Metal Removal

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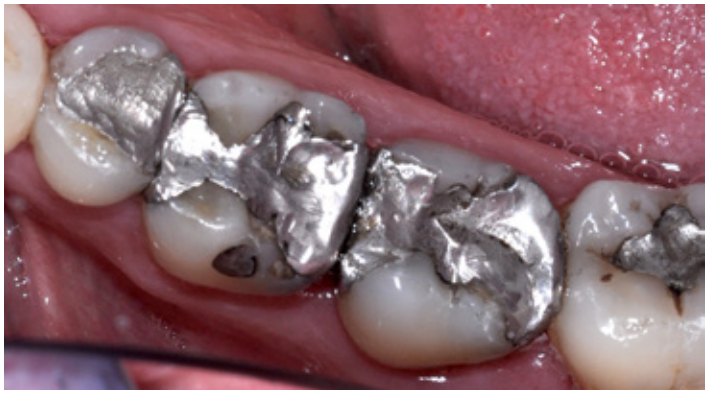
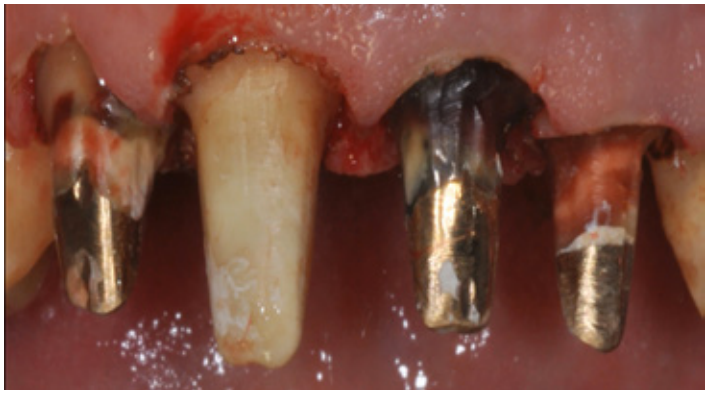




Scientific studies have clearly demonstrated that various metals, such as mercury, gold, platinum, copper, cobalt, aluminium, iron and chrome, have cytotoxic, immunological and carcinogenic effects, along with an influence on a person's metabolism [1-10]. Generally, just a few days after being introduced into the oral cavity, metallic substances can be detected in all parts of the body.
Basically, there are three different ways in which metals can impact the body:

- *How poisonous a material is (toxicity):* it is mainly the highly poisonous amalgam that plays a prominent (decisive) role here. The heavy metals it contains, namely mercury, copper, tin and silver, bind to sulphur-containing proteins, enzymes, cofactors and cell membranes (sulfhydryl groups) in ionised form. For instance, this covalent bond results in the complete disabling of an enzyme's ability to function. In addition, metal ions from all dental alloys enter an aqueous solution (saliva), thereby corroding. One could say that they 'rust'. This results in a flow of current.

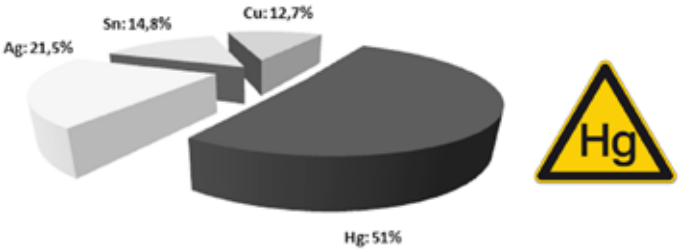
- *The immunological component:* None of the metals used in dental restorations has a function in the human body. Almost every metal is seen as a foreign substance by the body's immune system, making it liable to trigger an allergy. This process is unique in every person and entirely independent of the amount or number of metal crowns, inlays or implants. The cell forms antibodies in response to the metal or the combination of metal and cells (haptenation) - this phenomenon plays a significant role in the development of autoimmune disorders such as MS, Hashimoto's, thyroiditis etc.

