

Replacing Failing Metal Amalgam Filling

For decades, it's been known that mercury is dangerous to human health because it accumulates in the body and damages its cells. Mercury is a potent neurotoxin that can cause memory loss, headaches, loss of coordination, weakness, kidney damage, respiratory damage, infertility, birth defects, and psychiatric effects.

Mercury has also been linked to multiple sclerosis, amyotrophic lateral sclerosis (ALS), Parkinson's disease, Alzheimer's disease, arthritis, and lupus.

As Dr. Mercola mentioned in his October 12, 2010 newsletter, mercury-amalgam fillings are essentially [unethical human experiments](#):

"If you have "silver" amalgam dental fillings, I'm sorry to say that you, too, have been the subject of an ill-fated experiment. In the words of Charlie Brown, president of the World Alliance for Mercury-Free Dentistry:

"Amalgam is a primitive, polluting, 19th century product that began when physicians were sawing off legs. Medicine has since moved forward."

Unfortunately, this aspect of dentistry has not.

The American Dental Association (ADA) continues to give amalgam (mercury) fillings their seal of approval despite the known fact that mercury is a potent neurotoxin that can damage your brain, central nervous system and kidneys.

A single dental amalgam filling releases as much as 15 micrograms of mercury per day, which is absorbed directly into your body. Canada advised dentists to stop placing amalgam in children and pregnant women in 1996 -- nearly 15 years ago! Denmark, Norway and Sweden have essentially banned amalgams. But in the United States, they're still regarded as the "gold standard" of dental care -- unfortunately once again at the expense of your health."

Many of you have probably decided to take the next step toward better health by removing your mercury fillings. But have you considered what material will replace your old amalgam? This choice is incredibly important. If you do not use the most bio-compatible material available, you may compromise your well-being and take a step backwards in your health, rather than forward. Don't undermine your healthy choice to remove your mercury-amalgam fillings by restoring them with harmful materials! Patients today have several choices when it comes to selecting dental restoration materials: porcelain, composite resin, all-metal, and porcelain-fused-to-metal.

Porcelain is an Excellent Choice

I believe that the ideal replacement for a mercury-amalgam filling is an all-porcelain inlay or on-lay.

Porcelain is a ceramic material that most closely resembles natural tooth enamel in terms of appearance and functionality, and it is the most bio-compatible restoration material available on the market today. ("Bio-compatible" means that it is as neutral as possible when placed in your mouth, and it is most agreeable with the rest of your body.)

Porcelain is the best choice, even if bio-compatibility tests conclude that you would be okay with other

materials like gold, platinum, or composite resins (made of an acrylic plastic).

Why?

Because porcelain is chemically inert and does not contain any ionized metal or plastic.

Composites are Weak and Contain Plastic

The plastic content in composite resin fillings and bondings make them susceptible to shrinkage and dilation in response to temperature changes, such as when you drink hot or cold liquids. This can affect the seal between the filling and the tooth and allow bacteria to leak under the material, which can cause tooth sensitivity and decay.

Composites are also relatively weak -- they wear down much faster than natural tooth enamel, which can lead fractures and tooth loss.

In addition, dental composites typically contain compounds that are derived from bisphenol A (BPA), a synthetic chemical that is potentially toxic. BPA mimics the body's natural hormones (specifically, estrogen), disrupting the function of the endocrine system. BPA has been shown to affect reproduction and brain development in animal studies.

In humans, it has been identified as a possible cause of breast and uterine cancer, prostate cancer, decreased testosterone levels, and developmental effects in children. (This is why we currently favor drinking water out of glasses rather than plastic bottles, why parents are switching to BPA-free baby bottles, and why lawmakers are pushing for restrictions on BPA in baby bottles, sippy cups, and other food containers.)

Be Careful Not All Porcelains are Created Equal

You need to be aware that when a conventional dentist uses porcelain as a replacement material the base of the actual replacement is actually a metal and then it is covered with porcelain. The next section discusses some of the problems with using metals in your mouth.

Ideally you would want a metal-free porcelain replacement to avoid the problem with electric currents that may interfere with the proper functioning of your brain.

Metals Cause Galvanic Activity and Immunological Responses

Metal restorations can cause a large number of harmful side effects, so these are the worst choice for replacing your amalgam fillings. Metal crowns, inlays, and on-lays constantly release metal ions into patients' mouths due to corrosion and galvanism. These ions are distributed through the lymphatic system and bloodstream to the entire body.

This constant exposure to metallic ions can cause toxic, allergic, and immunologic reactions. Depending on their genetic makeup, individuals may tolerate more or less exposure to metals before showing adverse systemic effects.

The immunological effects of metals can be either very general, such as the activation or suppression of the immune system, or very specific, such as allergy, inflammation, and autoimmunity (any disease in which the body attacks itself, like multiple sclerosis and rheumatoid arthritis).

