CAMPAIGN FOR
MERCURY FREE DENTISTRY
A PROJECT OF CONSUMERS FOR DENTAL CHOICE

Dental Hygienists, Dental Assistants urge USPHS to end amalgam purchase and use

Dear Assistant Secretary for Health Dr. Levine:

As dental hygienists and dental assistants, we urge you to take action to end government purchase and use of amalgam, a filling material that is approximately 50% toxic mercury. Amalgam use must end in the US Public Health Service on a date certain.

In addition to the harm that amalgam's mercury does to our patients and our environment, it thoroughly contaminates our workplaces – mercury is, of course, the most volatile of the heavy metals. With high levels of mercury in dental offices' air, amalgam particulate escaping during drilling, and the potential for spills, it is not surprising that many objects around the dental office – from sinks to carpeting, and even dentists' shoes – can be contaminated by mercury. Even the piping systems in dental offices tend to accumulate mercury. [1, 2, 3]

Due to mercury exposure from amalgam in the workplace, studies have shown that dental workers have elevated systemic mercury levels.[4] Many of these dental workers – including dentists, dental assistants, dental hygienists, and office workers – are women of child-bearing age, which makes them particularly susceptible to the occupational hazards associated with mercury.[5,6,7]

The government employs many dental hygienists and other dental professionals who are unnecessarily and unfairly exposed to toxic mercury – which then can be carried in patients' mouths to other dental offices where other hygienists and dental professionals inside and outside government service will be exposed during future dental work.

Amalgam use is an environmental justice issue for us dental professionals. Only one route exists to protect our colleagues who work in US Public Health Service and all other government agencies who provide oral health care: the end of amalgam use by federal agencies!

Sincerely,

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[1]Concorde East/West, *The Real Cost of Dental Mercury* (March 2012), http://www.zeromercury.org/index.php?option=com_phocadownload&view=file&id=158%3Athe-real-cost-of-dental-mercury&Itemid=70, p. 13

[2] R.H. Roydhouse, M.R.F. Ferg, and R.P. Knox, *Mercury in Dental Offices: Survey in Vancouver, BC*, J. Canad Dent Assn, No.2 (1985), http://www.keytoxins.com/hgbiblio-files/iaomt/iaomt_db/Roydhouse%20et%20al.1985.pdf

[3] Gronka PA, Bobkoskie RL, Tomchick GJ, Bach F, Rakow AB. Mercury vapor exposures in dental offices. J Am Dent Assoc. 1970;81:923–925, http://www.keytoxins.com/hgbiblio-files/iaomt/iaomt_db/Gronka%20Hg%20Dental%20Offices%20ADA%201970.pdf, p.925

[4] Marcelo Tomás de Oliveira *et. al.*, *Effects from Exposure to Dental Amalgam on Systemic Mercury Levels in Patients and Dental School Students*, PHOTOMEDICINE AND LASER SURGERY (October 2010, Vol. 28, No. S2: S-111-S-114), http://www.liebertonline.com/doi/abs/10.1089/pho.2009.2656

[5] Linda Jones et. al., *A 30-year follow-up of residual effects on New Zealand School Dental Nurses, from occupational mercury exposure*, HUMAN AND EXPERIMENTAL TOXICOLOGY (2007), http://www.ncbi.nlm.nih.gov/pubmed/17615119 ("Thirty years ago, the all-women exposed group worked with both silver and copper amalgam filling material without protective gloves or a ventilation system, resulting in chronic mercury exposure. The aim of the study was to test the null hypothesis in a survey of general and reproductive health, and a battery of nine neurobehavioral tests. The population was the 115 graduates of one school for dental nurses from 1968 to 1971. The sample was 43 mercury-exposed women and 32 matched controls. Statistical comparisons revealed that the two groups were equivalent on cognitive tasks and four of the six mood subscales. Significant between-group differences were found in current health symptom experience and reproductive health, especially early hysterectomy experience. Reporting of Occupational Overuse Syndrome was strongly positively correlated with years of work. In general, the study suggests that acute symptoms from mercury exposure may be reversible, while some residual health effects may be becoming more of a concern with the women's increasing age.").

[6]Lindbohm ML, Ylöstalo P, Sallmen M: Occupational exposure in dentistry and miscarriage. Occup Environ Med 2007, 64:127-133., http://www.ncbi.nlm.nih.gov/pubmed/17053021 ("A slightly increased risk was found for exposure to mercury amalgam, some acrylate compounds, solvents and disinfectants.")

[7]Rowland A, Baird D, Weinberg C, Shore D, Shy C, Wilcox A: The effect of occupational exposure to the mercury vapour on the fertility of female dental assistants. Occup Environ Med 1994, 51:28-34, http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1127897/ ("To study the effects of mercury vapour on fertility in women, eligibility questionnaires were sent to 7000 registered dental assistants in California. The final eligible sample of 418 women, who had become pregnant during the previous four years, were interviewed by telephone. Detailed information was collected on mercury handling practices and the number of menstrual cycles without contraception it had taken them to become pregnant. Dental assistants not working with amalgam served as unexposed controls. Women with high occupational exposure to mercury were less fertile than unexposed controls. The fecundability (probability of conception each menstrual cycle) of women who prepared 30 or more amalgams per week and who had five or more poor mercury hygiene factors was only 63% of that for unexposed women (95% CI 42%-96%) after controlling for covariates.").