- *The electrical component:* In an era where mobile phone towers, WiFi, radar and various government networks are omnipresent, we are unavoidably exposed to a wide range of frequencies and forms of electromagnetic radiation. This means that the fixed metal restorations and titanium implants in the oral cavity act as small antennas with a 'sender' and 'receiver' effect, which can cause hypersensitive disruptions in the nervous system. The radiation is amplified unchecked, which can result in a warming of the surrounding tissue. Accordingly, the impact of this on the body cannot be foreseen either.

1. Various materials with their respective effects on the body

1.1. AMALGAM

Even today, amalgam continues to be used routinely in most dental practices. For one thing, this is because it is a material that is easy to handle and long-lasting. For another, it is subsidised by statutory health insurance, i.e. cost-free. However, after being removed, amalgam must be disposed of as highly toxic hazardous waste - this fact alone should make us reconsider its use. Amalgam consists of up to 50 % mercury (Hg), which, contrary to popular opinion, does not remain inert in the filling after being mixed.



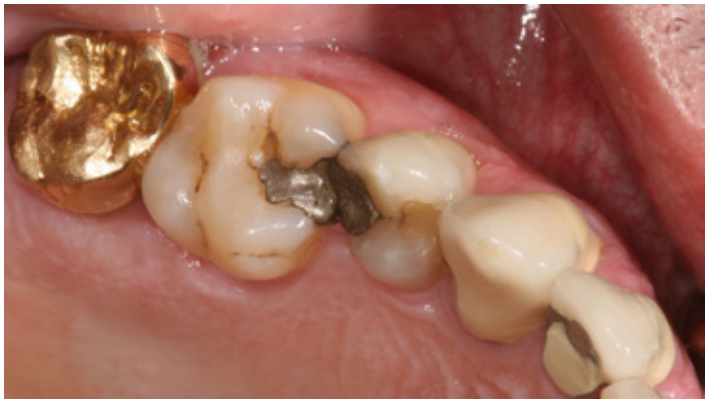
Sample composition of an amalgam filling: 51 % mercury (Hg), 21.5 % silver (Ag), 14.8 % tin (Sn) and 12.7 % copper (Cu) (according to manufacturer specifications).

From chewing, grinding or brushing one's teeth and drinking hot or cold beverages, a certain amount of mercury vapour is released each day. Although this amount of mercury measures in the micrograms, its impact should not be underestimated, as one molecule of Hg is enough to destroy nerve cells. Hg (mercury) is the most toxic non-radioactive element, surpassing all other known elements in this respect, such as lead, cadmium, and arsenic, in some cases many times over [11-13]. In animal studies, pathological changes in the brain could be demonstrated after amalgam had been present for just 14 days [14-15].

Each day, approximately 2-3 µg of mercury vapour is released over an average amalgam lifetime of 20 years. It is thus possible to refer to this as low-dose chronic poisoning. Numerous studies have observed an increase of approximately 2 to 5 times in the amount of mercury in blood and urine in living amalgam carriers. Examinations of deceased patients even showed an increase of 2 to 12 times in the amount of Hg in various body tissues. According to these studies, amalgam is the main source of mercury contamination in the human body [5, 16-35]. Mercury is known for being able to simulate any symptom, which makes its presence in the body unacceptable. The human body is extremely intelligent, and where possible, stores the fat-soluble toxins in metabolically inert connective or adipose tissue. In athletic persons or in persons with a low amount of body fat, however, the toxins often accumulate in the nervous tissue or in the brain. Particularly at risk are infants during the nursing period or even during pregnancy in the womb, as mercury is fully able to pass through the placenta. The amount of mercury in breast milk and amniotic fluid shows an indisputable correlation with the number of amalgam fillings the mother has [36-47]. Because amalgam fillings are the main source of mercury poisoning and other heavy metals, they should be removed for prophylactic reasons, regardless of whether the patient is already chronically ill or not.

