



## **Memorandum**

**To:** Mayor and City Council

September 20, 2011

**From:** Suja Lowenthal, Second District  
Steve Neal, Ninth District

**Subject:** Dental Amalgam

---

### **REQUESTED ACTION:**

Request the City Attorney draft a resolution recognizing the efforts of Californians for Green Dentistry and support for their mission to eliminate the use of mercury in dental practices.

Request the resolution urge our State legislators to require the installation of dental amalgam separators to catch spilled mercury by a particular date based on discussions with dental associations and consumer groups.

Request that the resolution encourage all dental practices located in the City of Long Beach to voluntarily cease use of Dental Amalgam, implement Best Management Practices and install dental amalgam separators to catch spilled mercury.

### **BACKGROUND INFORMATION:**

In his speech to Congress last week, President Obama singled out mercury exposure to children as his lead environmental concern in a speech otherwise focused on jobs. The President said: "I reject the argument that says for the economy to grow, we have to roll back protections . . . that keep our kids from being exposed to mercury."

Created in July, 2010, Californians for Green Dentistry is a grass roots coalition whose mission is to create dental mercury amalgam-free zones in the United States. Consumers for Dental Choice is the umbrella non-profit organization for Californians for Green Dentistry.

Consumers for Dental Choice, was founded in 1996. Their Campaign for Mercury-Free Dentistry started in key states before going national and international. Along the way, they began educating consumers, encouraging access to mercury-free alternatives, challenging arguments rationalizing mercury use and protecting dentists' right to speak out. During their decade of work in California, they worked on getting a fact sheet into the hands of every California dental patient (under the Watson Law), which dentists are required to make available to patients warning them of various dental materials, including mercury amalgam

fillings. The Watson Law was written by former Congresswoman Diane Watson, who as a State Senator chaired the Health Committee for two decades. The warning adopted by the Dental Board of California under the Watson Law reads:

“Toxicity of Dental Materials”

“Dental Amalgam”

“Mercury in its elemental form is on the State of California’s Proposition 65 list of chemicals known to the state to cause reproductive toxicity. Mercury may harm the developing brain of a child or fetus.”

Mercury is a natural element found in the earth’s crust and mined in both open air and underground mines throughout the world, secondarily in United States mines. According to a report from the California Environmental Protection Agency, Office of Environmental Health Hazard Assessment<sup>1</sup>, “Mercury is a very useful component of many items due to its unique properties. It exhibits fluidity at a wide range of temperatures, and a uniform volume expansion over the entire liquid temperature range...It has a high ability to form alloys with many metals, thus its significant use in dental amalgams, which are composed of nearly 50% elemental mercury combined with other metals... “ (*Public Health Goal for Inorganic Mercury in Drinking Water*, Office of Environmental health Hazard Assessment, CA EPA, February 1999)

Elemental mercury is released during preparation and handling of dental amalgams, exposing dental professionals and patients. The dental amalgam restorations, themselves, appear to be the major contributor to an individual’s body burden of mercury.” In fact, dental offices in 2003 were found to have been the source of 50% of all mercury pollution entering Publicly Owned Treatment Works (U.S. EPA). Dentists use amalgam because it is a cost-effective long lasting material, readily available for use in fillings. It is estimated that over 60 million mercury tooth fillings get placed into American’s mouths every year in the United States. Amalgam has been used in dental fillings for nearly 200 years.

Mercury vapors can cause neurological damage, especially to the developing brains and nervous systems of children and fetuses. Dental workers, mostly females of childbearing age, are most often exposed to mercury in their work environments.

Beyond direct health concerns, the environmental effects of mercury are well established – according to the U.S. Environmental Protection Agency (EPA) ([www.epa.gov/hg/dentalamalgam](http://www.epa.gov/hg/dentalamalgam)):

*If improperly managed by dental offices, dental amalgam waste can be released into the environment. Dentists should use dental amalgam separators to catch and hold the excess amalgam waste coming from office spittoons. Without dental amalgam separators, the excess amalgam waste will be released to the sewers via drains in the dental offices.... At the treatment plant, the amalgam waste settles out as a component of sewage sludge that is then disposed:*

- *in landfills,*
- *through incineration, or*
- *by applying the sludge to agricultural land as fertilizer.*

*If the amalgam waste is sent to a landfill, the mercury may be released into the groundwater or air. If the mercury is incinerated, mercury may be emitted to the air from the incinerator stacks. And finally, if mercury-contaminated sludge is used as an agricultural fertilizer, some of the*

*mercury used as fertilizer may also evaporate to the atmosphere... Mercury amalgam also accumulates on dental supplies, such as cotton swabs and gauze, and these materials are usually deposited in the regular trash. In local areas where trash is incinerated, the mercury in this trash can be released via air emissions.*

Dental amalgam is the second-largest selling mercury product in the United States (switches and relays are the largest) where more mercury resides in human teeth than in all other mercury products combined. The mercury from dental fillings pollutes our water via dental clinic releases and household waste. Dental amalgam, once in the environment, can convert to methylmercury and contaminate the fish we eat.

In 1986, California voters approved an initiative to address their growing concerns about exposure to toxic chemicals. Proposition 65 requires the State to publish a list of chemicals known to cause cancer or birth defects or other reproductive harm and businesses such as dental offices that knowingly discharge these chemicals to provide a “clear and reasonable warning” prior to exposing any person to a listed chemical. In addition to mercury, there are approximately 800 chemicals on the list. The warning adopted under Proposition 65, pursuant to agreement of the California Dental Association, the Attorney General of California, and the public interest group which filed the case, is as follows:

*“NOTICE TO PATIENTS: Dental Amalgam, used in many dental fillings, causes exposure to mercury, a chemical known to the state of California to cause birth defects or other reproductive harm.”*

In California, City Councils in Santa Ana and Costa Mesa have passed resolutions recognizing the dangers of dental amalgam. Several municipalities throughout the United States and approximately 12 states have taken a position on dental amalgam, ranging from urging best dental practices to requiring filter separators on dental office sinks to capture mercury released during dental amalgam removal. Both the FDA and EPA warn pregnant women and those with children under 6 years of age to consult with their dentist before receiving dental amalgam fillings. Norway, Sweden and Denmark have banned dental amalgam fillings

## DISCUSSION:

The issue before the Council is not whether dental amalgam is harmful to our bodies and the environment – it is clearly a contributing factor to increased mercury levels in humans and water sources worldwide. However, banning the use of amalgam pits one segment of dentists against another. One side contends that their patients would not be able to pay for the higher cost “white” or composite fillings, leaving them without an option to have dental treatment and raising the prospect for long-term dental or even related health problems. They contend this is especially true for low-income patients and their children. The other side claims that the cost of dental amalgam procedures are actually comparable and in some cases even more expensive than other types of fillings such as composite and Atraumatic or “alternative” restorative treatment, especially in children. These dentists also believe that the long-term health of their patients must include consideration of the harmful effects of mercury.

Combined with externalized costs and environmental degradation, the costs of dental amalgam outweigh its benefits. Finally, they believe that many dental consumers are deceived by the term “silver fillings,” and unaware of Amalgam’s mercury content and its resulting environmental impact.

In any case, this issue is not one solely for dentists to debate. Parents have a major stake in being told what material is going into their children’s mouth; many would oppose mercury exposure in their children. Taxpayers and water rate-payers also have a major stake; their water rates reflect clean-up costs for mercury that otherwise would not be in the water supply if all dentists used separators – or did not place amalgam at all.

**FISCAL IMPACT:**

There is no fiscal impact to the general fund.