



## *St Leonards Holistic Dental Care*

Principal: Dr Charlotte de Courcey-Bayley BDS Hons (Syd Uni)

# *Amalgam Removal Information Guide*

By:

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## *Introduction:*

Dr Charlotte de Courcey-Bayley has worked at St Leonards Holistic Dental Care since 1986 and has owned the practice since 1998. She graduated from Sydney University with a Bachelor of Dental Surgery, 1st class honours. Charlotte has continued to educate herself in various aspects of dentistry including the safe removal of amalgam, orthodontics, orthopaedics, TMJ and orofacial pain management, snoring and sleep disorders, periodontics, cosmetic dentistry, nutrition and alternative medicine. She has studied both around Australia and overseas, undertaking well over 100 hours of continuing education every year since 1993. Charlotte is a qualified Bowen practitioner and is currently enrolled in a Master's degree in Sleep Medicine through Sydney University Medical Faculty.

St Leonards Holistic Dental Care has been offering the safe removal of amalgam fillings since 1991. Over that time we have offered treatment to more than 2000 people seeking removal of their mercury amalgam fillings. Dental amalgam as a filling material has been used since the 1840's and even at that time there was controversy over its use due to the high mercury content. In the 1890's a proponent of amalgam, Dr G.V Black was key to improving the mechanical properties of amalgam and it's use continued to grow over the alternative filling material, gold. The main reason that amalgam gained favour and has continued to persist is that it is cheap, long lasting and effective as a restorative material. This is well documented in many scientific papers [1]. Though it does not come without a price; the grey-black appearance of amalgam is far from aesthetic, amalgam fillings also require the removal of more tooth structure than "bonded restorations" in preparing the tooth and the aging process of amalgam commonly causes cracking and fracture of teeth. All of these reasons are valid to request an alternate filling material be placed in your teeth however the most common reason that patients seek our assistance is because of their concern of having mercury based fillings in their mouth.

Over the last 20 plus years we have assisted patients with a number of health concerns however all our patients self-reported results would be classed as anecdotal evidence as we are working dental practice undertaking dental treatment and not a centre performing research. Scientific research carried out to the highest standards requires "Random Controlled Trials" (meaning the researchers chose the subjects, not that the subjects seek us out) and "Double Blind Studies" (the patient does not know whether they are having their fillings removed or not). Also to prove that the dental amalgam was the contributing factor in the medical situation we would have to replace them, after having first removed them and cause the same symptoms to appear again. This is not something that my patients will permit me to do, surprisingly! Therefore the results that we have dating back to 1991 are classed as Anecdotal Evidence. What I can tell you though is that we have in our records reported changes in the health of patients suffering from cancer, blood disorders, arthritis symptoms, panic and anxiety attacks, digestive disorders, sleep disturbances, and head and face pain to name a few. We even have a patient who reported and improvement in his golf swing.

This guide has been created to educate patients who want to know more about the importance of having their amalgams removed. This information guide answers our frequently asked questions regarding amalgam removals into three sections:

## Contents:

### **1. What is amalgam?**

a. Why has amalgam been used as a filling material?

### **2. How do amalgam fillings affect the body?**

a. How are unborn children affected?

### **3. What is involved with an amalgam removal procedure?**

a. What steps are taken at St Leonards Holistic Dental Care?

### **4. References/Resources.**

## What is Amalgam?

As defined by the Dictionary [2], “Amalgam (a·mal·gam) is 1. an alloy of mercury with another metal or metals. 2. an alloy that consists chiefly of silver mixed with mercury and variable amounts of other metals and is used as a dental filling. 3. a rare mineral, an alloy of silver and mercury, occurring as silver-white crystals or grains. 4. a mixture or combination. *Origin:* 1425–75; late Middle English *amalgam* ( *e* ) < Middle French < Medieval Latin < dialectal Arabic *al the* + *malgham* < Greek *málagma* softening agent, equivalent to *malak-* (stem of *malássein* to soften) + *-ma* noun suffix”. Colgate Oral Health Resource Center states that amalgam is, “made of a mixture of silver, tin, zinc, copper, and mercury. Mercury is nearly 50% of the mixture.”

Amalgam, according to the observations of Gordon J. Christensen, D.D.S., M.S.D., Ph.D in *Amalgam Vs. Composite Resin: 1998*, [3] has been used in dentistry to “restore posterior tooth defects ranging from tiny holes in teeth to amalgam full crowns because it was known for its high strength and low wear making it a preference among dentists over composite restorative resin” (natural tooth coloured filling). Colgate Oral Health Resource Center lists Amalgam as being “the least expensive type of restorative material” [4]. It has been used by dentists because of its low cost and it’s said to be a reliable and a predictable material. It is less techniques sensitive in its handling properties than composite resins, making it a quick and easy filling.

