

# EXPOSING THE DANGERS OF MERCURY

DR. MERCOLA



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# EXPOSING THE DANGERS OF MERCURY

The dangers of mercury are slowly but surely starting to get the attention they deserve. For the longest time the issue of mercury exposure was successfully dodged and its health risks were downplayed by both government and major media.

Unfortunately, despite its now well-known dangers and role as a potent neurotoxin, many naïve people increase their exposure to mercury daily by putting it into their teeth, injecting it into their body in the form of vaccines, or by eating heavily contaminated fish.



**The key to preventing mercury contamination is to gain knowledge of the sources and risks that might place you in danger ... and avoid them.**

In this report, I will guide you through the most common perils – fish, dental amalgams and vaccines; sources of mercury that can put you and your family at serious risk.

## Mercury Overview

Mercury (Hg) is one of the basic chemical elements, of which all things are made (see periodic table<sup>1</sup>).

Periodic Table of Elements																		
1	IIA																2	
1 H																	2 He	
3 Li	4 Be															10 Ne		
11 Na	12 Mg	III B	IV B	V B	VIB	VII B	VIII B	IX B	X B	13 Al	14 Si	15 P	16 S	17 Cl	18 Ar			
19 K	20 Ca	21 Sc	22 Ti	23 V	24 Cr	25 Mn	26 Fe	27 Co	28 Ni	29 Cu	30 Zn	31 Ga	32 Ge	33 As	34 Se	35 Br	36 Kr	
37 Rb	38 Sr	39 Y	40 Zr	41 Nb	42 Mo	43 Tc	44 Ru	45 Rh	46 Pd	47 Ag	48 Cd	49 In	50 Sn	51 Sb	52 Te	53 I	54 Xe	
55 Cs	56 Ba	*La	72 Hf	73 Ta	74 W	75 Re	76 Os	77 Ir	78 Pt	79 Au	80 Hg	81 Tl	82 Pb	83 Bi	84 Po	85 At	86 Rn	
87 Fr	88 Ra	+Ac	104 Rf	105 Ha	106	107	108	109	110									
		* Lanthanide Series	58 Ce	59 Pr	60 Nd	61 Pm	62 Sm	63 Eu	64 Gd	65 Tb	66 Dy	67 Ho	68 Er	69 Tm	70 Yb	71 Lu		
		+ Actinide Series	90 Th	91 Pa	92 U	93 Np	94 Pu	95 Am	96 Cm	97 Bk	98 Cf	99 Es	100 Fm	101 Md	102 No	103 Lr		

Mercury

Mercury, also known as quicksilver, is a heavy metal like lead or cadmium that occurs naturally in the environment in different chemical forms, some of which are quite toxic.

Mercury occurs in four basic forms:

1. Pure mercury, also known as metallic mercury or elemental mercury
2. Mercury vapor
3. Organic mercury, also called organomercurials
4. Inorganic mercury or mercury salts

Although mercury occurs naturally in the environment, it is now mainly released by human activities. Humans and the environment are at risk until these releases are better controlled or we find alternative industrial processes.

You are probably most familiar with the liquid metal form of mercury-- the shiny, silvery, outer-space-looking material you have seen in your glass thermometer. This is called “elemental mercury” or “metallic mercury”.



If the pure mercury in your thermometer were exposed to air, it would readily evaporate into colorless and odorless mercury vapors.<sup>2</sup>

Mercury rarely occurs in pure metal form. It is usually found within other compounds and inorganic salts. When mercury combines with carbon, the compounds formed are called “organic” mercury compounds or organomercurials.

**By far the most common organic mercury compound in the environment is *methylmercury*, which is the form posing the greatest risk to your health.**

Methylmercury can build up in many edible fish and marine mammals to levels that are many thousands of times greater than levels in the surrounding water.<sup>2</sup>

The high levels of mercury in your environment and your food supply are of great concern since mercury is known to be toxic. It is known to be highly poisonous to your nervous system, and there is growing evidence that methylmercury can cause cancer. It is very difficult for your body to cleanse itself of heavy metals.

Moreover, methylmercury exposure during pregnancy can affect your unborn baby.

## Environmental Upsets

Mercury is not only harmful to you but may harm birds and affect their reproduction and behavior as well. Additionally, some seals and whales in the Arctic and some predatory marine mammals in warm waters are at risk.

Even forest soils might be affected by mercury because it suppresses the microbiological activity that is vital to the terrestrial food chain. There is also evidence that climate change might be increasing the levels of methylmercury in some bodies of water.<sup>2</sup>



Man's best friend is now helping scientists evaluate areas of mercury contamination in the arctic.

An article from March of 2008<sup>3</sup> illustrates just how globally widespread mercury has become as scientists are measuring mercury in the coats of Alaskan sled dogs.

The dogs eat scraps left over from people in the villages, consisting largely of fish.

Mercury levels in fish change depending on their location and feeding habits, and testing dog hair from different husky populations that eat those fish shows scientists the areas with the highest levels of mercury contamination.

Since the sled dogs' fish diet is similar to that of Alaska's indigenous population, scientists believe the racing huskies can provide unique insight into how much mercury humans are eating, as well as helping to determine where the toxin enters the food chain.

The mercury found in Alaskan fish originates from places many thousands of miles away.

## Around The World in 80 Days... or Less

Mercury makes its way around the Earth as fast as juicy gossip through a high school cafeteria. Mercury itself cannot be broken down or degraded into something else, but it does occupy different forms, including liquid mercury, solid mercury-containing minerals, ions in solution, and gases.

