

If You've Ever Had a Cavity, Read This

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STORY AT-A-GLANCE

- › Research showed amalgam fillings appear to contribute to elevated mercury levels elsewhere in your body
- › Among people with more than eight amalgam fillings, blood mercury levels were more than double those of people without fillings
- › If your dentist is still trying to push mercury fillings, find another (mercury-free) dentist

Editor's Note: This article is a reprint. It was originally published November 19, 2016.

The American Dental Association (ADA) has long maintained that amalgam fillings, which contain about 50% mercury by weight, are safe. Even the U.S. Food and Drug Administration (FDA), which has a history of siding with industry, states that they consider "dental amalgam fillings safe for adults and children ages 6 and above."¹

Among children under 6 and pregnant women and their developing fetuses, which are the most vulnerable populations when it comes to exposure to the neurotoxic effects of mercury, the FDA still stopped short of issuing a warning and instead only suggests those who are concerned should "talk to their dentist."

For comparison, Health Canada directed dentists to stop using amalgam fillings in especially vulnerable populations – children, pregnant women and people with impaired kidney function – in 1996!²

In the U.S. and around the globe, the number of mercury-free dentists is growing, but there are still many pro-mercury dentists out there. This means there's a chance you could still come across one while sitting in the dentist's chair, and if you do, find another dentist.

In the video above, Charlie Brown, executive director of Consumers for Dental Choice and former attorney general for West Virginia, explains the importance of choosing a mercury-free dentist. The message becomes all the more pertinent in light of research that, again, confirms the risks of mercury fillings to your overall health.

Mercury Fillings Raise Levels of Mercury in Your Body

Researchers from the University of Georgia revealed that amalgam fillings appear to contribute to elevated mercury levels elsewhere in your body, a concerning finding given their prevalence. Americans have, on average, three dental fillings each, and 25% of Americans have 11 fillings or more.³

The study used data from nearly 15,000 people and found that among those with more than eight fillings, blood mercury levels were more than double those of people without fillings.

The average mercury levels among people with more than eight fillings were still below the U.S. Environmental Protection Agency's (EPA) and the World Health Organization's (WHO) safety thresholds, but this doesn't necessarily mean it's safe.

As study co-author Dr. Xiaozhong "John" Yu, Ph.D., assistant professor of environmental health science, told Time:⁴

"That is just the average ... A small percentage of those people did exceed those threshold levels. If you have other exposures, like if you eat fish every day, those amounts can add up in the body."

The ADA continues to support amalgams' safety, despite this study, and echoes the FDA is telling people to talk to discuss the issue with their dentist if they're concerned. But as

Yu pointed out, "the truth is that most dentists don't know there is a risk ... They only know what the ADA tells them – that amalgam is safe."⁵

"As toxicologists, we know that mercury is poison," Yu said in a press release, "but it all depends on the dose ... if you have more than eight dental fillings, the potential risk for adverse effect is higher."⁶

4 in 10 People Have a Special Vulnerability to Mercury's Toxic Effects

It's not only pregnant women and children who are at risk from mercury exposure. Anyone has the potential to be harmed, including the 4 in 10 people with certain genetic variants making them especially vulnerable to long-term, low-level release of mercury from fillings.

Initial results, published in 2006, found a genetic polymorphism of coproporphyrinogen oxidase (CPOX4) appeared to affect susceptibility for specific neurobehavioral functions associated with mercury exposure.⁷

A related study of 330 children with the CPOX4 variant, published in 2012, found that those with mercury fillings performed significantly worse on annual tests of memory, concentration and other neurological activities compared to children who received mercury-free treatments.⁸

At least two other studies also showed a link between this genetic variant and heightened risks from exposure to mercury fillings. McClatchy DC reported:⁹

"The results, in four papers published in scientific journals from 2011 to 2014, have escaped public attention, although the authors say up to 40% of the population has at least one of the genetic traits and could be affected.

Diana Echeverria, [Ph.D.] a scientist who collaborated with University of Washington toxicologist James Woods [Ph.D.] and others in the reassessment, said the susceptible groups face 'a lifetime risk' of neurological damage.

