Review Comment

Docket Information

Docket ID	FDA-2008-N-0163
Long Title	Dental Devices: Classification of Dental Amalgam and Reclassification of Dental Mercury; Issuance of Special Controls for Amalgam Alloy

Document Information

Document ID	FDA-2008-N-0163-0074
Document Title	Dental Amalgam Mercury Solutions - Comment
How to Comment	

Submitter Information

Submitter Category	Health Professional - A0007
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Comments

Amalgam, which is used in dentistry for 150 years, consists of 50% elemental mercury and a mixture of silver, tin, copper and Zinc. Minute amounts of mercury vapor is released continuously from amalgam. Amalgam contributes substantially to human mercury load. Mercury accumulates in some organs, particulary in the brain, where it can bind to protein more tightly than other heavy metals (e.g. lead, cadmium). Therefore, the elimination half time is assumed to be up to 1-18 years in the brain and bones.
Mercury is assumed to be one of the most toxic non-radioactive elements. There are hints, which show, that mercury vapor is more neurotoxic than methyl-mercury in fish.
Review of the recent literature suggests, that mercury from dental amalgam possibly leads to nephrotoxicity, neurobehavioral changes, autoimmunity, oxidative stress, autism, skin- and mucosa alterations or unspecific symptoms and complaints. The development of Alzheimer´s disease, ALS, autism, Parkinson or multiple sklerosis was also linked to low dose mercury exposure.
There exist individual genetical or aquired susceptilities for negative effects from dental amalgam. Mercury levels in blood, urine or other biomarkers don´t reflect mercury load in critical organs. Autopsie studies have shown that mercury levels in critical tissues in amalgam bearers reach the levels, which was proofed to be toxic in human cells and in animals. But most studies regarding dental amalgam show substantial methodical flaws.
Accurate removal of dental amalgam lead mostly to a permanent improvement of various chronic complaints in a relevant number of patients in some trials.
In sum, available data suggests, that dental amalgam is an unsuitable material for medical, occupational and ecological reasons.

Attachments

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Action

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