1.2. DENTAL ALLOYS

Neither gold, nickel, palladium, silver, platinum nor titanium are present biologically in the human body. However, they are routinely used in dental alloys. Another complicating factor is that, according to the German Medical Products Law (MPG), all components that make up less than 1 % of a material do not need to be specified.
In contrast to the highly toxic mercury in amalgam, it is primarily the patient's individual immune system which plays a decisive role for the metals listed above. These metals are inevitably regarded as foreign substances by the body and are either tolerated or attacked depending on the aggressiveness of the immune system. This results in symptoms ranging from minor inflammations, which in many cases are only apparent locally in the form of bleeding gums, to massive allergies or even autoimmune disorders. Unfortunately, the cause of these illnesses often goes undetected, and the therapy is therefore usually limited to treating the symptoms. The chronic, low-dose activation of the immune system consumes at least 30 % of the body's energy each day. Chronic fatigue is not uncommon. A number of patients experience this immune reaction each morning in the form of aching limbs, sluggishness and even a slightly elevated temperature. In other words, they constantly feel a little 'poorly'.
In addition, they also experience what is called the 'battery effect' (galvanic element), the resulting increased corrosion of the metal ions and the accumulation of these ions on the body's own proteins, cell membranes and enzymes, along with an 'antenna effect' from all of the metals.



A battery is created when two dissimilar metals are introduced into a conductive solution. In the direction of the electrochemical reactivity series, the more base metal ions enter the solution and flow in the direction of the more noble metal. This reaction releases electrons, generating a current. Due to its high mineral content, saliva is an optimum electrolytic solution.

One classic example is a gold crown next to an amalgam filling or a gold restoration on a titanium implant. This is referred to as a galvanic element or the 'battery effect'. These comparatively high currents in the oral cavity result in the corrosion of the metals over time, which inevitably correlates with the metal toxicity problems.
This is further compounded by the growing electrical sensitivity of the patient due to the exponentially increasing prevalence of microwaves from WiFi and mobile phones. In the body, metals act as small antennas, which can completely disrupt the action potential of cells. This results in stress fields, causing hypersensitive disruptions in the central nervous system. No matter where we go, exposure to electrosmog is inescapable [48]. The standard absorption rate of electromagnetic fields can be increased by 400-700 times solely by using a mobile phone (when ringing or receiving an SMS) in combination with metals in the oral cavity [49].
Electrogalvanism and the resulting electrical sensitivity are often the cause for a loss of concentration and memory, insomnia, unspecific symptoms such as sharp pains or a pressure in one's chest, unexplainable palpitations, tinnitus and a loss of hearing [50].

1.3. TITANIUM IMPLANTS AND SCREWS

According to Dr. Volker von Baehr (www.imd-berlin.de), 15 to 20 % of the population already has a titanium allergy [51], triggered primarily by the massive use of titanium dioxide (= E171) as a filler or dye in medications, dietary supplements, personal hygiene products, cosmetics, chewing gum and toothpaste. An increased, non-specific immune response results from the tissue-specific phagocytes' reaction to the titanium oxide particles released due to abrasion when the implant is screwed in. This leads to increased oxidative stress [52-53]. In a study by Weingart et al., titanium oxide particles were detected in regional lymph nodes [54]. This means that the lymph- and immune systems are placed under additional strain. The question of whether autoimmune responses are triggered is also being discussed [55]. Radar et al. were able to demonstrate that zirconium oxide particles of the same size did not induce an inflammatory immune response (TNF-α) in a phagocyte culture medium [56]. As is the case with all other metals, titanium implants also act as small antennas for electromagnetic fields. In a clinical study by Fujii, patients with titanium implants had difficulty keeping their balance, triggered by an amplification of electromagnetic waves by the titanium implants [57].

2. Therapy:

For the reasons mentioned above, it is understandable that, as part of systematic biological dentistry practice, all metals should be removed – to reduce the strain on the immune system on the one hand and to reduce the micro-currents and interactions with electromagnetic fields on the other.

