

## MERCURY TOXICITY & DETOXIFICATION

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Mercury has long been considered one of the most poisonous elements known to man. Despite this, the total amount of mercury in our environment has grown to the point that chronic mercury toxicity is now an endemic disease. The amount of mercury found in human bones today is 500-1000 times greater than what is found in bones from 300 years ago. The most severe toxic effects are in the brain and nervous system. When mercury was used to stiffen brims of felt hats, many craftsmen actually developed mental problems and became insane...hence the term "Mad as a hatter."

The US Environmental Protection Agency set 0.1 mcg/kg as the maximal "safe" daily mercury ingestion. For an average 70 kg (150lb) person this would come to 7 mcg per day. In 1991 the World Health Organization released information regarding the average amount of mercury that was being absorbed daily from known sources. **There were two major sources of mercury identified by the EPA. Dental amalgams were identified as the most prevalent source accounting for 3-17 mcg of mercury per day. The second major source was fish and other seafood which accounted for an average of 2.34 mcg/day.** Other sources including air, water, and non-swimming foods, account for about 0.25 mcg per day.

It is readily apparent that dental amalgams are the chief source of mercury exposure and absorption today and on average they exceed the "safe" limits set by the EPA. Some is absorbed directly from the teeth into surrounding tissues where it deposits in the jawbone or enters the lymphatic circulation for transport throughout the body. The mercury can also enter directly the nerves around the teeth and these nerves transport the mercury directly to the brain. In addition, mercury is very volatile (turns to a gas very easily) and with each chewing action a certain amount of mercury gas is released from the fillings. It is estimated that up to 80% of this mercury vapor is breathed into our lungs and is a major source of further exposure.

Dentists now place over 100 million "silver" fillings into patient's mouths each year. Each of these "silver" fillings is actually an amalgam containing 35% silver, 50% mercury, and varied amounts of nickel, tin and other metals. The average filling contains 1000mcg of mercury. Dentists are required to keep the amalgam material in special containers, wear gloves to handle the substance, and dispose of any removed amalgams in special containers as hazardous waste. Unfortunately, very few dentists wear re-breathing masks to protect themselves from the volatile mercury vapors that pour out when amalgams are drilled. It may be interesting to note that dentists today have the highest rate of depression and suicide of all the health care professionals.

Mercury is also used as a fungicide and preservative in some medicines. It is still being used in certain vaccines though finally in the past year there are efforts to rid this source of exposure in childhood vaccines, though it still remains present in adult vaccines including DT, Flu, and Pneumonia vaccines and in RhoGam given to pregnant women!

Many chemicals sprayed on US farms contain mercury that gets incorporated into the food sold in non-organic grocery stores (another reason to buy organic foods.)

After dental amalgams, the largest source of mercury is from fish. This mercury actually comes from industry and 8000 metric tons of mercury is poured into the earth's atmosphere every year. This mercury ultimately falls back to the land and water where it is incorporated into plant life, which is eaten by small fish. The level of mercury increases dramatically as we go up the food chain, as large fish eats small fish, and those large fish are then eaten by even larger fish. The largest fish, preferred by humans, are the most contaminated. The World Health Organization has identified toxic levels of mercury in every type of fish, from every body of water on the planet. Even pristine mountain springs are not spared. This is the reason that health departments are now warning women to limit fish intake during pregnancy.

Once absorbed, mercury remains in the body for very long times. If all new exposures were stopped, it would take about 30 years for our body to rid just one half of its accumulated mercury, and about 120 years to dispose of nearly all of the mercury. There are a vast number of toxic effects from this poison that involve the nervous system, the hormone producing systems, musculo-skeletal system, and the immune system. Symptoms are very variable and may include burning pains and other nerve related symptoms such as pins and needles sensations all over the body, "brain fog", inability to concentration, memory loss, insomnia, tremor, headache, muscle and joint pains, fibromyalgia, fatigue, depression, shyness, anger, irritability, moodiness, nausea, diarrhea, constipation, loss of appetite, kidney damage, lung inflammation, swollen glands, swollen tongue, ulceration of the mouth, metallic taste in mouth, dark pigmentation of the gums, loosening of the teeth, and birth defects.

Mercury is concentrated in sulfur rich tissues like the brain and in the master glands of the pituitary and hypothalamus. Mercury can also have a profound effect on the immune system. Practitioners have long observed the beneficial effects that mercury detoxification can have on chronic viral illnesses (like hepatitis, herpes and HIV), chronic fungal infections (Candida and others) and chronic bacterial diseases (Lyme disease and periodontal disease). Clearing the body of any heavy metal burden can enhance even the course of cancer treatments. Some very provocative studies have demonstrated that mercury can create identical abnormalities in cultures of human brain cells as are seen in Alzheimer's disease.

Harmful effects on the cardiovascular system are recently being identified. In one study coronary artery specimens taken during bypass surgery were compared to artery specimens obtained for other reasons. The arteries with arteriosclerosis had 12,000 times more mercury than the non-diseased coronary arteries. In another study biopsy specimens were taken from patients with idiopathic cardiomyopathy (congestive heart failure of uncertain cause). The mercury content of the heart muscle was 10,000 times greater than in the skeletal muscles of the same patients and 22,000 times greater than that found in healthy hearts.

By now I assume you are asking yourself how could this be allowed? A bit of history may help you understand. Until 1833 medical doctors who had specialized in care of teeth performed all dental care. Usually a diseased tooth was pulled to relieve pain. Occasionally a cavity might be filled with gold if one were wealthy enough for this luxury. But in 1833 some dental technicians discovered that if mercury was mixed with silver the resulting material was soft enough to work with and could be used to fill cavities. At the time there was uproar at the thought of putting mercury into a person's mouth. The mercury-silver amalgam was known as quicksilver or "quacksilver" and the technicians were laughed at as "Quacks." But the material was cheap and people wanted to have an affordable option other than pulling the painful teeth. In time the technicians became strong in numbers and to fight the medical community they formed the American Dental Association to lobby for their right to use mercury-silver amalgams. The ADA obtained a patent on the amalgam and still holds that patent today on the currently used amalgams. The FDA has never evaluated the safety of amalgams, leaving that to the ADA. The ADA prohibits dentists from advising anyone that amalgams may be harmful to their health and a dentist who suggested removing mercury amalgams for health reasons could risk his ADA license. California law supersedes the ADA and requires dentists to warn patients of possible harms prior to using "silver" amalgams. In many European countries such as Sweden these amalgams have been banned for over 10 years. During the summer of 2001 a coalition of public interest groups sued the ADA claiming they have misled the public about the dangers of mercury in fillings. I expect there will be many lawsuits before one is ultimately successful just as we have seen with the tobacco industry.

Removing the mercury requires precautions to protect the body from further toxic damage. Just as we seek trained professionals to remove asbestos from our children's classrooms, we should seek advice from experienced medical and dental practitioners who have been trained in the safe removal of this very toxic substance. If you do not feel that you have toxic levels of mercury then at least insist that your dentist uses no "silver" amalgams in your mouth or your children's. Do not have any dental work or even cleanings done during pregnancy. Insist on mercury and aluminum free immunizations. Limit intake of fish and if you use fish oil supplements check that they are certified mercury free. For further information you can call our office and check out some web sites: The International Academy of Oral Medicine and Toxicology at [www.IAOMT.org](http://www.IAOMT.org) or Dental Amalgam Mercury Syndrome, Inc. at [www.dentaltruth@yahoo.com](mailto:www.dentaltruth@yahoo.com). A good site for scientific literature is [www.ALTCORP.com](http://www.ALTCORP.com).