Furthermore, metal restorations cause galvanic activity. Dental metals contain all the ingredients you need to create a charged battery in your mouth. A battery only requires two or more different metals

and a liquid that can conduct electricity (i.e. an electrolyte), like saliva.

An electric current, called a galvanic current, is generated by the transportation of the metal ions from the metal-based dental restorations into your saliva.

This is called "oral galvanism." Oral galvanism increases the rate of corrosion of metal restorations, causing even more metallic ions to be released into your body. It can also cause a constant metallic or salty taste or a burning sensation in your mouth, unexplained pain, nerve shocks, ulcerations, and inflammation.

Moreover, there is concern that oral galvanism directs electrical currents into brain tissue and can disrupt the natural electrical current in the brain.

Even if you have only one metal filling or crown in your mouth, you may still be exposed to galvanic toxicity. All-metal and metal-fused-to-porcelain restorations can contain any number of different metals, because they are always made of alloys (metal blends). No pure metals are used, not even gold, because the physical characteristics are inappropriate.

Since I am dedicated to providing my patients with the most bio-compatible treatments available, my dental practice is completely metal-free.

Even though researchers are beginning to test metal sensitivity in patients and test the role of metals in chronic disease, I take my practice one step further by offering only ceramic implants and restorations, even if test results show that a patient can tolerate a particular metal.

I believe that most people WILL respond immunologically to ionized metals -- if not today, then at some point in the future, as a result of cumulative dental, medical, and environmental exposure.

Therefore, I choose only the best materials currently available in order to fulfill my patients' functional and cosmetic needs while minimizing the toxicity in their mouths (which could influence the rest of their bodies). And right now, ceramics are the most bio-compatible choice.

What About Aluminum and Zirconium Oxides?

Many patients ask, "Doesn't porcelain contain aluminum oxide, which is a metal?" Most ceramics, including porcelain and zirconia (which we use for dental implants and bridges), consist of one or more varieties of a metal oxide, a compound of a metal and oxygen.

But these oxides are NOT cause for concern, because ceramics do NOT release metallic ions into your mouth.

Once the metal is chemically bonded to the oxygen (or "oxidized"), it becomes a chemically inert, non-metallic ceramic. The metal is completely bound and is part of a crystalline lattice structure; it is no longer available to ionize or dissociate and bind chemically with our tissues when placed in the body. (The binding to our tissues is what creates toxicity concerns.)

An oxidized metal no longer acts like a metal -- for example, its electrons are not available for donation and therefore does not cause galvanic activity -- which is why it is classified as a ceramic. This makes porcelain highly bio-compatible, unlike dental metals such as mercury, gold, copper, nickel, and titanium.

Think of it this way: porcelain is as different from its components, aluminum and oxygen, as table salt is from its components, sodium and chlorine. Sodium and chlorine are highly reactive and are potentially toxic in their natural states. But when they are combined to create sodium chloride -- table salt -- they change into a completely new, edible compound.

The same is true for porcelain.

When the aluminum is oxidized, it becomes a ceramic and no longer releases metal ions that are bio-available to chemically bind with the tissues in your body. Thus, porcelain does not create the same health concerns as metallic materials. Furthermore, no local or systemic adverse reactions have been reported in relation to ceramic dental materials.

What About Bio-compatibility Testing?

It is common for many biological dentistry to do a bio-compatibility blood test of a patient's blood. This is a test that evaluates the reactivity of the patients' blood to many different dental materials, including metals.

Those materials are being used for root canals, implants, temporary and permanent restorations, removable partials, bridges, and cements, which is essentially, all the available dental materials. After 25 years of private holistic practice, it is of my professional opinion, that the majority of the materials being tested do not belong in a patient's mouth.

As previously stated, metals interact with the patient's saliva causing galvanic activity and immunological response. In the long run and sometimes acutely, these materials will compromise a person's health, even if the bio-compatibility test measures inert or non-reactive to your blood at the time it was done.

My advice is to simplify the process by using materials that are more similar to tooth structure, and bone such as porcelain and ceramic materials, which are more biologically inert and better tolerated by the immune system.

Make Sure You Get Dental Replacement Material Correct

Keep in mind that no material is a perfect substitute for your tooth as a result of the issues described above.

That's why prevention is the key to health. We educate our patients in eating healthy for their metabolic type, having excellent oral hygiene, maintaining great sleeping habits, and making good lifestyle choices. And when they remove their mercury fillings, we make sure to follow the right protocol and replace them with only the strongest and most bio-compatible material.

Remember it is best to seek out a dentist that has been trained in biological dentistry to perform any mercury removal. For more information on this important topic please review [the article Dr. Mercola wrote in September](#).