

TOXIC OR HEAVY METALS

Reviewing a Few Associated Toxic States

On the minerals analysis of the hair (and *occasionally* in the blood for a few hours after acute exposure; in the urine for several hours; on the red cell membrane for perhaps a week) there may appear high levels of some heavy metals, which are harmful, and known as toxic minerals, or toxic metals. They are called heavy because they have high atomic numbers, and as atoms go, they are heavy! They may not appear on the first minerals test, but only appear after subsequent tests are done. A new appearance of a heavy metal on the mineral analysis does not mean that the previous low level was erroneous, but only that after extensive mineral replacement with beneficial minerals, the heavy metal has been moved from soft tissue, and put into circulation, which then makes these minerals available for deposition in the hair. This is a "displacement" reaction, or may be called re-compartmentalization. When someone is very ill, they are *not capable of excreting* heavy metals and ridding the body of them. After oral or IV minerals and amino acids are given, they gain some ability to excrete them, once they are mobilized and shifting compartments.

The several heavy metals that we will eventually consider cause injury to the body in a multitude of ways. They effect the soft tissue of the body including the brain and nervous system, the liver, heart, kidney, skin; the blood and blood forming tissues, and bone and joints. In fact, between all the toxic metals, no system is spared! The biochemical effect in all these tissues is *inside the cells* and works in the following manner: causing inactivation of the enzymes (which require our beneficial minerals in order to work) by displacing, or bumping the good mineral from it's site in, on, or close to the enzyme. Thus our body chemistry doesn't work, or works slowly, or erroneously, so that energy production and use in our cells is impaired and we become just too tired to feel normal. The Chronic Fatigue Syndrome is a real illness, and thus related at least in part to heavy metals.

A second major illness cluster is the so called "environmental illness" meaning that the environment, or the *every day world around us* makes us sick. It happens in this way: the body must process, by either storing or excreting, chemicals brought into it that we can't use for growth, repair or energy production. Anything the body can not use for growth repair and energy is by definition toxic, though some of these chemicals may be of a *minor* toxic nature to most people, such as red food dye. Most would usually show no effects from consumption of red dye. Those with toxic conditions, especially children, become hyperactive. The USA version of red food dye is thus not used in Europe or Japan.

The process of handling the chemical is called detoxication, and if we use medicine or supplements to aid this process it is called detoxification. The chemical factory that we have in place to do this work is primarily the liver, and the chemical reactions used to bind up and begin to excrete the heavy metals, (as well as pesticides, petrochemicals, etc.) relies on enzymes that must have good minerals as a helper molecule, or *cofactor*. If the enzymes are inactivated, or broken down, because we have heavy metals that displaced the necessary cofactor, we begin to suffer from toxic reactions from the chemicals our body could previously excrete. This is a major way we ultimately become food sensitive, and environmentally sensitive, so that the smell of perfume, tobacco, gasoline, essential oil and many such things makes us sick.

A third effect of heavy metals occurs when the enzymes that make the immune system work are changed or have run out of energy, so that the part that fights infection deactivates and we become susceptible to viruses, bacteria, fungus or yeast (candida), at the same time that we may become sensitized to the chemicals and foods, and proteins, like pollen, in our environment. Is it not commonly observed by parents that the allergic child, whose immune system is overreacting to the world around him, is also the most infected child, getting sick over and over because that part of the immune system is under-reacting.

Here is a very brief list of some toxic metals you should be familiar with:

Mercury - second most toxic according to the EPA, after Plutonium, and that because it is radioactive
Aluminum - yes the Alzheimer's connection is correct. But the neurotangles also contain mercury mixed with the aluminum. Special treatments can help this!

Antimony - running a close second to Mercury, and becoming more common in our environment

Cadmium - easily obtained. All one need do is breath cigarette smoke, or industrial air.
Great damage to several systems.

Lead - bet you thought this was worse than mercury, but it's not. Glad it's out of the gasoline? The new gasolines have something that forms formaldehyde, which is very toxic to breath also!

Nickel - our body requires just a little. More than that is toxic.

Arsenic -everyone knows about Agatha Cristi and the English mysteries ... it's the gardener (see below and you'll find the reason).

Bismuth - easy to absorb, fairly easy to excrete through hair, nails, etc..

Silver - yes this is used as therapy, but if it is toxic to microbes, it could toxic to us in excess though an excess would be very expensive to acquire!

A list of some sources of toxic metals, the organs effected, and a few symptoms:

Aluminum

Sources: beer is number one! bakery goods are second, then antacids, deodorants, cooking utensils, most baking power (look for one without Aluminum in the ingredients on the container)

Target Tissue: brain. Accumulates in neurotangles, which are exactly that, neuro fibers that tangle
Causing: Alzheimer's Disease, and lesser states of brain dysfunction, not always diagnosed.

Arsenic

Sources: pesticide residues, rat poisons, seafood, large fish: top of food chain), auto exhaust, soil

Target tissue: skin, muscle, peripheral nerve.

Causing: Weakness muscular aching, drowsiness, confusion, a slow gradual respiratory failure

Cadmium

Sources: cigarette smoke, water or beverages from galvanized piping, oysters, liver

Target Tissue: Liver, kidney

Causing: Nausea, vomiting, abdominal cramps, headache, hypertension

Lead

Sources: drinking water, canned food, milk, bone meal, organ meats, newsprint; old painted surfaces

Target Tissue: Kidney, placenta, heart, bone, brain

Causing: Learning disabilities, anemia, dementia, violent behavior (especially if other heavy metals are also elevated, cadmium, in particular, but also some "good" minerals, like iron and manganese, if in excess!)