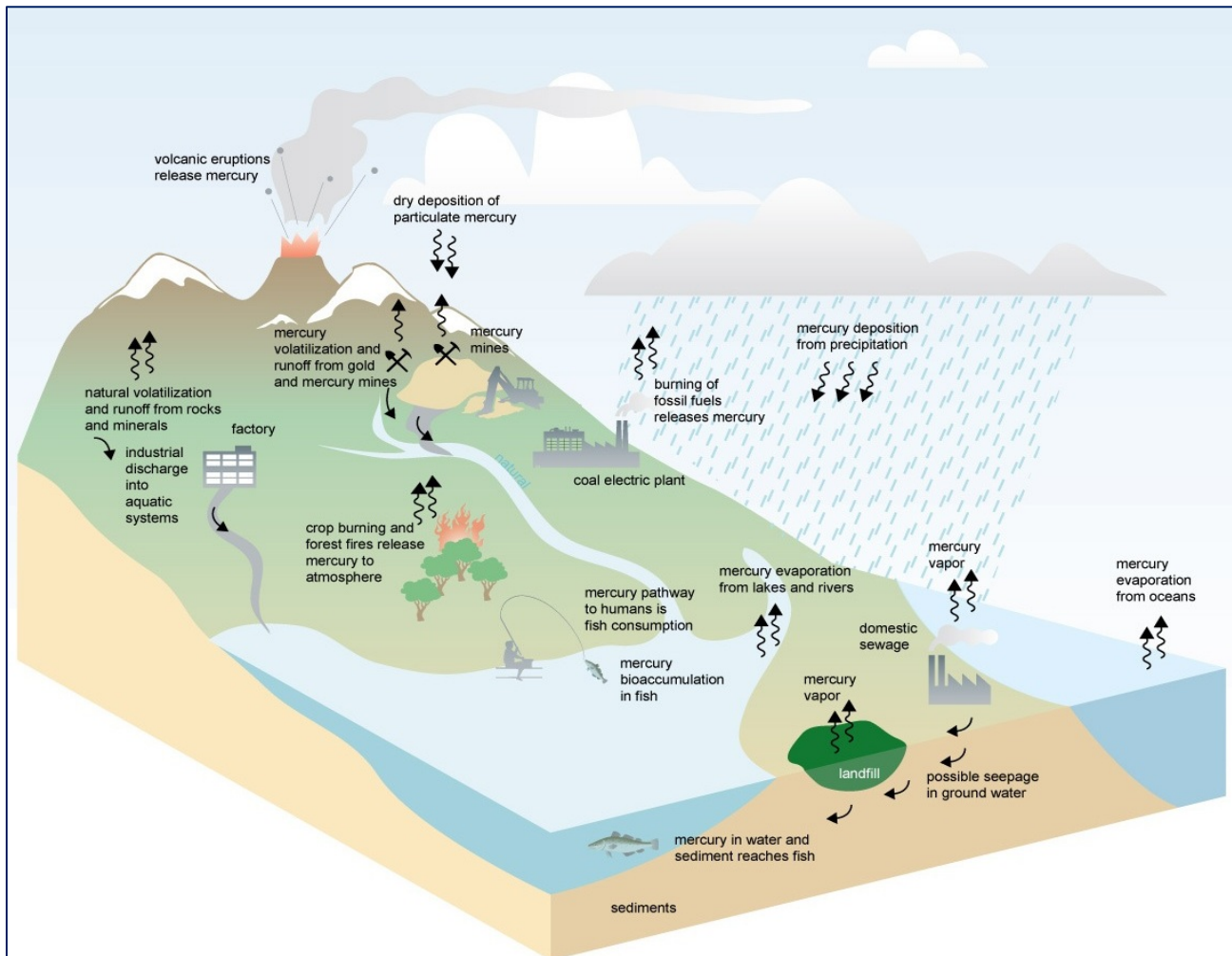
Once mercury is released into the atmosphere through natural events or human activities, it readily moves through the environment. Soil, lakes, oceans, rivers and bottom sediments are where mercury comes to rest before it is ultimately liberated again, such as through the burning of fossil fuels, and by absorption by living organisms.

It is highly mobile, cycling between the Earth's surface and the atmosphere, as shown in the illustration on page 8.<sup>4</sup>

You ingest environmental heavy metals such as mercury in three principle ways:

- The food you eat
- The air you breathe
- The water you drink

The reason heavy metals are so dangerous is they tend to bioaccumulate, meaning your body increases their concentration over time. Once you absorb heavy metals, they tend to be stored at a rate that is faster than they are metabolized or excreted.



Heavy metals accumulate in the water supply through human activity, such as industrial and consumer waste. Commercial processes such as mining, agriculture, manufacturing and landfills are all sources of heavy metal contamination.

Rainwater tends to be acidic; therefore, these unwanted metals tend to leach into your underground water supply from the surrounding rock and soil.<sup>5</sup>

While the EPA sets maximum contaminant levels (MCL) for heavy metals in your drinking water, practically all of their testing takes place at the water source and during treatment. Only a tiny fraction of the testing takes place randomly at your home tap, and metal contamination often occurs between the water source and your kitchen.

For those of you on private wells, there is no one looking out for your water quality. The testing is solely up to you.

Water filters are helpful but are only part of the solution. No single filter can remove all contaminants. It is wise to have your water tested by a certified laboratory since they are required to follow mandatory testing procedures and can detect impurities down to parts per billion. Once you know what's in it, you are a step closer to doing something about it.

## How *You* Are Exposed

Weathering and evaporation from mercury-laden rocks and soils, forest fires, and volcanic eruptions are all natural ways mercury is released into the environment. Although natural emissions are difficult to measure, it is estimated that *less than 50 percent* of environmental mercury comes from natural sources.<sup>2</sup>

According to the U.S. Global Survey, human activities have caused the atmosphere's mercury content to rise by 1.5 percent per year, and **the problem is global**.

Human activity is now the main source of mercury in the environment.

Most of it is released from processes where mercury is an unwanted impurity. Combustion of coal that contains mercury at power plants is the major source of environmental pollution.

**40 tons of mercury is released into the U.S. EVERY YEAR by this method.**<sup>6</sup>



Emissions into the air, mainly from fossil fuel power plants and waste incinerators, are expected to increase unless other energy sources are used or emissions are better controlled.

Your largest source of mercury exposure is your diet, and mostly from fish. Mercury can easily accumulate in living organisms. Levels of accumulated mercury increase as you go up the food chain, and guess who is at the very TOP?

