



## General Information Of Heavy Metals

### Mercury

Mercury is the second most neurotoxic chemical on the planet, meaning it viciously attacks the nervous system. Mercury primarily attacks the brain and kidneys. Symptoms of mercury toxicity include tremors, insomnia, neuropathy, paresthesias, irritability, personality changes, headaches, weakness, blurred vision, slowed mental response, and an unsteady gait (imbalance). Mercury has also been shown to increase autoimmune diseases.

Mercury is often talked about when eating fish, having vaccines, and dental fillings. Before you schedule an appointment with your dentist to take out your toxic fillings, there are steps you need to take to protect yourself. People tend to think amalgam fillings are primarily made of silver because of their color but as I stated earlier, 50% of the filling is comprised of mercury. When people discover the truth, they want to get them removed but don't know the proper process to go through to not only remove the fillings but also protect their bodies from the effects of the mercury. The sad news is that traditional dentists often don't know any more than their patients do. Traditional dentists will just drill into the tooth to remove the filling, which vaporizes the mercury and is more dangerous than just leaving the fillings in place. I recommend that clients go to a biological dentist who is trained to remove the amalgam fillings properly.

However, proper removal of the fillings isn't the end of the process! For those who have had toxic fillings removed, there is typically a six-month honeymoon period before a major crash in your system occurs if the mercury that was already released into your body isn't dealt with. Inevitably, people feel better after getting the chunks of mercury removed from their bodies! The problem is that mercury had been slowly leaching out into your system ever since you first had the fillings put into your mouth! Patients typically find they have about six months to remove all the amalgam fillings and begin heavy metal chelation treatment before their body crashes. People feel good at first because the source has been removed and is no longer releasing mercury. However, the fact that the source has been removed is what gives the body permission to begin to dump what it has been storing. To get rid of the mercury, the body begins to release it, but is unable to truly get rid of it. Mercury is literally spread throughout the body and causes it to crash as the mercury is reabsorbed. A true heavy metal detox is essential to completely remove the mercury from your body before it can do widespread damage. I always recommend that clients work with a practitioner who is properly trained. This is too dangerous to do on your own!

### Lead

Lead is typically associated with the paint that was used on homes before 1978 or plumbing pipes before 1940. But would it surprise you to learn that today there are modern sources of this deadly toxin that we encounter in our everyday lives? Some modern sources of lead include: Commercially processed vinegars, which have been shown to have lead in them. Balsamic vinegars and aged vinegars are the worst. White vinegars from rice and grapes usually contain less lead but still have trace amounts. Children's toys, jewelry, Vinyl and faux-leather, Indian and Chinese herbs are also examples of lead containing items.

Questions that can identify lead toxicity:

- Does your occupation involve construction, soldering, metal salvage, or stained glass?
- Are you an electrician or handle electrical devices, electrical wiring, ballasts, or TV glass?
- Do you wear lipstick?
- Do you have any tattoos?
- Do you handle and/or reload ammunition?
- Do you or have you regularly consumed the supplement coral calcium?



32 different lipsticks were analyzed in a recent study in Environmental Health Perspectives. 24 of them (75%) contained lead! This is especially troubling considering the study states that the average woman consumes six pounds of lipstick in her lifetime! Lead toxicity is often called a “generational curse” because the number one source of the lead in your body is your mother! Lead is carried in our bones and mothers inevitably pass it on to their babies throughout their pregnancy.

Again, lead is stored in our bones. When you go through any hormonal shift (puberty, pregnancy, menopause, etc.) lead is released. For example, when bone density changes, you can be assured that lead is being released into the body. Lead being released doesn't cause loss in bone density - it's something that happens because of the change in bone density. The emotional swings that women tend to experience during menopause (a stage in life that is often associated with a change in bone density) could be caused by the release of lead into their bodies! This could indicate that a heavy metal detox would benefit women going through menopause.

## **Cadmium**

The heavy metal cadmium is found in cigarettes. If you are or were a cigarette smoker or in an environment that contained cigarette smoke, your problems may be linked to cadmium exposure. Other sources include batteries, PVC plastics, motor oil, exhaust from motor vehicles, and even paint pigments.

Do you eat non-organic food? The toxic heavy metal cadmium was found to be significantly higher in non-organic foods. This is because the insecticides, fungicides, sludge, and commercial fertilizer non-organic farmers use contain cadmium and pollute the soil. Cadmium targets organs like the liver, placenta, kidneys, lungs, brain, and bones. Cadmium can increase your heart size, cause higher blood pressure, exacerbate atherosclerosis, reduce kidney function, depress the immune system, cause aches and pain in bones and joints, and has even been linked to lung and liver cancer.