In the first step, therefore, all metals are removed and replaced with temporary restorations.

2.1. AMALGAM REMOVAL WITH SIX-FOLD PROTECTION

a) Boosting the body's own detoxification ability:
In order to ideally prepare your body for the upcoming removal of amalgam, please begin with the detoxification protocol 14 days before the scheduled session or follow the instructions given by your referring environmental medicine or non-medical practitioner. Despite taking the maximum possible protective measures when removing the metals, it is unavoidable that a small amount of mercury vapour will enter the body. By increasing the amount of supplemental nutrients, your body is now equipped to intercept and secrete these toxins, thereby minimising and/or eliminating the risk of increased contamination during removal. The detoxification protocol assists the body with its detoxification processes, with the goal of being able to carry out the amalgam removal phase without any additional problems. Please note that it is not to be regarded as complete heavy metal detoxification. Total detoxification can only take place after the systematic removal of all interference fields in the oral cavity (removal of metal and interference fields). Please consult your attending physician or non-medical practitioner for more information on this topic.

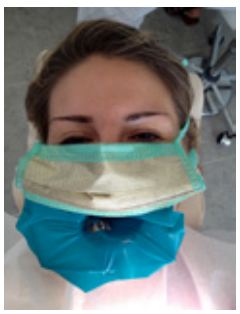
b) Detoxification protocol
In the days leading up to the amalgam removal, all detrimental nutritional influences should be eliminated. This means: no coffee, alcohol, tobacco, simple sugars, gluten or products made with cow's milk. Water, healthy fats, all kinds of vegetables and salads, plus a healthy lifestyle with lots of sleep, exercise and sun have a positive and stimulating effect.

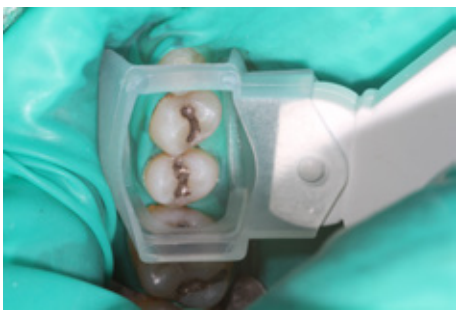
Please take the following dietary supplements and medications in the 14 days leading up to and the 14 days after the amalgam is removed:
- Chlorella vulgaris pellets: 3 x daily 8 – 10 pellets (30 min. before eating, with the last dose directly before going to bed)
- Zinc (gluconate/citrate): 20 mg twice a day with meals (2 x 2 capsules)
- Omega 3 fish oil: 2 capsules at breakfast, 4 capsules before going to bed
- Magnesium citrate: 2 capsules in the morning and in the evening with meals

On the day the amalgam is removed, the nutritional requirements remain the same. Please drink plenty of water after the treatment.

As a follow-up, a professional and customised amalgam rehabilitation procedure needs to be conducted by your environmental medicine or non-medical practitioner.

c) Six-fold protection
During amalgam removal, it is easy to make mistakes that could be extremely serious for the patient. Usually, the dentist will use a drill to remove the filling without taking any protective measures out of ignorance of the issues mentioned above, since they are not reflected in the established dental school of thought. However, this releases a very large amount of highly toxic, inorganic mercury vapour (Hg^0). It is not uncommon for a patient to react to such a routine amalgam removal procedure with neurological complaints, chronic fatigue, joint and muscle pain or other symptoms they did not experience prior to the procedure. For this reason, four-fold protection is absolutely essential when removing amalgam fillings:





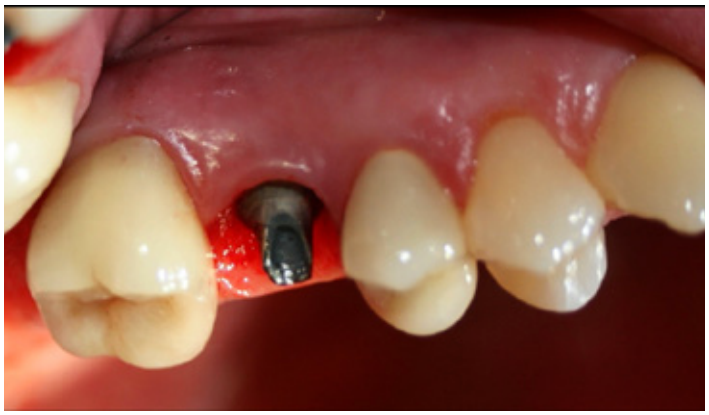
- the use of a dental dam – a protective rubber sheet – protects against amalgam chips and fragments which may break free and become embedded in soft tissue.
- the use of a clean-up suction device provides additional protection from mercury vapour, as it is placed over the tooth being treated.
- careful drilling of the tooth at a low rotational speed to avoid toxic mercury vapours.
- oxygen supply via a nasal tube, which oxidises mercury and provides the lungs with additional protection against breathing in the harmful vapours.
- a gold-coated protective nasal mask intercepts mercury vapour, as gold and mercury have a high affinity for each other.
- a chlorella algae inlay in the tooth after the removal of the amalgam binds any remaining mercury in the tooth.
- depending on the patient's state of health, the teeth are then immediately provided with a permanent restoration (ceramic or composite) or temporarily treated with cement (a glass ionomer cement filling) until detoxification is complete
- optional: infusion with a high dose of vitamin C and other micronutrients

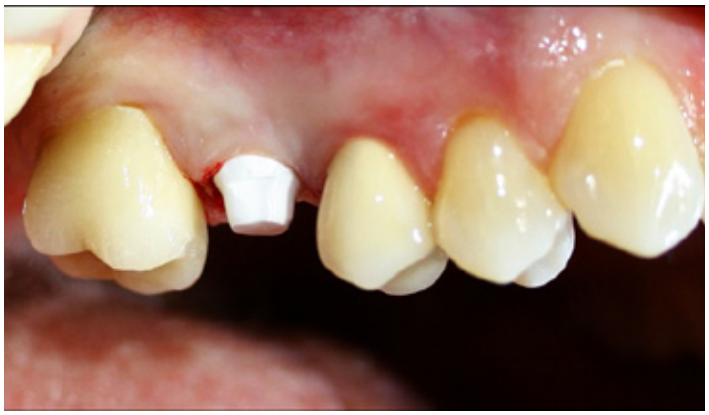
2.2. METAL REMOVAL (CROWNS AND BRIDGES MADE OF ALLOYS WITH A HIGH CONTENT OF GOLD OR NON-PRECIOUS METALS)

All metals are removed with at least the protection of a rubber dental dam to prevent metal particles from being absorbed via the mucous membranes and entering the gastrointestinal tract. In the case of serious illnesses such as ALS or at the patient's request, it is also possible to use the maximum degree of protection even for general metal removal (see amalgam removal).

2.3. TITANIUM REMOVAL:

A titanium stimulation test (blood test) can be used to verify whether titanium intolerance already exists. A visual inspection for inflamed tissue around the implant in the mouth may also indicate the presence of intolerance. If this is the case, the implants should be removed during the treatment and replaced with all-ceramic implants.
In most cases, it is possible to remove the titanium implants from the jaw without causing the usual bone defect with the use of a special system (implant removal set, Neobiotech). Depending on the patient's state of health, an all-ceramic implant can then be installed without first needing to allow the bone to heal. This 'titanium-to-ceramic' replacement prevents the loss of bone and saves time, as the new implant is screwed directly into the same bone cavity.
In cases where there is neither titanium intolerance nor any electrical sensitivity, the implant can remain in the patient's mouth for the time being. The abutment and screw on the implant are generally made of a gold-containing alloy, meaning that it invariably needs to be replaced with an all-ceramic abutment to avoid a local current flow.





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