



Common Symptoms and Sources of Heavy Metals

ELEMENT	SYMPTOMS and diseases associated with heavy metals	COMMON SOURCES of heavy metals
Aluminum	Absorbed through the skin, lungs and intestinal tract. Skin rashes, eczema, contact dermatitis pulmonary disease, bone diseases, osteoporosis, neurotoxicity, suspected cause of Alzheimer's, Parkinsons, dementia and other neurological disorders.	Personal care products: cosmetics, antiperspirants, astringents Food: food additives Household: Beverage cans, pots and pans, foil, water treatment Pharmaceutical: antacids, buffered aspirin Other: dialysis
Antimony	Topical and respiratory irritant Dizziness, headache, insomnia, loss of smell, hypertension, ECG abnormalities, menstrual disturbances, spontaneous abortion	Lifestyle: smoking Industry: automobile batteries, incinerators, solder, sheet metal, flame retardants, plastics, textiles, rubber, adhesives, paper, paint, ceramics Pharmaceutical: anti fungal or de-worming agents
Arsenic	Absorbed through the mouth, lungs and skin. Respiratory and gastro intestinal irritant, headaches, anaemia, anxiety, cardiac arrhythmias, neurotoxicity, depression, garlic breath, hyperpigmentation of skin, Neuralgia and neuropathy, nephritis, spontaneous abortion and birth defects, promotes tumor formation, cancer (lung, skin, liver, bladder and kidney)	Food: well water, seafood and shellfish, meats Lifestyle: smoking Industry: Automobile batteries, asphalt, lead and copper refining, wood preservative, pesticides (primarily cotton), fungicides, insecticides, herbicides, algacides, rodenticides, growth stimulants for plants and animals, lead oxide, glass, electronics Environment: smog, polluted air
Cadmium	Absorbed by inhalation or ingestion. Primarily affects the lungs, kidney, bones and immune system. Liver dysfunction, kidney disease, anaemia, behavioural changes, emphysema, migraines, hypertension, hypoglycemia, autoimmune disorders, high cholesterol, neurotoxicity, birth defects, infertility, cancer (lung, kidney, prostate, uterus, breast, bladder, pancreas, leukemia)	Lifestyle: smoking (both first and second) is the primary source Food: well water, food (if soil contamination), seafood, liver and kidney meat Industry: Asphalt, batteries, plastics, paints, metal soldering and welding, metallurgy, photography, printing, textiles, rubber, fungicides, fertilizer Environment: air pollution
Copper	Essential in small amounts, toxic in high concentrations and can lead to rheumatic conditions, tumours, liver or kidney disease	Food: Tap water Household: cookware



		<i>Other:</i> high levels of zinc
Lead	Neuro-toxin that targets the nervous system, kidneys, bones, heart and blood and poses greatest risk to infants, children and pregnant women. Abdominal pain, colic, anaemia, fatigue, anxiety, headaches, mood swings, liver dysfunction, mental retardation, Parkinson's disease, vertigo, weight loss, hearing loss, still births, developmental delay, tooth decay, menstrual problems, cancer	<i>Food:</i> lead-contaminated water and food <i>Personal care products:</i> cosmetics <i>Lifestyle:</i> smoking <i>Industry:</i> lead crystal, pesticides, batteries, solder, pipes, roofing materials, caulking, petroleum refining, radiation protection, lead-based paints, plastics, ceramics, electrical wire insulation and devices, TV glass, brass, bronze, gasoline, mining, fertilizer, candle wicks, auto exhaust <i>Environment:</i> contaminated soil, air pollution <i>Other:</i> some herbal products from India and China
Mercury	Affects the nervous system, kidneys and liver. Fatigue, irritability, emotional disturbances, neuropathy, nephritis, altered libido, spontaneous abortion, excessive salivation, tremors, menstrual disorders, autoimmune disease, birth defects.	<i>Food:</i> fish (freshwater bass and trout, saltwater tuna and swordfish), tap and well water <i>Dental:</i> "silver" amalgams are a primary source PCP: skin lightening creams <i>Environment:</i> naturally occurs in air and soil <i>Industry:</i> thermometers, light bulbs, batteries, fireworks, pesticides, fungicides, asphalt, agricultural chemicals, photography, electrical equipment, textiles, interior paint before 1990, waste incineration, paper industry <i>Pharmaceutical:</i> vaccines, antiseptic creams, laxatives, haemorrhoidal preparations
Nickel	Dermatitis, respiratory irritation, colic, emphysema, excessive salivation, fatigue, headache, muscle pain, vertigo, liver toxicity, male infertility, cancer	<i>Food:</i> baking powder, cocoa powder, tea, hydrogenated oils <i>Household:</i> jewellery, coins, stainless-steel cookware, braces <i>Lifestyle:</i> smoking <i>Industry:</i> ceramics, cast iron, metal industry, batteries, electroplating, electrical circuits, dyes, pesticides, asphalt, power plants, waste incinerators, diesel exhaust
Thallium	Anxiety, hair loss, muscle pain, headache, colic, liver dysfunction, colitis, gastroenteritis, abdominal pain, burning mouth and throat, neurological disorders	<i>Food:</i> seafood, fish, water <i>Lifestyle:</i> smoking <i>Environment:</i> air pollution