You are!

Dental fillings present another major source of mercury. Elemental mercury has been used for many years in dental amalgams. As these dental amalgams slowly release mercury vapors into your mouth, the mercury is absorbed into your tissues where it becomes stuck for decades. This will be addressed in much more detail later.

Other sources of mercury exposure include mercury vapors in the air you breathe at work, and mercury compounds in your personal care products. Mercury is present in some skin-lightening creams and soaps where it can be easily absorbed through your skin.

Mercury is also used for ritualistic purposes in some cultures and in traditional medicine, further increasing exposure for some segments of the population.<sup>2</sup>

## More Disturbing Facts

A 2006 report in Science Daily<sup>7</sup> reveals these disturbing statistics:

- On average, three times more mercury falls out of the sky now than before the Industrial Revolution 200 years ago
- For three decades, emissions from developing countries have increased, offsetting decreased emissions from developed nations
- Understanding the global mercury cycle is being muddled by climate change, increasing ozone levels, and other environmental factors
- There is new evidence that methylmercury exposure might increase your risk for cardiovascular disease
- While lower mercury levels are being seen in fish and wildlife due to lower emissions in their *local* region, higher mercury levels are appearing in some fish-eating wildlife in remote areas

- Methylmercury exposure might be contributing to declining populations of birds, fish and mammals
- The use of mercury in small-scale gold mining is responsible for more than 10 percent of the human-generated mercury in the Earth's atmosphere, polluting thousands of areas around the world and posing health risks to nearly 50 million people

## Mercury Gives New Meaning to “Nervous Breakdown”

Mercury does nasty things to adults as well as children, and can lead to birth defects in babies.

**In adults, mercury damages or destroys nerve tissue, and affects the visual cortex and the cerebellum, the part of your brain that controls complex movements and balance.**

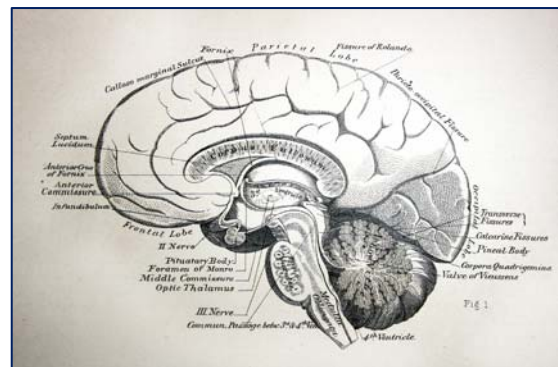
The clinical symptoms of chronic mercury toxicity are wide-ranging and variable. Most involve the central nervous system (CNS), including<sup>8</sup>:

- Memory problems
- Attention span and concentration
- Cognition and clarity of thinking
- Motor skills, coordination, and slowed reflexes
- Impaired visual-motor function
- Language deficits

There are simply too many clinical symptoms to list them all, but most relate to things controlled by the nervous system (neurological and “psychological” symptoms).

Mercury has also been associated with cardiac abnormalities such as arrhythmias and cardiomyopathy (inflammation of the heart muscle).<sup>8</sup>

The reason most of the symptoms are related to the CNS is that mercury has a strong affinity for amino acid structures in the CNS. Studies have shown that mercury is taken up in the periphery by all nerve endings and rapidly transported to the spinal cord and brainstem.





Unless actively removed, mercury has a half-life (the time it takes for the substance to decay to half of its initial value) in the CNS of **15-30 years**... so, once it finds a home in your brain and spinal cord, it **STAYS**.

According to the EPA<sup>9</sup>, almost all people have at least trace amounts of methylmercury in their tissues, reflecting methylmercury's pervasive presence in the environment and your frequent exposure through consumption of fish and shellfish.

Multiple factors determine how severe your health effects will be, including the form of mercury ingested, your dose, your age, your duration and route of exposure, and your general health. Most people have mercury levels below the level associated with serious health effects.<sup>9</sup> Nevertheless, mercury levels in humans are rising, as is *your risk for mercury toxicity!*

For fetuses, infants and children, the primary health effect of methylmercury is impaired neurological development. As a National Academy of Sciences panel definitively warned in 2000, some children exposed in utero by their mothers' fish consumption are at risk of falling in the group of children "who have to struggle to keep up in school and who might require remedial classes of special education."<sup>6</sup>

*Methylmercury* exposure in the womb can adversely affect your baby's growing brain and nervous system, impacting the following:

- Cognition
- Memory
- Attention
- Language
- Fine motor skills
- Visual motor skills



Women who eat a lot of fish during pregnancy, or even as little as a single serving of highly contaminated fish, can expose their developing child to excessive levels of mercury. The toxic metal can cross the placenta to harm the rapidly forming nervous system, including the brain.

*Elemental (metallic) mercury* toxicity occurs when it is breathed as a vapor and absorbed through your lungs.

Symptoms include:

- Tremors
- Emotional changes
- Headaches
- Insomnia
- Neuromuscular changes such as weakness or twitching

- Changes in nerve responses
- Cognitive deficits

At higher exposures, you risk kidney damage, respiratory failure and death.<sup>9</sup> High exposures to *inorganic mercury* can result in damage to your gastrointestinal tract, nervous system, and kidneys. Symptoms of inorganic mercury toxicity include<sup>9</sup>:

- Skin rashes and dermatitis
- Mood swings
- Memory loss
- Mental disturbances
- Muscle weakness

There is some evidence that mercury exposure has a role in the onset of multiple sclerosis (MS); however, there is no universal agreement about this link. MS will be addressed further in the section about dental amalgams.

It is also possible that mercury is linked to autism, which will be explored in the section about vaccines. Strong links also exist between mercury and heart disease, Parkinson’s disease, and Alzheimer’s disease.

## Fish is Good for You, But There’s a Catch

Were it not for PCB and heavy metal contamination, fish would be one of the most nutritious foods on the planet. Unfortunately, fish and shellfish easily accumulate high levels of chemical residues from the water in which they live. Residues in fish can be as high as **9 million times** the amount found in their surrounding water!

