Dental Mercury Toxicity and Clinical Medicines - by Dr. Stephen Bourne MB BS, MRCGP, Dip Homotox (Hons)

"Never has so much harm been done by so many to so few" (Murray J Vimy, Professor of Oral medicine, Calgary University, Canada, 2000)

Mercury amalgam was first used in dentistry in 1826. It consists of silver, tin, copper, and zinc dissolved in approximately 50% mercury, which is a toxic and volatile heavy metal. A mercury amalgam filling is therefore technically a mercury implant. As long ago as in 1926, the German chemist, Dr. Alfred Stock proved that amalgam fillings are a source of mercury vapour. In 1998, a report commissioned by the Swedish Government, stated that ‘mercury from amalgam fillings is liable to damage the central nervous system, kidneys and the immune system’. Dentistry as a profession was found to be hazardous because of exposure to mercury in dental amalgams. Mercury accumulation was found to accumulate in the thyroid testicles and retina of the eye. SCENIHR, The EU Scientific Committee on Emerging and Newly Identified Health Risks, prepared a report on the safety of dental amalgams and alternative restoration dental materials. In its abstract the Committee stated that mercury in general does constitute a toxicological hazard with defined characteristics for the major forms of exposure. It noted claims of causation with respect to a variety of systemic conditions particularly neurological and psychological and psychiatric effects. Whilst the scientific Committee noted that there were alternatives but these alternatives were also not without toxicological hazard. They concluded that there was likely to be a sustained reduction in the use of mercury amalgams across the European Union. WHO (World Health Organisation) states that elemental and methyl mercury are toxic to the central and peripheral nervous system and that inhalation of mercury can cause adverse effects on the nervous, digestive and immune systems as well as the lungs and kidneys.

The use of mercury amalgam fillings is prohibited in Sweden and Denmark. Austria, Canada and Australia permit amalgam fillings for the general population, but not for children, pregnant women and for those with renal impairment. The American FDA has stated that mercury has potential neurotoxic effects, and advised that it should not be used for young children or for pregnant mothers. In California, dentists are required to display a notice to the effect that if patients choose to have amalgam fillings, they do so at their own risk and are not entitled to sue for consequent health problems. In the United Kingdom, France, Italy and Germany, the use of mercury in dentistry is unrestricted.

Fatigue, anxiety and depression are among the first symptoms of mercury toxicity. There are many credible accounts in which people have "miraculously" recovered from chronic illnesses following detoxification and the safe removal of amalgam fillings from their teeth. These include chronic fatigue syndrome, Alzheimer's, Parkinson's disease, irritable bowel syndrome, lupus, multiple sclerosis, fibromyalgia, muscular dystrophy, heart disease, hypertension, asthma, and migraine.
Detailed information about medical problems caused by dental mercury can be found in the book Dentistry without Mercury, and on the Internet. Statistics from a meta-analysis of published material in DENTISTRY WITHOUT MERCURY, show that 89% of 1569 patients treated for mercury toxicity experienced 'that their condition had improved or was totally eliminated after replacement of their amalgam dental fillings'.

Some Symptoms and conditions caused by Mercury Toxicity

Acute Symptoms and Systemic Reactions such as:

Metallic taste, burning pains in the mouth throat and stomach, increased salivation, swollen salivary glands, abdominal pains, diarrhoea and vomiting, hypothyroidism, allergies, headaches, dermatitis, subnormal body temperature, cold clammy hands and feet, perspiration and night sweats.

Nervous System impact including:

Anxiety/depression, loss of memory and inability to concentrate, insomnia, muscle weakness and paraesthesia, ataxia, tremors of the eyelids, lips, tongue, hands and feet, numbness and burning sensations, motor neurone disease, multiple sclerosis, parkinson's disease, chronic fatigue syndrome.

Gastro-Intestinal discomfort including:

Food sensitivities, dysbiosis (bacterial, fungal and micro parasitical), inflammatory bowel disease (irritable bowel syndrome, crohn's disease, ulcerative colitis).

