

Part 3

The Amalgam War

Chapter 17

History of dental materials

Today dentists spend a lot of time repairing decaying teeth, drilling a hole into the tooth to clear out the decay and then restoring the tooth with a filling.

The first evidence of teeth with drilled holes has been dated back to 7000 BC, when skulls were found in a Neolithic graveyard in Pakistan. These holes were probably drilled to release 'spirits' from the body rather than to place fillings.

From 166–201 AD the Etruscans/Romans, from 166-201 AD, are said to be the most advanced dentists of the ancient world; they used gold to fill teeth and even made artificial crowns. Early records of fillings are also found in Chinese, Egyptian and Greek culture. Around 700 AD, an old Chinese medical text mentioned using a silver paste to fill teeth which contained mercury and since then teeth have been filled with an assortment of materials, including stone chips, resin, wood and cork, possibly with little or no anaesthesia.

Over the years hot metallic leaves of gold, silver, tin and lead were hammered into tooth cavities. Gold finally became the only option, but this was a slow and expensive process and an unattainable option for the general population, so the only alternative was extraction for a decaying tooth.

Experimentation with various dental filling formulas seriously started in the early 1800s. Silver, copper, tin and mercury were the metals used to create the first 'amalgam' filling and the search widened to include other metals such as gold, platinum, zinc cadmium, nickel, manganese, indium, lead, and aluminium. Mercury was always used because of its ability to dissolve other metals, then harden into a solid mass. A difficulty to overcome was the fact that the first amalgam fillings would expand on setting causing a lot of pain and fracturing the tooth. Today a typical amalgam mix is usually mercury 50%, silver 35%, tin 10%, plus small amounts of copper and zinc though this can vary from manufacturer to manufacturer. When a dentist is ready to fill a cavity with amalgam, the powdered alloy (metallic substance), is mixed with liquid mercury to form a softened 'amalgam' putty and it is this that is placed into the tooth cavity where it quickly hardens. (1)

Dentists today have a variety of fillings for tooth restoration apart from amalgam. There is gold, ceramic/porcelain, tooth-coloured plastic materials called composite resin fillings and glass ionomer (acrylic and a specific type of glass material). But care is still needed when deciding which to use, as has been shown in previous chapters.

The issue which sparked the 'amalgam war' within the dental community was the use of mercury.

Mercury through the ages

Mercury is an extremely rare element in the Earth's crust. It occurs in all types and ages of rock but mostly in cinnabar where it can be found as droplets or vein-lets within the ore. Mercury is extracted by heating cinnabar in a current of air and condensing the vapour. Mercury can be absorbed through the skin and mucous membranes and mercury vapours can be inhaled.

Perhaps the oldest known use of mercury dates to the Ancient Egyptians because archaeologists found mercury in an Egyptian tomb dating from 1500 BC. It was also recovered from elite Maya tombs dating from 100 - 700 BC.

Aristotle is credited with the oldest known written record of mercury. In an academic text dating back to some time during the 4th century BC, he referred to mercury as 'fluid silver' or 'quicksilver'. China in the 2nd century

BC possibly used mercury when trying to convert base metals into gold. The Roman writer Pliny the Elder, in the 1st century wrote about the production of mercury and the trading of the metal between Spain and Rome.

In the 16th century mercury acquired various therapeutic, agricultural uses and was used in the amalgamation of gold and silver.

By the 17th century, advanced science and technology found it used in thermometers, barometers, electrical and chemical applications and throughout the 19th century it was used for numerous health conditions including constipation, depression, child-bearing and toothache. In the 20th century mercury was used as a disinfectant and administered to children yearly as a laxative and de-wormer and also used in teething powders for infants.

