

Growing number of dentists choose not to use dental amalgam

By Tom Wilmoth

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As a dental student almost three decades ago, Dr. C. Frederick Smith of Lynchburg says he became concerned that dental amalgam filling material contained mercury.

Though his professors assured him that the mercury could not leak out of the filling material, Smith said he doubted the validity of that statement because he had worked as a research chemist before entering the dental field. Still, he said in a letter sent to the newspaper last week, "I did not think it wise to disagree with my professors."

But after graduation from dental school in 1977, he began to research the safety of dental amalgam, which is made up of 50 percent mercury. He said his master's degree in chemistry gave him a high respect for the toxicity of elemental mercury.

Smith says now he has no doubt: Dental amalgam isn't safe.

"Scientific research has proven beyond a shadow of a doubt that elemental mercury evaporates from amalgam fillings as mercury vapor. When a piece of 25 year old amalgam filling that had been removed from a patient's tooth was lightly touched and then examined with an electron microscope, tiny balls of liquid unbound mercury could be seen beading up on the surface of the filling. With special black lighting mercury vapor has even been photographed evaporating off of dental amalgam," he stated.

Smith stopped using dental amalgam in most of his patients as early as 1984 and as of 1998 he stopped using it altogether.

He said he's among a growing number of dentists choosing alternatives to dental amalgam. According to Smith 30 percent of dentists in the United States don't use dental amalgam fillings at all and half of all the fillings now used are with materials other than dental amalgam.

One issue dentists in Virginia who are mercury-free face is that they can't advertise that fact. According to the Virginia Board of Dentistry, doing so would be tantamount to making a claim of superiority and therefore they become subject to disciplinary action.

Sandra Reen, executive director of the Virginia Board of Dentistry, said the board does not have a guiding document specific to the use of dental amalgam.

"We refer people to the research literature that exists ... There's quite a bit of literature available from the research community in regards to the safety," she said.

Smith said he also points his peers to scientific information so "they can come to their own conclusion" on the safety of dental amalgam.

"I just think a lot of the scientific literature is not available to the majority of dentists," he said of why some dentists still choose to use dental amalgam. "You really have to go hunting and looking

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for it. If they did (study it) they would really begin to question it as I did when I read it," he said.

Smith belongs to the dental professional organization the International Academy for Oral Medicine and Toxicology which deals with the safety of dental materials used by dentists to restore teeth.

He said studies have shown that mercury vapor breathed in is 80 percent absorbed by the blood in the lungs and then becomes a cumulative toxin that the body must dispose. He said the studies have shown that mercury from amalgam fillings accumulates in distant organs within just a few weeks of being placed in the mouth.

The American Dental Association, however, does not believe any vapor which might be released is harmful.

Dr. Robert Kelly, a spokesman for the ADA from the University of Connecticut School of Dental Medicine, said the ADA's position supporting the safety of dental amalgam has been formed from a lot of people outside the field of dentistry.

He said the amount of exposure to mercury from amalgam fillings is minuscule relative to exposure from a normal diet or "from the air we breathe."

"It's not for lack of looking. People just haven't found any relationship (between dental amalgam and health problems) at all," he said.

"The health side seems to be well settled," he added. "There just isn't anything out there to raise a health concern."

Kelly said at best having amalgam fillings adds one microgram of extra exposure per day, compared to some 10 micrograms of exposure per day in a normal diet.

He didn't question that people are having health issues, but Kelly said those health issues are being wrongly attributed to the use of dental amalgam fillings. Instead, he said symptoms of health problems such as Multiple Sclerosis, which tend to come and go, may coincide to an issue with a filling during a time when such a health issue is progressing naturally.

"It's clear to me if they had a problem related to the neurologic and auto-immunue diseases they would have been found. There's been a lot of looking," Kelly said.

He said the use of dental amalgam provides an effective and inexpensive option. "It's the cheapest and most long-lasting filling material we have," he said. "There are a lot of people who are healthier because of its use. "

He said if there was a problem, the ADA would be among the first to advocate against its use. "They have an active interest in the patients we treat," he said.

"If dentistry could cure Alzheimer's, wouldn't that be wonderful. But we can't. The same with Multiple Sclerosis. We just can't," Kelly said.

But Smith disagrees with the ADA position stated by Kelly. Smith said the World Health Organization believes any mercury vapor released is harmful.

"The consumer is now put in the awkward position of whom to believe: the ADA who is in favor of amalgam use or the WHO that states that it is the major contributing factor to human mercury exposure," he said.

He said the recent hearings before an advisory panel of the U.S. Food and Drug Administration on the safety of dental amalgam should send a message. Those hearings, he said, showed there was skepticism as to the claims by the ADA that dental amalgam is safe, and stated that an overwhelming majority of the neurologists on the panel voted that "Given the amount and

quality of information available for the FDA Draft White Paper, the conclusions [that amalgam is safe] were not reasonable."

Those hearings have been followed by several thousand submissions from individuals claiming adverse reactions to dental amalgam.

Smith wrote: "As I understand it, the FDA has only two positions. A material is either safe or not safe. If the advisory panel would not make a statement that amalgam is safe, then what are we to assume but that it is not safe?"

The use of tooth-colored composite restorations, though they require more time and cost more, have advantages, he said. Those advantages include requiring less of the patient's tooth to be removed and being able to bond the remaining tooth structure together, "giving the tooth back almost its original strength which reduces the risk of fracture."

He also said tooth-colored composite restorations match the natural tooth color. "They can even be placed on the surfaces of a child's permanent teeth as a sealant to prevent decay from penetrating the grooves that are so often the first site of a filling in a child," he added.

He said it's important that if amalgam fillings are removed, they be done so safely.

"Unfortunately, when dentists place and remove dental mercury containing amalgam, they expose themselves, their staff, and their patients to toxic mercury vapor and amalgam dust particles unless they take special precautions to minimize the exposure as recommended by the IAOMT. Mercury vapor is colorless, odorless and tasteless. If we cannot see it, smell it, or taste it, it's very hard to believe that it is present. The ADA recommends that the dental treatment rooms be well ventilated, but without some sort of monitoring and well defined protection and containment procedures, mercury exposure will inevitably occur," he wrote.

He said other countries have already eliminated or restricted the use of dental amalgam fillings.

"When other countries have had a fair and balanced review of the currently available scientific research on mercury containing dental filling material, and have found it to be unsuitable as a dental restorative material, it is disturbing that the United States, usually a leader on these issues, is so far behind other countries," he said.

He hopes the use of dental amalgam fillings will be discontinued in this country soon.

"If the discontinued use of mercury containing amalgam has been successfully accomplished in other countries, I am sure we can be as equally successfully in eliminating its use in the United States," he wrote.

In his letter, Dr. C. Frederick Smith noted that the information he gave was his opinion and anyone with questions should consult their local physician for more dental health/medical information. The entire text of his letter will appear on next week's Opinion page.

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