease", Neurology, Volume 43, p 611 – 613
[81] CDC "Evaluation of consumer Complaints Related to Aspartame Use", Division of Nutrition, Centre for Health Promotion and Education, centres for Disease Control , Atlanta, GA 30333, November 1984
[82] Roberts HJ "Reactions attributed to aspartame-Containing Products: 551 Cases", Journal of Applied Nutrition, Volume 40, page 85-94, 1988
[83] Stegink, LD et al "Plasma Amino Acid Concentrations in Normal Adults Administered Aspartame in Capsules or Solution: Lack of Bioequivalence" Metabolism, volume 36, No.5, p 507 – 512.
[84] Roak Foltz R., Leveille G. "Projected Aspartame Intake: Daily Ingestion of Aspartic Acid, Phenylalanine and Methanol" in Stegink, L., Filer, L., 1984 "Aspartame: Physiology & Biochemistry", Marcel Dekker Inc., NY
[85] www.holisticmed.com/aspartame/abuse/parkinson.html
[86] Maher TJ, 1986 2Neurotoxicology of food Additives", Neurotoxicology, 1986, 7(2), 183-196
[87] Maher TJ, Wurtman RJ,1987 "Possible Neurological effects of aspartame, a widely used food additive". Environ. Health Perspect., 75;53-57
[88] Cabarello 1986

broken down slowly and phenylalanine is absorbed gradually, however according to Wurtman and Walker ingesting aspartame with carbohydrates can lead to excess levels of phenylalanine in brain [91]. Nor does this rush occur when aspartame is ingested in capsule form.[92] . With aspartame consumption there may be a competition with other amino acids at the blood-brain barrier, thus aspartame ingestion may lead to higher than normal levels in the brain (unless consumed with food). This is supported by Wurtman's (1985) findings that increased phenylalanine in the brain may affect synthesis of catecholamines or serotonin, causing convulsions [93] [94]. This may cause special problems for those suffering from PKU or epilepsy.

PKU, is a rare genetic disorder, which prevents phenylalanine being metabolised, allowing it to build up to harmful levels in the blood. It is an inherited condition that occurs in 1 in 15,000 babies. A programme of screening at birth allows early detection and the baby is put on a restricted diet in order to control the condition. There are two types of PKU:

1. Homozygous PKU, that is genes inherited from both parents leads to irreversible mental retardation within the first few months of life if undetected.
2. Heterozygous PKU is derived from only one parent. They show no signs of PKU but metabolise phenylalanine at 50% if the rate of 'normal' human beings. In the Kretchmer & Hollenbeck (1991) study, 12 normal men & woman and 8 heterozygous women were given 34mg/kg of aspartame in one serving after a period of fasting. The resulting levels of phenylalanine in the blood were only 5mM/100ml higher for the heterozygous subjects, a level that would not cause a risk to PKU –heterozygous individuals. [95]

These decreased levels of serotonin, due to excess phenylalanine, are also implicated in other symptoms such as depression (see "Depression, p.5) and carbohydrate cravings. (See "Weight Gain & Appetite, p.8)

Seizures/Epilepsy

According to 1995 figures, 7% of aspartame toxicity reactions reported to FDA involve seizures or convulsions [96]. Many studies have indicated the role of aspartame in migraines. Roberts (1988) studied 551 patients who claimed a reaction to aspartame, in 18% of cases grand mal, petit mal and absence seizures occurred[97]) Camfield (1992)[98] administered a single dose of 40mg/kg of aspartame mixed in liquid to children with generalised absence epilepsy. The conclusion drawn was that "aspartame appears to significantly increase the

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[89] Matalon Reuben et al, 1988 "aspartame consumption in Normal Individuals and carriers for Phenylketonuria (PKU), presented at "dietary phenylalanine and Brain Function". Proceedings of the first International meeting on Dietary phenylalanine and Brain Function, Washington DC, May 8-10, 1987. Centre for Brain Sciences & metabolism Charitable Trust , PO Box 64, Kendall square, Cambridge, MA 02142. Reprinted in "Dietary Phenylalanine and Brain Function", c1988, Birkhauser, Boston, MA, USA, page 41-52

[90] Stegink, LD., 1987 – "Plasma amino acid Concentrations in Normal adults administered aspartame in capsules or solution: lack of Bioequivalence", metabolism, volume 36, no.5, pages 507-512

[91] (Wurtman & Walker "Dietary Phenylalanine and Brain Function" Proceedings of the first International Meeting on Dietary Phenylalanine & Brain Function, Washington DC, may 8 – 10 1987)

[92] Stegink, LD., 1987 – "Plasma amino acid Concentrations in Normal adults administered aspartame in capsules or solution: lack of Bioequivalence", metabolism, volume 36, no.5, pages 507-512

[93] Wurtman RJ, 1985"aspartame;possible effect on seizure susceptibility" The Lancet, 9(2), 1060

[94] www.afssa.fr/ftp/basedoc/aspartamgb.pdf

[95] Kretchmer N, Hollenbeck CB, 1991 "Sugars and Sweeteners", Boca Raton, CRC Press, p. 151-167, 232-237

[96] DHHS 1995, Department of Health and Human Services. "Report on all adverse reactions in the Adverse Monitoring System", 20th April 1995

[97] Roberts HJ , 1988 – "Reactions Attributed to Aspartame-containing products: 551 cases", Journal of Applied Nutrition, Volume 40, pages 85-94

[98] Camfield PR, Camfield CS, Dooley JM, Gordon K, Jollymore S, Weaver DF, 1992 "Aspartame exacerbates EEG spike-wave discharge in children with generalised absence epilepsy; a double blind controlled study" Neurology:42; 1000-1003

duration of time that children with absence epilepsy have spike-wave on their EEG. In this study children spent 40% more time in spike wave after aspartame than after sucrose". Subjects were not on anti-seizure medication during study, authors called for longer study to take place. US Air Force & Navy also acknowledge the effects of aspartame. Articles have been published in both "Flying Safety" and "Navy Physiology" magazines, warning that aspartame ingestion may make pilots more susceptible to seizures and vertigo [99]

Increased levels of phenylalanine along with increased ration of phenylalanine to other Large Neutral Amino Acids can inhibit enzymes needed to synthesise neurotransmitters and diminish the production of brain catecholamines and serotonin. The hypothesis is that this change in blood chemistry leads to lowering of the seizure thresholds, therefore those ingesting aspartame become more susceptible to seizures [100]

Several animal studies have shown that aspartame lowers the seizure threshold in animals[101][102] [103][104][105][106], though these results are based upon Wurtman's findings that a dose of 60x more aspartame is needed in rodent studies to stimulate changes in phenylalanine/LNAA ratio that occurs in adults[107]. However this finding is challenged by Hjelle (1992). Based on Wurtman's findings several teams have found that aspartame lowers the seizure threshold in animals

A number of other scientists have refuted the claims that aspartame causes seizures ([108])([109]). In a Monsanto/NutraSweet funded study, Shaywitz [110]concludes, "our findings indicate that, in this group of vulnerable children, APM (aspartame) does not provoke seizures". This study is criticised as 9 out of 10 children were taking anti-seizure medication at the time, the dose was given in capsule form (thus eliminating

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[99] US Air Force, 1992 – "aspartame alert", Flying safety 48(5):20-21 (may 1992)

[100] Maher, TJ, Wurtman, 1987 "Possible Neurologic effects of aspartame, a widely Used Food Additive", environmental Health Perspectives, volume 75, page 53-57.

[101] Diomede L et al., 1991 "Interspecies and Interstrain Studies on the Increased to Metrazol-Induced Convulsions in Animals Given Aspartame" Food and Chemical Toxicology, Volume 29, 101-106

[102] Garrattini S et al., 1988 "studies on the susceptibility to Convulsions in Animals Receiving abuse Doses of aspartame", presented at "dietary phenylalanine and Brain Function". Proceedings of the first International meeting on Dietary phenylalanine and Brain Function, Washington DC, May 8-10, 1987. Centre for Brain Sciences & metabolism Charitable Trust , PO Box 64, Kendall square, Cambridge, MA 02142. Reprinted in "Dietary Phenylalanine and Brain Function", c1988, Birkhauser, Boston, MA, USA, page 131-143)(Guiso G et al., 1988 "effect of aspartame on Seizures in various models of experimental Epilepsy", toxicology & applied Pharmacology, volume 96, No.3, pages 485-493

[103] Kim KC, Tasch MD, Kim SH, 1988 "The Effect of aspartame on 50% Convulsion doses of Lidocaine", ", presented at "dietary phenylalanine and Brain Function". Proceedings of the first International meeting on Dietary phenylalanine and Brain Function, Washington DC, May 8-10, 1987. Centre for Brain Sciences & metabolism Charitable Trust , PO Box 64, Kendall square, Cambridge, MA 02142. Reprinted in "Dietary Phenylalanine and Brain Function", c1988, Birkhauser, Boston, MA, USA, page 127-130

