

109TH CONGRESS  
1ST SESSION

# H. R. 4011

To prohibit after 2008 the introduction into interstate commerce of mercury intended for use in a dental filling, and for other purposes.

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## IN THE HOUSE OF REPRESENTATIVES

OCTOBER 6, 2005

Ms. WATSON (for herself, Mr. MICHAUD, and Mr. BURTON of Indiana) introduced the following bill; which was referred to the Committee on Energy and Commerce

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## A BILL

To prohibit after 2008 the introduction into interstate commerce of mercury intended for use in a dental filling, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*  
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Mercury in Dental Fill-  
5 ings Disclosure and Prohibition Act”.

6 **SEC. 2. FINDINGS.**

7 (a) GENERAL FINDINGS.—The Congress finds as fol-  
8 lows:

1           (1) Elemental mercury and mercury compounds  
2           are known to be toxic and hazardous to human  
3           health and to the environment.

4           (2) Mercury is number three on the 2003  
5           CERCLA Priority List of Hazardous Substances,  
6           behind arsenic and lead.

7           (3) A dental amalgam, commonly referred to as  
8           a “silver filling”, consists of 42 to 58 percent mer-  
9           cury.

10          (4) Consumers may be deceived by the use of  
11          the term “silver” to describe a dental amalgam,  
12          which contains substantially more mercury than sil-  
13          ver.

14          (5) The American Dental Association estimates  
15          that the dental industry places approximately  
16          70,000,000 dental amalgams annually and each den-  
17          tal amalgam may contain  $\frac{1}{2}$  to  $\frac{3}{4}$  of a gram of mer-  
18          cury, depending on the size of the filling.

19          (6) The mercury contained in dental amalgam  
20          is continually emitted in the form of mercury vapor,  
21          and the total amount of mercury released depends  
22          upon the total number of fillings; their age, composi-  
23          tion, and surface area; the intraoral presence of  
24          other metals; dietary and lifestyle habits; and other

1 chemical and metabolic conditions affecting the  
2 mouth.

3 (7) When mercury vapors are inhaled, most of  
4 the mercury (about 80 percent) enters the blood-  
5 stream directly through the lungs and then rapidly  
6 deposits preferentially in the brain and kidneys as  
7 well as other parts of the body.

8 (8) Mercury toxicity is a retention toxicity  
9 (total body burden) that builds up over years of ex-  
10 posure, and is therefore dependent on all sources of  
11 mercury to which an individual may be exposed.

12 (9) Recently funded research by the National  
13 Institutes of Health has concluded that when inor-  
14 ganic mercury is located in brain tissue, researchers  
15 are unable to demonstrate an appreciable half-life,  
16 or decrease, of mercury over time (more than 120  
17 days). The implications of this conclusion are that  
18 dental amalgam exposure will permanently increase  
19 mercury body burden.

20 (10) According to the World Health Organiza-  
21 tion, the estimated average daily intake and reten-  
22 tion of mercury from dental amalgam ranges from  
23 3 to 27 micrograms per day, and is greater than all  
24 other sources combined.

1           (11) The California Dental Association, by  
2           court order, requires postings of warnings about  
3           mercury fillings in California Dental Offices as of  
4           March 9, 2003. The warnings read “NOTICE TO  
5           PATIENTS: PROPOSITION 65 WARNING: Den-  
6           tal Amalgam, used in many dental fillings, causes  
7           exposure to mercury, a chemical known to the state  
8           of California to cause birth defects or other repro-  
9           ductive harm”.

10           (12) United States consumers and parents have  
11           a right to know, in advance, the risks of placing a  
12           product containing a substantial amount of mercury  
13           in their mouths or the mouths of their children.

14           (13) The Food and Drug Administration added  
15           Health Canada warnings regarding mercury in den-  
16           tal amalgam to a consumer update issued on Decem-  
17           ber 31, 2002.

18           (14) According to certain scientific studies,  
19           Health Canada, and the Agency for Toxic Sub-  
20           stances and Disease Registry, children and pregnant  
21           women are at particular risk for exposure to mer-  
22           cury contained in dental amalgam.

23           (15) According to the Agency for Toxic Sub-  
24           stances and Disease Registry, the mercury from  
25           amalgam passes through the placenta of pregnant

1 women and through the breast milk of lactating  
2 women, increasing health risks to both unborn chil-  
3 dren and newborn babies.

4 (16) The National Academy of Sciences esti-  
5 mated that “over 600,000 children are born each  
6 year at risk for adverse neurodevelopmental effects  
7 due to in utero exposure to methyl mercury”. This  
8 report urged the need to understand the relative  
9 amount of mercury attributable to dental amalgam  
10 and to thimerosal in vaccines.

11 (17) Studies show that a variety of commonly  
12 found human intestinal and oral bacteria can meth-  
13 ylate mercury. In this way, the mercury vapor from  
14 fillings biotransforms into the highly neurotoxic and  
15 teratogenic methylmercury.

16 (18) The use of mercury in any product being  
17 put into the body is opposed by many health groups,  
18 such as the American Public Health Association, the  
19 California Medical Association, and Health Care  
20 Without Harm.

