PREGNANT WOMEN, CHILDREN,
AND DENTAL AMALGAM MERCURY FILLINGS
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February 27, 2018

The IAOMT does not recommend that anyone have amalgam (silver) fillings placed in their mouths because they contain 50% mercury. Mercury is a neurotoxin, and a 2005 World Health Organization (WHO) report identified harmful effects of mercury exposure, including areas of risk specifically linked to mercury in fetuses and children: "Adverse health effects from mercury exposure can be: tremors, impaired vision and hearing, paralysis, insomnia, emotional instability, developmental deficits during fetal development, and attention deficit and developmental delays during childhood."[1]

It is also important to note that as a safety precaution, the IAOMT does not recommend amalgam mercury filling *removal* for women who are pregnant or breast-feeding and that the IAOMT does not recommend that dental personnel who are pregnant or breast-feeding conduct work that disrupts amalgam mercury fillings (including their removal). These recommendations are based on scientific research, as well as regulatory actions in some countries.

Scientific research about dental mercury damage in children

Mercury's damaging influence on the developing brain and neurological system makes dental mercury amalgam fillings an inappropriate material for use in children, pregnant women, and women of childbearing age. In fact, research has repeatedly shown the potential for significant impacts to pregnant women, fetuses, and children as a result of dental mercury.[2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37] Some of the impacts that have been examined in science include the following:

- Fetal and infant exposure to mercury is known to have potentially serious health consequences, and the number of maternal amalgam fillings has been associated with mercury levels in cord blood;[38 39] in the placenta;[40] in the kidneys[41 42] and liver[43] of fetuses; in fetal hair;[44] and in the brain[45] and kidneys[46] of infants.
- Mercury is excreted in breast milk of mothers with dental mercury amalgam fillings, and the mercury concentration in breast milk increases as the number of amalgam fillings in the mother increases.[47 48 49 50]
- Additional research has likewise examined the potential dangers that dental amalgam mercury poses to pregnant women, their fetuses, and infants.[51 52 53 54 55 56 57 58 59 60]
- Another area that has received much attention is the possibility of reproductive hazards to female dental personnel, including menstrual cycle disorders, fertility issues, and pregnancy risks.[61 62 63 64 65 66]

Although two studies[67 68] (commonly referred to as the "New England Children's Amalgam Trial" and the "Casa Pia Children's Amalgam Trial") have repeatedly been used to defend the use of amalgam in children, other researchers have since demonstrated that factors such as long term effects, genetic predisposition, and measurement errors must be taken into account.[69 70 71]

[72] [73] [74] Furthermore, researchers studying the same cohort (of the Children's Amalgam Trials) have provided data that has identified potential risks to these subjects from mercury exposure based on gender, [75] [76] [77] genetic predisposition,[78] [79] [80] and even gum-chewing.[81] Risk assessments have also explored designating safe levels for children, who are smaller and still developing,[82] especially since many dose levels are based on a one-size-fits-all scale for both children and adults.

In the meantime, scientific research continues to show that children are, in fact, at-risk for health impairments linked to dental amalgam mercury fillings.[83] [84] [85] [86] [87] [88] [89] [90] [91] [92] [93] [94] [95] [96] [97] [98] [99] In summary, authors of a study from 2011 cautioned: "Changes in dental practices involving amalgam, especially for children, are highly recommended in order to avoid unnecessary exposure to Hg [mercury]."[100]

Regulatory action to protect pregnant women and children from dental mercury

Norway banned dental amalgam in 2008,[101] Sweden banned the use of dental amalgam for almost all purposes in 2009,[102] and Denmark, Estonia, Finland, and Italy use it for less than 5% of tooth restorations.[103] Japan and Switzerland have also restricted or almost banned dental amalgam.[104] France has recommended that alternative mercury-free dental materials be used for pregnant women, and Austria, Canada, Finland, and Germany have purposely reduced the use of dental amalgam fillings for pregnant women, children, and/or in patients with kidney problems.[105]

In December of 2016, three EU institutions (the European Parliament, the European Commission and the Council of the European Union) reached a provisional agreement to ban dental amalgam fillings for children under 15 and pregnant and breastfeeding women as of July 1, 2018 and to consider banning dental amalgam completely by 2030.[106] [107]

Part of this agreement was inspired by the United Nations Environment Programme's Minamata Convention on Mercury, which is a global treaty that entered into force in 2017. The United States was the first country to give its support for ratification of the international treaty, which includes initiatives with regards to phasing down the use of dental mercury amalgam.[108]

What these measures mean is that some regions of the world are taking action to end the use of dental mercury altogether, while others are at least ending it for pregnant women and children as global dental mercury use is slowly phased-down.

Yet, dental mercury is still being used on some pregnant women and children

In spite of this treaty and other international legislation, the U.S. Food and Drug Administration (FDA) currently "considers dental amalgam fillings safe for adults and children ages 6 and above."[109] However, details in the FDA's public statements about dental mercury amalgam on its website have changed over the years, including information about its potentially harmful impact on pregnant women, fetuses, and children under the age of six. Importantly, there are no enforced FDA regulations for this susceptible population or any other population.

Due in part to concerns about this lack of protection, the IAOMT filed a lawsuit in 2014 against the FDA over its classification of dental mercury amalgam.[110] As part of the case, the IAOMT secured an internal document from the FDA that had proposed restricting dental mercury amalgam use in pregnant and nursing women and children under the age of six, as well as individuals with mercury allergies and pre-existing kidney or neurological disease.[111] Yet, allegedly for administrative reasons, the FDA communication (dated January 2012) was never released to the public.

Meanwhile, as substantial support for ending dental mercury for pregnant women and children continues to mount, this toxic filling material is still being used routinely in the US. This is completely contradictory, as it disregards scientific data published in hundreds of peer-reviewed journals and protective measures taken by other countries around the world. Safeguarding American children from dental mercury has been left to their parents—and the dentists brave enough to warn them about something that the FDA seems to be avoiding.

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