The larger the fish, the worse the problem because the large fish eat the smaller fish, thereby getting an even greater dose of accumulated toxins.



The tissues of large fish such as albacore tuna, swordfish, and shark can contain as much as 100 times more mercury than those of smaller fish. The highest concentrations are found in the large carnivorous fish of the ocean, such as:

Tuna	Canned tuna
Sea bass	Oysters
Marlin	Halibut
Pike	Walleye
White croaker	Largemouth bass
Shark	Swordfish

If you eat fish on a regular basis, your methylmercury levels will be higher than a non-fish eater.

If you are a pregnant or breastfeeding woman, you need to be aware that you can transfer the mercury you've consumed to your baby. According to a national survey by the Centers of Disease Control and Prevention, one in 10 women of childbearing age already has blood levels of mercury above the dose that could put her fetus at risk for adverse neurological effects (CDC 2001).

The Food and Drug Administration (FDA), which regulates commercially sold fish, recommends that pregnant and nursing women and young children not eat ANY shark, swordfish, tilefish, or king mackerel, but then recommends 12 ounces per week of any other fish.

The Environmental Protection Agency (EPA), which makes recommendations to states about safe mercury levels in sport fish, allows up to 8 ounces of any fish per week for pregnant women with no prohibitions on consumption of any individual fish caught recreationally.

These restrictions are steps in the right direction, but they need to be tightened significantly to adequately protect women and their unborn children from the toxic effects of methylmercury. The FDA's recommendations do not take into account many important real world differences in individual exposure such as body weight and blood volume, absorption and distribution rates, and variable rates of methylmercury decay in different pregnant women.<sup>6</sup>

Since the "safe" levels continue to change with every new batch of data, **there is no way to know what level of fish consumption is truly "safe"**.

If American women ate a varied diet of the FDA's recommended 12 ounces of fish per week (and none of the four prohibited fish), they would expose more than one-fourth of all babies born each year (1 million infants) to a potentially harmful dose of methylmercury for at least one month during pregnancy. About 20,000 of these children would be exposed to a dose of methylmercury that increases the risk of adverse neurological effects for the entire pregnancy.

## Recommendations and Fish Advisories

Unfortunately, most wild fish is now contaminated because very few water sources remain unpolluted.

The EPA and the FDA are planning to issue a federal warning to pregnant and nursing women, as well as to those even thinking about getting pregnant, to limit their

consumption of tuna due to mercury contamination, which is another step in the right direction.

While you may be saying to yourself, **“Holy Shrimpbait, Batman!! I’ll never eat fish again!”** ...moderation and making educated choices can allow you some dietary flexibility. In a perfect world, you might swear off all “swimming critters” for good. However, short of such a heroic effort, there are ways to minimize your mercury load while still enjoying an occasional wild salmon filet.

Based on analysis of the findings by government agencies (CDC, FDA, EPA, etc.) as well as the [Environmental Working Group \(EWG\)](#), the FDA’s list of fish **to avoid during pregnancy** should be expanded to include the following:

Tuna Steaks	Sea Bass	Oysters (Gulf of Mexico)
Marlin	Halibut	Pike
Walleye	White Croaker	Largemouth Bass

Additionally, the following fish should be restricted to **no more than one serving per month**, for all species combined:

Canned Tuna	Mahi Mahi	Blue Mussels	Eastern Oysters
Cod	Pollock	Salmon (Great Lakes)	Blue Crab (Gulf of Mexico)
Channel Catfish (wild)	Lake Whitefish		

The following fish are the least contaminated with methylmercury and are **my recommended safer fish options**:

- Summer flounder
- Wild Pacific Salmon
- Croaker
- Sardines
- Haddock
- Tilapia

I also recommend making sure the larger fish you choose to eat, including any sport fish, have been laboratory tested and confirmed to be free from harmful levels of toxins. On my website is one such option, for true Alaskan wild salmon, which has been tested safe by a lab.

## Fish Farms: Flounder's Worst Nightmare

Farm-raised fish are appearing everywhere, from grocery store fish counters to the most upscale restaurants. Farmed salmon typically have at least 10 times more cancer-causing pollutants than do their wild counterparts.

Moreover, both the conventional and organic varieties are pumped full of antibiotics and chemicals to fend off parasites like sea lice, along with drugs and hormones to accelerate their growth and change their reproductive behaviors.

All of these chemicals are necessary because farmed fish in no way live a life similar to wild fish. Sometimes referred to as “feedlots of the sea”, farmed fish are raised in net-covered pens that are tethered offshore in the ocean.



The fish are overcrowded, and fish waste and uneaten feed covers the sea floor beneath the pen (which is a disaster for other marine life).

The penned fish face many of the problems that occur in factory-farmed cattle, including rampant disease, parasites, and an over-use of pesticides and other chemicals. They are prone to diseases and parasites because they are crammed into small pens with no room to swim around.

Additionally, the muscles of farmed fish do not develop in the same way as wild fish because they are not eating their natural diet or swimming in open waters. This causes their coloring to be pale and anemic-looking. To correct this rather unappetizing flaw, they are supplemented with artificial color to make them look like their colorful wild counterparts. Yes, your fish have been dyed like Easter eggs.

Wild baby salmon are being infected with sea lice at rates almost 75 times higher than normal while passing through commercial salmon farms on their way to the ocean. Many wild populations of salmon have in fact been devastated by nearby commercial fish farms.

## One More Reason to be Afraid of Your Dentist

Has anyone ever suggested that your dental phobia is “all in your head”? Perhaps your fears have a real basis in fact. There is a growing concern about the metals that have been implanted in your mouth.

If you are one of the millions of Americans who has received silver dental fillings, be aware that mercury makes up about **50 percent** of every amalgam dental filling, also known as "silver" fillings.



