

UPDATE ON THE USE OF SILVER AMALGAM FILLINGS*

by Seymour L. Gottlieb, BS, BDS, DDS, member of NOHA's Professional Advisory Board, with a private practice in Dentistry in Northbrook, Illinois; former Research Assistant and Instructor, College of Dentistry, University of Illinois and Researcher in Microbiology, United States Public Health Service, Center for Disease Control.

The silver amalgam filling is the most commonly used dental material in the United States. It contains 50% mercury, 35% silver, 11-12% copper, 3% tin, and sometimes 1% zinc. Many studies have confirmed that mercury is released from the fillings by:

- * Corrosion - a blackening of old silver fillings that releases metallic mercury from the surface.¹
- * Chewing - results in a release of the vapor, methyl mercury, which is 100 times more toxic than elemental mercury when in the presence of certain bacteria such as *Streptococcus mutans*, which is found in the mouth.² The elevated mercury vapor released declines slowly to the original levels 90 minutes after the activity ceases.³ Beware gum chewers!

One average silver amalgam filling contains enough mercury over its lifetime in the mouth to exceed the United States Environmental Protection Agency Adult Intake Standard. Animal and human autopsies demonstrate that mercury builds up in the body over time. It is detected highest in the kidney, stomach, jaw, and liver. It can pass through the placental barrier to the unborn child.⁴

One average silver amalgam filling contains enough mercury over its lifetime in the mouth to exceed the United States Environmental Protection Agency Adult Intake Standard.

Several countries have limited the use of silver amalgam fillings. The Swedish parliament recently voted for a new dental insurance system starting January 1999, in which silver amalgams will not be subsidized. Use of silver amalgams had previously been banned for pregnant women and children. The French Superior Council for Public Hygiene has just issued a series of recommendations to regulate the use of silver amalgams. Dental use is being targeted because of the long-term risks of renal or nervous problems. It is reported that restrictions are underway in England. In addition, the Canadian legislature limited the use of silver amalgam fillings in adults while prohibiting its use in children, pregnant women, and people with kidney problems. A letter to this effect was sent in August, 1996 by Health Canada to every dentist in that country. As early as 1992, the German Ministry of Health restricted silver amalgams to back teeth. Further, none were to be placed in pregnant women and children up to 6 years of age or anyone with kidney problems.

At a recent lecture in Belgium, Dr. Christiansen asked an audience of about 1,000 dentists how many would use silver amalgams in their own child's mouth. No more than 10 hands were raised.

Dr. Gordon Christiansen, one of the world's most eminent researchers and lecturers stated at the 1998 Chicago Dental Society meeting that the University of Zurich and Japanese dental schools have eliminated silver amalgams from the teaching curriculum. At a recent lecture in Belgium, Dr. Christiansen asked an audience of about 1,000 dentists how many would use silver amalgams in their own child's mouth. No more than 10 hands were raised. At present, Dr. Christiansen estimates that 78% of the fillings placed in the United States are still silver amalgams.

*For a copy of Dr. Gottlieb's earlier article on the "Present Health Status of Silver Fillings," in NOHA NEWS, Vol XVII, No. 3, Summer, 1992, call (847) 272-7874 or fax (847) 272-9566.

1Pleva, J., "Mercury poisoning from dental amalgam," *Journal of Orthomolecular Psychiatry*, 121:3, September 1983.

2Heintze, V. et al, "Methylation of mercury from dental amalgam and mercuric chloride by oral Streptococci in vitro," *Scandinavian Journal of Dental Research*, 91:150-2, 1983.

3Vimy, H. and F. Loescheider, "Serial measurements of intraoral air mercury; Estimating daily dose from dental amalgam," *Journal of Dental Research*, 64(8):1072-5, 1985 and Patterson, J. et al, "Mercury in human breath from dental amalgam," *Bulletin of Environmental Contamination and Toxicology*, 34:459-68, 1985.

4Foundation for Toxic Dentistry, 4(2), March 1991.

Article from NOHA NEWS, Vol. XXIII, No. 4, Fall 1998, pages 6-7.