## **Aluminum**

Aluminum targets the brain, central nervous system, kidneys, and digestive system. Science has also linked Alzheimer's, degenerative muscular conditions, and cancer to aluminum toxicity. Aluminum is found in food additives, antacids, buffered aspirin, nasal sprays, drinking water, tobacco smoke, aluminum foil, aluminum cans, ceramics, and fireworks. Research has shown that high levels of aluminum increases the risk of developing breast cancer. More troubling is the fact that the aluminum that is found in deodorant mimics estrogen and has been shown to absorb and be stored in breast tissue!

## **Other Metals**

### **Bismuth**

Pepto-Bismol® and other treatments for diarrhea are the most common source of bismuth. It can also be found in drinking water, and in non-organic fruits, vegetables, and grains. Prolonged bismuth toxicity has been shown to cause neurological problems, generalized inflammation, kidney damage, and even reduced brain function.

### **Arsenic**

Arsenic can be found in paints, rat poison, fungicides, wood preservatives, and even in our drinking water worldwide. It affects the food we eat like shellfish, cod, and haddock because it is so prevalent in the world's waterways. It is also commonly used in the manufacturing of chemicals, glasses, and pesticides. Arsenic targets the blood, kidneys, central nervous system, digestive system, and our skin. Arsenic has been shown to decrease production of red and white blood cells, cause fatigue, abnormal heart rhythm, bruising, and impaired nerve function. It also causes stomach aches, nausea, vomiting, and diarrhea. Early warning signs of arsenic toxicity are pins and needles sensations on the hands and feet.

## Barium

### Sources of Exposure

- Cigarette/tobacco smoke
- Paint pigments
- Contaminated groundwater
- Pyrotechnics
- Petroleum production
- Flat panel display devices such as smart phones, TVs, LCD computer monitors and laptop computers
- Filler for rubber, plastics, and resins
- Clay slurries used in drilling oil wells
- Paper filler
- Barium sulfate beverages (used in certain medical procedures)
- Rat poison

Systemic effects (gastrointestinal, cardiovascular, muscular effects; hypokalemia) have been observed following relatively high-level oral exposure to soluble barium compounds such as barium acetate, barium chloride, barium hydroxide, and barium sulfide. Similar effects occurred in rare cases of high level inhalation exposure. Ingestion of relatively large amounts of barium compounds that dissolve in the gastrointestinal tract may cause rapid onset of gastrointestinal symptoms (nausea, salivation, vomiting, abdominal cramps, watery diarrhea), hypokalemia (a reduction in blood potassium levels that can result in ventricular tachycardia, hypertension and/or hypotension, muscle weakness, and paralysis), and kidney damage. Excessive blood levels of barium result in decreased blood potassium (hypokalemia), which may cause adverse cardiovascular and muscular effects such as tachycardia, increased or decreased blood pressure, muscle weakness, and paralysis. Barium can also cause the development of neurodegenerative diseases, including multiple sclerosis.

## Antimony

Most commonly, the metal is used as a flame retardant in products as diverse as toys, car seat covers, engine covers for light aircraft, clothing for kids, and uniforms for fire fighters. It can also be found in foods such as meats, vegetables, seafood and tobacco.

The major toxic side-effects of antimonials as a result of therapy are cardiotoxicity (~9% of patients) and pancreatitis, which is seen commonly in HIV and visceral leishmaniasis co-infections.

Low doses cause headaches, nausea, dizziness and depression. Large doses cause vomiting, diarrhea, abdominal discomfort and tingling of the extremities. Despite the fact that large doses work as an emetic, if left untreated, a person may die. Those who are exposed to low doses for over long periods of time, will also show the symptoms of poisoning as mentioned above. However, the effects will vary depending upon the amount and period of exposure. Additionally, such individuals also suffer from hair loss and develop a scaly skin rash that called lichen planus. One compound—antimony trioxide—is even believed to be carcinogenic, and antimony poisoning has also been known to lead to Adams-Stokes syndrome. Sudden infant death syndrome (SIDS) has also been found to be associated with antimony poisoning.

### Antimony Toxicity – Physiological Interactions in the Body

- Antimony accumulates in adrenals, thyroid, kidney, liver, spleen, and bone
- Clears rapidly from blood
- Inhibits various enzyme systems
- Binds to the good sulfhydryl detoxification chemicals groups

### Synergistic for Antimony Toxicity Uptake/Retention



- Magnesium or selenium deficiency increase antimony absorption and retention in the body.

### **Antagonistic for Antimony Toxicity Uptake/Retention**

- Adequate magnesium, selenium, and methionine decrease the absorption and retention of antimony.