The War on Mercury (UPDATED)

By ACSH Staff — September 27, 2005

Editor's note: With the Senate narrowly staving off more restrictive mercury regulations recently (see ACSH's new report on mercury emissions for an explanation of the futility of trying to improve human health through further limitations on factory emissions of mercury), New York governor George Pataki recently approving an unscientific and belated call for mercury-free vaccines, and dental quacks perpetually blaming human ills on mercury in dental fillings, mercury may be in the running for America's Least Favorite Element. ACSH Advisor Dr. Marvin Schissel looks at the latest on the dental front...

It is characteristic of pseudoscience devotees that when one of their assertions is refuted they come up with another -- equally unsound, equally outrageous. For some time, dental amalgam fillings, which contain about 50% mercury, have come under attack by the fringe, who claim that mercury in fillings vaporizes into the mouth and causes manifold health catastrophes. But in amalgam fillings the mercury is bound tightly to other metals, chiefly silver. Any mercury vaporization into the mouth is negligible -- otherwise these fillings would not last long (a properly done amalgam filling can last a lifetime).

Dr. Stephen Barrett has made an analogy between water and amalgam: hydrogen is an explosive gas; oxygen is highly combustible. However, put them together and we get water, which is neither explosive nor combustible. Similarly, mercury in some compounds is highly toxic, but not when bound in dental amalgam. Moreover, the American Dental Association has labeled the removal of amalgams for alleged reasons of health to be improper and unethical.

Recently, some anti-amalgamists, confronted with the overwhelming evidence that dental amalgam fillings have never been shown to be a health hazard, have given their pet cause a new and bizarre spin. They are claiming that the mercury in fillings vaporizes, then is excreted by the body and contributes to environmental toxicity. To this they add some grisly postscripts: if a person with amalgam fillings dies, this increases the toxicity of the earth where the lamented dental patient is buried. Worse yet, should the dearly beloved dental patient be cremated, mercury vapors will pollute the atmosphere!

In their desperation, the fringe seems to be drifting towards the macabre, focusing on lavatories, cemeteries, and crematoriums. I next expect them to warn ghouls and grave robbers of the dread mercury peril linked to their occupations.

Here are conclusions from two recent Swiss studies:

"The minimal contribution to mercury contamination due to cremation can thus not be used as an argument to ban the use of dental amalgams."

"The amount of mercury contamination during cremation as a result of amalgam fillings is so low
that no additional preventive measures are required at the crematoria."

The tiny amount of mercury released into the environment from amalgam fillings has never been documented as a health threat.

Mercury occurs naturally in the environment: burying people with amalgams returns but a tiny amount. Moreover, studies done some years ago showed that dentists who work with amalgam have between three and fifteen times the body burden of mercury of the general public but as a group have no greater incidence of disease and actually enjoy somewhat better health than the population at large.

Another dental-related bit of dubious treatment in the news:

The Aetna insurance company has been sued because they have refused to pay for procedures related to a device that allegedly diagnoses a jaw disease, so-called "neuralgia-inducing cavitational osteonecrosis." This hypothetical disease is not recognized by science. The suit was brought by the makers of the device and financially backed by dentists calling themselves "biological dentists." Some "biological" dentists have advocated unusual treatments that have no scientific support, including a particularly heartless and radical practice, the extraction of any root canal-treated tooth. They have also claimed, without valid evidence, that a variety of pains throughout the body can be caused by the "cavitational osteonecrosis" and should be treated with surgery of the jaw, although no evidence was established to verify either the malady or the treatment. I saw a patient who was in substantial pain after such surgery was performed by a "biological dentist," and that pain persisted for over a year.

The American Dental Association lists "biological" dentistry with "unconventional dentistry, defined as encompassing scientifically unproven practices." The ADA statement "encourages advocates of unconventional dentistry to pursue scientifically valid, systematic assessment of diagnostic and treatment efficacy and safety."

The suit against Aetna failed but is only one of many cases of a dubious treatment, having failed in the court of science, trying to obtain legitimacy through a court of law. And efforts continue to prohibit the use of amalgam. I believe it is necessary for mainline scientific organizations to overcome their reticence and speak out strongly against pseudoscience, lest medical treatments and policies be chosen not by doctors and scientists but by know-nothing politicians, quacks, and political opportunists.

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