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FOR CHRONIC ILLNESS & ALLERGY

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HEAVY METALS AND DISEASE

By Dr. Robin Bernhoft, MD, FACS, DABEM, FAAEM

Minerals like magnesium, calcium, iron, manganese, copper and zinc are involved in many biochemical reactions in the body, usually as cofactors for enzymatic reactions (in which one food chemical is transformed into another). These minerals are generally “good” in a biochemical sense, with the partial exceptions of iron and copper which can, in some individuals, become problematic in excessive quantity.

Other minerals like lead, mercury, cadmium, aluminum, arsenic, tin, among others (“heavy metals”) are known to produce health problems. These occur either because these heavy metals compete with the “good” minerals, and interfere with enzymatic reactions necessary for health, or because they bind to various proteins or membranes in the body and interfere with normal function.

This has a lot of clinical relevance.

Lead, for example, has been shown to lower IQ (reversibly), raise blood pressure and increase the risk of heart attack, to mention only three impacts on well-being. Cadmium (on which I cut my teeth as a researcher years ago) is associated with lung, kidney, nerve and blood vessel disease. Mercury also has many well-documented adverse health impacts (amalgam fillings have been illegal for dental use in much of Europe since 1994), but remains controversial in this county largely due to the political efforts of the American Dental Association, which has major conflicts of interest. Mercury has been shown to cause disease in virtually every organ in the body, but is especially toxic to the nervous system, the heart, kidneys, liver and endocrine glands, as well as to energy production within the cell. Arsenic is famous as a poison (e.g., the play *Arsenic and Old Lace*), but in lesser doses interferes with energy production and causes certain types of cancer.

There is no safe level of any of the toxic heavy metals.

The federal government’s NHANES study showed many Americans carrying significant body burdens of toxic heavy metals. Not everyone with a body burden of toxic heavy metal is sick from that metal. Some are, some are not. Disease caused by metals cannot always be reversed by removal of the offending metal, but a majority of people in various clinical studies have been improved in varying degrees. The technology for removing toxic metals from the body has been well worked out over the past fifty years or so, and can be done safely under established protocols, when indicated.

We offer chelation in our office using the protocols of the American Board of Clinical Metal Toxicology.