Even in countries where the use of dental mercury is unrestricted, dental mercury waste is classified as highly toxic and must be disposed of initially in mercury vapour resistant containers. The British Dental Association (BDA) has failed to explain why it regards mercury to be safe inside the mouth yet highly toxic outside the mouth. In favour of dental mercury implants, the BDA points out that they are cheaper, easier and quicker to install and more durable than white resin alternatives.

Traditional western doctors are not taught about dental mercury toxicity in their medical training, and dental mercury poisoning is not covered standard medical textbooks. There are several reasons for this.

1. Overt dental mercury related illness may take up to thirty years to develop, so that the connection may not be self-evident.

2. Blood, urine and hair tests for mercury are of no clinical value, since in susceptible individuals mercury tends to be retained in the cells rather than to be excreted.

3. Although release of mercury vapour in the mouth can readily be quantified, e.g. with a Jerome 431-XE mercury vapour analyser. This type of technology is not routinely used in medical or dental practice. Chewing gum and hot drinks have been shown to cause release of significant quantities of mercury vapour in susceptible subjects.

4. Traditional western doctors are not taught to measure galvanic currents related to mercury implants using a simple voltmeter. (The British Society of Mercury Free Dentists advises that
amalgam fillings with voltages above 100mV should be considered for removal using a safe protocol).

5. The medical treatments for chronic mercury poisoning (chelation therapy, complex homeopathy and nutritional therapy) are not included in medical pharmacopoeias.

6. The BDA disregards the research that led the Swedish Government to ban dental mercury. This could be in part because many British dentists earn a substantial part of their income from the use of dental mercury, and because the British Government is advised by the BDA (the dentist’s trade union) in dental matters.

Factors predisposing to Mercury Toxicity:

These include the number of fillings, the length of time in place, other nearby fillings with variable metallic components (particularly gold), related caries (which acidifies the local terrain promoting galvanic currents), and above all, the patient’s own ability to excrete mercury.\textsuperscript{10}

Animal and Autopsy Studies:

In sheep, amalgam implants have been show to significantly impair renal function.\textsuperscript{11}

It has been shown in human autopsy studies that mercury deposits in the brain, kidneys, intestine, liver and heart, correlate with the number of fillings and their time in place.\textsuperscript{12}

In the intestine, mercury is liable to poison healthy micro-flora, predisposing to bacterial dysbiosis, candidiasis and micro parasitosis. It also causes antibiotic resistance.\textsuperscript{13}

Possible link between Mercury Toxicity and Autoimmune Disease:

In susceptible subjects, mercury is retained in the cells. It is perceived by the immune system as antigenic. So that mercury containing cells become focuses of inflammation as the immune system attempts (unsuccessfully) to destroy them. Such an auto immune reaction may well underlie many auto immune conditions such as inflammatory bowel disease, multiple sclerosis, Alzheimer’s disease and Parkinson’s syndrome.

Clinical considerations

The mouths of all new chronically ill patients should be routinely examined for amalgam fillings. If seen, the voltages (galvanic currents) between each filling and the buccal mucosa should be measured with a simple voltmeter set to measure up to 2 volts (2000 mV). Voltages in excess of 100 mV should be considered for referral to a ‘mercury free’ dentist for safe removal and replacement of the filling with a non-toxic alternative. Details of mercury free dentists can be found on the Internet (British Society of Mercury Free Dentistry).

Patients with amalgam fillings should be advised not to chew gum and to take their beverages warm rather than hot.\textsuperscript{10} Since acidic saliva promotes galvanic currents, an alkaliizing toothpaste (e.g. Arm and Hammer) should be recommended together with a relatively alkaline diet (e.g. reduced animal protein).
High Voltage Amalgam Fillings and Earthing

In clinical experience, patients with high voltage amalgam fillings and ‘brain fog’ report a clearing of the brain fog immediately after removal of the amalgam fillings. This effect is due to removal of pathologic electric currents that have been impairing consciousness: systemic mercury poisoning takes much longer (several months) to subside. Patients with high voltages associated with their amalgam fillings generally feel clearer headed with earthing before dental treatment. Earthing mats can be obtained from BEP Technology Ltd (www.bioenergyproducts.co.uk).

