

Safely Removing Mercury Amalgam Fillings

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Note: This protocol is given to teach you about the safety issues involved with removing mercury amalgam fillings and other toxic metal restorations from the mouth. While each client is unique, with specific situations that must be addressed, the protocol outlines the general procedures we follow to ensure your health and safety, as well as that of our dental team and the environment.

MERCURY IS A HIGHLY TOXIC HEAVY metal. due to its devastating effects on the autonomic nervous system – the one that controls your body's unconscious actions such as breathing, digestion, and sweating – mercury can wreak havoc in almost any organ. It is also easily oxidized, generating free radicals. These are molecules that lack one or more electrons, and thus are prone to bind with a wide range of organic and inorganic compounds. As a result, the biological terrain – the *milieu* – is impaired. Enzymes and cellular membranes work less effectively. Cross-linking proteins are damaged. The body loses its ability to rid itself of toxins.

Of course, mercury is not the only metal of concern to integrative dental physicians. Amalgam fillings also typically contain silver, copper, zinc and tin. Cadmium, nickel, aluminum, palladium, beryllium, arsenic, and cobalt may be found in other types of dental restorations, as well as in the general environment via industrial pollution. Over time, such toxins accumulate in a body's tissues.

But simple detoxification is not enough to restore health. In the case of mercury, this metal must be removed from the teeth. Otherwise, any chelators used – heavy metal detox agents – will only pull more mercury from the teeth and redistribute it throughout the body. Not only will there be no net gain; symptoms may change or even worsen.

In removing amalgam fillings, safety is key – that of the client as well as the dentist and assistants. There should be procedures to protect all from as much exposure to the metal as possible. Some will occur, of course, despite all best practices. In part, this is because the mercury in fillings is in the elemental form, which easily penetrates all mucous membranes in the mouth, GI tract and lungs, as well as the rubber used in gloves and dental dams. Mercury – the only metal that is liquid at room temperature – is also highly volatile when heated. A dental drill running at more than 300,000 RPMs can generate a lot of mercury vapor during removal.

Pre-Mercury Removal Treatment

PROTECTION FROM MERCURY EXPOSURE actually begins long before any fillings are removed. Like any successful action, it begins with creating a well thought-out plan.

In doing so, a thorough clinical biological dental evaluation and digital x-rays are needed. Functional assessments (FAs) may be taken at the client's request to determine their particular health issues. Although a complete FA is most desirable, two tools in

particular are good for initial screenings for most clients we see:

1. Biological Terrain Analysis (BTA) to gauge the state of the client's internal milieu.
2. Electro-dermal (EAV) Bio Functional Matrix Resonance Imaging to evaluate the subtle energy package of the acupuncture meridians

The client is encouraged to read Keith Scott-Mumby's *Virtual Medicine*, which discusses the important tool of Functional Assessments. FAs are followed by treatment planning and sequencing, and client education to ensure full understanding and truly informed consent.

The client is next placed on a pre-revision/restorative protection plan, tailored to his or her unique biochemistry. Compatibility testing may be done to ensure that the replacement restorations are suitable, compatible with the client's immune system. We use both the Clifford cytological challenge blood test and EAV energetic assessment. The latter is strongly suggested for clients with multiple hyperactive and allergy problems.

The length of time between pre-treatment and mercury removal varies from person to person. Some are ready almost from the get go, needing only large amounts of chlorella – a type of algae that is an excellent natural chelator – before surgery. Others need months to prepare. On average, though, most people need about two weeks to open the channels of elimination and establish drainage. We also confront allergic responses to the mercury and nutritional factors during this phase.

Oral chelation and drainage protocols should continue after mercury removal. For while removing the fillings eliminates a major source of tissue contamination, there is still the matter of accumulated mercury in all the tissues and organs of the body. Consider: if you had water running into an overflowing bathtub, you'd need to shut off the water *and* pull the plug to solve the problem. Each action alone wouldn't suffice.

So, too, with mercury. It's not enough to "turn off the tap" (i.e. remove the fillings). You've also got to "pull the plug" via post-operative chelation and drainage.