[104] Maher TJ, Wurtman R, 1987 "possible Neurologic Effects of Aspartame, a Widely Used Food Additive", Environmental Health Perspectives, volume 75, page 53-57

[105] Pinto JMB, Maher TJ, 1986 " High Dose aspartame Lowers the Seizure Threshold to subcutaneous Pentylenetetrazol in Mice", The Pharmacologist, volume 28, page 155

[106] Pinto JMB, Maher TJ, 1988 "administration of Aspartame Potentiates Pentylenetetrazole- and Fluorothyl-Induced seizures in mice, Neuropharmacology, volume 27, No.1, page 51-55

[107] *Wurtman RJ, Maher TJ, 1988 "General discussion: calculation of the aspartame dose for rodents that produces neurochemical effects comparable to those occurring in people", Dietary Phenylalanine and Brain Function. Proceedings of the First International Meeting on Dietary Phenylalanine and Brain Function, Washington DC, May 8 – 10, 1987. Centre for brain science and metabolism charitable trust, PO box 64, Kendall square, Cambridge, ma 02142. Reprinted in "dietary Phenylalanine and Brain Function" c1988, Birkhauser, Boston, MA, USA*

[108] Anderson GM, Novotny EJ, Shaywitz BA,1996 "Evaluation of seizures in: The Clinical Evaluation of a food additive. Assessment of aspartame", Tschanz C, Butchko HH, Stargel WW, Kotsonis FN(edts), 1996, pp 205-216, CRC press, Boca Raton, New York, London, Tokyo

[109] Gaull GE, 1985 "Aspartame & Seizures", lancet: 2(8469-70),1431

[110] Shaywitz BA et al., 1994a "Aspartame Has No Effect on Seizures or Epileptiform Discharges in Epileptic Children", Annuls of Neurology, volume 35, pages 98-103

the blood plasma phenylalanine spike, which is thought to be partially responsible for causing seizures) [111]Also the tests were carried out on epileptic children who had not reported aspartame-induced seizures.[112]
Rowen (1995)[113]concludes "aspartame, in acute dosage of ~50mg/kg is no more likely than placebo to cause seizures in individuals who reported their seizures were provoked by aspartame consumption". Criticisms of this report are that 16 of the 18 subjects were on anti-seizure medication at the time of the study. Again, the aspartame was given in capsule form so the phenylalanine was ingested slowly as it would be if it was ingested in food. Capsule administration also slows the absorption of both methanol, reducing the effects of methanol toxicity (Posner 1995) and aspartic acid, which when absorbed quickly may be an excitotoxin [114]Significantly, there was only one dose of aspartame given. Neither the fact that aspartame was given in capsule form nor that the subjects were on medication was given in the abstract of this study.[115]
Trefz (1994)[116]reports that doses of 15mg/kg and 45mg/kg of aspartame in PKU heterozygotes does not change EEG spectral parameters. Again the aspartame was given in capsule form, and in this case it was given with meals both of which would delay the absorption of the aspartame breakdown products. This study was longer term than Rowen and Shaywitz, lasting 3 months. However analysis of seizures linked to aspartame doesn't usually appear until after 3 months of non-encapsulated aspartame [117]([118]
The FDA report in 1992 [119]concluded, "In most cases, information obtained from the complainant's medical records as well as data on consumption patterns, temporal relationships, and challenge tests did not support the claim that occurrences of the seizures were linked to consumption of aspartame". The criticisms levelled at this report are that unclear cases (e.g. medical records not released, any lifestyle factors, for example smoking, or stress, which may influence health) were classified as "Group D – highly unlikely", and it is suggested that a category such as "possible aspartame reaction" may be more appropriate. Also any reactions that took place more than 13 hours after ingestion (35% of the non-Group D seizure patients), however Carroll (1992)[120] puts forward that reactions to food intolerance can be exhibited up to 48 hours after ingestion, and that excitotoxins can remain in the brain for up to 24 hours[121]. The report also states that only 251 cases of seizures due to aspartame ingestion have been reported to the FDA, however there are actually 5 categories: "seizures and Convulsions", "Grand Mal", "Petit Mal", "complex Partial seizures" and "Simple Partial Seizures", and the 251 quoted cases are only those in the "seizures and Convulsions" Category. Of the final result 76 of the 251 cases were classified into Groups A and B, meaning that a re-challenge with aspartame lead to further seizures.

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111 Stegink, LD., 1987 – "Plasma amino acid Concentrations in Normal adults administered aspartame in capsules or solution: lack of Bioequivalence", metabolism, volume 36, no.5, pages 507-512.
112 www.holisticmed.com/aspartme/abuse/seizures
113 Rowen ., James, A., Shaywitz et al., 1995) "aspartame and Seizure Susceptibility: Results of a Clinical Study in Reportedly Sensitive Individuals", Epilepsia, Volume 36, No.3, page 270-275)
114 Blaylock, RL., 1994 "Excitotoxins: the Taste That Kills", Health Press, Santa Fe, New Mexico, c1994
115 www.holisticmed.com/aspartame/abuse/seizures.
116 Trefz F., de Sonneville, L, Matthis, P., Benninger C., Lanz-Englert B., Bickel H., 1994) "Neuropsychological and Biochemical Investigations in Heterozygotes for Phenylketonuria During Ingestion of High Dose Aspartame (A Sweetener containing Phenylalanine)", Human Genetics, Volume 93, page 369-374
117 CDC (centre for Disease Control), 1984 "Evaluation of Consumer Complaints Related to Aspartame Use", division of Nutrition, Centre for Health Promotion and education, Centres for disease Control, Atlanta, GA 30333, November 1984
118 www.holisticmed.com/aspartame/abuse/seizures
119 Tollefson L., Barnard RJ, 1992 "An Analysis of FDA Passive Surveillance Reports on seizures Associated with Consumption of Aspartame", Journal of the American Dietetic Association, Volume 92, No.5, page 598-601
120 Carroll P, Caplinger K, France G, 1992 "Guidelines for Counselling Parents with Young Children wit Food Sensitivities", Journal of American Dietetic Association, volume 92, No.5, page 602-603
121 Inouye, M, 1976 "selective distribution of radioactivity in the Neonatal Mouse Brain Following the Subcutaneous Administration of 14 C-labelled Monosodium Glutamate", congenital Anomalies (Journal serial No. 0914-3505, Japan),Volume 16, page 79-84

Animal studies showing that aspartame does not lower seizure threshold:[122][123][124][125][126][127][128][129]These studies show that it takes huge doses of aspartame in order to lower the seizure threshold in rodents and therefore normal doses would not be enough to do it in humans. However this does not take into account Wurtman's (1988) finding that it takes 60x more phenylalanine to cause the phenylalanine/LNAA changes in rats than it does in humans.
In a study on newborn monkeys doses of aspartame at 1,3,and 4 g/kg per day were administered for 52 weeks. Epileptic seizures were recorded at highest doses after 218 days of treatment, with sporadic convulsions occurring during handling. Symptoms were identical with those observed in young monkeys treated with phenylalanine. In a later study showed no effect in monkeys treated with 2 and 2.7g/kg/day. Different results could be explained by differences in exposure conditions, food and state of health of the animals [130]

Weight Gain & Appetite
Aspartame is marketed as being ideal for people following a weight management programme, as it is lower in calories than sugar. However this use of the sweetener was challenged in March 1985 when, in the Congressional Record, Dr Wurtman, of MIT, stated, "Aspartame has been demonstrated to inhibit the carbohydrate induced synthesis of the neurotransmitter Serotonin. Serotonin blunts the sensation of craving carbohydrates and this is part of the body's feedback system that helps limit consumption to appropriate levels. Its' inhibition by aspartame could lead to anomalous result of a diet product causing increased consumption of carbohydrates"

Other Reported Symptoms
The following is a list of symptoms attributed to aspartame consumption as reported to the FDA and to Internet sites relating to aspartame use [131].

