

2. in view of the above, is the use of dental amalgam safe for patients and users, i.e. dental health professionals? Are certain populations particularly at risk, e.g. pregnant women or children?

Women, children and especially dental personnel are obviously being harmed. The mercury in the umbilical cord is coming from mercury/silver fillings. (Snapp_1989)

No, it is not safe and a brief examination of the empirical evidence of will expose the fallacy of mixing, packing, polishing carving a toxic metal in the uncontrolled environment of a school or office where the fumes and dust can be inhaled not only by the operators but by others.¹ (Tezal Table 3) Both instructors and students in the dental school experienced a statistically significant increase in blood and plasma mercury during the academic year.

Tesande writes that 1 in 6 children born each year in the US year have cord blood mercury levels > 5.8 µg/L and this high level of exposure is responsible for nationwide cost of \$8.7 billion due to lost income from low IQ.² Cord blood is about 1.5 times the maternal blood. Therefore, mother's blood of 4µg/l could cause harm.

Tesande would jump out of his skin if he saw the enormous levels of mercury in the blood of dental students going up every year of training. If a woman became pregnant she would likely deliver a damaged child. The dramatic increase in blood mercury from only part time dental training explains the multitude of former dental assistants who have tremor, damaged children, infertility and birth defects.^{3 4} That is the predictable result of this kind of exposure.

Note that although the clinical areas are within the occupational guidelines (TWA 50µg/M³) many blood and plasma mercury measurements are considerably higher. Occupational guidelines were never intended to be protective against fetal harm and clearly do not apply to women of child bearing age or during pregnancy and are certainly not "protective" of the population as a whole.

Whenever the problem of mercury contamination in dentistry has arisen in the past the problem was attributed to some unique event such as poor training, a spill or other contamination accident.^{5 6 7} From the latest survey we can see that no spill is necessary. It is a proven consequence of amalgam use.

25 Studies reviewed by Dr. Hansen found substantial relief from mercury related symptoms with amalgam removal.⁸

A subset of the population that is particularly vulnerable to mercury due to a failure to excrete was identified and linked to autism and Alzheimer's.^{9 10 11} Those who excrete the least mercury are at the greatest risk. This new

fundamental research directly refutes the European Commissions' DG III 1998 Report claim that mercury has not been linked to any specific disorder.¹²

Dr. Jill James, is one of the world's leading experts on glutathione in medicine. Her research supports the hypothesis that autistic children represent a subset of the population that cannot effectively excrete mercury by showing they are low in glutathione, which binds to mercury aiding in its excretion.¹³ A single polymorphism that leads to low glutathione levels also puts children at risk for autism. This represents a genetic susceptibility that is responsive to either excessive lead or mercury exposure, but would not surface without the toxic exposure. Note that the polymorphism is increased in autism but is not absolutely necessary.

When you combine the individual variability of mercury exposure from amalgam fillings that is dependent upon so many factors such as smoking, number, size, position and hot fluids intake, chewing, nicotine gum, brushing, breathing habits and even occlusion combined with susceptibility factors such as prior fetal exposure, plus genetic susceptibility of CPOX and APOe 4/4 or 4/3, synergistic effects of lead and protective effects of selenium it is indeed not surprising that epidemiology has been unable to establish a direct link between amalgam mercury and a specific disorder of mankind. Proof of causation never was and never should be a requirement for an educated society to avoid mercury exposure especially our most vulnerable children.

¹ Tezel_Brit_Dent_J_Graph_2001

² Trasande_Environ_Health_Perspect_2005

³ Radzislav_Arch_Occuo_Environ_Health_1987

⁴ Fawer_J_Ind_med_1983

⁵ Cook_British_Dent_J_1969

⁶ Gelbier_Public_Health_1989

⁷ merfield_Brit_Dent_J_Occup_Exp_1976

⁸ HANSEN_FDA_Tandvårdsskedeförbundet_2006

⁹ mutter_Neuroendocrin_Ltr_2004

¹⁰ Haley_Medical_Veritas_2007

¹¹ Holmes_Int_J_Toxicol_2003

¹² Dental Amalgam. A report with reference to the Medical Devices Directive 93/42/EEC from an AD Hoc Working Group mandated by DG III of the European Commission. 1998.

¹³ S. Jill James, Ph.D.et al., The Frequency of Polymorphisms affecting Lead and Mercury Toxicity among Children with Autism American Journal of Biochemistry and Biotechnology 4 (2): 85-94, 2008