Modern products with mercury include auto parts, batteries and fluorescent bulbs. In pharmacology compounds of mercury are used as a skin antiseptic, diuretic and cathartic. Its agricultural use is as a fungicide to spray seeds, fruit trees and for controlling/killing weeds. Paint manufacturing uses mercury in the mildew proofing of paint and mercury is also packaged in cast-iron, wrought iron, or spun-steel bottles or flasks. Finally, it may be surprising to know that coal-fired power plants release the largest source of mercury into the environment.

Dentistry and its use of mercury

It took centuries before mercury's toxicity began to surface.

"For centuries, physicians used mercury in the treatment of syphilis. It was injected into the buttocks or routinely applied to the skin of the entire body. In the latter case, its high volatility accounted for absorption of toxic amounts through inhalation and frequently caused slowly developing, vague symptoms of kidney damage, which remained largely unnoticed. ... deaths attributed to syphilis actually resulted from mercury poisoning." (2)

In the 18th and 19th century it was noticed that 'hat makers' regularly went 'mad'... 'mad as a hatter' was a term often quoted. The reason for this strange behaviour, which was not appreciated or understood at the time, was caused by hat makers using mercury nitrate, as part of the process of turning the fur of small animals, such as rabbits, into felt for hats. Prolonged exposure to mercury caused employees to develop a variety of physical and mental ailments, including tremors (dubbed "hatter's shakes"), speech problems, emotional instability and hallucinations.

The realisation that mercury was a poison, a powerful poison, had only begun to surface by the time the first dental amalgam filling prototypes were made. A British chemist named Bell, is credited with making the first prototype in 1818. But French dentist Auguste Taveau also developed a dental amalgam containing metal silver coins with a small amount of mercury in 1816, although this material was not used for dental fillings until 1826. Then there is Louis Regnard, a Parisian and physician, who is also credited with being one of the first to add mercury to base metals during those early years of experimentation.

There was obviously a lot of activity and competition amongst chemists and dentists to produce a practical filling material for teeth and this new material containing mercury was first given the name quicksilver or quacksalver. The word 'quicksilver' may have originated from Aristotle's reference to mercury and 'quacksalver' may have originated from the Dutch word 'kwaksalver' meaning charlatan. 'Quack' was certainly the name given to any dentists placing amalgam fillings, by those opposed to such tooth restorations, because of the mercury content. However, by 1826, such fillings were being used extensively in both England and France, and slowly these fillings became known as 'amalgams'. This new word was taken from the French word 'amalgamer' meaning 'to mix' and amalgamer stemmed from the Medieval Latin word 'amalgama'. (3)

Dental amalgam fillings and adverse health effects

In the 1830s, amalgams were introduced into America, and soon many dentists there were placing them into tooth fillings, being inexpensive, easy to use, durable and seemingly very practical. It was thought that the mercury content within the amalgam was locked into the filling and could not escape. However, the American Society of Dental Surgeons (ASDA), which was founded in 1840, saw its main purpose as opposing the placing of amalgams because of the serious concerns over mercury poisoning. On the

grounds of mal-practice, the organisation suspended any dentist found using them. This opposition slowly resulted in a serious battle within the ASDA and the organisation soon collapsed. By the late 1870s a new association named the American Dental Association (ADA), was formed which fully supported amalgam use. This move initiated the use of amalgam fillings worldwide, even though a number of scientific papers were published highlighting illnesses due to amalgam use.

The first wave of controversy, or 'war', seemed to be over but the battle slowly and steadily continued with dentists in St Louis, USA, voting not to use these amalgam fillings sanctioned by the ADA and, in 1873, an article appeared in the Chicago Medical Journal warning of the,

"poisoning of thousands of people all over the world from corrosive sublimate generated in the mouth from amalgam plugs in the teeth; neither cholera, smallpox, or any malarious disease [is] doing more injury in the world than this poison."

And in 1878, another article appeared in the Canada Lancet mentioning that dental mercury,

"is radically wrong, and should not be ventured upon, if the patient's welfare is to be considered."