MS symptoms
Chronic diarrhoea esp. after meals, severe stomach cramps, abdominal pain, "gassy", constipation
Dizziness – vertigo attacks

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[122] Cain DP et al., 1989 "Failure of aspartame to affect seizure susceptibility in kindled rats", Neuropharmacology, volume 28, No.4, pages 433-435
[123] Dailey JW, Lasley SM, Bettendorf AF, Burder RL, Jobe PC, 1988 "aspartame does not facilitate Pentylenetetrazol induced seizures in genetically epilepsy prone rats", Epilepsia, volume 29, page 651
[124] Dailey JW, Lasley SM, Mishra PK, Bettendorf AF, Burder RL, Jobe PC, 1989 "aspartame fails to facilitate Pentylenetetrazol-induced convulsions in CD-1 Mice", toxicology and applied pharmacology, volume 98, pages 475-486
[125] Jobe PC, Bettendorf AF, Lasley SM, Daily JW, 1988 "Effects of aspartame on Pentylenetetrazol-Induced convulsions in CD-1 mice, Toxicologist, volume 8, page 85
[126] Meldrum BS, Nanji, 1988 "Lack of Effect of Large doses of aspartame on photically-induced seizures in the baboon", FASEB journal, volume 2, page A434
[127] Nevins ME, Arnolde SM, Haigler HJ, 1986 "Aspartame: Lack of effect on convulsant thresholds in mice", Federal Proceedings, volume 45, page 1096
[128] Thai L, Tilson HA et al., 1988 "lack of Effect of aspartame on Kindling, Electroconvulsive shock (ECS) and Metrazol-induced seizures in rats", society of Neuroscience Abstracts, volume 14, page 866
[129][129] Tilson HA, Thai L, et al., 1989 "Oral administration of aspartame is not proconvulsant in rats", Neurotoxicology, volume 10, pages 229-238
[130] JECFA,1980 "Toxicological evaluation of certain food additives: aspartame" WHO food additive series No.15, Report series No.653
[131][131] www.holisticmed.net/aspartame/adverse.txt

Depression – manic depression – anxiety attacks – morning anxiety
Low energy levels, very chronic fatigue, weakness esp. legs, fatigue, CFS
Cold sweats
Short term memory loss, memory loss, poor memory, inability of concentrate, forgets what is saying in middle of sentence, feels like "fog has been lifted" (on giving up), confusion
Tremors, head shaking
Weight gain, bloating, and obesity
Chronic cough, sneezing
Breathing difficulties, asthma, breathlessness, and temporary inability to breathe
Burning urination, urinary infections
Face flushing
Thinning hair, lost hair
Loss of sexual feelings – "messed up" menstrual cycle - PMS
Irritability
Itching, numbness, tingling of extremities
Joint pain – sever pain of shoulders, hips, and knees
Tachycardia – hypertension, heart palpitations – cardiac arrest
Insomnia, sleep disorders, fear of going to sleep in case dies of seizure
Tripping, falling, balance problems, legs give out
Craves sweets – food cravings – feeling of being full all the time though would hardly eat, excessive hunger or thirst
Slurred speech
Drooping mouth, muscle spasms, Bells Palsy, loss of muscular power in one side of face
Acne, rashes
Blurred vision – poor vision – temporary loss of vision – hard to focus, lights flashes in eyes, dry eyes
Back pain
Allergies
Chest pains
Swollen feet
Feeling old (repeated symptom)
Coma
Hallucinations
Sore throat, throat inflammation, throat closes up; feels like choking; can't get breath
Bleeding gums, sore mouth, dry mouth
Ringing in ears – poor hearing
Sweating
Birth defects
Addiction
ADHD, aggravates autism

MIND

ORGANISED/PRODUCTIVITY:

001	00.01.10	I have just been & tidied up my study, put away all my books & changed bedding - jobs I'd been meaning to do for the last few days. Unusual for me to do this before work.
001	01.15.xx	Wide awake, had urge to do tidying up in kitchen drawers but did not because everyone else asleep
003	02.01.xx	Feel surprisingly calm despite a multitude of extra tasks involved in getting my child to school; everything seems to run like clockwork, which is unusual – I would normally get very impatient.
005	02.01.xx	Still feel sense of well-being. Think I have dealt with my busy day better than usual, by just being busy and not stressed.
003	02.05.xx	Still feel very calm despite having to organise a birthday party. The calm feeling continues through the party, despite a (minor) injury to one of the children, which would normally make me feel quite stressed.
001	02.xx.xx	In morning felt calmer than usual and have done more housework
005	03.01.xx	Dealing well with problems at work today and energy level seems unusually high.
001	04.09.xx	Energy level high for a Friday afternoon; have been quite efficient, sorted out some bank stuff, got washing done, etc.
004	05.02.xx	Need to get a move on and be organised, don't have usual sense of urgency, feel laid back.
005	06.03.xx	In general feel better able to deal with things and a weight has been lifted off me.
004	03.13.xx	Also feeling better for having practical things to do and moving about
005	10.xx.xx	Not much happening, but generally feeling happier and dealing with things in general better.

FORGETFUL/MISTAKES:

003	02.02.xx	Forget to take child's lunchbox and book bag to school and have to make a return journey. Have never done this before.
001	02.xx.xx	Whilst doing research at Record Office, have not worked through in my usual methodical way at all. (Some of this kind of research is quite time-consuming, involving carefully looking through each register until the correct person is found) I moved from one thing to another, too impatient. Research has to be repeated as unreliable! I noticed this only in retrospect - when I came back to look what I'd done - it was such a mess, all over the place!
006	02.xx.xx	Was in the process of sending a text message to my partner and completely forgot what I was going to text. Sat for about 15 minutes and still couldn't remember – usually have a good memory.
006	03.xx.xx	I can't seem to collate all the information in my head.
006	03.xx.xx	I feel muddled up. I keep forgetting things like I was talking on the mobile phone while packing up to leave work, but was looking around to try and find where my mobile phone was. Finally realised it was because I was using it.
005	04.08.xx	Met friends and didn't feel myself at all – and couldn't think of what to say to them or talk properly. They noticed and commented that they thought I was a bit weird. Then I met some other friends and I couldn't remember the names of the people I had just left, which is very uncharacteristic.
005	04.09.xx	Spoke to another friend on the phone and wasn't making much sense – couldn't understand my own train of thought and it amused my friends.
001	05.10.xx	Feel extremely irritable - research at Record Office has to be repeated because what I did last is unreliable. Arrive home wanting to relax but have to prepare dinner etc. Both partner and son seem incredibly unhelpful and slow.
004	05.xx.xx	Feeling spaced out and mixing up words, spoonerisms, e.g. said "Muddy fore

		prints" instead of "paw prints". Am now clear this has been happening for last 4 days. Am trying to cover this stoned feeling
006	05.xx.xx	Lost track of the day number in my proving diary, entries are a bit muddled have to go back and sort it out.
006	07.xx.xx	My memory is appalling, I keep forgetting what I am going to say in a conversation
003	08.xx.xx	Go to cafe to buy cup of tea and a cake, but realise I have no money when I go to pay. This is the second time this has happened to me in three days. Never happens normally – I usually have a very good idea of how much money I have on me.
001	08.xx.xx	Not being very productive at work today, not particularly upset about it. Usually I am very conscientious.
004	09.xx.xx	Got home to find girls moths tutor had arrived. I had completely forgotten she coming even though we had spoken a few hours earlier.
004	10.xx.xx	Suddenly realise I forgot to take the girls to the dentist, and cannot afford cancellation fees. Am normally very well organised about appointments. Am feeling out of it again.
001	10.xx.xx	In retrospect I have forgotten to write symptoms in diary after 8.15 a.m. and have re-written an observation already put in the day before. Today I have forgotten to write in diary until the evening
009	11.xx.xx	Fleeting sensations of being out of it throughout the day. Forget to pick up a friend to take her shopping. Then became totally focused on one thing instead of her. Went to a party and danced without getting breathless or tired!!
009	13.xx.xx	Could not find a text message on mobile and could not organise a meeting, a friend had to do it for me!
004	15.xx.xx	Confusion! Keep thinking I have finished a task, e.g. putting on children's socks and shoes, and I have not! See headache; feel as though the remedy has finished its action, I'm tired, worn out had enough and have no joy left. Am still making mistakes with words e.g. said "waiting" instead of "writing"
004	19.xx.xx	Walking around Brighton and feeling overwhelmed by everything. Am normally enjoying the stimulus. Found myself tuning out, forgot where I had put money, mixing up words.
004	23.xx.xx	Spent the day getting words wrong e.g. it's time for the dreaded "fruit", when I meant "food"
003	32.xx.xx	Still very forgetful and confused (aggravated by severe headache!) I keep failing to notice when people speak to me – possibly because I have to focus very hard on what I am doing. In fact, I am still so forgetful that I put my child's coat down in a shopping centre and lose it.
004	44.xx.xx	Beginning to feel spaced out and am aware of it, kept repeating conversations and friend had to remind me.

TIME:

001	00.00.40	Feel slightly spaced out, slowed down, but alert, wanting to do things. Careful. Calm.
003	02.01.xx	…Everything seems to run like clockwork, which is unusual.
006	05.xx.xx	Lost track of the day number in my proving diary, entries are a bit muddled have to go back and sort it out.
006	05.x.xx	I have mixed up all the days and entries in my proving log. I have lost track of what day it is. I will have to go back and change it.
001	10.40.xx	Felt some strange thing happening with time today - I was convinced the date was the 28th yesterday & reduced items at work accordingly, & got very confused when I found it was still then 28th today. Things seemed to get done more - as if time stretched a bit - within a short space of time, but without any hurrying.

