

METAL TOXICITY

Dr. Scott Monk www.choosehealth.net or www.FBAHealth.com

Metals of all kinds are a permanent part of the modern conveniences of civilized life, benefit few are willing to forsake. However, as with most things, where there are positives, there are also negatives. Ever since man began working with metal, researchers have found poisonous tendencies. Extensively studied, for instance, are the metals lead, cadmium, mercury, and arsenic. Researchers believe these are the ones that pose the greatest threat to human health. It is now irrefutable that metals cause dysfunction and disease, although debate still rages as to the amount necessary to produce either one. From a functional medicine standpoint, a practitioner must always consider metal toxicity when the PEP K27 becomes active, because the kidneys are the last stage of metal detoxification.

Metal toxicity is a profound disruptor of physiology, often leading to gastrointestinal upset, food intolerances, allergies, vision problems, chronic fatigue, male infertility,ⁱ and hormonal imbalances of all kinds.ⁱⁱ But the symptoms do not stop there. Heavy metals inactivate enzymes, the proteins that make everything work in the body.ⁱⁱⁱ This means that the very things necessary for helping to eliminate metals are themselves turned off by them. Certain metals have an affinity for the nervous system. The brains of Alzheimer's patients often contain a jumbled mass of nerve fibers called a neurofibrillary tangle (NFT). These areas contain high levels of trapped aluminum.^{iv} Likewise, another degenerative neurological disease, Parkinson's, has a strong association with the presence of mercury and lead.^v

Where Do Metals Come From?

Metals are everywhere at any given moment. Industrialization has seen to that. People ingest metals regularly through what they eat, drink, and breathe. For those with healthy detoxification pathways in the liver, kidneys, digestive tract, and skin, the body manages and eliminates everyday metals so they do not become a health hazard. Functional imbalances, on the other hand, are notorious detoxification busters and will lead instead to the storage of excess metals. Here is where the problems begin.

When the body has excess metals that it cannot rid itself of, fatty tissue acts like a jailer, trapping the unwanted substances. The more metal that can be "put away," the less total harm to the body. The healthcare industry must recognize this phenomenon of quarantined chemicals before ever beginning a detoxification program. Forcing the body to cleanse itself through a radical, short-term detox will, in some people, do more harm than good. When overweight or obese people lose weight, health benefits abound.^{vi vii} However, in the case of cancer, this may not always be true. One study showed that obese people diagnosed with cancer who set out to lose weight and did so to the tune of at least 20 pounds had higher death rates than similar patients who lost no weight.^{viii} Many in the natural

health field believe this seemingly contradictory outcome resulted from a toxic overload created by the dumping of chemicals and metals into the blood stream as the body shed fatty tissue. To prevent this toxic overload, slow and steady is by far the best approach with metal removal.

Most people are aware of the heavy metal mercury and its effects on the body. The general population is primarily exposed to mercury via older dental amalgams and through food, with fish being a major source of methyl mercury exposure. This does not mean fish should be avoided by everyone.

Fish contains good fats that prevent heart disease and protect the nervous system.^{ix} The Harvard School of Public Health calculated that eating about 2 grams per week of omega-3 fatty acids in fish, equal to about one or two servings of fatty fish a week, reduces the chances of dying from heart disease by more than one-third.^x However, pregnant women may want to avoid certain fish known to have high mercury concentrations such as shark, swordfish and tuna, since there may be a risk to the unborn baby.

Mercury amalgams are a controversial health topic. Debate over their role as a health hazard and as a cause of various diseases is ongoing.^{xi} To many in alternative medicine, mercury as a cause of functional illness is undeniable, if for no other reason than the remarkable health benefits witnessed after the old amalgam fillings were removed.

Another metal of concern is cadmium. Society comes into contact with cadmium compounds through re-chargeable nickel-cadmium batteries and cigarette smoke. One reason why cadmium emissions have increased dramatically during the 20th century may be that people rarely recycle cadmium-containing products and often dump them together with household waste.

Lead exposure can occur from drinking water, lead pipes, lead solder, some ceramic dishes, or using lead in hobbies or crafts. Food safety is also of concern. Some meats and spices purchased from foreign countries contain high levels of lead and other metals.^{xii xiii} The neurotoxic effects of lead have been seen at levels of exposure much lower than previously anticipated.^{xiv} Children, however, face the most serious risk to lead exposure because their growing bodies absorb the metal easily. Lacking a fully developed and protective blood-brain barrier, children's bodies take up the metal into the blood stream, where it then easily travels to the brain. Young children and toddlers play on the ground or the floor and tend to put objects in their mouths. Lead polluted soil, toys covered in lead dust, or in the case of older homes, sweet-tasting lead-paint chips are all possible sources of contamination.

How to Become Metal Toxic without Exposure to Metals

With the teeter-totter effect, an elevated substance means its antagonist is low. In the case of metals, it is always a good idea to look at the high side first, assuming that someone has become metal toxic by excess exposure to the metal. However, all that matters to create health disruptions is that an imbalance is present between the sides of the teeter-totter. This means that that the high side could actually be a normal amount, and the low side could simply be too low. The best example of this idea is the teeter-totter between zinc, iron, and copper, a three-way teeter-totter. The body can rapidly

use up each of these three minerals, which are also metals, depending on certain circumstances. Depleted iron results in anemia, depleted zinc results in immune dysfunction, and low copper can contribute to hormonal issues and thyroid problems.