Dr E.S. Talbot, an American, is credited with being the first to document the dangers of amalgam fillings. In 1882, he wrote an article in the Ohio State Journal of Dental Science which stated that he had proved amalgams gave off mercury vapour, and that tests showed that it destroyed vegetable and animal life. (4)

His work came under vicious attack, and it was not until 16 years later that his work was confirmed by Dr Turnhill's research study, 'Mercurial necrosis resulting from amalgam fillings', published in 1898, in the Brooklyn Medical Journal. Turnhill said:

"I want to show that by the use of amalgam in filling teeth there is a possibility of mercurial poisoning, which seriously affects the nerve centres, impairs locomotion by heaviness of limb and stiffness of joint, gives rise to obstinate diseases of the skin, and makes a mental wreck of the victim, whose imaginations and hallucinations are more than my pen can describe." (5)

In the meantime, a Dr G. V. Black, a dental technician, had for years been trying to make a 'safer' amalgam material and published his '*balanced amalgam formula*' in 1895. This new formula, and its variations quickly became the gold standard and would remain such for almost a further 70 years. It was 'hoped', that mercury would not be released from these newer fillings. (It is interesting to note that Black also became involved in another big issue in dentistry, dental fluorosis, and worked with Frank McKay in the early 1900s – see chapter 5, mottled teeth).

The next, or second wave, of worldwide activity over the use of amalgams, came in the early 1900s when Alfred Stock (1876 -1946), a German professor of chemistry, discovered that his own health problems were related to the mercury vapour given off from his fillings. He thoroughly researched the subject and published 30 scientific papers, one published in 1928 was called, 'The dangers of mercury and amalgam tooth fillings'. Up until 1939, in an effort to halt amalgam use, he formed and led an international movement, even though he had retired in 1936. Unfortunately, Stock's laboratory, and most of his records, were destroyed in a World War 2 bombing raid. However, his prior activities had caused anxiety amongst health professionals and aroused the interest of other chemists, and metallurgists, and this could not be destroyed. (6)

Stock's overt work must have caused concerns within the American Dental Association (ADA) and must have prompted the ADA to continue supporting Dr Weston Price's (1870 - 1948) research programme for such a long period of time. He was commissioned to research the cause of dental decay and tooth health, either in the year 1898 or 1900. Price completed a 25-year study with the help of 60 other dentists. His report which came in two monumental volumes, published in 1923, was ground breaking because, for the first time, it showed how teeth and dental work could affect general health and showed the connection between disease and root canals, or dead teeth left in the body. Price's second round of research, and another book published in 1938, showed how nutrition affected not only the body but also the teeth. Unfortunately, this conclusion was too far reaching for the dentists of the time.

Dr Melvin Page (1894 -1983), however, was inspired by the work of Dr Weston Price and went on to do further pioneering research work, writing several books. This, unfortunately, brought him into conflict with the ADA and also the American Medical Association (AMA) as well as the Food and Drug Agency (FDA), and in the early 1960s Page found himself under scrutiny for practising outside the scope of his dental practice. There was a lengthy trial but the Judge found him not guilty because Page was able to produce over 3,600 case studies and was able to substantiate his findings with over 40,000 blood tests as well as 35 years of research. The Judge even reprimanded the AMA and the FDA for not trying to figure out what he was doing rather than harassing him. Dr. Page went ahead with his work, supported by the Jarvis Group of professionals. He published numerous articles and received recognition certificates from many associations and professional bodies but he continued to be undermined by the dental and medical profession. (7)

In 1948, in the UK, the National Health Service (NHS) was formed, which provided free dental treatment for everyone. Trusting, conscientious mothers could now take their children to visit a dentist every 3 to 6 months, as advertised, in the hope of protecting their children's teeth from decay. Dentists were paid for each treatment and maximised their work by 'drilling and filling' teeth, and the fillings used were amalgam fillings. The mantra, 'drill, fill and bill', became a popular term in the UK when referring to dental work at that time. However, the results were to prove catastrophic, as Andrew Gwynne MP, explains below,

"I have also said this before: there is a reason why my mouth is full of metal, crowns and fillings, and it is not because I ate more sweets than my children did or because I brushed my teeth less well. It is because dentists were incentivised to maximise the amount of work they did because that is how they got paid, "drill and fill". (8)

Dr Karl O. Frykholm of Sweden, in 1957, claimed, incorrectly, that when saliva covered amalgam fillings, mercury was no longer released. This statement, of course, eased the conscience of dentists worldwide.