21 (19) Highly effective and durable alternatives to  
22 mercury-based dental fillings exist, but many pub-  
23 licly and privately financed health plans do not allow  
24 consumers to choose alternatives to dental amalgam.

1 (b) ENVIRONMENTAL FINDINGS.—In addition to the  
2 findings of subsection (a), the Congress finds as follows:

3 (1) Mercury wastewater released from dental  
4 clinics has been shown to fail the Environmental  
5 Protection Agency’s toxicity characteristic leaching  
6 procedure and, therefore, is regulated as hazardous  
7 waste.

8 (2) Research from the Naval Dental Research  
9 Institute indicates that, when discharged to the envi-  
10 ronment, conditions may be right for waste dental  
11 mercury to methylate, become bioavailable, and sub-  
12 sequently biomagnify in fish as methyl mercury, the  
13 most toxic form of mercury.

14 (3) Forty-eight States, the District of Colum-  
15 bia, and the United States Territory of American  
16 Samoa have issued 2,362 fish consumption  
17 advisories to their residents due to mercury contami-  
18 nation as of 2003.

19 (4) The Food and Drug Administration has  
20 issued fish consumption advisories due to levels of  
21 mercury in commercially-caught fish and, in Janu-  
22 ary 2001, warned pregnant woman and young chil-  
23 dren not to eat certain marine fish.

1           (5) According to the Environmental Protection  
2 Agency, United States dentists use approximately 34  
3 tons of mercury per year.

4           (6) A report issued on June 5, 2002, by the  
5 Mercury Policy Project, the Sierra Club, Health  
6 Care Without Harm, Clean Water Action, and the  
7 Toxics Action Center stated that, because of mer-  
8 cury fillings, dental offices are now the leading  
9 source of mercury in the Nation's wastewater.

10          (7) Mercury from dental amalgam can enter the  
11 environment during any point of the product's life-  
12 cycle. This includes placement or removal of fillings;  
13 through bodily excretions; when sewage sludge is in-  
14 cinerated, spread on crops, or dumped in land fills;  
15 when vapor is released or land filled; when vapor is  
16 released directly from the filling (which increases  
17 with brushing, chewing, and consuming hot foods or  
18 salt); and during cremation. Currently there are no  
19 requirements for mercury capture before or during  
20 cremation.

21          (8) In 2000, the Association of Metropolitan  
22 Sewerage Agencies reported human wastes from in-  
23 dividuals with dental amalgam fillings to be the most  
24 significant source of domestic mercury entering pub-

1       licly owned treatment works, greater than 80 per-  
2       cent of the total contributing factors.

3           (9) According to the Association of Metropoli-  
4       tan Sewerage Agencies, removal of mercury from  
5       publicly owned treatment works has been shown to  
6       cost \$10,000,000 to \$100,000,000 for every pound  
7       removed.

8           (10) Mercury use by the dental industry in-  
9       creased from 2 percent in 1980 to 22 percent of the  
10      total use of mercury in the United States in 2001,  
11      because of drastic declines in mercury use by other  
12      industries over that period.

13          (11) Amalgam restorations were estimated to  
14      be 55 percent of the total mercury product reservoir  
15      in 2004 by the Environmental Protection Agency,  
16      and will therefore be a source of environmental con-  
17      tamination into the future.

18          (12) According to a joint study by the Environ-  
19      mental Protection Agency and the Cremation Asso-  
20      ciation of North America, approximately 238 pounds  
21      of mercury, mostly from dental amalgam fillings,  
22      were released from crematoria nationally in 1999.

23          (13) Cremation is chosen in approximately 30  
24      percent of all deaths, and this percentage is expected  
25      to increase every year.

1           (14) According to industrial hygiene surveys, 6  
2           to 16 percent of dental offices exceed the exposure  
3           levels for air mercury permitted by Occupational  
4           Safety and Health Administration standards.

5 **SEC. 3. PROHIBITION ON INTRODUCTION OF DENTAL**  
6 **AMALGAM INTO INTERSTATE COMMERCE.**

7           (a) PROHIBITION.—Section 501 of the Federal Food,  
8 Drug, and Cosmetic Act (21 U.S.C. 351) is amended by  
9 adding at the end the following:

10           “(j) Effective January 1, 2009, if it contains mercury  
11 intended for use in a dental filling.”.

12           (b) TRANSITIONAL PROVISION.—For purposes of the  
13 Federal Food, Drug, and Cosmetic Act (21 U.S.C. 301  
14 et seq.), effective December 31, 2006, and subject to the  
15 amendment made by subsection (a), a device that contains  
16 mercury intended for use in a dental filling shall be consid-  
17 ered to be misbranded, unless it bears a label that provides  
18 as follows: “Dental amalgam contains approximately 50  
19 percent mercury, a highly toxic element. Such product  
20 should not be administered to children less than 18 years  
21 of age, pregnant women, or lactating women. Such prod-  
22 uct should not be administered to any consumer without  
23 a warning that the product contains mercury, which is a  
24 highly toxic element, and therefore poses health risks.”.

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