However, in other research carried out by the Clinical Research Associates and Dr Gordon Christensen, *Alternatives for Class II restorations:1994* amalgam wears too! “Typical amalgam wears about 10 µm per year more than occlusal enamel, demonstrating a 0.1mm

step between enamel and amalgam in 10 years. Microfill resin, such as Heliomolar (Vivadent), wears approximately 15 µm per year more than enamel, or about 0.15 mm at 10 years.” Newer composite resins now show even less wear [5]. The cost of composite resin, which is “a mixture of plastic and fine glass particles, is a little bit more than amalgam but less than gold,” as stated in the Colgate Oral Health Resource Center [4]. A major benefit (to the patient) to have a composite resin material used for a filling is the result of less of their natural tooth structure needs to be drilled out. With amalgam fillings the dentist must use “undercuts or ledges” to provide retention of the filling because amalgam, unlike composite resin, does not bond to a tooth, it only fills the space created by the decay.

## *How do amalgam fillings affect the body?*

Amalgam fillings affect numerous areas throughout the body. In research carried out by Dr's. Lorscheider and Vimy, when studying *the absorption of mercury from dental fillings*. In 1995 they wrote “During the past decade medical research has demonstrated that this mercury is continuously released as vapour into mouth air; then it is inhaled, absorbed into body tissues, oxidized to ionic Hg, and finally covalently bound to cell proteins. Animal and human experiments demonstrate that the uptake, tissue distribution, and excretion of amalgam mercury is significant, and that dental amalgam is the major contributing source to mercury body burden in humans” [6]. “The mercury emitted from the fillings is transported to every part of the body via the air pathways, the digestive tract and the blood stream, and accumulates in tissues and organ systems.” More recent research from 2008 has demonstrated a direct correlation of the level of mercury in the plasma with the size and total number of amalgam fillings in the patient's mouth [7].

Vital organs such as, the brain heart and kidneys are damaged as a result of exposure to amalgam fillings. Sadly, this has been known for decades. For example, in 1987 Nylander et al published research on *Mercury concentrations in the human brain and kidneys in relation to exposure from dental amalgam fillings* in the Swedish Dental Journal. During autopsies they collected samples from the central nervous system (occipital lobe cortex, cerebellar cortex and ganglia semilunare) and kidney cortex to analyse the total mercury content using neutron activation analyses. A high proportion (mean 77% with a SD 17%) of inorganic mercury was found and it was concluded that the cause of the association between amalgam load and accumulation of mercury in tissues is the release of mercury vapour from amalgam fillings [8].

The mercury in amalgam fillings has even been linked to a number of diseases. Throughout Dr Hal Huggins years of research he states that, “three times now, mercury from fillings has been accused of initiating diseases. The first time was in the 1830s, again in the 1920s and the third time a movement started in 1973 in which more substantial information has been available to determine the toxicity of mercury. Up until recently, it was felt that the mercury stayed within the filling. Now it is known that mercury leaches out every minute of the day.” [9]. Diseases related to mercury exposure range from Multiple Sclerosis (MS) [10] [11], Lupus, Alzheimer's [12], Lou Gehrig's disease (ALS) [13], Parkinson's disease [14], Leukaemia, Diabetes, Seizures and even birth defects.

The toxicity level of the mercury ( $^{203}\text{Hg}$ ) released from an amalgam filling is high enough to affect an unborn child. In an article titled *Maternal-fetal distribution of mercury ( $^{203}\text{Hg}$ ) released from dental amalgam fillings*, “The continuous release of Hg vapor from dental amalgam tooth restorations is markedly increased for prolonged periods after chewing. In this study blood, amniotic fluid, feces, and urine specimens were collected during different days throughout gestation. The highest concentrations of Hg from amalgam in the adult occurred in kidney and liver, whereas in the fetus the highest amalgam Hg concentrations appeared in liver and pituitary gland. The placenta progressively concentrated Hg as gestation advanced to term, and milk concentration of amalgam Hg postpartum provides a potential source of Hg exposure to the newborn. It was concluded that accumulation of amalgam Hg progresses in maternal and fetal tissues to a steady state with advancing gestation and is maintained. Their findings lead them to determine that dental amalgam usage as a tooth restorative material in pregnant women and children should be reconsidered [15].”