However, from the 1970s onwards there was one dentist, Dr Hal Huggins who was prepared to speak out and voice an opposite view from the main stream narrative. His scientific approach and overt anti-amalgam position helped to initiate a third wave of intense activity among others. Huggins was born in 1937 and received his DDS in 1962 from the University of Nebraska at Lincoln, USA. During his life-time he presented more than 2,500 lectures in 47 US states and 16 foreign countries, and gave more than 1,000 radio/television interviews. He authored many books and wrote more than 50 articles. He worked tirelessly until he died in 2014. The third amalgam war had begun.

For Huggins his awakening began in 1973 when he met Dr Olympia Pinta, a Brazilian dentist, at a conference in Mexico City. Pinta amazed him by saying that amalgam fillings leaked and caused diseases in patients. After fully reviewing the evidence, he followed on from the work of Weston Price and Melvin Page and set up a special clinic in Colorado Springs, for dental amalgam removal and developed a safe mercury removal procedure for both patient and staff. He discovered for himself that the cause for various diseases was often the direct result of dental work and the use of toxic dental materials. He developed exact protocols, using a multi-disciplinary approach, for remedying the effects of toxicities. With his 'Full Dental Revision' he was able to reverse autoimmune disease, multiple sclerosis, Lupus, leukaemia, and Alzheimer's, but Huggins warned that "this protocol is not for everyone....only for those that genuinely care about their health". In 1985, he commenced a four year course and obtained an MS (with special emphasis on toxicology and immunology), in 1989, from the University of Colorado, while continuing to write books and lecture .

One of his long term goals was to see dentists and doctors working together for the well-being of patients and, with this in mind, he founded the Huggins Protocol Training program for dentists, as well as the Multidisciplined Alliance of Professionals and the Huggins Applied Healing Centre. The ADA disliked Huggins's work and insulted his overt activity, finally revoking his dental licence in 1996, citing gross negligence, "...for refusing to refer people for amalgam fillings and root canalsand for the use of unnecessary and unproven procedures." At this hearing Judge Nancy Connick ruled that, despite the scientific evidence given to her by Huggins, she still believed that mercury could not go into the brain. Because of this ruling, Huggins' Colorado Springs dental practice closed, though he continued to spread awareness and was 'the single loudest voice in the USA demanding, 'Stop placing mercury fillings'. In his later years, he formed the Dental DNA lab, which, among other pursuits, specialized in the detection of dangerous, disease-causing microbes found within root canals, cavitations, implants and other dental situations. Hal Huggins is now considered to be the father of holistic dentistry and his work continues through the 'Huggins-Grube Protocol'. (9)

Stimulated by the 'Huggins effect' scientific evidence, relating to adverse health outcomes, caused by amalgam fillings, slowly continued to appear. In 1978, Gay et al at the University of Iowa reported a measurable release of vapour from amalgam fillings when the amalgams were stimulated by chewing or brushing. They found that the release was far greater when hot beverages were drunk. Gay suggested that this mercury vapour would be inhaled into the lungs.

In 1981, Svare at Ohio State University confirmed Gay's findings.

In support of Huggins and other like-minded dentists, physicians and research scientists, Murray Vimy and Michael Ziff founded the International Academy of Oral Medical and Toxicology Association (IAOMT) in 1984. The aim of the IAOMT was to find the scientific truth about several controversial issues relating to oral health and their motto soon became 'show me your science'. With his father, Sam Ziff, Michael Ziff went on to write books on mercury-free dentistry, detoxing and other related issues, and the IAOMT became a truly international organisation with chapters in several countries.

