

The Impact of Mercury on the Environment

Do the Neptune Society and funeral parlors and medical schools that cremate bodies remove all amalgam-filled teeth prior?

I read the article in the July 2004 *CDA Journal* regarding mercury danger and removing amalgam from dental wastewater by Environ International Corp./Jay A. Vandeven, (Page 564). It caused me to wonder about how government agencies use sometimes suspect data and make assumptions and projects that often lose their basis in reality.

As we all know, after years of testing, amalgam is considered safe in humans' mouths. Therefore, the scrap that passes down our chairside evacuation lines is also considered stable and safe. (However, if I read the July *CDA Journal* articles correctly, the Environmental Protection Agency considers amalgam waste as 50 percent hazardous mercury in all its calculations.) For the scientific community, it seems amalgam scrap is only hazardous when the mercury is released via incineration. The article made a point of saying only 6.7 percent of Public-Owned Treatment Works (POTWs) incinerate their "biosolids" where the amalgam waste ends up. The article goes on to explain that costs to dentists statewide to eliminate all amalgam waste (I thought this was safe anyway) from possibly getting to these 6.7 percent POTWs was going to cost millions or about \$130,000 to \$280,000 per pound of amalgam.

I have several questions:

- Why require ALL dentists to capture amalgam waste when only the communities where the 6.7 percent POTWs exist actually incinerate waste?
- Why not require the 6.7 percent POTWs to NOT incinerate?
- Do the Neptune Society and funeral parlors and medical schools that cremate

bodies remove all amalgam-filled teeth prior?

- Why does the EPA continue to get away with classifying amalgam as 50 percent hazardous mercury, which flies in the face of all research on the subject?

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Contributing editor's response:

Dr. Burk raises questions that have likely popped up in the minds of other dental professionals unfamiliar with environmental science and policy. Environmental agencies do not dispute the safety of dental amalgam. Rather, these agencies seek to control the impact of mercury *from all sources* to the environment. Dentistry is just one of the sources — a small one, but one with a significant public profile. Other high-profile targets include crematories. The main targets for federal regulation are the coal-burning power plants and waste incinerators. Research on how to effectively control the environmental impact of mercury is ongoing, but there is still much to learn. For example, it is known that waterborne microorganisms play a key role in converting inorganic mercury to the more harmful methylmercury. Researchers are looking into different means of preventing this conversion. Research is under way to determine whether publicly owned treatment plants release less mercury to the water and to biosolids if the majority of dentists in their service areas have installed amalgam separators. Regardless of the outcome of this research, dentistry must take the lead in implementing environmentally sound practices.

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