Protocols for Mercury Removal

THOUGH SOME HOLISTIC DENTISTS recommend removing the fillings in order of their electrical charge, others find no advantage, as amperage readings can vary greatly over time. We find that the best strategy is to remove amalgams by quadrant, based on the client's occlusion, tooth alignment, and the size and location of each filling.

To protect their clothes from exposure to mercury, the client is covered with a disposable gown, and their hair is protected with a disposable cap. Their eyes are protected with wetted gauze, and the face and head are wrapped with a towel. The teeth and gums in the quadrant to be worked on are coated with a chlorella-based slurry, as is the rubber dam used to isolate the area. A special suction device is placed as close as possible to catch the pulverized amalgam and harmful mercury vapor. It runs continuously throughout the procedure, protecting both the client and the dental team.

So the client has clean air to breathe, their nose is covered with a mask delivering either oxygen or an oxygen-nitrous oxide mix, as the client chooses. The client is reminded to breathe only through their nose to reduce the risk of mercury vapor entering the lungs via the mouth. A room air filter and mercury vapor ionizer further purify the air for all.

It is important to remember that how the dental team protects itself also affects your health and safety. After all, if they show little understanding or concern for their own health and safety, how much will they show for you?

Thus, in addition to the measures already mentioned, both dentist and assistant wear special filtration masks during the procedure to further reduce the risk of breathing mercury vapor. We wear protective, disposable clothing or lab coats to keep particulate matter from clinging to our street clothes.

To reduce the pulverization of amalgam (and thus the vaporization of mercury), the fillings can sometimes be removed in large chunks. The dentist first sections the filling with a high-speed drill, then pries the pieces loose with a small hand instrument to remove them from the mouth. When possible, a slow-speed hand piece is used to remove any traces of amalgam left behind. (The fewer RPMs, the less heat and vapor generated.)

During drilling, large amounts of water are used to cool the drill and reduce amalgam dust. A high-speed suction tool is placed next to the filling to remove the mercury-laden water and further suction the vapor.

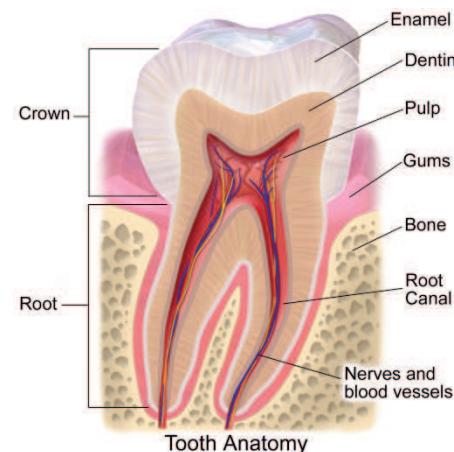
Before the rubber dam is placed onto the teeth, a soupy mix of chlorella is painted on

the gums. Blocking the absorption of mercury ions into the gums and tissue membranes, this product adds an extra level of protection.

Once all fillings have been taken out, the rubber dam is removed carefully. The client rinses their mouth with water and chlorella.

Restoring the Teeth: What You Need to Know about Tooth Health

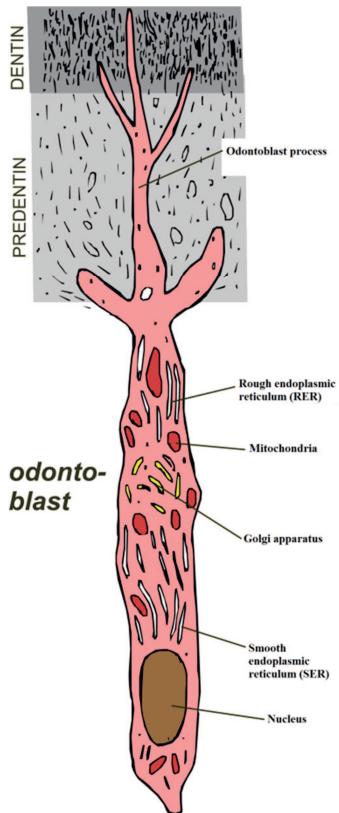
NEWLY PLACED COMPOSITE WILL ALWAYS be in direct contact with the dentin, the layer of tissue just below the enamel and surrounding the pulp. Protecting its health protects the vital tissues within – the tissues that make each tooth a living organ.



