



# Health Matters

Great Smokies Medical Center of Asheville

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## Mercury Toxicity: Mad Hatters and Quacks

Mercury occurs naturally in the ore cinnabar, which has been refined for its mercury content since the 15th or 16th century B.C. Once sentenced by the Romans to work in quicksilver (mercury) mines, criminals had an average life expectancy of only three

years. The expression “mad as a hatter” refers to mental illness of hat makers exposed to mercury used in processing felt for hats. Mercury was used for medical treatments, notably to treat syphilis prior to the discovery of penicillin.

Mercury, abbreviated Hg, is the only metal that is liquid at room temperature, and it exists in seven chemical forms. It can convert to a toxic methylated form in the body. The U. S. Food and Drug Administration (FDA) has issued warnings about mercury content in fish and has taken steps to stop mercury from being used as a preservative (Thimerosal) in childhood vaccines. The Environmental Protection Agency (EPA)

*“All truth passes through three stages. First, it is ridiculed. Second, it is violently opposed. Third, it is accepted as being self-evident.”*  
- Arthur Schopenhauer

monitors and restricts the use of mercury compounds in manufacturing, including pesticides, fungicides, and latex paint.

Can we all breathe a big sigh of relief that this toxic heavy metal is somehow safe when stored in the human mouth as

dental “silver” amalgams?

Scientific evidence says a loud and clear “No.” Chewing, corrosion, heat, and galvanic current result in release of mercury ions from amalgams. Dark discolorations called “tattoos” in gum tissues provide evidence of mercury leaching from fillings. The EPA requires dentists to implement safe handling procedures for mercury containing “silver” amalgam prior to its installation as dental fillings. If an amalgam filling has to be removed later, it is again subject to safe handling procedures to protect dentists and their staff from the resulting toxic vapor. Protection of the patient who has been

storing mercury amalgam in their mouth is apparently not considered an occupational safety issue. Patients should be protected by the use of rubber dams, high suction, and nutritional support of detoxification.

Mercury was first used in dental amalgams about 1800 in France, and the amalgam was introduced to America in 1833 by the English. The American Society of Dental Surgeons of New York (which later became the American Dental Association) found 11 of its own members guilty of malpractice for use of mercury amalgam and suspended their licenses in 1848.

The word “quack,” defined as an ignorant pretender of medical skill, is based on the German quicksilver, “quecksalber”. Doctors and dentists, concerned about patients being poisoned, shortened it to quack and used it as a term for colleagues who used mercury as a medicine or in dentistry.

A short video, “Smoking Teeth, Poison Gas,” documenting the escape of mercury from dental amalgams is available from the Medical Center for your viewing.

## Rumors of My Death . . .

A story reported in the 12th Edition of Uncle John’s Absolutely Absorbing Bathroom Reader, that well-known compilation of trivia and other factoids, is thought provoking and worth repeating.

On April 13, 1888, Alfred Nobel, the Swedish inventor of dynamite and blasting caps, was living in Paris and had a rare opportunity to read his own obituary when he opened a newspaper to the surprising news. The newspaper had goofed. In fact, Alfred’s less well-known brother, Ludwig, had died.

Nonetheless, Alfred was shocked to see himself ingloriously portrayed as the merchant of death, a “bellicose monster” responsible for boosting the bloody art of war from bullets and bayonets to long-range explosives. Determined to change his image and redeem the family name, Alfred used his wealth to create the now esteemed Nobel Prize, honoring world leaders in peace, science, economics, literature, and medicine.

If you’re reading this, you still have time to rewrite your obituary.

## GSMC Bookshelf



Jonathan V. Wright, M. D. has written another book based on his extensive clinical experience: Why Stomach Acid is Good For You. Dr. Wilson and “our” Dr. Wright both continue to marvel at

the varied conditions that respond to replacement of insufficient hydrochloric acid. A quick read that can change your health.

Intuitive Healing, by Judith Orloff, M. D., is a thoughtful “how to” approach to guide readers in developing and using their intuition to understand health problems. Orloff addresses those parts of illnesses and diseases that are influenced by the mind. The reader can expect both practical and refreshing insights into the nature of illness.