An abundant amount of research studies on amalgam and mercury have been carried out throughout the world all revealing/ discovering various adverse effects on the body. These results and findings have lead countries to ban mercury amalgam dental fillings from being used. “In 1991, Germany's Health Ministry recommended to the German Dental Association that no further amalgam fillings be placed in children, pregnant women, or people with kidney disease, and in 1993 this was extended to include all women of child-bearing age, pregnant or not. In January 1997 Sweden banned mercury amalgam dental fillings after determining that at least 250,000 Swedes have immune and other health disorders directly related to the mercury in their teeth and Austria started phasing out mercury fillings too,” as stated in an article by Charles W Moore, *Mercury Fillings: A Time Bomb In Your Head* [16]. In 2008 Reuters news service published an article detailing that Denmark and Norway had banned amalgam fillings [17]. European countries have taken action to protect their residence health yet the debate continues in North American countries [18], New Zealand and Australia.

## *What is involved with an amalgam removal procedure?*

At St Leonards Holistic Dental Care we ensure all the necessary steps are taken to remove your amalgam filling safely. We have been safely removing amalgam fillings since 1991 and following through on our philosophy “Together we help people get well and stay well”.

We start by scheduling you to come to our practice for a 70 minute consultation with Dr Charlotte de Courcey-Bayley. During this appointment we take two small x-rays to see the extent of the amalgam within the tooth where the eye can't see and carry out a 14 point examination which includes, but is not restricted to:

- A computerised Jaw examination to evaluate if there is any restriction in opening or arthritic changes in the jaw joint?
- A comprehensive examination for cancer in the mouth
- Check all muscles of head and neck for abnormal function
- Examine your bite and how the jaws relate to one another.
- Check your gum health for active gum disease. Gum disease is still the main cause of tooth loss worldwide.
- Examine your teeth and existing fillings
- Check for cracks in the teeth
- Any fillings that are broken or decayed that could lead to tooth loss or pain

You and your health are our highest priority. At this appointment we discuss in detail your dental treatment options for resolving any current problems and or concerns you have, including amalgam removal. We take this time to look closely and evaluate each tooth for the appropriate restoration material suitable for your body. We are able to arrange material sensitivity testing in order to select the most appropriate new filling materials and mercury detoxification guidance for after completion of the amalgam removal. We also provide you with a full quote and advise you of the order of importance in which treatment needs to be carried out.

In research compiled by Dr Rashid Buttar, who reviewed more than 643 scientific papers regarding cancer and mercury, he reported that mercury rapidly depletes the immune system. As amalgam adversely affects your immune system the first thing we do is see how we can give your immune system a boost. We discuss your nutrition, arrange for a consultation with Fiona Workman of Sydney Nutrition <http://www.sydneynutrition.com.au> (if needed) and recommend supplements for you to take prior to your amalgam removal to help assist in mercury detoxification and alkalising the body. Supplements range from a multi B, zinc, magnesium, vitamin E and selenium to an activated charcoal to help absorb any mercury fragments.

Depending on how many and where your amalgam fillings are located we carefully schedule your amalgam removal appointments using the protocols of Dr Hal Huggins (<http://www.holisticdentalnetwork.com/protocols.php>) [19,20]. He is possibly the most experienced dental practitioner in the field of safe amalgam removal and mercury detoxification.

We understand that previous dental experiences may have left you feeling anxious or nervous. To help you carry on with treatment effortlessly we offer a new technology called NuCalm (<http://nucalm.com.au/nucalm-patient-introductory-video/>) which puts you in a calm, relaxed state without using drugs! Its 100% natural, using your body's own relaxing neurotransmitters. We provide this service to you free of charge. You just need to let one of our team members know when booking your appointment that you would like to try NuCalm.

Once you are settled into our dental chair Dr Charlotte and her team use rubber dam to isolate the amalgam so you do not swallow it. Medical air is then used to provide a clean breathing supply to you and our team members, as the vapour off the amalgam is possibly more of a risk than the solid amalgam itself. (Remember that every time you eat something hot or chew something hard you are exposed to this vapour). We rest an exhaust on your chest which pulls the vapour from the room during the amalgam removal process to limit any exposure of this vapour. Once the amalgam has been safely removed from your mouth we fill the area with a suitable tooth coloured restorative material, the choice of which was determined during your initial comprehensive examination. At the end of the procedure we give you two charcoal tablets to swallow for any amalgam that may have passed the rubber dam.

It is important to remember that in some situations removal of amalgam alone will not return your dental health to optimum health. As mentioned at the beginning amalgam commonly causes cracks and fractures in teeth, requiring further treatment to restore the tooth and your dentition to a situation where it is capable of long term function. There are also limitations to what a direct placed tooth coloured resin filling can achieve and therefore alternate non-amalgam filling techniques need to be considered sometimes [21]. All of this is discussed and planning commences, with your direct involvement, at the initial visit. If there is a lot to discuss we will happily book a follow up 30 minute consultation **at no charge** to cover all the issues, so we are all on the same page and helping you get your dental health back on track.

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