Primary dentin is regular tubular dentin. It is formed before a tooth erupts and the tip of the root is complete. **Secondary dentin** is similar but grows at a slower rate throughout the life of the tooth. **Tertiary dentin** forms in response to stimuli such as tooth wear, caries (tooth decay), amalgam removal, and the placement of fillings. (You may hear it called by other names, such as “irregular,” “reparative,” and “defense” dentin.)

Primary and secondary dentins are secreted by the tightly packed layer of specialized

cells called **odontoblasts**. Barring injury, these cells usually survive as long as the tooth does. They make the tissue alive (vital) and respond to a wide variety of stimuli.



Dentin exists in close relationship with the pulp it protects. Together, these make up the **pulpodentin complex**. Its structure and behavior is intimately related to the behavior of the odontoblasts, as well as nerves, capillaries, lymphatics, and other cells within the complex.

The pulpodentin complex regulates the creation of new dentin, as well as the vitality of the pulp. It can increase the rate of dentin creation in response to caries, as well as dental milling or grinding.

When enamel and dentin are cut with diamond or carbide burs in a high-speed hand piece, the milling creates a turbulence of high and low pressure, somewhat like a tornado or hurricane. In turn, some of the

odontoblastic processes are torn or sucked out of the tubules, while the negative pressure at the entrance to those tubules also sucks in fine dust amalgam particles and infective caries microbes, as well.

All this material is antigenic, triggering an antibody allergic reaction within the tubules and extending into the pulpodentin complex. The health of the immune response determines whether the pulp will survive the restorative procedure or die slowly, leaving necrotic tissues within.

The success rate of direct pulp capping, as taught in traditional Western dental schools, is extremely low. The weak regenerative capacity of the pulpodentin complex is the main reason for root canal fillings or extractions once the pulp has become deeply infected.

According to the American Association of Endodontists, more than 15 million root canals are performed every year in the US. More than 41,000 are performed every day. Each endodontist averages 25 procedures each week. And the vast majority of dentists – 94% - see the care they provide in positive terms. Most dental educators – 87% - consider endodontists a reliable and trustworthy source of advanced dental technologies and leading-edge techniques in root canal treatment.

Biological dentists who are schooled in Ground System Regulation think otherwise. They understand that root canal filled teeth are containers of dead tissue, constantly spewing neurotoxins as the tissue decays within the body.

Protecting the Pulp

WE FOLLOW A NUMBER OF PROCEDURES to enhance the health of each tooth during restorative procedures.

After every speck of amalgam has been removed and before the composite is placed – rubber dam still in place – we soak the tooth with ozonated oil for 5 minutes. A cold laser is applied to promote deeper penetration and cellular interaction. The wavelength we use (810 nm) is optimized to interact with the mitochondria (the powerhouses of your cells). They, in turn, trigger an increase in Cytochrome C Oxidase and Adenosine Tri-Phosphate, two key chemicals required in the healing process of the odontoblasts.

Next, a combination of DMSO (lessens pain and speeds wound healing), DMPS (chelates mercury), and procaine (repolarizes the cellular contents of the odontoblasts) is dabbed onto the dentin and allowed to soak for 3 minutes while the cold laser is applied, followed by flushing with water.

The mesenchyme (unspecialized cells in the extracellular matrix) of the dentinal tubules are then reactivated with a combination of procaine and isopathic fungal remedies. These, too, are dabbed onto the dentin and allowed to soak for 3 minutes while the cold laser is applied, followed by flushing with water.

If indirect (lab-created) restorations are to be done, we'll repeat this procedure before taking impressions and before placing the temporary crowns.