Bio-regulatory approach to Mercury Toxicity

If mercury toxicity is a significant health problem, on bio regulatory testing, the MERCURY TOXICITY and/or the TOXIC AMALGAM test vial will lower health index (biological age). The mercury test vial will also cross filter with the ‘HIGHLY SIGNIFICANT CAUSE AND EFFECT’ and ‘ABNORMALITY REQUIRING IMMEDIATE TREATMENT’ test vials. With Vega testing, inserting the resonance of the most toxic tooth or quadrant in circuit will also lower the health index, and cross filter with the test vial ABNORMALITY REQUIRING IMMEDIATE TREATMENT. A toxic tooth will also cause weakness on muscle testing.

The Nutriscene test vials MERCURY TOXICITY and MERCURY OUT (1, 2, 3 and 4) should be routinely tested for all patients with chronic ill health and particularly for those with auto immune disease. MERCURY OUT 1 represents a relatively high degree of mercury toxicity and MERCURY OUT 4, only slight mercury toxicity. MERCURY OUT 2 and 3 are intermediate. Slight, but clinically significant levels of mercury toxicity may be found in patients, who have had their mercury fillings previously removed but without adequate detoxification, and in infants or children, who have been exposed to mercury poisoning in utero or from mercury contaminated breast milk. In adults, slight mercury toxicity can also be caused by mercury contaminated food (particularly fish) or water.

The MERCURY OUT 1-4 test vials can also be used to monitor clinical improvement during treatment.

Chelation Therapy

‘Chelation’ (claw like, from ancient Greek, chela for crab’s claw) therapy is the administration of chelating agents (particularly Captomer) to promote excretion of heavy metals. Such preparations bind with insoluble intracellular heavy metal molecules, converting them in to soluble chemical compounds that can pass out of the cells into extracellular fluid in preparation for excretion. If renal function has been impaired, as is generally the case with mercury poisoning, the released soluble mercury molecules may fail to be excreted and re-enter the cells. This phenomenon has been termed the ‘Ping-Pong effect’. To circumvent it, selected complex homeopathic drainage therapy together with adequate hydration (in the order of 1.5 litres of spring water daily), should be commenced about one week in advance of the chelation therapy. Such an approach primes the kidneys to excrete the soluble extra cellular mercury molecules before they return into the cells.
Chelation therapy promotes excretion not only of heavy metals, but also excretion of beneficial minerals (e.g. magnesium, zinc, copper and selenium etc.).

**ToxGuard** (Jarrow) contains PectaSol Chelation Complex and can be prescribed to support heavy metal detoxification. Jarrow do not specifically recommend concurrent mineral supplementation, although with bio regulatory testing a mineral supplement such as **Supertrace** (Nutrivial) or **Trace Minerals** (Nutrivial) may be indicated to ensure that the preparation is well tolerated.

Cysteplus (Thorne) contains N-acetyl cysteine or NAC, which may also assist with heavy metal detoxification because of its anti-oxidant and detoxification properties. NAC is contra-indicated in diabetics.

**General measures**

Selected complex homeopathic drainage remedies together with good hydration are always indicated when chelation therapy is prescribed. Drainage treatment should be commenced about a week in advance of chelation therapy in order to promote renal excretion of toxins and to reduce the risk of extra cellular mercury molecules (released in response to chelation therapy) from re-entering the cells (Ping-Pong effect).

The Nutriscene **TOXICITY** test vial, (Intox 1 on the Vega test Expert device), should be tested simultaneously with the relevant mercury test vial (most often 'TOXIC AMALGAM' or Mercury out 1, 2 or 3). When Mercury toxicity is a significant block to recovery, The TOXICITY test vial and the TOXIC AMALGAM test vial together will substantially lower the Health Index scale on initial Vega testing. The selected chelation therapy with the selected complex homeopathic drainage therapies will cross-filter with the test vials and lower the Health Index proportionately. When the chelation therapy is prescribed the selected treatment should be checked against the tolerance test vial, and if tests poorly tolerated, additional drainage and mineral supplements should be included to convert the composite treatments to well tolerated.

