



Advisory Committee on Mercury Pollution
103 South Main, Cannery Building, Waterbury, VT 05671

DENTAL AMALGAM FILLINGS

ENVIRONMENTAL AND HEALTH FACTS FOR DENTAL PATIENTS

Amalgam Fillings and Mercury



Amalgam fillings are also called dental amalgams or silver fillings. Dental amalgam is a compound of mercury (43-54%) combined with other metals including silver, copper and tin. These fillings give off mercury vapor. The amount depends on how many fillings you

have and activities such as chewing, grinding of teeth, and drinking hot liquids. Mercury vapor can be inhaled and enter the bloodstream. It can then be carried throughout the body. For people with a number of fillings, this can be the main way that mercury gets into the body. Any mercury from amalgam fillings we swallow is very poorly absorbed and most does not enter our bloodstream.

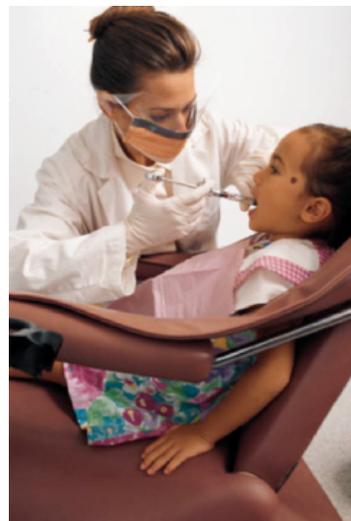
Mercury is a heavy metal. It is found in nature. Mercury is found in different forms. Many years of burning coal, other fuels, and wastes, as well as using mercury in consumer products (batteries, thermometers, thermostats, fluorescent lights, electrical switches, and dental amalgam fillings), has caused too much mercury to get into the environment.

Amalgam filling use is beginning to decline, due to better decay prevention and substitution with other restorative filling materials in its place. Dental amalgam is one of the major product uses for mercury. It is a major contributor of mercury in municipal wastewater. Some countries have banned the use of dental amalgam for health or environmental reasons.

Health Concerns

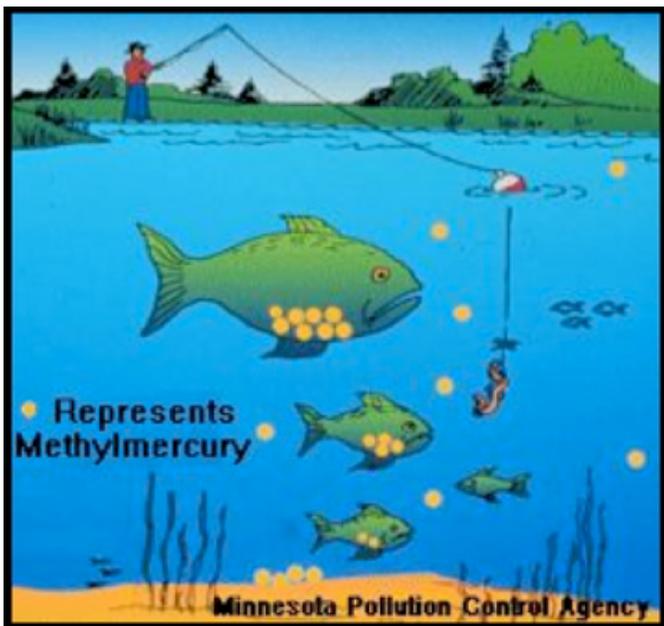
There is a lot of debate about health effects from the mercury in amalgam fillings. Allergic responses to dental amalgams are rare, but it is important to tell your dentist of any allergies you have before a filling material is chosen. Too much mercury in the body can damage the kidneys, nerves and the brain. Developing fetuses, infants, and young children are at the highest risk from mercury exposure, since their brains and nervous systems are still forming.

The U.S. Food and Drug Administration (FDA) considers dental amalgam safe for adults and children ages six and above. There is limited clinical information about the potential health effects of



dental amalgam fillings on pregnant women and their developing fetuses, and on children under the age of six. Based on this uncertainty, Canada and several countries in Europe recommend limits on the use of dental amalgam. They advise that pregnant women should not have amalgam fillings placed in or removed from their teeth. Some of these

same countries issue the same warning for nursing women and people with kidney problems. Some countries advise limits on using amalgam fillings with young children and people with braces.



Environmental Concerns

Some countries limit the use of amalgam fillings to help reduce mercury pollution. Waste amalgam is made when new fillings are put in teeth or when fillings are removed. It can pollute the environment. Vermont dentists are now using traps and filters to collect the mercury for recycling. Amalgam fillings cause our body's waste (urine and feces) to contain mercury. When these mercury-containing wastes enter sewers, they can add to the pollution of our waters.

Once mercury enters our waters, it can change to methyl mercury, a very toxic form of mercury that builds up in fish. Many states, including Vermont,

have issued Safe Eating Guidelines on eating fish, due to mercury pollution. Mercury used in dentistry is not the major cause of our mercury pollution and resulting fish consumption warnings, but it does add to the problem. Wildlife that eat fish, such as eagles, loons and otters, are also at risk of harm from mercury pollution.

What You Can Do

The best thing you can do is avoid the need for any fillings by preventing tooth decay in the first place. It is important for you to know that there are alternatives to amalgam fillings, such as composite (resin) fillings – using them is another way to reduce the amount of mercury that ends up in the environment. You can talk with your dentist about the kind of filling material that is best for you and for the tooth that needs to be filled. Each kind of material has advantages and disadvantages. You should know what these factors are so that you can make an informed choice.

Talk to your dentist. The final choice is yours.

Internet web links to additional information:

Vermont State Dental Society:

[http: www.vsds.org/mem_resources/index.aspx](http://www.vsds.org/mem_resources/index.aspx)

Maine Bureau of Health: <http://www.maine.gov/dhhs/boh/files/odh/AmalBrochFinal2.doc>

About the Fact Sheet

The Vermont Advisory Committee on Mercury Pollution was formed by the Vermont Legislature in 1998 to report on and advise state government and the general public on the extent of mercury contamination in Vermont, the risks posed to Vermonters, and methods to minimize the risk of mercury exposure to the general public. The Advisory Committee has reported annually to the Legislature since 1999 and has made numerous recommendations over the years, many of which have become law.

The mercury contained in dental amalgam fillings contributes to overall human exposure to this toxic metal. According to the World Health Organization, there is uncertainty as to how much mercury in your body can cause harm. Cremation of bodies with dental amalgams is a significant source of mercury release to the Vermont environment. For these reasons, the Advisory Committee has recommended to the Legislature that dental amalgam use be discontinued in the future in most instances, and that dental patients be provided with unbiased information on the health and environmental concerns with dental amalgam. The purpose of this fact sheet is to provide such information to the general public on health and environmental concerns. For further information on the Advisory Committee on Mercury Pollution, see www.mercvt.org.