The drills and the air/water syringe are wiped to remove any mercury residue. The client's protective gown and face coverings are removed and disposed as hazardous medical waste, as are the gloves and gowns of the dental team.

The contaminated hand-pieces, instruments and air/water syringes are rinsed and the

suction tips are replaced. The room air filter and mercury vapor ionizer are left to run, to fully decontaminate the room.

The amalgam removal process can be traumatic to the teeth, jaw, TMJ and cranial structures for a number of reasons: the mechanical forces of surgery; holding the jaw open for a long time; the change in galvanic charges from the teeth (and the way in which the body adjusts to the change). Because of this, physical medicine and cranial-sacral therapy – including releasing physical stresses in the teeth – can be very helpful after the surgery. We recommend that the client see their chiropractor after their appointment.

We also recommend repolarization of the intra-oral acupuncture points with biological homeopathic remedies we inject into the area that was treated that day. This enhances healing and minimizes post-treatment discomfort.

We highly recommend using a homeopathic remedy titled Body Mend, which is invaluable for controlling discomfort/pain. More importantly, it reactivates all the tissues that were traumatized during the procedure. This remedy is advised to be used until the whole bottle has been used.

Clients with severe chronic diseases such as cancers should have already made appointments with their integrative physicians to receive post treatment IVs that include vast amounts of Vitamin-C and Glutathione to support their greater defense systems.

Subsequent appointments for further removal of mercury silver amalgam fillings should not be made within the 7-14-21 weekly immune cycle.

Summary of Procedures

- I. Dental and Functional Medicine Assessment
 - A. Comprehensive dental evaluation
 - B. Initial client education about the dental protocol, integrative medicine, functional assessment and other pertinent information
 - C. Integrative medical histories taken
 - i. Dental history, including root canals, extractions and their potential relationship to the client's health problems
 - ii. Present health status with ratings of main medical complaints
 - iii. Medical history
 - iv. Chronological health history
 - v. Family history (optional)
 - D. Dental records obtained
 - i. Images, sometimes including a panorex but always a full set of digital dental x-rays (usually 16, with bite wings) and intra- and extra-oral photographs
 - ii. Charting of oral tissues (hard and soft), pharyngeal tissues including tonsils, and swallowing habits and patterns; airway patency evaluation; periodontal screening; TMJ screening (Note: more extensive evaluations can be done for cavitations, toxic root canal teeth and other issues)
 - iii. Electro-galvanic charting
 - iv. Dental pulpal complex vitality measurements
 - v. Study models and face bow transfer (to study alignment and occlusion issues)
 - E. Dental materials evaluation (optional EXCEPT when the hyper-reactive allergy response predominates)
 - i. Clifford blood test
 - ii. Electro-dermal screening
 - F. Functional Assessment
 - i. Biological Terrain Analysis
 - ii. Electro-dermal screening
 - G. Treatment Plan Development
 - i. Treatment sequencing
 - ii. Cost estimate
 - iii. Giving informed consent

II. Dental Amalgam Removal Precautions

- A. Pre-Removal
 - a. Extensive client protection with disposable gown, cap and wraps
 - b. Provide the client an alternate source of air
 - c. Coat the mouth with chlorella and isolate the teeth with a rubber dam
 - d. Administer chlorella
- B. Removal Procedures

- a. Continuously run room air filter and mercury vapor ionizer
 - b. Remove the amalgam by sectioning with a small burr
 - c. With a small instrument, pry the sections loose from the tooth
 - d. Use generous amounts of water during drilling
 - e. Keep the high-speed suction very close to the drilling site
 - f. Position the saliva ejector under the dam and next to the drilling area
 - g. Remove all amalgam traces with a slow-speed hand-piece
- C. Post-Removal Procedures
- a. Remove the rubber dam carefully
 - b. Thoroughly inspect and rinse the mouth of trace amalgam
 - c. Rinse with a heavy metal chelator solution
 - d. Wipe or replace the instruments
 - e. Properly discard the disposable instruments and barriers
 - f. Continue to run the air filter and ionizer to decontaminate the dental treatment room