**Complex Homeopathic Drainage Therapy**

Some suitable preparations include **KI-REV, KI-SOL, WH-SOL, MET-PATH, AD-REV, BR-REV, LV-REV** (Nutrivial), **Toex, Renelix** (Pekana), **Guna Matrix and Citomix** (Cyto Solutions) and **Kidney Liquescence** (New vistas).

Many patients with mercury toxicity also have dysbiosis and immune system weakness. Some preparations to test for dysbiosis include **Primal Defence caplets** (Garden of Life, Health Interlink) and **Securil capsules** (Integrative Health Solutions). Preparations for immune system weakness include **Immiflex capsules** (New Vistas), **Immuno-300 capsules** (Biopathica) and **Ultra Immuno Glycans Advanced** (Integrative Health Solutions).

After chelation therapy, selected drainage therapy and removal of the most toxic (high voltage) amalgam fillings, **Amalex Drops** (New Vistas) may be prescribed (subject to bio regulatory testing) for treatment of residual dental materials toxicity.

If the test vial **LIVER DYSFUNCTION** cross filters with the EFFECTIVE or ABNORMALITY REQUIRING IMMEDIATE TREATMENT test vials appropriate liver support treatments should be prescribed (subject to testing), e.g. modern homeopathy - Liver Liquescence (New Vistas), **Hepeel** (Biopathica), LV REV (Nutrivial), and/or **SAT, Liver Support, Multi Liver Formula** (Nutri) and **Liver PF** (Jarrow).
**Dental Considerations**

The safe removal and replacement of mercury amalgam fillings entails post-graduate dental expertise. A list of appropriately trained British dentists is available on the web site of the British Society for Mercury Free Dentistry (http://mercuryfreedentistry.org.uk).

Protocols vary between dentists. Many prefer to address only one or two amalgam fillings during a session (generally one quadrant at a time), beginning with those fillings with the highest associated voltages above 100mV or with those in most urgent need of replacement. The interval between dental sessions should be at least one week since replacing amalgam fillings is stressful to the patient and may even cause additional release of mercury. In any event, sufficient time should be allowed between dental sessions for the patient to become fully recovered from the previous session.

Many dentists use a rubber dam in the mouth to prevent mercury particles from being swallowed, together with high volume suction and copious irrigation. A nasal tube providing oxygen or air may also be used to prevent inhalation of mercury particles. Amalgam fillings are removed carefully using a tungsten carbide drill, which cuts rather than vaporises.

White resin fillings are more expensive and less durable than amalgam fillings. They are most suitable for teeth that are not especially prone to grinding. Porcelain crowns and gold fillings are as durable as amalgam fillings, but are in the order of three times the cost of white fillings.

**References**


1. ABSTRACT: The German chemist, Dr. Alfred Stock, researched mercury poisoning, and showed that ‘silver’ fillings in the mouth are a significant source of mercury vapour. (Dr. Stock, himself recovered from a longstanding illness as a result of having his amalgam fillings replaced.)


8. Dr. Hesham El-Essawy, a mercury free dentist in Harley Street, London, uses a Jerome Mercury Vapour Analyser.


**ABSTRACT**
Every amalgam filling releases in the order of 10 micrograms of mercury per day into the body. This is equivalent to 3,000,000,000,000,000 mercury atoms per day. Mercury crosses the placenta into the developing foetus.
Mercury can cause autoimmune disease.
Mercury can impair renal function.
Mercury predisposes to anti-biotic resistant bacteria.
Mercury reduces fertility.


**ABSTRACT**
Within thirty days after placement of twelve occlusal amalgam fillings in six adult sheep, there was a 50% impairment of kidney function. After sixty days, there was 60% impairment in renal function.


14. This section was written in collaboration with Dr. Adam Sapera BDS of Haverstock Hill, London, NW3. (See mercuryfreedentistry.co.uk).

**About the Author**
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