

“Mercury Rising”

Editorial by
Griffin Cole, DDS

On August 29, 2002, a Lufkin dentist was sued for placing 4 amalgam fillings in a pregnant lady allegedly causing her young boy to develop severe autism soon after birth. The Texas Dental Association and the American Dental Association were also named as defendants in the suit. Although this suit is pending, it represents just one of many that have been filed and successfully settled over the past few years. California attorney Shawn Khorrami, the litigator in this particular case, is one of several lawyers who are aggressively waging this anti-amalgam war against dentists and associations who represent us. The ADA denounces Khorrami's claims, saying they are based on “junk science.” Despite how this turns out, I think it's safe to say that this is a battle that is not going to be swept under the carpet with the usual “amalgam has been used for many years and is perfectly safe” argument. In fact, the war on amalgam is being waged and won all over the country.

Most of you following the mercury issue now know that the California State Dental Board was completely disbanded by order of the State Legislature in December 2001 for a number of deficiencies. Its most serious shortcoming was its failure to adopt a dental materials fact sheet that adequately warns the public of the known hazards of mercury-amalgam fillings.

The Maryland State Dental Association, along with the ADA were sued earlier this year for allegedly misrepresenting and deceiving consumers about the high levels of mercury used in amalgam fillings. This suit is seeking to be certified for class action.

In March, the Oregon Dental Board rescinded the use of the ADA's “Code of Ethics” rule (the rule adopted in 1990 that states dentists can not advocate the removal of amalgam fillings for any reason beyond mechanical breakdown) after facing constitutional warnings from the American Civil Liberties Union. Dentists in Oregon are now allowed to discuss mercury toxicity issues openly with their patients.

Along these lines, the state of New Hampshire has enacted a new law requiring all dentists to warn their patients of the risks of mercury exposure. Governor Jean Shaheen signed this into law in April despite constant opposition from the ADA.

On the political front, Congressman Dan Burton (Indiana) and Congresswoman Diane Watson (California) introduced bill H.R. 4163 before Congress on April 10th of this year. Should this bill become law, it would immediately ban the placement of amalgam fillings in pregnant women and children under 18 years of age, followed by a complete ban of the material by 2007.

With all this going on, it is becoming much more difficult to convince an informed public that a substance that enters our offices as a hazardous material - must be treated and

disposed as a hazardous material - is perfectly safe to place in their teeth. Whether you place this material or not, its continued use in dentistry is being called into question more than ever before.

Dentists are the biggest contributors of mercury spillage into the environment. Recent studies indicate that dental offices may be responsible for as much as 80% of the mercury water pollution in some areas. According to published reports by the Environmental Protection Agency and other regulatory bodies, as little as half a gram of mercury can contaminate a 10-acre lake. Drilling out just two amalgam fillings generates at least half a gram of mercury. When you do the math, the potential level of environmental contamination is extremely high.

State regulators in North Carolina have asked dentists there to improve their filtering methods. In 1998, supervisors in the State Division of Water Quality and environmental chemists at the State Department of Environment and Natural Resources found that the mercury content in the water was unsafe and exceeded acceptable levels. Other states have found the same results after testing their wastewater. Here in Austin, sediment values have been as high as 1.50 mg/kg, three times the allowable PEL (Probable Effects Level). This represents the level at which aquatic life can be contaminated.

The US Public Health Service maintains that metallic mercury, the kind found in dental offices, is relatively safe. If indeed the mercury released from our offices remained in this simple state, perhaps the issue of contamination would be controvertible. Once filtered into wastewater, however, mercury is quickly converted by bacteria into the highly toxic methyl-mercury. This form of mercury can enter the body readily through the lungs, skin, and stomach. Eating fish contaminated with this highly toxic organic form of mercury can damage neurological development of children, especially of fetuses exposed when their mothers ingest the poisoned fish. Kidney, brain, and lung damage can also occur.

The good news is there is a simple solution to this environmental problem, one that may soon become mandatory. An amalgam separator device, which can be easily installed into any size office, can capture 95%+ of the mercury filtering through the suction lines. Coupled with a recycling service for disposable chairside amalgam traps, this system can prevent virtually any mercury from entering our water supply. The chairside filter traps that most dentists currently use do capture the larger particulate matter, but large amounts of mercury easily bypass this system and pass into the wastewater. The separator and chairside amalgam traps contain all the spillover in sealed vessels which are carefully wrapped and sent back to recycling plants for proper handling. Tossing the regular traps in the garbage is not a safe disposal method and actually poses an environmental hazard itself.

In 1988, the E.P.A. declared scrap dental amalgam a hazardous waste, yet they still haven't addressed the water contamination issue with much attention. That will soon change. In response to all the legal and political concerns on the amalgam issue of late, the National Institute of Health is now conducting the first large-scale study of mercury-amalgam fillings with results expected in 2006.

Respectfully submitted,

Griffin Cole, DDS
