DISCUSSION OF MERCURY'S TOXIC EFFECTS ON THE BRAIN AND CENTRAL NERVOUS SYSTEM

The "Mad Hatter" in Lewis Carroll's Alice in Wonderland was actually modeled after one of a group of very debilitated, intractably compromised, occupationally poisoned hat makers. These Hatters shaped the felt in their hats with mercury, which from absorption by inhalation and skin contact eventually caused them to go "mad." "Eretheism" which is excessive irritability, excitability, or sensitivity to stimulation is also known as "Mad Hatter's Disease."

As a group of children familiar with this contemporary fairy tale we can count this as our first documentation of the effects of mercury on the brain. As children, 78% of us had silver mercury amalgam fillings placed in our teeth, which despite the American Dental Association's assurances of safety, began its insidious poisoning of our entire being. If you're a woman who had children while you had these fillings, you passed your body's toxic burden along to your developing embryos and through your milk to your hungry infants. Yes, "It's all in your head."

Recently released (April, 2001) large scale government research called the NHANES III Study (National Health and Nutritional Examination Survey conducted between 1988 and 1994) that had the data statistically analyzed by a California company looking for links to dental fillings and adverse health conditions showed the following: "That 95% of the people with Disorders of the Central Nervous System (the International Classification of Disease Codes 340-349 which includes Multiple Sclerosis, Epilepsy, Paralysis and Migraines) have dental fillings."

Further recent (March 2001) credible evidence of the degenerative effects of mercury came from research at the University of Calgary Faculty of Medicine which showed that in vitro exposure to trace amounts of mercury consistent with the levels found in dental fillings caused the formation of "neurofibrillar tangles" which are one of the two diagnostic markers for Alzheimer's Disease. Previous research has shown that mercury can cause the formation of the other Alzheimer's Disease diagnostic marker, "amyloid plaques."

Since there are thousands of articles and hundreds of web pages regarding mercury and heavy metal poisoning, only this most up-to-date concisely worded example of the available material is included for reference in this paper.

- Dental Amalgam contains about 50% Mercury. (undisputed)
- Mercury has been scientifically demonstrated to be more toxic than Lead, Cadmium, or even Arsenic. (undisputed)
- Mercury leaves dental amalgam continuously throughout the lifetime of the filing.(7)
- Mercury vapor is the main way that mercury comes out of amalgam.(31)
- Mercury vapor is absorbed at a rate of 80% through the lungs into the arterial blood. (31, 55)
  Mercury is cytotoxic. i.e. it kills cells (undisputed)
- There is NO harmless level of Mercury Vapor Exposure. (63)

- Mercury from amalgam binds to -SH (sulfhydryl) groups. These exist in almost every enzymatic process in the body. Mercury from amalgam will thus have the potential of disturbing all metabolic processes. (25, 33, 60).
- Mercury from amalgam is transported freely via the blood.(19, 34, 35)
- Mercury vapor is absorbed directly into the brain. (34, 55a)
- Mercury from amalgam will result in a slow build up of mercury in body tissues. (20, 26, 34)
- Mercury crosses the blood brain barrier. (34, 55a)
- Mercury is implicated in the pathogenesis of Alzheimer's Disease. (67, 68)
- Mercury from amalgam is stored in the fetus and infant before the mother. (20,61)
- Mercury from amalgam is stored in the breast milk and the fetus up to 8 times more than the mother's tissues. (18,19)
- Mercury (Mercury Vapor / Methyl mercury) crosses the placenta.(18, 31)
- Mercury Crosses into breast milk.(18,31,61)
- Mercury will severely reduce reproductive function.(2, 3, 4, 20, 22, 24, 31, 37,38, 39, 40, 41, 49)
- Mercury rapidly depletes the immune system.(27,34,35,42,43,44,45,46,47,48,60)
- Mercury will induce a number of Auto Immune Diseases.(27,34,35,42,43,44,60)
- Mercury will cause an increase in number and severity of allergies.(1,34,60)
- Mercury from amalgam is stored principally in the kidneys, liver and brain. (1,20,31)
- Mercury from amalgam (shown in animal experiments) causes kidney damage.(59)
- Mercury from will cause a 50% reduction in Kidney filtration as shown in a study of sheep after amalgam placement.(59)
- Methyl Mercury is 100 times more toxic than elemental Mercury. (undisputed)
- Mercury from amalgam is methylated in the mouth.(51,53,54,)
- After chewing, Mercury Vapor levels will remain raised for at least another 90 minutes. (1,15,16,18,47)
- Mercury from amalgam will migrate through the tooth.(25,27,30)
- This rate of migration is increased if a gold crown is placed over a tooth filled with amalgam. (27,30)
- Teeth are living tissue and are a part of our bodies. (undisputed)
- Teeth have a massive communication via blood, lymph and nerves with the rest of the body.(34)
- Mercury from amalgam is absorbed into the body at a rate of 3 to 17 mcg / day. (WHO 1991 Criteria 118)
- Mercury release is increased by; increases in temperature, friction & increase in electrical currents.(28,31,56)
- Mercury from amalgam will enter the body as elemental mercury, inorganic mercury, vapor, charged mercury ions.
- In the Brain, Mercury from amalgam is stored preferentially in the Pituitary Gland and Hypothalamus.(20,34)
- Micro-Mercurialism is principally characterized by Neurological symptoms.(34)

- Mercury is transported along the axons of nerve fibers.(33,34,50)
- Mercury from amalgam may be stored in every other cell in the body. Each area affected will produce its own set of symptoms
- Mercury binds to hemoglobin in the red blood cell thus reducing oxygen carrying capacity.(1,16,17,21,26,35)
- Mercury damages blood vessel reducing blood supply to the tissues (micro-angiopathies).(34)
- Amalgam fillings produce electrical currents which might be injurious to health. These currents are measurable in Micro Amps. The Central Nervous System (Brain) operates in the range of Nano-Amps this is One Thousand times less than a Micro Amp.(28)
- Dissimilar metals in the mouth [eg Gold & Amalgam] will produce higher electrical currents.(19,30)
- Mercury from amalgam (shown in animal experiments) will induce Antibiotic Resistance and Mercury resistance in bacteria in the mouth and Gastrointestinal tract.(58)
- Brain levels of mercury are in a direct linear proportion to the number of Surfaces of amalgam fillings in the mouth.(1,19,25)
- The level of Mercury, in brain tissue of fetus's, new born, and young children, is proportional to the number of amalgams in the mother's mouth.(61)
- Mercury will cause single strand breaks in DNA.(41,42)
- Mercury levels in the body can not be assessed by either blood or urine levels. (26)
- Mercury from amalgam fillings is the single greatest source of dietary mercury for the general population. (W.H.O. Criteria 118., 1991).
- Dental personnel are severely effected by exposure to mercury. (3,13,49)

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