Studies have proven that people with mercury-containing dental fillings show an association between the number and size of the fillings and the amount of mercury in their urine. Evidence has also shown a clear link between the number of surface amalgam fillings a mother has and the level of mercury in the brain tissue of her offspring.<sup>10</sup>

Despite abundant evidence, the health risks posed by fillings are not acknowledged by the American Dental Association, which claims the following:

*Dental amalgam (silver filling) is considered a safe, affordable and durable material that has been used to restore the teeth of more than 100 million Americans. It contains a mixture of metals such as silver, copper and tin, in addition to mercury, which chemically binds these components into a hard, stable and safe substance. Dental amalgam has been studied and reviewed extensively, and has established a record of safety and effectiveness.*

If these amalgams are so "safe," why are dentists required by law to dispose of them in toxic waste containers? There's some seriously delusional logic here.

Consider that while 78 percent of Americans have dental fillings, 95 percent of people with disorders of the central nervous system such as MS, epilepsy, paralysis and migraines also have silver dental fillings. This begs the question, would you want mercury, one of the most powerful neurotoxins on the planet, embedded in your mouth, only inches from your brain?

Probably not.

Vapors from amalgams are released continuously, and studies have shown that people with these fillings can have mercury vapor concentrations 10 times higher than those without them. Simple activities such as chewing gum, drinking hot liquids and brushing teeth can increase the release of mercury into your body even further.

It is interesting to note that in six European countries, it is illegal to install silver amalgam (mercury) fillings. If you are a dentist in one of those countries and you put those into someone's mouth, it's black and white-striped pj's for you. Sweden has led the world in the restriction and replacement of dental amalgams with non-mercury materials. It is now illegal in California to put amalgams into a pregnant woman, and it was nearly outlawed in Canada in 2007.<sup>11</sup>

According to leading mercury scientist Dr. Boyd E. Haley of the University of Kentucky Department of Chemistry, elemental mercury from dental amalgam work could interact synergistically with the other ethyl-mercury sources and have a cumulative toxic effect on your body.

**He postulated that this could be a potential cause of autism and Alzheimer's disease, Parkinson's disease, ALS, MS, and AD because mercury is such a potent neurotoxicant.**<sup>12</sup>



Dr. Haley also noted that, in 1991, the World Health Organization (WHO) reported that dental amalgams constitute the major human exposure to mercury. Of course, with mercury levels ever-rising in fish, it cannot be assumed that this tops the list today. Nevertheless, it remains an impressive declaration.

The American Dental Association (ADA) claims that a zinc oxide layer is formed on the amalgams, which decreases mercury release. This is true, as long as you don't **use** your amalgamed teeth!

Dr. Haley demonstrated in his lab studies that this zinc oxide layer is easily removed by slight abrasion, such as chewing food or brushing the teeth. Furthermore, mercury emitting from a dental amalgam can be (and has been) easily detected using the same mercury vapor analysis instrument used by OSHA and the EPA to monitor mercury levels in the environment.<sup>12</sup>

The dental branch of the FDA has steadfastly refused to investigate the toxic potential of dental amalgams. Dr. Haley points out that we are “beating up on the fishing industry whilst leaving the dental industry alone”.

The ADA has issued a “gag order” preventing dentists from even mentioning to their patients that amalgams are 50 percent mercury. If a dentist does tell a patient this truth, he/she will be considered to be practicing “poor dentistry” and his/her license will be in jeopardy.

Mercury toxicity increases with years of exposure. Therefore, the damage caused by your amalgams could occur years after initial placement and at mercury levels now deemed safe by the ADA.

If you decide to have your amalgams replaced with non-toxic material, the most important thing is to find a specialist who can remove your mercury fillings safely. Any dentist can technically replace your fillings, but if he/she doesn't employ proper precautions, much of the mercury in your fillings will be released in the process and go straight to your brain.

Secondly, I would highly recommend getting healthy *before* you start on your fillings. Even a good dentist will likely liberate some mercury in the removal process and you want your detoxification ability optimized prior to removal.

## Deadly Immunity

Are you unwittingly harming your children in your efforts to prevent them from becoming sick? There is an enormous body of evidence suggesting just that.

For many years, infants received scheduled injections on a state-mandated, medically recommended schedule. These vaccines were all preserved with a mercury-based compound called **thimerosal**, which was developed by the pharmaceutical company Eli Lilly.



Thimerosal was widely used in vaccines until it was identified in 1999 as the largest source of mercury exposure in American children less than 18 months of age, at which time it was mandated to be removed from the market.

The CDC actually tried to *bury the data* that thimerosal was harmful by hiding unflattering findings and actually *paying* the Institutes of Medicine to produce a new study that would debunk the link between thimerosal and brain disorders. And, to wiggle out of the Freedom of Information Act, the CDC handed its giant database of vaccine records over to a private company, thereby pronouncing the data off-limits to researchers.<sup>13</sup>

Once the dangers of thimerosal were unveiled to the public and companies began to make vaccines without it, the government (the CDC and FDA) was more than willing to offer a “helping hand” to developing countries by shipping the toxic vaccines off to them (some of which are now experiencing a sudden explosion in autism rates).

Robert F. Kennedy, Jr. describes the above events as a government cover-up of a mercury/autism scandal and details his investigation in an article in the June 2005 issue of Rolling Stone<sup>13</sup>.

**Amazingly, despite its well-documented potential side effects, thimerosal remains present in the flu vaccine and many other vaccines including Hepatitis B, diphtheria, tetanus, pertussis, and Hib, as well as many over-the-counter medications.**

If you wish to avoid thimerosal, be sure to avoid any vaccines that come from *multi-dose vials* since many of these still contain this preservative.



It is possible to get childhood immunizations without thimerosal, since some manufacturers have developed thimerosal-free vaccines. However, you will have to ask your doctor to check the package insert and provide a written guarantee that the vaccine is mercury-free. Even then, you will not know *for certain* because the package inserts, which are supposed to detail exactly what is in a vaccine, may not even be accurate due to mislabeling and other regulatory loopholes.