'We're not talking about a small risk,' said Echeverria, who works for the Seattle-based Battelle Centers for Public Health Research and Evaluation."

In all, at least a dozen common genetic polymorphisms worsen the effects of mercury on behavioral process in children, the researchers noted. Males appear to be particularly susceptible to the effects, as girls were able to excrete more of the mercury in their urine.

In response to the findings, the European Commission's Scientific Committee on Emerging and Newly Identified Health Risks advised dentists to consider alternatives to amalgam. But in the U.S., even though the FDA described the study as "well-conducted," it said the evidence wasn't yet strong enough to justify an amalgam ban.

Hair Mercury Concentrations Reveal Contamination from Mercury Fillings

In humans, mercury contamination from seafood consumption (methylmercury) is typically evaluated by measuring hair mercury concentration while exposure to mercury from other sources (elemental and inorganic mercury) is typically measured by analyzing blood or urine.

A study published in the journal *Environmental Science & Technology* revealed, however, that hair mercury concentrations are the result of diverse sources of exposure, including dental mercury.¹⁰ The research team developed analytical capabilities that allowed them to identify different sources of mercury in hair at concentrations as low as 0.5 parts per million (ppm).

"... [W]e showed that inorganic mercury from dental amalgams can be detected in hair with distinct intermolecular structure from that of methylmercury from fish consumption," study author Jean-Paul Bourdineaud, professor of environmental toxicology at the University of Bordeaux, France, told *Phys.org*.¹¹

In addition, since hair grows at a rate of about 1 centimeter per month, it allows contamination events to be traced back to particular points in time. The study revealed, for instance, that one person's spike in mercury levels could be traced back to unsafe removal of a mercury filling.¹²

Removing Your Mercury Fillings? Find a Qualified Biological Dentist

Mercury is a poison that, even in adults, may have damaging effects on your nervous, digestive and immune systems, as well as your lungs, kidneys, skin and eyes, depending on exposure.¹³ It's imperative that you have mercury fillings removed (although I typically recommend you get healthy first), but be aware that the unsafe removal of your mercury fillings could expose you to toxic amounts of poisonous mercury.

For this reason, it's important to find a qualified biological dentist who is trained in safe amalgam removal. When amalgams are removed, a large amount of mercury is released, and if the proper precautions aren't taken, your body will absorb a massive dose of mercury, which leads to acute kidney problems.

I experienced this myself more than 20 years ago when I had my amalgams removed by a non-biological dentist. Biological dentistry views your teeth and gums as an integrated part of your body and any medical treatments performed take this fact into account.

Biological dentists are well aware of the dangers involved with toxic materials such as amalgams. Some of the steps that need to be taken to keep you (and your dentist) safe during amalgam removal include the following. You can find tips to help you [find a biological dentist here](#), as well as below.

Providing you with an alternative air source and instructing you not to breathe through your mouth

Putting a rubber dam in your mouth so you don't swallow or inhale any toxins, and using a high-volume evacuator near the tooth at all times to evacuate the mercury vapor

Using a cold-water spray to minimize mercury vapors

Washing your mouth out immediately after the fillings have been removed (the dentist should also change gloves after the removal)

Immediately cleaning your protective wear and face once the fillings are removed

Using room air purifiers

The Mercury Tri-Test

Chris Shade, Ph.D., is one of the foremost experts in the world on the subject of heavy metal detoxification, and shared his wisdom on this important topic. Shade developed a patented liquid chromatographic mercury speciation technology that differentiates and identifies the exact source of your mercury – whether it's from your dental amalgams or from eating contaminated seafood (or both).

The test he developed is called the Mercury Tri-Test, because it looks at three different kinds of samples – blood, hair and urine. You always have more mercury in your tissues than in your blood, but there's a steady state or ratio between what's in your blood and what's in your tissues.

The Mercury Tri-Test is the only clinical test out there that differentiates between the inorganic form of mercury (typically found in amalgam fillings) and organic mercury or methylmercury (from fish), allowing you to tailor the most ideal [detoxification protocol](#) for your situation.

Sources and References

- [Ecotoxicology and Environmental Safety December 2016](#)
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