HEAVY METALS ARE ALL AROUND…HOW DOES IT AFFECT US?

What are the major heavy metals and what are the main sources?

1. **Aluminum**: COOKWARE, cans, aluminum foils, pipes, vaccines, white flour, deodorant, lipstick.
2. **Antimony**: used in alloy production, car batteries, plastics, paint, adhesives, fertilizers
3. **Arsenic**: CIGARETTE SMOKING, soils, emissions (ie power plants/ smog/smoke), wood preservatives/pressure treated wood, insecticides (ants especially), shellfish, volcanoes, electroplating, well water, copper mines.
4. **Beryllium**: occupational exposure
5. **Bismuth**: Pepto-Bismol
6. **Cadmium**: CIGARETTE SMOKING, associated with industrial exposure, contaminated shellfish, drinking acidic beverages from contaminated containers, auto exhaust, plastics, wine, breast milk
7. **Gold**: gold amalgams, osteoarthritis injections
8. **Lead**: leaded gasoline (used to 1955), cigarette smoking, cosmetics, hair dyes, mother to infant transfer during pregnancy, lead base paints, miniblinds, metal wicked candles, industrial pollution, DRINKING WATER, batteries, canned foods, lead glazed cookware or pottery making (esp. from out of country), some fertilizers, stained glass making, home remodeling, occupational exposure (plumbers, miners, auto repair, printers, plastic manufacturing, refiners, welders, battery manufacture, gas station attendants)
9. **Mercury**: DIET (fish and seafood), VACCINES, DENTAL AMALGAMS, gold extraction, skin-lightening creams, petroleum, natural gas, occupational exposure, mining, fossil fuel combustion, cement production, pesticides
10. **Nickel**: nickel refinery dust, cigarette smoking, hair spray, jewelry, batteries, shampoo, pipes, tap water
11. **Uranium**: dust from mines
12. Other common heavy metals include: **Platinum, Thallium, Thorium, Tin, and Tungsten**

THEY HAVE A SYNERGISTIC EFFECT or multiple (100 to 1000) WHEN COMBINED or added (one and one).

What do they do to the body?

1) Affects various areas of the kidney and may cause **nephrotoxicity**. This can reduce the function of the kidneys, and/or effect water balance (hypertension) and/or hormone balance.
2) **Neurotoxicity** which causes a dysregulation of neurotransmitters in the brain. This can also cause brain injury and death in newborns. As health Canada states, infants and children are at the highest risk for this effect. This effect is also linked to neurological conditions like Autism, and Alzheimer’s.
3) **Immunotoxicity**: even at considered “non-toxic” levels, heavy metals can suppress immune systems. This causes decreased resistance to bacterial infections, as well as increased susceptibility to viruses, fungus, and parasites. This could mean chronic, repetitive infections. This may also be linked to auto-immune disease.
4) **Allergies**: as the immune system is suppressed, we also develop antigens to heavy metal/protein complexes in the body. This leads to chronic allergies. As well we may see eczema, psoriasis, scleroderma and other skin conditions associated.
5) **Hormonal Imbalances**: Heavy metals have been found to negatively affect the endocrine system, disrupting function of the pituitary gland, thyroid gland, thymus gland, adrenal gland, enzyme production processes, and affecting many hormonal functions even at very low levels of exposure. This may lead to hypothyroidism, auto-immune disease, infertility, menstrual problems, frequent miscarriages, fibroids, endometriosis, menopausal symptoms, and hormonal imbalances.
6) **Heavy metal particulars**:
   a) **Aluminum**: incoordination, poor memory, depression, tremors, impaired cognition, lung and bladder cancer, behavior difficulties, colic, liver dysfunction, Alzheimer’s.
   b) **Antimony**: respiratory tract problems, cardiac depression, skin problems, menstrual irregularities, spontaneous abortion
c) **Arsenic**: skin, liver lung, kidney and bladder cancer; hormone imbalances, liver deterioration, skin afflictions, gastrointestinal distress, malaise, muscle weakness, cardiovascular disease, garlic breath, altered sensations of hands and feet.

d) **Beryllium**: cancer

e) **Bismuth**: stomatitis, salivation, pathological fracture (osteoarthritis), encephalopathy.

f) **Cadmium**: leg cramps, nausea, vomiting, diarrhea, joint pain, kidney stones, yellow teeth, dry skin, hair loss

g) **Gold**: kidney problems

h) **Lead**: fatigue, headaches, poor memory, attention deficit, decreased coordination, peripheral neuropathy (loss of feeling in extremities), anemia, kidney problems, lowered immune system, lowered sperm count, hormonal imbalances, hypertension

i) **Mercury**: irritability, excitability, anxiety, restlessness, depression, insomnia, delirium, kidney toxicity, gastric pain, gingivitis, thyroid problems, neurotoxicity, tremor, autism

j) **Nickel**: lung and nasal sinus cancer

k) **Uranium**: lung cancer

**How do we test for heavy metals?**

Urinary provocation test. This involves a urine collection for a specified time period after the administration of a chelating agent. This chelating agent mobilizes elements (namely heavy metals) from otherwise slowing exchanging tissues. This represents the deep tissue stores of heavy metals in the body.

**How do we get rid of them?**

Chelation therapy: the administration of a chelating agent into the body, which forms bonds to the heavy metals and removes them from the body. The chelating agents are not metabolized by the body and are 100% eliminated; they simply form stronger bonds to heavy metals, thereby assisting the metals removal.

**Who can undergo chelation therapy?**

The procedure is quite safe, and has been used in patients of all ages. A Serum Creatinine MUST be performed prior to treatment to determine the function of the kidneys. The kidneys must be in optimal condition, because they are responsible for eliminating the chelating agents and attached heavy metals.

**Further research resources:**

http://www.hc-sc.gc.ca/sr-sr/finance/tsri-irst/proj/metals-metaux/tsri-241_e.html


For Further information please ask about the toxic metal tests and removal that is offered by Dr. Alana Berg, ND.