INDIFFERENCE:

009	01:12XX	Am not physically tired, but have an overwhelming urge to close my eyes and sleep. I do not want to get the evening meal ready, I cannot be bothered.
004	02:03	Feel like I am slipping back into my own space, can't be bothered to organise group discount for a swim
006	03.xx.xx	Things don't affect me much. Something happened at work that would normally make me furious but it has just gone by and I don't seem to care.
003	03.03.xx	Decide to go out for a bike ride. Very unusual for me, as I usually sit at home feeling stressed about not getting my college work done when I'm not at work.
001	03.05.xx	Very calm day at work, not as stressed as usual for a Thursday. As usual lots of complaining people but I don't feel hurried/hassled by them today - just momentarily irritated, can't be bothered with this nonsense.
004	04.03.xx	Supervisor arrived and I could not be bothered to give symptoms and have not written them in red book.
006	04.xx.xx	Not upset about the meanness of people at work not giving much to a long-serving employees retirement party. Usually would have been very upset by this.
009	05:02	Need to get a move on and be organised, don't have usual sense of urgency, feel laid back.
007	06.xx.xx	She has felt better in herself - less irritable and not so argumentative
004	07.xx.xx	Visiting a friend and find I am withdrawing into my own world again. Too much noise and lights seem too bright. When I had had enough, I quietly got the children ready and left (this is normally frantic, stressed out event)
006	10.xx.xx	Feel like I can't be bothered with anything. I feel like I am in a bubble with the whole world going on around me.
006	13.xx.xx	There was an incident at college, which I would usually have got upset about, but it doesn't bother me at all, which is unusual.
001	12.10.xx	After college discussion of proving symptoms, I feel spaced out again - very calm and everything a little surreal - a bit like the start of an LSD trip when you know it's starting to work, but before you get the full effect. I know I have to do some preparation for tutorial tomorrow but really can't be bothered at all - it just doesn't seem important now. Like it's a long way off anyway.
001	13.xx.xx	Felt more assertive today at college - couldn't be bothered with some niggly stuff that came up re "group dynamics" - just went and got it sorted out with the people concerned; being straight, direct with them but also seeing funny side of things.
004	16.xx.xx	A.m. Notice spaced out feelings have gone and I want them back!! P.M realised that I had been tuning in and out whilst clothes hunting in a charity shop. Had been very laid back looking after 5 children, even though we were on a main, busy road
001	xx.xx.xx	Also I dreamt my partner and I were both having diarrhoea - doing it at the same time, together. I had to go and have a shower after, as it was so messy! This was just normal/OK in the dream, not disgusting at all. Made me laugh when I woke up. (I do not often remember my dreams, so it was unusual for me to recall dreaming this much)

CALM, LIGHT AND ALERT:

001	00.12.25	Feel spaced out. Calm, but alert - things seem sharp & clear - like looking through a rail tunnel - when you come out, everything seems clearer in outline. A bit surreal.
001	01.15.xx	Wide awake, had urge to do tidying up in kitchen drawers but did not because everyone else asleep Felt relaxed, alert, happy, no desire to sleep. Read till 12.30 before going off to bed.
003	0201.xx	Feel surprisingly calm despite a multitude of extra tasks involved in getting my child to school; everything seems to run like clockwork, which is unusual – I would normally get very impatient.

003	02.05.xx	Still feel very calm despite having to organise a birthday party. The calm feeling continues through the party, despite a (minor) injury to one of the children, which would normally make me feel quite stressed.
001	02.xx.xx	In morning felt calmer than usual and have done more housework.
001	03.12.xx	Tired at end of day. Slept for 15mins. In evening then felt more awake, alert. (Usually if I'm that tired, I just get more tired).
001	03.05.xx	Very calm day at work, not as stressed as usual for a Thurs. As usual lots of complaining people but I don't feel hurried/hassled by them today - just momentarily irritated, can't be bothered with this nonsense.
001	03.xx.xx	Felt tired during day, but calm.
	04.01.xx	Feel good, alert, light-hearted.
006	04.xx.xx	Feel mood has improved, is lighter.
006	05.xx.xx	Mood still feels lighter.
	06.09.xx	Mood wise feel normal, i.e. anxious! Looking forward to daughter coming this evening but can't help background worry about train being late, accidents, etc. Stupid, but can't help it. Feel as if remedy has stopped having an effect - actually from yesterday I think. (In retrospect, this was because I associated the remedy with feeling calm, alert, and happy).
006	06.xx.xx	Mood is still improved, still feel lighter than usual.
006	07.xx.xx	Mood is still light and feel so much more laid back.
006	08.xx.xx	Not being very productive at work, but not worried about it. Feel great though. Can't believe my mood is so much lighter. Still feeling exhausted though.

DULLNESS/TIREDNESS:

006	01.xx.27	Feel fuzzy headed
007	01.xx.xx	She hadn't had time to eat. She went to bed and went straight to sleep. She had been physically tired all day and she just wanted to sleep. Felt despondent - like she couldn't be bothered (with headache)
007	02.xx.xx	Feels a bit daydreamy - like she needs to be shaken to wake up and take notice
006	02.xx.xx	Feel mentally dull not achieving much. Feel abnormally tired. Very fuzzy headed a cloudy feeling in the head. Feeling dull and unemotional.
006	03.xx.xx	Feel dull all over, mentally and physically.
001	03.xx.xx	Felt tired during day, but calm.
004	04.01.xx	Alarm went off, I cannot be bothered to get up, am working out when I can have a lie in.
001	05.14.xx	Very tired but no longer irritable. Sleepy
006	06.xx.xx	Still feel 'hung-over'. This exhaustion is just so debilitating
001	07.09.xx	Feel tired; quiet day at work makes it more tiring. Tired and irritable with family especially around dinner-cooking time - usual stuff, "I'm doing all the work whilst rest of family relaxing, etc"
006	07.xx.xx	Head feels full, heavy, as if a bubble with things going on around it.
004	07.xx.xx	Friends tell me I am looking well today and that last week I looked withdrawn, tired and pale. I am feeling withdrawn and light headed and slightly giggly. By 21.00hrs am feeling very tired, it's a heaviness about the eyes that makes me want to close them, cannot study.
006	08.xx.xx	Not being very productive at work, but not worried about it. Feel great though. Can't believe my mood is so much lighter. Still feeling exhausted though
006	09.xx.xx	The tiredness is really getting me down now. I feel like I just can't lift it. I am getting enough sleep but still feel tired.
006	10.xx.xx	Feel like I can't be bothered about anything.
001	10.xx.xx	Fatigue, fuzzy-headed, sore muscles, slight h/a. Very tired, sleepy. Fell asleep in front of TV.

001	14.xx.xx	Very tired. Sleepy this evening.

IRRITABILITY:

004	00.08.47	Feel spaced out, head feels as though I have a hangover or have not had enough sleep. Am agitated, on edge, easily irritated by sudden loud noises.
004	02.05.xx	Arrive at swimming pool and am immediately irritated by people in my group (am usually friendly and outgoing), people are helpful, but I want to be left alone, I don't want to communicate. Lights and noise make me feel high, out of it. Can only concentrate on one task at a time, find myself explaining that I am proving a remedy and feel like I have had lots of M.S.G. Body feels as though swimming, < in swimming pool and headache begins to lift. (Feel normal at 1pm)
001	05.10.xx	Feel extremely irritable - research at Record Office has to be repeated because what I did last is unreliable. Arrive home wanting to relax but have to prepare dinner etc. Both partner and son seem incredibly unhelpful and slow
001	06.09.xx	Irritable - felt as if I had to do all the work and family sat around doing nothing. Although in fact both children helped with dinner.
007	06.xx.xx	She has felt better in herself - less irritable and not so argumentative (curative)
001	07.09.xx	Feel tired; quiet day at work makes it more tiring. Tired and irritable with family especially around dinner-cooking time - usual stuff, "I'm doing all the work whilst rest of family are relaxing, etc."
001	13.xx.xx	Felt more assertive today at college - couldn't be bothered with some niggly stuff that came up re "group dynamics" - just went and got it sorted out with the people concerned; being straight, direct with them but also seeing funny side of things
001	42.xx.xx	Woke feeling very irritable, very depressed, and very snappy with partner and son. Tired; lack of energy. Cross with self and others. Continued to feel very depressed, really awful, like severe PMT, full of negativity. Very irritable with partner when he phoned at lunchtime. By late afternoon, developed severe headache - as this got worse, my mood lifted and by 5.30pm headache was terrible, but felt much better in myself. Felt as if this was the poison finally coming out.