## Q/A: Mercury and Health by Dr. Wilson

**Q:** How does mercury affect health, and can mercury toxicity be treated?

**A:** Mercury affects health by interfering with enzyme activity. Since enzymes are involved in virtually every biochemical process in the body, many symptoms can result from mercury toxicity. These symptoms are described in the article on MSDS of mercury below.

Mercury enters the body through inhalation and absorption through the gastrointestinal tract and skin. It has been detected in the pituitary, spleen, thyroid, adrenals, kidney, liver, lymphatics, and brain. Genetic damage and birth defects can also result from



mercury toxicity. Some individuals are genetically less able to excrete mercury, resulting in its accumulation in the body.

Depending on its form, mercury has a half-life of three to 60 days in the blood and, once in the brain, it has no known half-life. Half-life is the time required for half the quantity of a substance deposited in a living organism to be eliminated by natural body processes. Mercury levels in the brain don't significantly decrease over time. Mercury toxicity is diagnosed by analysis of a urine collection following administration of a drug that chelates mercury. Blood levels of mercury are unreliable for diagnosis.

The medical treatment of mercury toxicity varies by age and the state of health of the affected person, and includes various chelating agents that are known to react chemically with mercury to assist in its removal from the body. Treatment usually extends over a long period of time. The safe removal of "silver" amalgams by a biologically trained dentist prior to treatment is necessary.

I cannot in good conscience recommend that any child receive vaccinations preserved with Thimerosal, that a person of any age use their mouth as a storage facility for new mercury amalgam fillings, or that a person eat mercury toxic fish including tuna and swordfish.

### Prehypertension?

In May 2003, the Journal of the American Medical Association (JAMA) reported new guidelines issued by the Joint National Committee on Prevention, Detection, Evaluation and Treatment of High Blood Pressure (JNC) to further decrease cardiovascular complications. A new category, prehypertension, is now defined as a BP of 120/80 to 139/89. Hypertension is defined as 140/90 or greater. The effect of doctors and patients acting on this narrowly defined category of prehypertension would likely be millions more prescriptions for drugs being written. The side effects of these drugs are much more likely to adversely affect health than a BP of 120/80. GSMC doctors think this new definition is enough to, well, give anyone high blood pressure. Get regular BP checks and get your healthcare from a physician who treats people and not numbers.

### MSDS from Mercury Amalgam Manufacturer

Material Safety Data Sheets (MSDS) are required by the U.S. Occupational Health and Safety Administration (OSHA) to be readily available in the workplace to define potential harm or risk to health and life and actions to mitigate risk for those in contact with workplace exposures. The MSDS for dental amalgam include the following warnings:

"Routes of entry: **Skin:** Irritant/Sensitizer/Neurotoxin/Nephrotoxin. Mercury may be absorbed through intact skin causing urinary problems.

**All content in this newsletter is intended to be informational and is not to be taken as medical advice or to replace medical care.**

**Eyes:** Mercury is corrosive and may cause corneal injury or burns. Mercury may be deposited in the lens of the eye, causing visual disturbances.

**Inhalation:**

**Acute:** Inhalation of mercury vapor can cause cough, fever, nausea, and vomiting. **Chronic:** Inhalation of high concentrations of mercury vapor over a long period

causes mercurialism. Findings are extremely variable and include tremors, salivation, stomatitis, loosening of teeth, blue lines on gums, and pain and numbness in extremities.

**Ingestion: Acute:** May cause nausea, vomiting, kidney damage, and nerve effects. **Chronic:** Symptoms include Central Nervous System disorders. May cause neurotoxic/nephrotoxic effects.

**Precautions if spilled:** Isolate the area and clean up immediately. Do not touch spilled material. Avoid breathing of vapors. Highly toxic irritant sensitizer. Is known to the State of California to cause birth defects or other reproductive harm."

Considering that less toxic alternatives are available for filling dental cavities, both scientists and informed consumers remain incredulous that controversy still exists about the continued, intentional use of mercury in dentistry.

*"It ain't what you don't know that gets you into trouble. It's what you know for sure that just ain't so." -- Mark Twain*

### The Five Phases of American Life