## The Autism-Vaccination Link

Over the past decade, the prevalence of autism and other neurodevelopmental disorders such as attention deficit disorder have been increasing to epidemic proportions, and many experts believe that mercury from vaccines is at least partly to blame.

Mercury poisoning is often mistaken for a psychiatric disorder, especially when mercury exposure is not suspected.

**Approximately 75 symptoms of mercury poisoning parallel those for autism<sup>14</sup>.**

About 90 percent autism cases are idiopathic (of unknown cause). It is believed that autism results from a combination of genetic and environmental factors, including vaccinations.



Historically, the generally accepted rate for autism is one in 500 live births. A study in California revealed a staggering increase to one in 312 as of 1998, which is nearly double the previous rate. The latest numbers for the U.S. show autism affects about one in 150 American children, a **60-fold increase** since the 1970s.

It is also now an incomprehensible fact that, compared with other disabilities, the net growth in the number of persons with autism in California is 300 percent greater each year, evidence of an epidemic in progress.<sup>15</sup>

The dramatic rise of autism in young children during the past decade coincides with dramatically rising vaccination rates in California and other states. The National Vaccine Information Center (NVIC), the Autism Research Institute (ARI), Cure Autism Now (CAN), and Autism Autoimmunity Project have all combined forces to facilitate independent scientific research to investigate the causes of autism.<sup>15</sup>

This push toward an investigation is, in part, due to tremendous pressure from parent groups who are reporting in record numbers that their children are becoming autistic after immunization. Portia Iverson, founder and president of CAN, reports that about 50

percent of the children are becoming autistic shortly after vaccination, according to the hundreds of parents who call her office each month.

In addition to full-blown autism, there has been an increase in other vaccine reactions, including immune system dysfunction and subclinical autistic behavior. It is believed by some that children's ability to excrete the mercury they absorb from vaccinations is reduced by their immature detoxification systems.<sup>15</sup>

Many previously healthy children who begin showing autistic behaviors after vaccination also show signs of immune system dysfunction. Some of the children have shown high measles or rubella titers. When they were treated for immune system dysfunction, not only did their titers reduce to normal levels but their autistic behaviors improved or resolved altogether.<sup>15</sup>

Six new vaccines were added to the mandatory vaccination schedule in the U.S. between 1963 and 1998, including five doses of live oral polio, two doses of live measles, mumps and rubella (MMR), four doses of Hib, and three doses of hepatitis B vaccine.

During that same period, vaccination rates for the "standard" vaccines rose in American children under age three from between 60 to 80 percent in 1967 to between 80 and 95 percent in 1997.<sup>15</sup>



The mainstream press recently widely reported a new study "disproving" any link between thimerosal and autism. However, NaturalNews.com points out that the study was published in a medical journal that was stacked full of ads from the very same drug companies that manufacture and market vaccines.<sup>16</sup>

**Just one more example of how Big Pharma regards your health as *secondary to the almighty dollar*.**

The autism epidemic has received so much press that even the 2008 presidential candidates and some celebrities have voiced opinions. Republican candidate John McCain declared, "there is strong evidence that thimerosal is responsible for the increased diagnoses of autism in the U.S."<sup>17</sup>.

Actors Jim Carrey and wife Jenny McCarthy believe that vaccines played a role in Jenny's son's autism, which they believe they have now successfully reversed through diet, metal detoxification, and other natural means.

## The Good, The Bad And The Ethically-Challenged

Governmental agencies have set daily mercury intake levels that they consider “safe”, but the levels absorbed by many people exceed these limits. Up to this point in time, government agencies have done very little to prevent you from mercury toxicity.

You have already read about what the CDC and FDA are doing to cover up the problem, under the guise of being a good-neighbor nation. An extensive report in the Chicago Tribune<sup>18</sup> reveals that seafood consumers in the United States are at serious risk for mercury exposure, since regulators are ignoring their own experts, issuing flawed warnings, and setting policies favorable to industry rather than consumers.

The reporters further showed that repeated neglect by the U.S. government has unnecessarily put Americans at risk for decades. Failures on the government's part include a lack of mercury testing, failure to adequately warn consumers, and an unwillingness to enforce their own rules.



In some cases, regulators ignored the advice of their own scientists, who concluded that mercury was far more dangerous than what consumers were being told.

Another newly published study in Texas shows, for the first time in scientific literature, a statistically significant association between autism risk and distance from an environmental mercury source<sup>19</sup>. Autism prevalence diminished 1 to 2 percent for every 10 miles from the source of the mercury releasing facility.

For every 1,000 pounds of mercury released by Texas power plants in 1998, there was a corresponding 3.7 percent increase in autism rates in Texas school districts in 2002. And yet little or nothing is done to truly safeguard our future generations from these dangers.

Unless or until the government takes an honest, active role in prevention of mercury toxicity, it is up to *you* to take care of yourself.

United States Senator Patrick Leahy of Vermont has a long history of legislative efforts to reduce mercury emissions<sup>20</sup>. We need more people to follow his lead!

One organization is working to promote policies to eliminate mercury uses, reduce the export and trafficking of mercury, and significantly reduce exposures at the local, national and international levels. The Mercury Policy Project (MPP) is actively involved in tightening mercury regulations.

As a result of their hard work, the US House and Domestic Subcommittee on Oversight and Government Reform is conducting an investigation into the work of the EPA to determine if the EPA has *underestimated* mercury emissions related to dental use of mercury. The Subcommittee's hearing revealed significant disparities between the agency's data for mercury emissions related to dental use of mercury and other estimates. EPA has even expressed a lack of confidence in some of its own estimates.

For more detail on the work of the MPP, go to [www.mercurypolicy.org](http://www.mercurypolicy.org).

## How To Protect Yourself and Your Family

As is true with most issues related to your health, the best strategies are *limiting* and *preventing* further mercury exposure, and *detoxification*, or helping your body rid itself of what you have already absorbed.