LAUGH/LIVELY/HIGH:

004	00.13.57	Feeling giggly and not quite together
001	01.12.xx	Feel relaxed, but lively - have had a lot of laughs today and this evening.
004	02.05.xx	Lights and noise make me feel high, out of it. Can only concentrate on one task at a time, find myself explaining that I am proving a remedy and feel like I have had lots of M.S.G.
003	03.03.xx	Decide to go out for a bike ride. Very unusual for me, as I usually sit at home feeling stressed about not getting my college work done when I'm not at work. Ride by the rough sea and feel really exhilarated.
001	03.05.xx	Had lots of laughs with work colleagues.
006	03.xx.xx	I do feel lighter in my mood and generally less grumpy
001	04.09.xx	Felt calm and happy.
003	04.xx.xx	Feel like going for a short walk after dropping child off at school – wouldn't usually do this. Feel the need for exercise, but also enjoy the sensation of doing something different.
006	04.xx.xx	Feel my mood has improved, lighter. Usually quite moody and grumpy.
006	06.xx.xx	Mood is still lighter. Don't feel so grim.
006	07.xx.xx	Mood is still light and feel so much more laid back
006	08.xx.xx	Not being very productive at work, but not worried about it. Feel great though. Can't believe my mood is so much lighter. Still feeling exhausted though
003	11.xx.xx	I have noticed that I am more talkative than usual – I have the sensation that

		I am gabbling, and that other people can't get a word in edgeways.
004	12.xx.xx	At college and finding it hard to be in the group, am tuning out and feeling silly and giggly.
001	13.xx.xx	Felt more assertive today at college - couldn't be bothered with some niggly stuff that came up re "group dynamics" - just went and got it sorted out with the people concerned; being straight, direct with them but also seeing funny side of things
001	xx.xx.xx	Also I dreamt my partner and I were both having diarrhoea - doing it at the same time, together. I had to go and have a shower after, as it was so messy! This was just normal/OK in the dream, not disgusting at all. Made me laugh when I woke up. (I do not often remember my dreams, so it was unusual for me to recall dreaming this much)

PROBLEMS WITH FOOD:

001	05.06.xx	I realise I have eaten more chocolate than usual the last few days- have had wind/heartburn all day today - probably because of this.
001	08.xx.xx	Feel as if have been eating far too much sugar/bread - all stuff that gives me bloating. Have been very bad the last week and need to get a grip! No more chocolate! Feel tired, low, negative. (Still eating foods which disagree - this time, it's crumpets)
001	13.xx.xx	Have decided to go on renewed healthy eating regime from tomorrow. I'm getting fed up with constant bloating, wind, indigestion together with inability to stop eating foods which aggravate it
001	14.xx.xx	From now on I was craving all the foods that gave me indigestion and I couldn't understand why. I felt increasingly upset/depressed/cross with myself - why was I eating all this rubbish all the time again? I gained weight, and my energy was generally low. I was tempted several times to take another of the proving remedy - I wanted that calm, alert, happy feeling again.
001	38.xx.xx	Feeling quite depressed, negative for no apparent reason, missing my mother (who died in '97), feeling generally cheesed off with myself and with life. Couldn't understand why I felt like that. Particularly fed-up with my eating habits and feeling bloated and full of wind all the time. An element of self-disgust to this.
001	42.xx.xx	Head felt muzzy, slight nausea. Feel as if full of poison - coming out of my mouth when I spoke, in the food I have been eating. Ate nothing till lunchtime and felt strong aversion to sugar/sweet foods. Continued to feel very depressed, really awful, like severe PMT, full of negativity. Very irritable with partner when he phoned at lunchtime. By late afternoon, developed severe h/a - as h/a got worse, mood lifted and by 5.30pm h/a was terrible, but felt much better in myself. Felt as if this was the poison finally coming out.
004	Comment	Have gained about 3lbs since starting the proving

DEAD/GRIEF:

003	00.10.00	Dream: Close friend calls me to tell me her two daughters have died in the night from a mild fever. I feel grief stricken and disbelieving. A couple of days later I watch through my window as the bodies are taken away in a flurry of people. They are not in coffins but being carried upright as if they are alive. I see that the youngest girl's eyes are open – it is as if she looks at me, but I can see that she is dead. The reality in the dream is very sinister – I can see their blonde hair blowing in the breeze. I have t0 tell my own daughter that her friends are dead, and feel guilty that I can do nothing to help. Wake up crying.
003	31.XX.XX	Dream: A friend with daughter same age as mine told me she had a son aged three who died after she lost him in a shopping centre. Feel shock

		that she never told me before; it seems very strange that I didn't know this. Like the dream on day 0, wake up feeling confused about the reality of the situation.
001	38.xx.xx	Feeling quite depressed, negative for no apparent reason, missing my mother (who died in '97), feeling generally cheesed off with myself and with life. Couldn't understand why I felt like that.
VERTIGO		
005	00.00.45	Felt a little shaky & light-headed, like had been spun around, > bending down.
007	00.06.15	Had some vertigo - spatial awareness changed. The floor didn't feel as though it was where it should be. Maybe not really focusing. It wasn't a fainting feeling. It only happened when she was walking around, not when she was sitting or standing
005	01.10.xx	Still feeling light-headed today, but when dancing around to music and shaking my head, felt giddy.
004	02:14.xx	Bent forward and felt very dizzy
004	03:17.xx	Shopping, bent over trolley and felt dizzy in my body, then legs and head, lasted for a few minutes.
005	04.07.xx	Feeling spaced-out and giddy and my head feels like it is full of warm liquid if I move my head quickly.
	09.06.xx	Felt giddy and light-headed again with some nausea
HEAD		
00x	01.06.xx	Occasional waves of dizziness fleet across my head
006	01.27.xx	Feel fuzzy headed
006	02.xx.xx	Fuzzy feeling in head, cloudy feeling.
006	07.xx.xx	Head feels full, heavy, like a bubble with the world going on around it.
006	11.xx.xx	Short, sharp headache above eyeballs, stabbing in and out sensation.
HEAD – PAIN		
00x	00:08:47	Aware that I have been having headaches all day. They vary from oppressive to a dull stamp through back of eye and head. Mostly right sided and pressure on top of head
001	01.00.xx	Woke with headache; slightly nauseous.
001	01.02.xx	Still got headache with slight nausea. Feeling as if bruised ache all over head.
001	01.03.xx	On bus to work headache became quite bad. <Left side, possibly due to sunlight directly shining into eyes. >shading eyes. Not better for rubbing/pressure - which my headaches usually are. Sensation of a line from top of head above left eye, going right down through head - sore bruised feeling along that line. With aching and sense of pressure in ears & left cheek. > walking in fresh air. The intense line of pain lasted about 1 hour. Awareness of h/a in background for further 3 hours.
004	01:03xx	Yesterday's headache is back; left sided, pressure beneath left eye through to middle of nose
004	01:07XX	Sensation of pressure through right sinus, under right eye and at bottom of neck pushing down to muscle joining clavicle, sensation comes and goes.
007	01.xx.15	Dull headache, started at the back of her head then moved to top right behind her eye. Occasionally changes to a sudden intense pain lasting for a few seconds only
007	01.xx.38	Headache got really bad. Her whole head felt as if it was going to burst. She hadn't had time to eat. She went to bed and went straight to sleep. She had been physically tired all day and she just wanted to sleep. Felt

		despondent - like she couldn't be bothered.
007	02.xx.xx	Slight headache this morning - around mid-morning. It went off a bit after lunch. Tiredness better today.
004	03:13.xx	Return of headache, feel heavy above my eyes, pressure in left sinus below eyes, pushing inwards feeling.
007	03.xx.xx	Headache all day. Dull ache in occiput - but occasionally spreading to top of head (NS)
004	05:09	I am a passenger in car, and headache starts, pinching sensation at the back of my head just above my neck. Dull ache in left sinus below left eye. Am aware of feeling spaced out and giggly.
006	11.xx.xx	Short, sharp headache above eyeballs, stabbing in and out sensation.
001	12.10.xx	After college discussion of proving symptoms, I have come home and experienced the rod-like h/a pain above left eye - similar to what was discussed, and that I had on day 1. Lasted about 15 minutes.
004	13.xx.xx	Block of pain, like a bar across back of head, from ear to ear, squeezing and very painful.
004	15.xx.xx	17.00 sudden heavy headache, feels like a weight behind my eyes and see mind.
003	30.xx.xx	Bad headache over right side of head and face, which throbs if I bend forwards. Cheekbones and bones around eye-socket and temple feel like they are being squeezed in a vice. This is in the same area as the neuralgia that I often get, but feels different and much more painful. > putting cool hand over my cheek.
003	32.xx.xx	Headache still the same. Have noticed that it gets worse as the day goes on. Have noticed confusion with the headache; don't realise when people are speaking to me. Relieved slightly by having a hot bath and going to bed at 9pm.
	37.xx.xx	Bending over bath to wash my hair have sudden sharp pain in back of neck on the right hand side. Headache starts to abate after this (trapped nerve?)
001	42.xx.xx	Severe h/a, terrible cracking pain all over head. Felt as if this was poison coming out.
EYES		
00x	01.06.xx	Occasional waves of dizziness fleet across my eyes
006	03.xx.xx	Eyes feel cloudy, mucussy, like a thin film over my eyes but vision not impaired. Black rings under my eyes
006	04.xx.xx	Eyes, feel cloudy, but vision fine. Other people notice my eyes look, glassy, and glazed.
001	04.xx.xx	Itchy left eye - woke up with it. Want to rub vigorously, which makes it worse. Sensation as of hair in inner corner. Have had this symptom before, but usually when tired - do not usually wake up with it. Itchiness gone by evening but then slightly sore, <moving eyeball.
005	04.09.xx	Son commented my eyes were wide open and then I looked in mirror and they did seem very open, sort of 'starey'.
004	12.xx.xx	Squeezing pressure above my eyes and across them, really hurts; later followed by heavy sensation, as if a band was on top of them, could nod off to sleep.
005	Comment	Had to book an eye-test, as eyes ache when trying to focus.
VISION		
005	00.01.45	Seem acutely aware of things, visuals are clearer.

