

Mad as a Hatter

The Dental Amalgam Debate

By

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I recently attended a very important international dental seminar in Scottsdale, Arizona. Several prominent physicians and dentists from Europe discussed in great detail the problems with mercury amalgam fillings and their profoundly toxic effects. I could feel a bit of uneasiness around me. (several dentists from the Arizona State Dental Board attended), as this ever controversial topic unveiled. The amalgam debate, which dentists have been arguing about since the 1800s has resurfaced with a vengeance in recent years. In the past five years, Sweden, Germany, Demark, Austria, and Finland have all taken action to ban the use of amalgam fillings. Degussa, Germany's largest producer of amalgam completely shut down its amalgam production in 1994. Here in the U.S., California dentists who place amalgam fillings must post a warning sign exposing their dangers in compliance with a court mandate. So, what's going on here? Isn't amalgam safe? This is the million dollar question that never seems to get answered to everybody's satisfaction. On one side, the American Dental Association, the current governing body in dentistry, says amalgam is safe. According to them,

“Amalgam restorations continue to be shown safe for the vast majority of dental patients...indeed for the vast majority of patients the benefits of using amalgam restorations far outweigh any risks.”(1)

On the other side, however, there are numerous scientific studies clearly demonstrating that amalgam fillings are actually quite toxic, and not safe for anybody.

WHAT IS AMALGAM?

The modern silver amalgam, traditionally known as a “silver” filling, which has been used as the restorative material of choice for over 180 years, presently accounts for 75-80 % of all tooth fillings. These “silver” fillings contain 50 % mercury (on average) by weight, 35 % silver, with tin, copper, and zinc comprising the rest. Elemental mercury, the form used in dentistry, is toxic liquid metal which is highly volatile at ordinary temperatures and produces a vapor which is readily absorbed when inhaled.

Continued exposure to mercuric vapor can sometimes cause neurological and behavioral changes. Remember the Mad Hatter from Alice in Wonderland? The expression “mad as a hatter” came from nineteenth century English hatters who used mercury salts to manufacture hats. They would absorb these salts through the skin and, as a result of mercury poisoning, would become highly erratic, appearing “mad” to onlookers.

MERCURY'S EFFECTS

Because of mercury's accumulation in the central nervous system (2), many psychological symptoms are commonly found, including irritability, confusion, and memory loss. Mercury has also been shown to be associated with headache, fatigue,

depression, nervousness, anger fits, mood swings and suicidal thoughts. (3) Physical symptoms associated with mercury poisoning are also evident. Mercury accumulates in the kidneys, sometimes rendering them unable to filter effectively, leading to dysfunction and even damage. (4) The pituitary gland, whose function is to regulate the production of hormones, is another site of mercury accumulation. Hormonal imbalances can occur, such as menstrual disorders and infertility. (5) In fact, numerous studies have shown that 25-50% of women working in mercury-polluted environments suffer from reproductive disorders due to excessive mercury exposure. (6) Recently published research demonstrates that mercury from fillings produces antibiotic resistant bacteria in the gastrointestinal tract and mouth. (7) So, with all this available evidence, why are amalgam fillings still being placed in people's teeth?

It is very difficult to diagnose mercury toxicity due to two complicating factors. First, the symptoms of toxicity usually do not develop for many years, making it rather difficult to identify dental work or other mercury exposures as their source. (8) Second, many of the symptoms overlap or mimic those of numerous other diseases. There is not one unique identifying symptom of mercury toxicity.

THE AMALGAM WARS

As I mentioned earlier, the subject of amalgam fillings has long been a hot topic of debate in dentistry. In fact, it is interesting to note that the current American Dental Association was actually spawned from the first amalgam controversy. In 1830, the American Society of Dental Surgeons, the original professional dental organization in the U.S., attempted to stop the use of mercury fillings by requiring members to sign an anti-amalgam pledge:

“It is my opinion and firm conviction that any amalgam whatever... is unfit for the plugging of teeth.”

In 1926, Dr. Alfred Stock, a chemistry professor at the Kaiser- Wilhelm Institute in Germany, published an article providing crucial scientific information on amalgam fillings as a source of mercury vapor. This article, and in particular, the following paragraph, is what sparked the next amalgam debate in dentistry. Dr. Stock writes,

“Dentistry should completely avoid the use of amalgam for fillings or at least not use it whenever this is possible. There is no doubt that many symptoms: tiredness, depression, irritability, vertigo, weak memory, mouth inflammations, diarrhea, loss of appetite and chronic catarrhs often are caused by mercury which the body is exposed to from amalgam fillings, in small amounts, but continuously. Doctors should give this fact their serious consideration. It will then likely be found that the thoughtless introduction of amalgam as a filling material for teeth was a severe sin against humanity.”

