

Science Versus Emotion in Dental Filling Debate:
Who Should Choose What Goes in Your Mouth?

CHICAGO - The growing debate over the safety of silver-colored fillings, known as dental amalgam, pits science against emotion, and consumers are caught in the crossfire, according to the American Dental Association (ADA).

The decision about what to use to fill your cavities is a matter best decided by you and your dentist, the ADA says, yet emotional reports claiming amalgam is responsible for a variety of diseases are confusing and perhaps even alarming people to the point where they will not seek necessary dental care.

Of the dental filling materials available today-gold, silver-colored amalgam, and tooth-colored fillings-one material, amalgam, has been attacked to the extent that some would ban it. This would deprive dental patients of a valuable-and in some instances, irreplaceable-treatment option.

The ADA is concerned that misguided fears about the safety of amalgam, coupled with the added costs of the more expensive filling options, may cause people to forego necessary dental care. Far fewer people have dental insurance than medical insurance, and not all insurance plans cover all filling options, the ADA says.

"I would hate to see such a valuable material banned based on misinformation about its safety," said Frederick Eichmiller, DDS, director of the Paffenbarger Research Center (PRC), one of the nation's foremost dental research facilities, located in Gaithersburg, MD.

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"Throughout the years, dentists have earned the trust of their patients by basing their treatment decisions on sound science and clinical experience. What science and experience tells us is that amalgam, like all other dental filling materials currently in use, is safe and effective."

Internet Health Scares

Despite amalgam's long and impressive track record, a small group, communicating primarily through the Internet, claims they know more than the Food and Drug Administration (FDA), Centers for Disease Control and Prevention (CDCP), U.S. Public Health Service (USPHS), National institutes of Health (NIH) and the World Health Organization (WHO), when they say that amalgam is somehow responsible for diseases such as autism, Alzheimer's and Multiple Sclerosis because it is an alloy with mercury.

Currently, physicians and researchers have yet to determine the cause for each of these diseases, leaving the door open for speculation.

Yet the FDA, NIH, USPHS and other organizations responsible for protecting the nation's health have extensively evaluated amalgam time and time again and declared it safe and effective. The FDA's most recent reaffirmation of amalgam's safety was published in March 2002.

More Than the Sum of Its Parts

Concern about amalgam because it contains mercury is intuitive but not supported by scientific fact, the ADA says. It is true that amalgam contains mercury, but when it is mixed with metals such as silver, copper and tin, it forms a stable alloy that dentists have used for years to successfully treat dental disease in millions of people.

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"Similar to the way that sodium and chlorine (both hazardous in their pure state) combine to form ordinary table salt, the mercury in dental amalgam combines with other metals to form a stable dental filling," Dr. Eichmiller explains.

A minute amount of mercury vapor may be released by amalgam fillings due to vigorous chewing and grinding, the ADA says, but there is no scientific evidence that this negligible amount results in adverse health effects.

"People hear the words 'mercury vapor' and they get unnecessarily concerned," Dr. Eichmiller said. "But mercury is a part of our everyday lives...from the air we breathe down to those little button batteries we have in our watches. To put the issue in perspective, a person would have to have almost 500 amalgam fillings in his mouth to see subtle symptoms even if he were the most mercury-sensitive patient."

Withstanding the Test of Time

Amalgam has been used for over a century to fill and preserve hundreds of millions of decayed teeth. Until the advent of amalgam, most people lost their teeth due to decay.

Critics claim that amalgam, because it has been in use for over a hundred years, is outdated and should be replaced with other, newer materials.

"Getting rid of amalgam would be like getting rid of aspirin," Dr. Eichmiller counters. "Amalgam has a great track record and, like aspirin, it still serves a useful purpose, even with the other options that are available."

Dr. Eichmiller explained that in some situations, like large cavities in the rear molars, or cavities below the gum line, amalgam is often used because of its durability, affordability and because it is one of the best filling materials that can be placed in areas of the mouth that are difficult to keep dry.

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In other situations, such as a tiny cavity where the tooth needs very little preparation or because the patient wants a more natural-looking filling, amalgam clearly takes a back seat to tooth-colored fillings, Dr. Eichmiller stated.

One Size Does Not Fit All

Deciding which type of filling you need to fill a cavity is a decision best made by you and your dentist, taking into account your individual situation, the ADA says. There is no "one size fits all."

Some fillings are more durable in the back teeth where lots of chewing is done; other fillings are more attractive to people because they resemble natural tooth color;

some fillings require more time to place (sometimes requiring two dental visits instead of one); and some fillings may not be covered by your insurance.

Your dentist can advise you on the types of fillings that are right for you taking into account the size and location of the cavity, your patient history, cosmetic concerns and cost.

To learn more about the different types of dental fillings available, the ADA offers a patient brochure, "Restoring Your Smile: Dental Filling Choices," on the ADA's website at www.ada.org.

Most important, the ADA encourages people to talk to their dentist about their various treatment options as well as any concerns they may have about their oral health so they will feel comfortable about the choices made concerning their treatment.

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