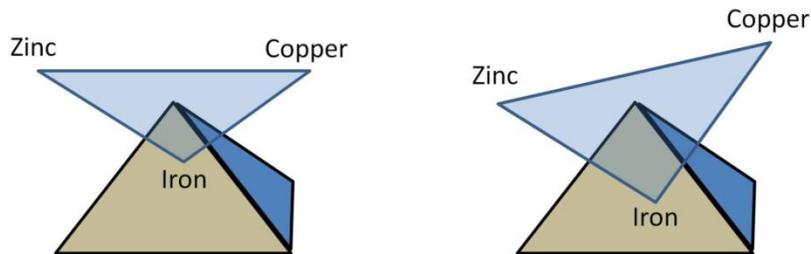


Figure 1: The Copper/Iron/Zinc Teeter-Totter

The picture on the left depicts a three-way teeter-totter with each of the nutrients in proper balance. The picture on the right shows high copper, normal zinc and low iron. Any combination, however, is possible. Each of these nutrients keeps the others in check. In many cases, it activates the function of the others. High iron for instance, will often produce the same symptom as low iron, namely fatigue. Adding the low mineral (copper or zinc) on the teeter-totter will allow the red blood cells to begin utilizing iron once again, and its levels will drop to normal. Why was there a low mineral to begin with? What system, in other words, was using up this mineral too quickly? The primary energetic points (PEPs) will allow the practitioner to find the answers.

Managing Metals with FBA

An FBA practitioner could use a sample of any metal and test a strong muscle to see whether it weakens. However, this is a bit time consuming. Instead, looking for evidence of excess metals is much faster. Because metals have an affinity for the nervous system, neurological deficits emerge when the metals are present in unhealthy amounts. The deficit created by metal overload is easily measured with manual muscle testing via the midline test.

The midline test determines whether the right and left hemispheres of the brain are working synchronously. For example, the left side of the brain controls the muscles on the right side of the body and vice versa. Just lifting the right arm out straight and then returning it to the side is an activity controlled exclusively by the left brain. Now, lifting the right arm out straight and then crossing it over to the left side of the body requires both the left and right sides of the brain to work together. Here is where metals make trouble. They disrupt the normal communication between the

right and left brain. Any muscle tested with the arm or leg across the midline will become weak when this communication problem is present.

Of course, the PEPs themselves give the FBA practitioner clues that metals may be bothersome. Often, it is the PEPs most related to detoxification that show up near the top of the list, with Kidney 27 being the predominant one. Finding hormetic nutrients to chelate or attach to metals and remove them from the body is critical. Merely increasing detoxification through hydration is a big help, since it promotes kidney health and function. Furthermore, sweating, a clean diet, and essential hormetic nutrients are all clinically effective.^{xv}

ⁱ Wirth JJ, Mijal RS. Adverse Effects of Low Level Heavy Metal Exposure on Male Reproductive Function. *Syst Biol Reprod Med*. 2010 Apr;56(2):147-67.

ⁱⁱ Iavicoli I, Fontana L, Bergamaschi A. The Effects of Metals as Endocrine Disruptors. *J Toxicol Environ Health B Crit Rev*. 2009 Mar;12(3):206-23.

ⁱⁱⁱ Houston MC. The Role of Mercury and Cadmium Heavy Metals in Vascular Disease, Hypertension, Coronary Heart Disease, and Myocardial Infarction. *Altern Ther Health Med*. 2007 Mar-Apr;13(2):S128-33.

^{iv} Walton JR.. Evidence for Participation of Aluminum in Neurofibrillary Tangle Formation and Growth in Alzheimer's Disease. *J Alzheimers Dis*. 2010 Aug 30.

^v Monnet-Tschudi F, Zurich MG, et al. Involvement of Environmental Mercury and Lead in the Etiology of Neurodegenerative Diseases. *Rev Environ Health*. 2006 Apr Jun;21(2):105-17.

^{vi} McGoey, B. V., Deitel, M., Saplys, R. J., Kliman, M. E. (1990) Effect of Weight Loss on Musculoskeletal Pain in the Morbidly Obese. *J Bone Joint Surg* 72: 322–323.

^{vii} Fontaine, K. R., Barofsky, I., Andersen, R. E., et al. (1999) Impact of Weight Loss on Health-related Quality of Life. *Qual Life Res* 8: 275–277.

^{viii} Williamson, D. F., Pamuk, E., Thun, M., Flanders, D., Byers, T., Heath, C. (1999) Prospective Study of Intentional Weight Loss and Mortality in Overweight White Women Aged 40 – 64 Years. *Am J Epidemiol* 149: 491–503.

^{ix} Mozaffarian D, Rimm EB. Fish Intake, Contaminants, and Human Health: Evaluating the Risks and the Benefits. *JAMA*. 2006; 296:1885-99.

^x ibid

^{xi} Järup L. Hazards of Heavy Metal Contamination. *Br Med Bull*. 2003;68:167-82.

^{xii} Galal-Gorchev H. Food Addit Contam. Dietary Intake, Levels in Food and Estimated Intake of Lead, Cadmium, and Mercury. 1993 Jan-Feb;10(1):115-28.

^{xiii} González-Weller D, Karlsson L, et al. Lead and Cadmium in Meat and Meat Products Consumed by the Population in Tenerife Island, Spain. *Food Addit Contam*. 2006 Aug;23(8):757-63.

^{xiv} Järup L. Hazards of Heavy Metal Contamination. *Br Med Bull*. 2003;68:167-82.

^{xv} Brownstein, David. *Overcoming Thyroid Disorders*. Medical Alternative Press, West Bloomfield MI, 2004. P. 216-222