Since this time, numerous anti-amalgam crusaders have diligently tried to persuade the A.D.A. to ban its use. What does the A.D.A. think about the possible dangers of amalgam today? Actually, they still hold to their original purport, pamphlet W 186, an informative brochure provided for dentists to pass out to their patients. Some statements include:

“Scientific studies of dental amalgam in tooth restorations have been carefully conducted for more than 100 years.”

In fact, no studies of amalgam safety have ever been published, yet hundreds of studies by numerous scientists have found mercury, the major component of these fillings, to be unsafe.

Another statement in regard to the poisonous nature of mercury reads:

“Mercury is made virtually harmless when it combines with the other metals used to produce amalgam.”

The A.D.A. further instructs dentists, when asked about the dangers of mercury exposure, to respond:

“Not when used in dental amalgam. Alone, in the form scientists call elemental mercury and the public sometimes calls quicksilver, mercury is toxic at high concentrations. However, when mercury is combined with other metals, such as silver, tin, and copper, it reacts with them to form a biologically inactive substance.”

The fallacy of these statements is that mercury is not “neutralized” when combined in amalgam form. Many research studies show that chewing, tooth brushing, drinking hot liquids, and grinding the teeth all release mercury vapor. Vinny and Lorscheider, researchers with the World Health Organization, demonstrated that the air inside the mouth with amalgams continually contained elemental mercury vapor, and the dynamic of chewing increased this vapor substantially. (10)

The A.D.A. goes on to say:

“The strongest and most convincing support we have for the safety of dental amalgams is the fact that each year more than 100 million fillings are placed in the United States.”

Don't forget that lead, asbestos, and DDT were all thought to be safe and were very widely used. In each of these examples, scientific concerns were long discounted by industries that produced and used the material, often supported by responsible government agencies.

THE MERCURY SCARE MADE PUBLIC

In 1990, CBS-TV ran a 60 Minutes episode on the amalgam issue. This episode created such a stir in the dental community that immediately following the show, the A.D.A. sent out a bulletin describing, “what 60 Minutes didn’t tell you.” In this letter, they attempted to allay new fears regarding amalgam safety by defending their original claim... that amalgam is safe in its “filling” form, and that 60 Minutes presented a biased anti-amalgam story. Increasingly, this 60 Minutes segment received the highest viewer response ever, yet it has never been replayed, despite the fact that other episodes are frequently rerun. The A.D.A. Principles of Ethics and Code of Professional Conduct was changed to say:

“The removal of amalgam restorations from the non-allergic patients for the alleged purpose of removing toxic substances from the body, when such treatment is performed solely at the recommendation or suggestion of the dentist, is improper and unethical.”

Such a statement violates the patient’s right to an informed consent. Moreover, a dentist can lose his license to practice dentistry if he attempts to make recommendation for amalgam removal based on his knowledge or mercury toxicity

ARE YOU TOXIC

This is difficult question to answer. As I mentioned, there is no single test that will provide this information. Characteristic patterns have emerged in blood, urine, and hair analysis testing, but a clear-cut laboratory diagnosis is still not possible. However, there is a way to estimate how much mercury is in your body. A physician trained in chelation therapy can administer a mercury chelating agent, a drug that will attach to mercury and then pull it out through the urine via the kidneys. By measuring the level of urine mercury before and after the chelation therapy, you can estimate the body’s burden. (11) You can also measure the amount of mercury vapor being released from your fillings with a vapor analyzer. Although this test cannot be used to diagnose mercury poisoning, it does gauge your relative exposure.

So should you have your amalgams removed? This is a decision only you can make. You must gather all the information you can, then make an educated decision on how to proceed. You will always hear two sides to this controversial subject. The amalgam advocates provide you with data embarrassingly short of supporting research evidence. On the other hand, some amalgam opponents irresponsibly go beyond the limits of experimental data by suggesting miraculous cures occur after the removal of amalgam fillings. There are countless numbers of people who have experienced life changing improvement from persistent health problems after having their amalgams removed. However, their recoveries cannot be predicted with certainty, and are often viewed as merely anecdotal. As long as the A.D.A. stamps their “seal of approval” on amalgam fillings, millions of people may continue to have their health unknowingly compromised.

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