Mercury

Sources: dental amalgams, the so called silver fillings are actually 50-52 % mercury, and erode continually and enter your body; contact lens solution; mercurio-chrome; fungicides; pesticides; floor polish; cleansers of walls, floors, surgical instruments; Fish (especially tuna, Blue fin Marlin, Sword fish and Shark, i.e. the BIG ones, so that the EPA advises not to eat ocean fish); and the list gets bigger each week.

Target tissue: the fetus, if one is pregnant; brain; kidney; liver; heart; g.i tract, especially the large bowel; lymphoid tissue, i.e. the immune system.

Causing: things too numerous to list, but including fetal deformities; any kind of neuro problem you care to mention; liver impairment, and thus environmental illness; **renal failure; congestive heart failure, as the muscle has no energy and the muscle wears out.**

I'll post a long list when we discuss each mineral in more detail.

How does one test for heavy metals?

Whole Blood is the widely accepted specimen for screening for acute recent exposure.

Urine is used to *monitor* the effects of treatments for *removing* heavy metals, and the collection of urine is made for 24 hours after the treatment.

Hair is the better indicator of long term or chronic exposure, and also of mobilization of metal by mineral replacement, and other slower modes of toxic metal removal treatment.

Hair measurements are considerably less expensive than urine measurements, and show changes over several months. If a metal isn't moving by excretion via the kidney during the urine collection, it will not show any metal even though the metal may be very concentrated in the body.

Now, does all that make you want to recheck you mineral levels, both good and bad?

Mercury

A big source of dangerous heavy metals, or toxic minerals, is the fillings and other dental paraphernalia used in our mouths. Mercury is the best known. Common "silver" fillings are 50 % mercury.

Mercury is so toxic, that if there is a spill onto the floor, in industry, a school or hospital, or in the dental office, the EPA is called to supervise the disposal of the spill! And the waste container has to go through a "chain of custody" protocol as if handling radioactive wastes. (Many dentist flush mercury down the city sewer water!) Yet this same stuff is claimed to be safe for our mouths.

It vaporizes with every warm-to-hot drink we swallow. It vaporizes with chewing. It melts away gradually with the action of saliva. We swallow it and breath it and deposit it -- in brain, liver, kidney, bowel lining, heart muscle, and bone marrow. The ill effects are myriad. The effects may be different if a load is absorbed rapidly, that if it is absorbed gradually over the years. This quick damage phenomenon is well described by many who have had a rapid onset of neurologic or bowel problems right after a tooth repair or renewal of a leaky amalgam filling, and then begin to recover while in the process of getting the mercury removed. There are many books on mercury toxicity: at least fifty! If you require further expounding, please obtain and read the books listed in the book list at the end of this discussion: and call the organizations listed with phone numbers to obtain information packets.

It is our feeling, after reading so much, and seeing so many people with these problems, that no one should leave the mercury in their mouth, once they learn of the problems that evolve. Surely if your minerals tests show a high level, it is time to get them out. If you have symptoms, it is past time.

Your regular dentist probably will not recognize this problem, as he/she has been trained by the American Dental Association not to believe, or admit, that mercury, or any other of their metals and reparative are toxic or dangerous. There are a handful of special dentist, who are trained, in what is now called, *environmental dentistry or ecological dentistry*. They are on at least three registries, and we know a few trained dentists personally. We will try and give you a current list when you are seeking a trained dentist.

Regarding removal, you may well ask, "What do you replace your fillings with ?" Commonly the dentist will choose a composite, or plastic material, and if you have become sensitized to chemicals, the *replacement may be toxic to you*. If you are a toxic person already at the time you decide to fix your teeth, it is best to have a blood test done, through the Huggins Institute, or Clifford Labs., both in Colorado, that will test you for sensitivity to the many, many things that can be used in your mouth. The blood test is drawn and sent from the doctors office, and a report is sent to the dentist or to you if you have not yet chosen your dentist.

Before the dental work is begun, you should be on a mineral replacement program in full tilt, and on an oral chelating program. Chelating means "binding": the aim is to bind the heavy metals chemically and get it out of the body before you insult the system further by mobilizing what is in the mouth during the removal process. This may take several months, but should be started at least two weeks before your dentistry begins, and may be started even before your compatibility blood test and dental plans are made.

You will be given a special page listing instructions and chelators to use, at the time of discussion with the doctor.

Once all the mercury is out of the mouth, it will still be in storage in the brain, liver, kidney, etc.. You should have a course of DMPS, which is given IV over 5 minutes. DMPS is sodium 2,

3-dimercaptopropane-1-sulfonate. The IV is given, after you have voided your bladder of urine, and when the IV is done, you are given a jug for collecting the urine over the next 24 hours. It has a preservative in it and will be all right for testing for several days. You must bring it back to us to measure out and mail to Chicago for two special tests: one to measure mercury, and one for all other heavy metals. DMPS is *used monthly until* the urine stops clearing a great deal of mercury, **and** the copper/manganese ratios show a change in excretion pattern. The DMPS removes a number of heavy metals, so a mineral replacement IV is required within 24 hours after receiving the DMPS injection. See the Heyl 2008 monograph, patient information and prescribing information for details on DMPS therapy, elsewhere on this site. PBMD