In 1984, the American Dental Association, had a three-day conference, considering the role of metals in dentistry, and at last conceded, that mercury can escape from mercury amalgam fillings... but not, they said, in sufficient quantities to cause ill-health, except in the case of hypersensitive individuals. They suggested that under 1% of the population would be affected. Dr Jack Levenson, the UK - based dentist, has written about this event stating that although the ADA conceded only a little, it proved to be a 'watershed moment' for the dental profession, freeing and enabling more scientists and researchers to look into this subject so that a new flood of research blossomed. Levenson noted that "Between 1965 and 1995 there was a massive amount of research papers on mercury – 13,000 in total – which was compiled into a bibliography by the Swedish researcher, Dr Mats Hanson".

Emboldened by the three day conference in the USA, the British Dental Society for Clinical Nutrition (now the British Dental Society for Mercury Free Dentistry) held a two-day conference in July 1985, entitled "Hazards in Dentistry". It coincided at the very same time that the 'The Toxic Time Bomb', written by Sam Ziff, was published. This all managed to spark off a flood of media interest worldwide, such that the theory that mercury in amalgams was locked into the fillings could no longer be sustained. (10)

One significant study, following this renewed interest by a wide range of researchers from different disciplines: chemists, biologists, pathologists, neurologists, metallurgists, microbiologists and others, came in 1987 when Nylander et al in Sweden published a study reporting that victims of sudden unexpected death had high mercury levels in the brain and a high number of amalgam fillings.

However, the British Dental Association (BDA) and the American Dental Association (ADA) still continued to adamantly support the use of amalgam fillings, even though, in 1988, the USA Environmental Protection Agency (EPA) had declared that scrap dental amalgam was a hazardous waste.

Studies continued to appear. In 1989, Nylander et al published another study showing that dentists and dental staff had a 40 times higher mercury level in the pituitary gland. Other studies proved dentists to have a higher rate of irritability, depression and mood swings, with dentists having a six-fold higher rate of suicide than other white-collar professionals.

A big leap forward occurred in 1990 at the University of Calgary School of Medicine, when Loescheider and Vimy placed amalgam fillings with radioactive mercury into pregnant sheep and monkeys. After just 29 days, the mercury was traced and found in the kidneys, the liver, the gastrointestinal tract, the brain, and many other parts of the body, including the unborn foetus. For both the mother and foetus, the highest level was in the pituitary gland, suggesting an amalgam mercury role in depression and mood disorders.

All this ongoing and sustained activity had an effect with Norway and Sweden being the first to *recommend* a ban on amalgam filling and, in the mid-1990s, they were the first to ban the import and export of mercury, which resulted in dentists finding it difficult to make and place amalgam fillings. In 1992, Germany's Minister for Health, also *recommended* that amalgams should be avoided for children under six, pregnant women and, any young women and individuals with kidney disease. Unfortunately, it was noted, that this advice/ recommendation, was generally ignored by dentists.

Another big step forward was when the largest German manufacturer of amalgam, Degussa AG, stopped making amalgam, in December 1993, and Austria announced a 'ban' on amalgam use for children in 1996, and for everyone by 2000.

Important research surfaced in 1993, by microbiologist Anne Sommers PhD, who reported that the placement of mercury amalgam fillings in monkeys and humans caused a major shift in the kinds of bacteria found in intestines. She found that some bacteria became mercury resistant, and concluded that amalgams tended to produce more antibiotic-resistant bacteria.

In 1994, in the UK, Dr Jack Levenson founded the British Society for Mercury Free Dentistry and wrote the book, 'Menace in the Mouth', published in 2000.

