



**Oral Health  
Foundation**  
Better oral health for all

Oral Health Foundation | Policy Statement

# Dental Amalgam

## The Oral Health Foundation's view on dental amalgam

**The Oral Health Foundation does not consider that the use of dental amalgams containing mercury poses a significant health risk.**

The Oral Health Foundation advises patients not to have their amalgam fillings replaced unless they are certain they are allergic to dental amalgam, as the process of removal can weaken the teeth.

It also supports the view of the UK Department of Health that it is sensible to minimise health interventions during pregnancy. For this reason, and because mercury can be passed through the placenta and breast milk, it is prudent to avoid placing or removing amalgam fillings during this period.

### Recent scientific reviews

The UK Committee on Toxicity of Chemicals in Food, Consumer Products and the Environment (COT) reported to the Department of Health in 1997<sup>1</sup> that the use of dental amalgam is free from risk of systemic toxicity.

Other prominent agencies that have upheld the safety and utility of amalgam in recent years include the World Health Organization and FDI World Dental Federation<sup>2</sup>, Swedish Medical Research Council<sup>3</sup>, and the US Food and Drug Administration<sup>4</sup>.

### Safety

Amalgam fillings, made up of a mixture of metals and mercury, which are chemically bound together, have been in use in dentistry for over 150 years. Research into the safety of such dental amalgams have been carried out for over 100 years and so far no reputable controlled studies have found a connection between amalgam fillings and any medical disorder.

Minute amounts of mercury from dental amalgam do escape from dental amalgam and are absorbed into the body, some of it into the central nervous system. Everyone has a small amount of mercury in their system, measurable through their blood and urine. On average a UK adult absorbs about 9 millionths of a gram of mercury a day from all environmental sources – about a sixth of which comes from amalgam fillings.

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1. Committee on Toxicity of Chemicals in Food, Consumer Products and the Environment, Statement on the Toxicity of Dental Amalgam. Department of Health December 1997.
  2. WHO/FDI Consensus Statement on Dental Amalgam. FDI World Dental Federation, September 1997.
  3. Bergman B, Bostrom H, Larsson KS, Loe H, eds. Potential biological consequences of mercury released from dental amalgam. Proceedings from a state of the art conference, Stockholm, 1992. Stockholm: Swedish Medical Research Council, 1992;1-200.
  4. Consumer Update: Dental Amalgams. US Food and Drug Administration, December 2002.
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Most people with dental amalgam fillings containing mercury show less than 5 micrograms per litre of urine. Nearly all dentists have levels below 10 micrograms per litre. Compared with this, the maximum permitted level of exposure to mercury for industrial workers in the US will produce levels around 135 micrograms per litre, which is still considered safe by medical authorities<sup>5</sup>.

Confirmed cases of allergic reaction to amalgam are extremely rare – fewer than 100 cases have been reported worldwide<sup>6</sup>. This is an extremely small number in relation to the many thousands of millions of amalgam fillings that have been provided to patients since the material was developed.

None of the claims linking dental amalgam to illnesses such as Alzheimer’s disease, Autism, Muscular Dystrophy and Parkinson’s disease have been substantiated. Leading health organisations in these fields, have disputed such claims, and these conditions have not been associated with higher, occupational, levels of exposure to mercury.

However, the Oral Health Foundation’s considers that, if amalgam were to be presented as a new material today, it would not be approved by any food and drug administration, on the precautionary principle.

## Alternatives to amalgam fillings

Patients who wish to avoid amalgam fillings should discuss the alternatives with their dentist. There is no filling material available that can fully replace amalgam in all applications. Alternative materials, such as gold, porcelain, composite resins and glass ionomers, each have relative strengths, weaknesses, and costs associated with their use.

Gold is an inert metal with a long history of use as dental filler, but it is generally not considered acceptable from the aesthetic point of view. It is also expensive. Most of the other alternatives have been introduced much more recently, and there is relatively little published research yet available about the long-term health implications of the use of these materials.

Concerns have been raised about oestradiols, such as Bisphenol A, a chemical that has been used since the 1960s in dental products including fissure sealants and composite fillings. Recently it has been recognised as an oestrogen mimicker and may be linked to male infertility, and prostate and breast cancers. However exposure through dental materials would make only a small contribution to total exposure, as these chemicals are found in the food packaging industry.

None of the alternative filling materials is currently available for dental treatment under the NHS.

**Further Information:** Contact the Oral Health Foundation on 01788 539732, or [pr@dentalhealth.org](mailto:pr@dentalhealth.org)

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5. Position Paper on Dental Amalgam. National Council Against Health Fraud, 2002.

6. Frequently Asked Questions: Amalgam. American Dental Association, May 2003.