EAR		
003	01.12.45	Right ear feels very hot and is rather red – it feels as if I have banged it. I notice this when I am lying down.
001	02.xx.xx.	Ears very itchy right inside, plus feeling as if ears popping. Usual for me to get these itchy ears, but this was v. marked, more than normal.
NOSE		
005	00.01.45	Seem acutely aware of things, seem to notice smells more.
FACE		
001	00.00.10	Fleeting sharp, stinging pain in left upper cheek in small spot under eye, followed by sensation of warmth: pleasant feeling.
005	01.23.xx	Very itchy spots around hairline in front of right ear, like heat spots.
004	02:03.xx	Return of dull pressure behind left eye & in sinus below.
004	02:12.xx	Fleeting pressure either in sinus below left eye, or across either eyebrow, on and off throughout the evening
001	004.xx.xx	Feel as if sinus ache in eye/cheek area - not bad, just awareness of area - as if been pushed in face.
001	08.xx.xx	Spot has come up on right side of face, an inch above outer corner of mouth. (I don't get spots all that often)
005	08.00.XX	Have noticed while driving to work for the last week that skin on face feels very dry & tight. Has got progressively worse.
005	09.02.XX	Dry skin feeling on face again today on way to work.
004	20.xx.xx	Sudden, sharp boring pain through right sinus under the eye. Pain lasted all day, relieved by climbing on a climbing frame. Pain extended to right shoulder.
003	30.XX.XX	Right side of face – cheekbone, eye – painful and throbbing (with headache) Bones in cheek and temple feel like they are being squeezed in a vice. Better for laying cool hand over cheek, but worse for pressure.
MOUTH		
007	00:00:00	Took first dose. Tasted really horrible - a bit like alcohol - metallic
007	00:00:05	Increase of saliva in the mouth
004	01.01.xx	Mouth feels moist, but tongue and roof of mouth feel dry and I am thirsty.
004	01.14.xx	Have just realised that I have finished off everyone's drinks at meal times, I need sweetened cool liquid
005	00.01.15	Tongue feels fluffy & spongy.
005	01.23.xx	Cleaned teeth and noticed that tongue was clean, whereas I usually always have to brush it.
007	00:02:30	Little bit of pain in the jaw-line. Sometimes happens in cold weather - feels like a tooth coming through. Has not got wisdom teeth yet and sometimes gets this feeling (RS)
007	00:03:00	Noticed she could still taste the tablet and her mouth felt funny. Still had increased salivation. She looked at her tongue in the mirror - it was yellow and furry
003	02.xx.xx	Sore spot on lower front right gum from banging it with a toothbrush a week ago. This would usually heal up very quickly, but there is a definite ulcer on the spot now, which is really stinging. Very painful to eat anything salty or acid.
007	02:xx.xx	Toothache again - left top of jaw. Constant but faint. Hurt more while eating some nuts (RS)

007	02:xx.xx	Sore at corner of mouth - right side (usually gets this on the left side)
007	06:xx.xx	Mouth still sore on right side - cracks when mouth opened to eat or laugh
003	07.xx.xx	Mouth very dry and 'sticky' – saliva is very thick, white and foamy. Start drinking lots of water, but mouth remains very dry, and tastes horrible – like 'morning mouth'. Feel convinced that my breath smells horrible.
TASTE		
005	00.01.45	Seem acutely aware of things, taste is much more vivid.
003	07.xx.xx	Mouth tastes very stale – like old meat. This continues all day, despite drinking large quantities of water.
THROAT		
005	01.06.XX	After eating, sensation of something stuck in the throat and kept trying to clear my throat, unsuccessfully.
005	01.09.XX	After eating again, had same 'stuck' sensation in my throat.
001	08.11.00	Slightly sore, dry throat >drinks.
STOMACH		
005	00.00.45	Felt a bit sick, but not in abdomen. Feeling increases up back from waist to shoulders.
005	00.06.10	Strong desire for meat sausages (am mainly vegetarian).
004	00.13.13	Bought cheap sweet sparkling wine (something I do not do), horrible stuff, gulped it happily
004	01.14.xx	Have just realised that I have finished off everyone's drinks at meal times, I need sweetened cool liquid
005	01.00.55	Lots of eructations, and sensation around navel of mild nausea when stomach sucked in.
005	01.01.25	Strong desire for coffee.
005	01.06.30	Feeling very hungry and sensation in stomach of hollowness and emptiness.
001	05.xx.xx	Heartburn and wind on and off all day. Probably the result of eating too much chocolate over the last few days.
001	06.xx.xx	Heartburn and wind < anxiety, irritability.
004	06.xx.xx	Bought chocolate and crisp for a journey when I would normally have bought fruit.
001	07.11.xx	Lots of wind <eating fish
004	07.xx.xx	Very thirsty and drinking lots of water
005	08.03.xx	Really crave something sweet.
005	08.05.xx	Not very hungry and didn't know what I wanted to eat.
005	09.02.xx	Really craving something sweet and ate a couple of chocolates.
001	09.xx.xx	Have had loads of wind all evening, probably due to eating crumpets earlier.
005	10.03.xx	Really wanted something sweet and ate loads of chocolate.
004	10.xx.xx	Stomach and lower abdomen feel numb and sore, as though I have been eating wheat (stopped a year ago)
001	12.12.xx	Lots of bloating, wind
001	13.12.xx	Bloating, wind, indigestion. <foods which disagree - carbohydrate rich e.g. bread or chocolate (Have had indigestion and wind, <evenings on and off, <eating sweet/carbohydrate-rich foods - and these are the foods I have been craving)
004	16.xx.xx	Feeling nausea, mouth watery and almost sick. Would not normally eat, but did and all symptoms disappeared with eating
003	xx.xx.xx	Ravenously hungry every day at around 9.00am to 9.30am, despite having had breakfast 2 hours earlier. Find myself having a second breakfast everyday.

ABDOMEN		
003	03.02.30	Enormous amount of abdominal rumbling after eating toast at 9.15am. The noises seem to be traveling all over my abdomen.
005	02.00.XX	Dull, aching, period pain in lower abdomen.
006	02.xx.xx	Sharp pain, pulsating, 'pin prick', 'stab like' lower abdomen, central, in womb. Electric shock like pain in the same place again, central 2 cm below belly button. Pain again, short sharp bursts, this time lower abdomen, slightly to the right.
004	15.xx.xx	Feel like a hard bar is being pushed against my guts
RECTUM		
005	00.12.45	Had to rush to the toilet urgently, had an upset stomach and an urging feeling.
003	03.02.30	Need a bowel movement after eating my second breakfast, but can only manage a small amount instead of my usual diarrhea.
003	04.01.xx	Urge for bowel movement but can only manage a few very narrow stools. I feel I need to go a lot more, but can't.
003	06.xx.xx	Urge for toilet, bowel movement feels incomplete.
003	07.xx.xx	Stool quite hard, small and narrow. Smells awful.
BLADDER		
005	00.08.50	When urinating, felt like I had an excited bladder, almost like mild cystitis.
005	00.12.45	Urging feeling in bladder.
FEMALE		
004	00:07:13	Sharp stabbing pain in right fallopian tube
006	02.xx.xx	Sharp pain, 'pin prick' 'stab like' womb, lower abdomen, central Electric shock like pain 2cm below belly button, central, location of womb.
004	03:13.xx	Dull stabbing pains in right fallopian tube / ovary, went on for about 30 mines.
004	03:18.xx	Brown, watery discharge from vagina
006	05.xx.xx	Period 2 days late. Usually very regular
005	07.23.xx	Noticed still menstrual bleeding, which is unusual for me for this long (5 days). Also is brown colour, which I last had a few years ago.
005	09.03.xx	Dull period-type pain, very unusual this late in the cycle.
006	09.xx.xx	Sharp pain same quality as pain in the lower abdomen, this time felt in the right breast
RESPIRATION		
005	00.01.25	Breathing feels laboured, as if there is a heavy weight on chest.
007	00:04:30	Felt like she need to breathe really deeply otherwise feels a bit airless. Only one deep breath needed to make her feel she has enough air (this occurred several times more during the day) (NS)
005	00.06.10	Got breathless while eating lunch.
005	00.08.50	Breathing a little more rapid than normal.
001	13.xx.xx	After college discussion of proving symptoms, I remember over the last week or so being quite out of breath on climbing stairs, or after exertion.
COUGH		
007	01.32.00	Occasional dry cough.