In 1994, Drasch et al, at the University of Munich in Germany, published an autopsy study on babies who had died of Sudden Infant Death Syndrome (SIDS). The authors found a strong correlation between the mercury levels in the brains and kidneys of the babies and the number of amalgam fillings in the mother's teeth. This finding was confirmed by Lutz in 1996.

In 2007, Dr Graeme Munro-Hall, a member of the IAOMT, working in Bedford, England, and accompanied by three other dentists from other countries, was invited to speak at the European Union on the subject of dental amalgam fillings and their removal. Norway then finally banned dental amalgam in 2008, while Sweden banned the use of dental amalgams for almost all purposes in 2009. The Norwegian Minister Erik Solheim said:

"Mercury is amongst the most dangerous environmental toxins. The ban is for both environmental and health reasons."

Britain was not open to these new ideas. In 2009, Dr Munro-Hall published the book, 'Toxic Dentistry Exposed', which he co-authored with his wife, Lilian, also a dentist. This antagonised the British Dental Association (BDA) and those dentists who still firmly supported amalgam use. Dr Graeme Munro-Hall was harassed and endured two internal trials by the BDA, where he was told that he had to place amalgam fillings or lose his licence to practice. He ignored this advice and managed to continue working without mercury until he and his wife retired in 2017.

Other countries however, began to follow the example of Austria, Norway and Sweden, with Denmark, Estonia, Finland and Italy using amalgam fillings for less than 5% of tooth restorations. Japan and Switzerland also restricted or almost banned, dental amalgam. France recommended that alternative mercury-free dental materials be used for pregnant women, and Canada has included children and patients with kidney problems in that advice.

It has taken the general public a long time to understand and acknowledge the seriousness of mercury toxicity. Was this delay partly due to the fact that mercury was to be found in thermometers, batteries, lamps, cosmetic products, and pharmaceuticals, such as vaccines and diuretics (water pills)?

In the 1950s and 60s, it is remarkable to note that students in schools and colleges often played with mercury balls on laboratory tables during science lessons – both teachers and students being unaware of the full extent of mercury's toxicity.

It took the terrible afflictions and suffering caused by severe mercury poisoning in Minamata, Japan, and in Niigata 10 years later, to bring the seriousness of mercury toxicity to the world's attention.

The Minamata mercury poisoning, was first discovered and acknowledged in 1956, but it took several decades and much litigation before victims from this accident gained any recognition and support, and before world-wide news outlets even began reporting the incident. The poisoning was caused by a chemical factory, founded in 1908, releasing its waste, containing methylmercury, into the Minamata bay between 1932 and 1968. People eating fish caught in the bay became seriously ill. This environmental disaster became known as the Minamata disease and was a 'wake-up' call to humanity. Slowly, international concern began mounting over mercury pollution everywhere, particularly when it was revealed that large amounts of mercury vapour was coming out of the fillings of deceased persons at cremation, and after burial, to pollute the environment. (11)

This knowledge culminated in the forming of the Minamata Convention on Mercury, an international treaty which was Japanese-led. After three years of meetings and negotiating, on 19th January 2013, 140 countries agreed to reduce mercury pollution by banning the production, import and export of items using mercury, of which there are many, to be prohibited altogether by 2020. Dental fillings, mercury amalgam fillings, were also regulated under the Convention and their use phased down through a number of measures. (Germany became a Contracting Party to the Convention on the 14th December 2017 and Thailand agreed on 16th August 2017). It is to be noted that dental associations did not sign this treaty.

Despite objections from the dental establishment, further progress was made to ban amalgam fillings on 1st July 2018 when an EU Regulation stated that dental amalgam may no longer be used for dental treatment of deciduous teeth, of children under 15 years and of pregnant or breastfeeding women.

The EU has proposed a ban on dental amalgam as of 1st January 2025. This includes not only the use but also the manufacture and export of amalgam. There are two branches of the EU: The European Parliament and the European Council that must ratify and, approve, the proposal for it to become law. There is an ongoing campaign by the 'Consumers for Dental Choice', led by Charlie Brown and helped by Dr Graeme Munro-Hall, past president of (IAOMT), to convince these two branches of the EU to support this proposed ban in the hope that it will influence America and Canada in its decisions.

