

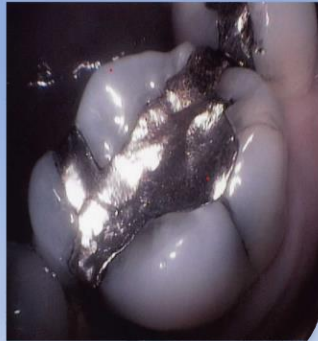
Phasing Out Dental Amalgam COP5

- Dr. Graeme Munro-Hall
Chief Dental Officer World Alliance for Mercury Free Dentistry
- Email any questions to WAFMFD-UK@steeps.net
- <https://www.mercuryconvention.org/en/documents/cop-4-submissions-world-alliance-mercury-free-dentistry-comparison-availability>. *Report on toxicity of mercury from dental amalgam.*
- WHO 118 Inorganic Mercury 1991 – Amalgam is largest source of mercury to humans & No safety level can be established (NOEL)
- No need to use amalgam as alternatives are:
Available – Affordable – Effective (Swedish Chemical Agency INC1)

Exposure to Mercury is 24/7.

Amalgam consists of:

50% Mercury
25% Silver
25% Tin



Dr. Graeme & Dr. Lillian Munro-Hall email: drsdrj@protonmail.com

Mercury Vapour from a 22 year old amalgam filling.



Rubbed with pencil eraser for 10 seconds and held behind a phosphor screen to show release of mercury vapour.



Mercury from Amalgam –What Happens?

Health Canada Report 2007

- 28% of the mercury used in the dental filling
- 10% of the mercury swallowed – to be excreted into the environment
- 62% mercury enters the environment (72%)
- BPM reduces this from 72% to 56% dental mercury into environment

Foetal Exposure

- Placenta not a barrier for dental mercury
- More maternal amalgams means more mercury the foetus absorbs
- 1 maternal amalgam exposes the foetus to levels of mercury that can cause irreversible damage to the foetal brain

Richardson G, "Mercury exposure and risks from dental amalgam. Part 1 ," SNC-Lavalin Environment Ottawa Canada, 2010

Mercury from Amalgam -Risks

Mercury Exposure

- Mercury penetrates the Placental Barrier.
- Mercury is preferentially absorbed by the fetus.
- Mercury accumulates in the brain, kidneys, heart, spleen and gut.
- Exposure to Mercury causes developmental defects.
- For example - Reduces IQ.

How many is too many?

Dental material	Component	Safe no. of filled surfaces (N)	Safe no. of filled teeth (N)
Gold alloys	Au	??	??
	Ag	4	2
	Pd	8	3
	Pt	6	2
Ceramic	Li	13	5
Amalgam	Hg	7	3
Composite resin	All	No limit	No limit

3 for an adult and 1 for a child before adverse health event likely from mercury exposure

Who is at Risk?

- Vulnerable Groups – Pregnant & lactating women, foetuses, infants, children, the elderly, kidney disorders, compromised immune function & dental personnel.
- Exposure to dental mercury increases rates of depression, anxiety, suicidal thoughts.
- Mercury from dental amalgam leads to adverse Neurological, Psychological and Cardiac effects.

No valid reasons either dentally, financial or environmentally to continue the use of dental amalgam