007	02.xx.xx	Dry cough. Felt looser than yesterday but nothing came up. Coughed a few times during the morning.
005	07.23.XX	Really coughed until I retched. Seem to have a lot of phlegm.
CHEST		
007	00:03:00	Sticking pain in chest as though lung pulling as she breathed. Left side, between ribs under breastbone. Lasted about 10 minutes.
004	01.03.xx	Cold gripping sensation around top of right breast, lasted about 10 minutes.
007	01.29.xx	Started getting sticking chest pains, like yesterday but stronger. Felt she needed to breathe but each breath hurt. She had a bruised feeling across her back and chest. Same feelings as yesterday but constant. She feels she is breathing shallowly, then has to consciously take a deeper breath to get enough air. Feels as if she needs to stretch her chest out. It feels constricted, like she needs to sit up straighter and put her shoulders back.
BACK		
001	00.00.40	Bruised feeling in back of neck, confined to small spot. As if bones are creaky, need oiling.
004	00.02.08	Spasms of dull electric shocks moving across right hip, lasted 20 minutes.
001	00.14.00	Stiff neck without usual aetiology of working at computer. More intense than usual but not lasting. <1st movement.
005	05.xx.xx	(When asleep) Woke with boiling hot feeling in small of back and radiating all over. Had to uncover totally to cool down and then fell back to sleep. Surprisingly wasn't thirsty.
004	05.xx.xx	Lower back is stiff and hurts, some stabbing pain in coccyx.
001	08.11.00	Aching, sore pain in back of neck along vertebrae (without usual aetiology).
001	08.xx.xx	Twinges in right sciatic nerve, right buttock. < riding on bus.
005	09.xx.xx	Woke in night very hot again, with radiating pains from the small of my back.
004	15.xx.xx	Lower back still stiff with sharp electric shocks going through coccyx when I move.
EXTREMITIES		
005	00.01.05	Arms feel very heavy, difficult to write, don't seem to have the same dexterity.
0001	00.12.xx	Funny sharp, short twinges in toes. Left big toe + Right foot all toes. Tingling, slightly creaky sensation in bones of feet.
001	00.14.xx	Sore, bruised, achey feeling in short sharp waves in Left knee, Right hip More intense than usual, but not lasting. <first movement.
004	01.06.xx	Sudden dizzy sensation in legs, could not walk for about 5 mins
004	01.07.XX	Right hand palm, feels like a cold ball, as hand is stretched out, dull cold fizzy tingly sensation.
001	01.13.xx	Sharp, short pains in toes, both feet. Waves of prickling sensation in toes and upper part of feet. Short, sharp intense pain in left bunion. Short sharp twinges in left knee. All pains > movement.
001	02.xx.xx.	In supermarket fleeting bruised sore pain in left knee - made me hobble for a few minutes. Pain in one spot.
001	03.xx.xx	Pains in both feet, and both bunion areas. Sensation of prickling across toes. Burning rather than bruised pain. All pains > moving, wiggling toes, walking. <pressure.
004	03.xx.xx	Woke with hands feeling stiff, especially around area where palm joins fingers.
005	04.08.xx	Difficult to write again, and isn't very legible and grammar and spelling is worse than usual.
005	04.09.XX	Left hip feels numb, like I've hit it hard. Gradually wore off after about 5

		minutes.
001	04.xx.xx	Pain in feet, as last night. Series of short stabbing twinges in left bunion.
003	04.xx.xx	Right ankle really itchy. On the outside, just above the ankle bone. Have to scratch it both frequently and hard.
004	05.03.xx	Hands feel stiff from middle of palm to 1st phalanges. I can use them, previously would have had problems with fine motor movement / holding small items.
001	08.11.xx	Legs aching. Left leg has pain in small area 3-4ins. above ankle; aching, sore. Left knee aching quite badly. (No reason for this, haven't been at work today, no particular cause) <sitting >gentle movement.
001	09.01.xx	Sore, bruised feeling in left calf as before. > gentle movement.
001	11.09.xx	Left ankle felt very weak & painful as if it would give way. <putting weight on it. >rest for few moments. This pain only lasted a few minutes but was quite severe - enough to make me stop walking.
003	11.xx.xx	Right knee gives way when walking downhill. Pain not severe but somehow very unpleasant. Cannot put any weight on knee. This improves after I have got home and sat down for a while.
004	13.xx.xx	Cramping pains, like a bar is being pushed into the muscle across the back of right thigh, worse for sitting.
001	14.12.xx	Sore, sharp pain in left knee - no apparent cause.
SLEEP		
001	01.16.xx	Woke 3 times briefly feeling intense sensation of heat. (Not same as normal hot flush, which is more like a wave with a sensation of a rise and fall). This was just all on the same level of intensity, but very brief. Went straight back to sleep. No perspiration.
004	02.17.45	Incredible urge to sleep! Went to bed, am usually a night owl
001	02.xx.xx	Had feeling of great heat just before going to sleep. No sweat, just deep intense wave of heat. I apparently shouted at partner in early hours as he put an arm around me - I don't know way. Possibly didn't want to feel restricted.
004	03:13	Feel I want to go to sleep+++
005	05.xx.xx	(When asleep) Woke with boiling hot feeling in small of back and radiating all over. Had to uncover totally to cool down and then fell back to sleep. Surprisingly wasn't thirsty.
005	08.xx.xx	Hot moments in night.
005	09.xx.xx	Woke in night very hot again, with radiating pains from the small of my back.
DREAMS		
006	- 1.xx.xx	The night before I took the remedy I had a dream that I was doing the proving and that and that I could fly. I was flying around and then I stopped and looked at myself in the mirror and my right eye was glowing red and both my eyes were bloodshot. Had another dream early in the morning before taking the remedy as I had forgotten to bring it to bed. I dreamed that there was a leak in the house and it was because my son had put his potty in the loo and then downstairs was flooding. I woke up to find my son had wet the bed…
003	00.10.00	Dream: Close friend calls me to tell me her two daughters have died in the night from a mild fever. I feel grief stricken and disbelieving. A couple of days later I watch through my window as the bodies are taken away in a flurry of people. They are not in coffins but being carried upright as if they are alive. I see that the youngest girl's eyes are open – it is as if she looks at me, but I can see that she is dead. The reality in the dream is very sinister – I can see their blonde hair blowing in the breeze. I have t0 tell my own daughter that her friends are dead, and feel guilty that I can do nothing to help. Wake up crying.