Charlie Brown is President of the World Alliance for Mercury-Free Dentistry, which he founded in 2010. The World Alliance for Mercury-Free Dentistry is a global umbrella of environmental NGOs, consumer groups, and health professionals working united to phase out the use of mercury amalgam dental fillings. The World Alliance has strong mercury-free dentistry campaigns in 40 nations, (including several EU Member States). Charlie also leads the American NGO Consumers for Dental Choice. He is an attorney and author, Charlie is a graduate of Yale Law School, and has been twice elected a State Attorney General.

In the USA, in 2014, the International Academy of Oral and Medical and Toxicology (IAOMT) filed a lawsuit against, the Food and Drug Agency (FDA) over the classification of dental mercury amalgam and in 2017, the Environmental Protection Agency (EPA) developed standards for dental officers to use 'separators' so that mercury is not flushed down the drain and into the environment. This is estimated to reduce the discharge of mercury by 5.1 tons, annually.

In the UK, on 15th June 2018, the British Dental Association posted on their website the following:

"Dental amalgam: new regulations from 1st July 2018".

“The BDA is alerting dentists that from 1st July 2018, UK law states that dental amalgam should not be used in the treatment of deciduous teeth, in children under 15 years old and in pregnant or breastfeeding women, except when deemed strictly necessary by a dentist based on the specific medical needs of the patient.”

“The law has been passed on the basis of environmental concerns about mercury pollution, and does not reflect any evidence-based concern about adverse effects of amalgam on human health”

Then, on 24th September 2020, the Food and Drug Administration (FDA) in the US finally acknowledged the harm done by amalgam fillings by posting the following statement:

“Today the FDA is issuing updated recommendations concerning dental amalgam and the potential risks to certain high-risk individuals which may be associated with these mercury-containing fillings... certain groups may be at greater risk for potential harmful health effects of mercury vapour released from the device (the amalgam fillings). As a result, the agency is recommending certain high-risk groups avoid getting dental amalgam whenever possible and appropriate.”

The groups identified as having an increased risk were:

1. *pregnant women and their developing fetuses*
2. *women who are planning to become pregnant*
3. *nursing women and their newborns and infants*
4. *children, especially those younger than six*
5. *people with pre-existing neurological disease, such as multiple sclerosis, Alzheimer’s disease or Parkinson’s disease*
6. *people with impaired kidney function*
7. *people with known heightened sensitivity (allergy) to mercury or other components of dental amalgam.*

But to confuse the issue, the FDA also stated:

“The majority of evidence shows exposure to mercury from dental amalgams doesn’t lead to negative health effects in the general population. Exposure to mercury may pose a greater health risk in certain groups of people who may be more susceptible to the potential adverse effects generally associated with mercury.” (12)

The ADA also issued an ambiguous statement on 24th September 2020 to coincide with the FDA’s press release:

“The American Dental Association (ADA) supports the Food and Drug Administration’s (FDA) statement that all dental restorative decisions and treatment options should be made by the patient and the dentist and that the existing evidence shows that dental amalgam is not harmful to the general population. The ADA reaffirms its position that dental amalgam is a durable, safe and effective cavity-filling option.”

The reluctance of the dental associations in the US and UK to admit harm from dental amalgam fillings may be due to a fear of losing credibility, fear of litigation and/or concern over the possibility of having to contribute to the cost of removing amalgam fillings.