### Calculate Your Mercury Consumption

There is a handy on-line calculator that can help you calculate how much and what type of seafood is safest for you. Just go to [www.GotMercury.org](http://www.GotMercury.org) and enter your weight, the seafood type and quantity, and hit the calculator button. The *Got Mercury? Calculator* will tell you whether your consumption exceeds the EPA's safe limit for mercury.

There are also a number of lab tests that you can do to determine your mercury level. Some use urine, and others involve hair analysis.

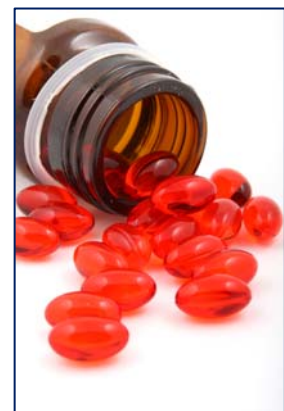
Hair analysis has become popular due to its ease and simplicity. Even the Sierra Club is making available a hair analysis for mercury for the very reasonable price of \$25 as part of a project to raise awareness about the dangers of mercury pollution<sup>21</sup>. The nice part of hair analysis is that you don't need a doctor's prescription.

### Getting the Benefits of Fish Without the Risks

A great way to enjoy the health benefits of fish without actually eating them is to take a high quality Antarctic krill oil on a regular basis. This marine oil is packed with omega-3 fats, the same ones found in salmon, with added vitamin D.

Why krill oil?

Because it has certain important benefits over regular fish oil. Fish oil is low in antioxidant content, and as you increase your intake of omega-3 fats by consuming fish oil, you actually increase your



need for even more antioxidant protection.

This happens because fish oil is highly perishable. You therefore need to have sufficient antioxidants to ensure that the fish oil doesn't oxidize and become rancid inside your body (oxidation leads to the formation of unhealthy free radicals).

Krill oil is superior because it contains phospholipids, antioxidants (more than 47 times the levels found in fish oil), and omega-3's bonded together in a way that keeps them safe from oxidation, and makes them easily absorbed in your body.

Additionally, your risk of getting any mercury contamination is extremely low since krill are so small they don't have the chance to accumulate toxins before being harvested.

Cod liver oil is another alternative that is rich in omega-3 fats and vitamin D.

## Avoid Vaccinations

Aside from the thimerosal issue, there are many other reasons why vaccines can do more harm than good. I recommend you simply avoid them altogether. At the very least, do your homework before allowing your child to receive any vaccination.

Now, you have already learned ways to steer yourself away from potential mercury sources. But what about getting rid of the mercury you've *already absorbed*?

## How To Detox Heavy Metals Safely

The following information comes directly from my [Mercury Detoxification Protocol](#). If you know you are suffering from mercury toxicity, I urge you to read the full version of the protocol before implementation because what follows is merely an overview.

The protocol should be done under the expert guidance of a physician who is familiar with heavy metal detoxification.

### My Mercury Detoxification Protocol

1. **Diet:** Avoid all sugar and milk, and limit all processed foods and most grains, especially wheat. The diet should be high in protein to aid with detoxification.
2. **Beneficial Bacteria:** Detoxification requires optimal bowel flora. Take one quarter to one half teaspoon of high quality probiotics, once daily.

3. **Bowel Movements:** Maintain two to three movements per day. Ninety percent of the mercury in your body is eliminated through the stool. Freshly ground flax seed, several teaspoons a day, can help with this as well as contribute some beneficial essential fatty acids.
4. **Chlorella:** Chlorella is an algae that has protein and high levels of chlorophyll and other nutrients that offer nourishment while being an excellent mobilizer of mercury. Chlorella powder is the most cost effective approach but some people prefer the tablets or capsules for convenience.
5. **Garlic and MSM:** Garlic enhances sulfur stores, which are crucial for mercury elimination. Use real garlic cloves, rather than the supplement. Adults should try to consume three cloves daily. MSM is a form of sulfur, and the initial dose is once capsule twice daily.
6. **Cilantro:** No, it's not just for salsa! Cilantro will help mobilize mercury out of your tissues. The best form is a tincture available from Dragon River (505-583-2348).
7. **Mineral Replacement:** When you are deficient in magnesium, sodium, zinc, and other minerals, the body does not let go of the toxic metals very easily. Therefore, it is important to have a generally healthy mineral base. Selenium (200-400 mcg daily) and zinc are particularly important trace minerals for mercury detoxification.
8. **Hydrochloric Acid:** This acid is normally secreted by your stomach and is essential for absorption of mineral supplements. There is a hydrochloric acid reflex present on your lowest rib, approximately one inch lateral to your midline. If this area on your rib is tender to palpation, there is a strong likelihood you are deficient in hydrochloric acid and would benefit from supplementation in the form of Betaine Hydrochloride.
9. **Digestive and Gall Bladder Support for Autism:** Liver and gall bladder congestion are major issues for people who are toxic. To insure that your gallbladder bile flow is functional, add magnesium taurate or taurine, butyric acid (Butryex 559-433-3110). Digestive enzymes, CCK, and good quality fats from pure, unprocessed oils are also important.
10. **Antioxidants:** Vitamins C and E are most important. Vitamin C mobilizes mercury out of intracellular stores, and Vitamin E (400 I.U. per day) has been shown to protect your brain.
11. **DMPS or DMPS Alternative** (also see next section): Available as injections, suppositories, or transdermals. DO NOT use DMPS if you have amalgam fillings as DMPS is a very efficient mercury extractor and will pull mercury right out of your fillings, which can create serious complications in some people.

If DMPS is not well tolerated, there are alternative options, including PCA (peptide chelating agent), a dipeptide amino acid, or mixed mineral succinates such as Champion Nutrition Muscle Nitro.

12. **Hyaluronic Acid (HA):** HA is found in the skin, joints, eyes, and most other organs and tissues. Personal experience has shown that the addition of 2 ml with the DMPS tend to improve the excretion of mercury by two- to four-fold, with virtually no toxicity.