004	00.22.xx	Dreamt about taking part in the proving and feeling indifferent to it
001	01.16.xx	Dream: had a bowl of white solid pieces of wax that had come out of my ears. I also dreamt of helping a particularly demanding customer at work with a long, detailed list - normally this would make me anxious - but this was more "how interesting", no anxiety.
006	14.xx.xx	Dream: About work, having sex with someone at work – felt silly and light, didn't seem as bad as it would be in reality. Was then very upset to hear about someone else having an affair though, although I had just been unfaithful.
003	31.XX.XX	Dream: A friend with daughter same age as mine told me she had a son aged three who died after she lost him in a shopping centre. Feel shock that she never told me before; it seems very strange that I didn't know this. Like the dream on day 0, wake up feeling confused about the reality of the situation.
001	xx.xx.xx	Also I dreamt my partner and I were both having diarrhoea - doing it at the same time, together. I had to go and have a shower after, as it was so messy! This was just normal/OK in the dream, not disgusting at all. Made me laugh when I woke up. (I do not often remember my dreams, so it was unusual for me to recall dreaming this much)
PERSPIRATION		
005	09.XX.XX	Palms were sweaty when I woke in the night hot.
001	00.18.40	Woke to go to loo. Nightie was damp with sweat all down front - had to change it. It wasn't that which woke me up, & I was surprised by it, as I do not have night sweats (even when menopause symptoms were worse). Not smelly. Cold sweat.
GENERALS		
001	01.02.xx	Increased sensitivity to temperature - felt hot earlier, now quite cold- more marked than usual.
004	01.14.xx	Feel better for going out, but am feeling as though I am drunk and wonder if I am safe to drive
006	03.xx.xx	Dull feeling all over
005	08.01.XX	Got warm at work and had to open a window.
001	08.xx.xx	Fatigue, low energy, negative; full of aches and pains. Weary.
004	08.xx.xx	Have noticed a loss of interest in drinking alcohol (am scared of exacerbating headaches etc)
005	09.XX.XX	Got hot again at work and had to open a window.
001	09.13.xx	Feel very cold, especially my face - weather has changed to cold and frosty but it is warm in house. Face feels unusually cold. Usually if I'm cold, it would be felt in feet first. Not better for warmth.
001	10.xx.xx	Fatigue <evening.
004	14.xx.xx	Mid afternoon, suddenly feel dead tired+++walk outside into cold air and get a complete return of energy.
003	XX.XX.XX	Felt exhausted all day. Felt I could hardly stay awake if I stopped moving, even for a minute. College consequently very difficult!
003	XX.XX.XX	Very forgetful and mentally disorganised. Significant symptom is: things that I did automatically before are no longer automatic. This includes: walking down steps (I feel I am going to fall!); carrying out basic transactions at work (get confused); getting ready in mornings (can't think of what to do next)
004	Comment	Noted synchronicities to date; forgot to finish (do, even) homework; need to talk and laugh++ so met up with old school friends and did; Had 2 very pleasant long car journeys with children (normally a nightmare); been more laid back about leaving dirty plates etc before leaving the house (normally have to tidy up); left my birthday present in friends car; could not be bothered to make the effort to get a friends birthday present out of the car;

		have been better for moving around and being active; took wrong turnoff for a route I know so well!!
004	Comment	Just before I became pregnant I started making a cheap kit wine, which I drank daily, and continued to drink a glass a day during the pregnancy. I later discovered that this "wine" contained aspartame. I have always avoided artificial sweeteners, in the beginning because I did not like them. My son's head had not properly developed; there was no skull cartilage. I had not miscarried before, nor have done since (I have 4 healthy daughters)

REPERTORISATION:

MIND

MIND - ACTIVITY; desires
MIND - ALERT
MIND - CALM
MIND - CHEERFUL
MIND - CONFUSION of mind – headache; with
MIND - CONFUSION of mind - talking, while
MIND - CONTENT
MIND - CONTENT – prostration, mental; during (NR)
MIND - DELUSION – automatic; things done automatically are no longer (NR)
MIND - DELUSION – awake, wide-awake (NR)
MIND - DELUSION – clockwork; everything runs like (NR)
MIND - DELUSION – poisoned: he: has been
MIND - DULLNESS – headache, with
MIND - DULLNESS – speaking, while
MIND - DULLNESS – work, during (NR)
MIND - EXHILARATION
MIND - FORGETFUL; headache, during
MIND - GRIEF
MIND - INDUSTRIOUS
MIND - INDUSTRIOUS – efficient (NR)
MIND - INDIFFERENCE – headache, during
MIND - INDIFFERENCE – important things; to
MIND - INDIFFERENCE – intellectual occupation; to usual
MIND - INDIFFERENCE - irritating, disagreeable things; to
MIND - IRRITABILITY
MIND - IRRITABILITY – alternating with: indifference
MIND - IRRITABILITY – family; to her
MIND - IRRITABILITY – headache amel. (NR)
MIND - LAUGHING
MIND - LOQUACIOUS
MIND - MEMORY – Weakness of memory
MIND - MEMORY – Weakness of memory; for what he is about to do
MIND - MEMORY – Weakness of memory; for what he is about to say
MIND - MEMORY – Weakness of memory; proper names
MIND - MISTAKES – speaking, in; using wrong words
MIND - MISTAKES – in work
MIND - MISTAKES – time, in; days of the week
MIND - PROSTRATION of mind – headache, during
MIND - REPROACHING himself
MIND - SENSES - acute
MIND - TIME – slowly, appears longer; passes too
MIND - TRANQUILLITY
MIND - TRANQUILLITY – tasks; whilst performing (NR)
MIND - UNTIDY
MIND - WILL – weakness of

VERTIGO

VERTIGO – TURNING; when – head; or moving the: quickly
VERTIGO – WALKING; while

HEAD

HEAD – HEAVINESS
HEAD – PAIN
HEAD – PAIN – light: general; from light in

HEAD – PAIN – Forehead: extending to: Eyes
HEAD – PAIN - Occiput
HEAD – PAIN – Sides: left
HEAD – PAIN – bursting: eating after; amel.
HEAD – PAIN – cutting
HEAD – PAIN – cutting: Forehead
HEAD – PAIN – line; line or rod; in a

EYES

EYES – GLASSY, appearance
EYES – ITCHING – Canthi: Inner
EYES – HAIR - sensation of hair in eye
EYES – STARING

VISION

VISION – ACUTE
VISION – FOGGY

EAR

EAR – HEAT
EAR – ITCHING – Meatus

NOSE

NOSE – SMELL – acute

FACE

FACE – CRACKED: Mouth; corners of
FACE – DRYNESS
FACE – ERUPTIONS – Mouth: Around: Corners
FACE – HEAT – spots; in
FACE – PAIN – Bones
FACE – PAIN –Cheek
FACE – PAIN – stinging

MOUTH

MOUTH – DISCOLORATION – Tongue: yellow
MOUTH – SALIVA – frothy
MOUTH – SALIVA – offensive
MOUTH – SALIVA – thick
MOUTH – SALIVATION – profuse
MOUTH – TASTE – acute
MOUTH – ULCER – Gums

THROAT

THROAT – DRYNESS
THROAT – FOREIGN body; sensation of a

STOMACH

STOMACH – APPETITE – increased
STOMACH – APPETITE – increased: morning
STOMACH – APPETITE – wanting
STOMACH – DISTENSION

STOMACH – EMPTINESS
STOMACH – EMPTINESS – morning: breakfast, after (NR)
STOMACH – ERUCTATIONS
STOMACH – HEARTBURN
STOMACH – RETCHING – cough, with

ABDOMEN

ABDOMEN – PAIN – Hypogastrium
ABDOMEN – PAIN – Umbilicus - region of: spot beneath navel
ABDOMEN – PAIN – stitching

RECTUM

RECTUM – CONSTIPATION
RECTUM CONSTIPATION – insufficient
RECTUM – URGING

STOOL

STOOL – HARD
STOOL – LONG, narrow
STOOL - ODOR – offensive

BLADDER

BLADDER – URGING

FEMALE GENITALIA

FEMALE – MENSES – delayed
FEMALE – MENSES – protracted
FEMALE – PAIN – stitching: uterus

RESPIRATION

RESPIRATION – DEEP – desire to breathe
RESPIRATION – DIFFICULT
RESPIRATION – DIFFICULT – eating; while
RESPIRATION – DIFFICULT – exertion; after

COUGH

COUGH – DRY

CHEST

CHEST – CONSTRICTED
CHEST – OPPRESSION
CHEST – PAIN – sore
CHEST – PAIN – stitching
CHEST – PAIN – stitching: respiration
CHEST – PAIN – stitching: Mammae: left
CHEST – PAIN – stitching: Ribs: Between

BACK

BACK – HEAT – Lumbar: sleep; on waking from; at night: radiating to body (NR)
BACK - PAIN – Cervical
BACK - PAIN – Cervical: aching

BACK - PAIN – burning: lumbar: sleep; on waking from; at night
BACK – STIFFNESS – cervical
BACK – STIFFNESS – cervical; oiling; creaking as if bones need (NR)

EXTREMITIES

EXTREMITIES - HEAVINESS - Upper limbs - writing, while
EXTREMITIES - PAIN – stitching: lower limbs
EXTREMITIES - PAIN – stitching: lower limbs: motion amel.
EXTREMITIES - PAIN – stitching: lower limbs: knees:
EXTREMITIES – WEAKNESS – Ankle: walking; while: sudden
EXTREMITIES – WEAKNESS – Knee: walking; while: sudden, gives way (NR)

SLEEP

SLEEPINESS

DREAMS

DREAMS – DEAD – children
DREAMS – EYES – bloodshot: eyes bloodshot and right eye glowing (NR)

SKIN

SKIN – CICATRICES – itching

GENERALS

GENERALS – AIR – open: amel
GENERALS – FOOD – diet: agg. errors in diet
GENERALS – FOOD – sweet: aversion to
GENERALS – FOOD – sweet: desires
GENERALS – HEAT – lack of vital
GENERALS – HEAT – sensation of
GENERALS – PAIN – appear suddenly
GENERALS – PAIN – spots; in
GENERALS – PAIN – Stabbing
GENERALS – PAIN – Stitching
GENERALS – WEARINESS - evening