However, many other countries have banned amalgam use – the Philippines, New Caledonia, Saint Kitts, Nevis, and Moldova. Tanzania ends amalgam this decade and has already banned it for children, pregnant women and breastfeeding women. Vietnam has ended amalgam for pregnant women, children and breastfeeding women. Indonesia has ended amalgam in the government programme. Mauritius has ended it for children. Bangladesh has ended amalgam in the army and armed forces. The Indian Dental Association endorses the phase out of amalgam and India’s major amalgam maker is now making alternative restoration material. The Indian Railway has ended amalgam as has India’s Armed Forces. In Africa, the association, ‘Dentists for Mercury Free Africa’ has been formed. The momentum to end amalgam use is growing worldwide and the largest dental products maker in the world, DentSupply, stopped making amalgam in 2020. (13)

In February 2024 a historic deal was struck by the European Council and Parliament to end the dental amalgam era in the 27-nation European Union. The European Union has already banned the use of amalgam in children, pregnant women, and nursing mothers in a regulation that went into effect in 2018. But this was not enough to protect the environment and human health, as the European Commission explained in its 2023 proposal to ban amalgam:

“Dental amalgam is the largest remaining intentional use of mercury ...Considering the availability of mercury-free alternatives, it is appropriate to prohibit the use of dental amalgam for dental treatment of all members of the population...”

So in response, the European Council and Parliament worked out a deal (to be formally adopted in the coming months) in which:

- Amalgam use ends in all EU countries on 1 January 2025 (the regulation retains narrow, time-limited exemptions so a few Member States can adjust their insurance).
- Amalgam manufacture and import are phased out on a timetable, cutting off the supply of this mercury product in the EU.
- Amalgam exports are banned next year too – so the EU will no longer allow amalgam sellers to dump this toxic product in Africa or Latin America.

Charlie Brown, executive director of Consumers for Dental Choice, said,

"We welcome the amalgam ban in the EU. . But we are concerned that this mercury product continues to be used in the United States, especially in government programs."

"Amalgam use is still common in the United States, especially in government dental programs that implant this mercury product into soldiers and sailors, American Indians and Native Alaskans, and low-income children and institutionalized individuals"

Brown concludes,

"It is time for the United States to join the European Union in banning the use of mercury in dentistry." (14)

Chapter 17 References

(1) (Source: 'Menace in the Mouth' by Dr Jack Levenson).

(2) (Source: 'Fluoridation the Great Dilemma', pages 11/12, by George Waldbott).

(3) (Ref: Melaine Reinhart foreword to 'Toxic Dentistry Exposed' by Dr G. and Dr L. Munro-Hall).

(4) (Ref: 'The Chemistry and Physiological Actions of Mercury as used in Amalgam Fillings,' The Ohio State J Dental Science, 2(1):1-12.1882).

(5) (Ref: 'Dental Amalgam Controversy: History and Regulations' by David Kennedy et al).

(6) (Ref: Stock, Alfred Chemische Berichte Berlin 1928).

(7) (Ref: International Foundation of Nutrition and Health – ifnh.org/dr-melvin-e-page).

(8) (Source 16th May 2023 at 3.24 pm at the Parliamentary UK debate on dental Services: East of England at 3.24 pm or <https://hansard.parliament.uk/commons/2023-05-16/debates/B1BF6DD8-2FAB-40D0-B534-7ECB5CC47D3E/DentalServicesEastOfEngland>).

(9) (Ref: 'Solving the MS Mystery', by Huggins).

(10) (Ref: 'Menace in the Mouth', by Dr Jack Levenson with Dr Robert Hempleman. 2000).

(11) (Ref: 'Till Death Do Us Part: Dental Mercury Pollution From Crematoriums' by Dr David Kennedy, article 2015).

(12) (Ref: 'Dental Amalgam Fillings'. US Food and Drug Administration (FDA) Retrieved 28th October 2020).

(13) (Source: <https://media.mercola.com/imageServer?Public/2023/August/PDF?/european-union-poised-to-ban-toxic-dental-amalgam-pdf.pdf>).

(14) (Source: The Malaysian Reserve, Sunday 18th February, 2024 or <https://themalaysianreserve.co,2024/02/12> and Washington, PR Newswire Monday 12th Feb 2024)