## What is DMPS?

DMPS is an acid-molecule that binds with heavy metals such as mercury, zinc, copper, lead, and silver. It was developed in the 1950s in the former Soviet Union and has been used effectively to treat metal intoxication since the 1960s in that country.<sup>8</sup>

DMPS is now produced by a pharmaceutical company in Berlin, Germany, and is a registered form of treatment of mercury poisoning there. However, it is still an investigational drug in the United States.

DMPS has an abundance of international research data and an excellent safety record in removing mercury from the body. It is not mutagenic, teratogenic or carcinogenic. DMPS has a high affinity for mercury but an even higher affinity for copper and zinc; therefore, mineral supplementation is important for anyone undergoing this type of mercury chelation to avoid depletion of these necessary minerals.

## Sweat it Out!

One more method of detoxifying your body from mercury, as well as other heavy metals, is by using a far-infrared sauna. Its dry, warming energy is highly compatible with the human body.

Research indicates that far-infrared heat is more cleansing than the heat of traditional saunas. Steam baths, sweat lodges, vigorous exercise and hot tubs are more extreme and less effective.<sup>22</sup>

Far-infrared heats your body while the air remains cool, making it more comfortable than conventional saunas. Infrared energy penetrates your tissues several inches deep, enhancing metabolic processes and



improving elimination through your skin. Greater cellular energy production facilitates healing.

Sweating begins quickly and the experience is pleasant for most people.

Preheating is unnecessary, which saves electricity. Most use ceramic elements to generate gentle heat. Remain in the sauna no more than 30 minutes. Use your judgment regarding the time. Sauna sessions can be done once or even twice per day. The temperature should not exceed 110. It is normal for you to sweat more on some days than others.

A far-infrared sauna can be constructed at home for about \$75- \$100, or easy-to-assemble kits can be purchased for \$2,000 and up, depending on the size and features.

## Conclusions

There is plenty of compelling evidence that mercury is having a detrimental effect on the planet and your body. It is high time for international action. Such a global problem needs to be addressed at the global, regional, national and local levels.<sup>2</sup>

The question, "What can I do about it?" might have popped into your mind.

The first step is taking the measures outlined above to protect yourself and your family, and relay this important information to people you know and care about.

If so inspired, I also invite you to write and call your legislative representatives to help add pressure on them to address these issues. Areas needing immediate action include:

- Increasing protection of sensitive populations, such as pregnant women and children
- Providing technical and financial support, instead of contaminated vaccines, to developing countries
- Supporting increased research, monitoring and data-collection about the health and environmental aspects of mercury, including environmentally friendly alternatives.



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<sup>1</sup>Periodic Table obtained from CorrosionSource.com, <http://www.corrosionsource.com/handbook/periodic/> (accessed May 22, 2008)

<sup>2</sup> Green Facts: Facts on Health and the Environment, "Scientific Facts on Mercury," <http://www.greenfacts.org/en/mercury/mercury-1.htm#2>, (accessed April 28, 2008)

<sup>3</sup> Emily V. Driscoll, LiveScience, "Dog Fur Reveals Mercury Pollution" March 21, 2008, <http://www.livescience.com/animals/080321-sl-husky-dog-mercury.html>, (accessed May 7, 2008)

<sup>4</sup>[http://maps.grida.no/library/files/mercury\\_pollution\\_transport\\_and\\_cycle.jpg](http://maps.grida.no/library/files/mercury_pollution_transport_and_cycle.jpg) (accessed May 7, 2008)

<sup>5</sup> Brian Cronin, "Heavy Metals & Your Tap Water" September 4, 2004 <http://articles.mercola.com/sites/articles/archive/2004/09/04/heavy-metals-water.aspx> (accessed May 7, 2008)

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<sup>7</sup> University of Wisconsin-Madison (2006, August 11). "Mercury Pollution Threatens Health," <http://www.sciencedaily.com/releases/2006/08/060811191845.htm> (accessed May 7, 2008)

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<sup>9</sup> EPA Website, "Mercury: Health Effects," <http://www.epa.gov/mercury/effects.htm> (accessed May 7, 2008)

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<sup>11</sup> "Why are Mercury Fillings Still Legal? Just Look at How Dow Corning Proposed" January 2, 2008 <http://articles.mercola.com/sites/articles/archive/2008/01/02/breast-implant-settlement.aspx> (accessed May 7, 2008)

<sup>12</sup> "Researcher Refutes ADA in Congressional Testimony" June 9, 2001. <http://articles.mercola.com/sites/articles/archive/2001/06/09/amalgam-safety.aspx> (accessed May 7, 2008)

<sup>13</sup> Robert F. Kennedy Jr., "Deadly Immunity," Rolling Stone Magazine June 20, 2005, [http://www.rollingstone.com/politics/story/7395411/deadly\\_immunity/](http://www.rollingstone.com/politics/story/7395411/deadly_immunity/) (accessed May 7, 2008)

<sup>14</sup> L. Redwood (2000) "Mercury and Autism: Coincidence or cause and effect?" Autism Aspergers Digest, July-August, pp. 4-7. Available from the NAS Information Center

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<sup>16</sup> Mike Adams, "Study 'Disproving' Mercury-Autism Link Published in Journal with Financial Ties to Vaccine Manufacturers," NaturalNews January 9, 2008 <http://www.naturalnews.com/022479.html> (accessed May 9, 2008)

<sup>17</sup> James Joyner, "McCain Blames Autism on Mercury," Outside the Beltway March 3, 2008 [http://www.outsidethebeltway.com/archives/2008/03/mccain\\_blames\\_autism\\_on\\_mercury/](http://www.outsidethebeltway.com/archives/2008/03/mccain_blames_autism_on_mercury/) (accessed May 9, 2008)

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<sup>21</sup> "Mercury is Toxic. Get Tested!" Sierra Club, [http://www.sierraclub.org/mercury/get\\_tested/](http://www.sierraclub.org/mercury/get_tested/) (accessed May 14, 2008)

<sup>22</sup> Lawrence Wilson, MD, "Detox in the Sauna" August 14, 2002 <http://articles.mercola.com/sites/articles/archive/2002/08/14/sauna.aspx>