



What Is Heavy Metal Poisoning?

Heavy metals are a category of elements in the periodic table. The term refers to naturally occurring metallic elements that are especially dense (in other words, they are “heavy for their size” compared to many other elements). Examples of heavy metals include copper, platinum, mercury, and lead.

Heavy metal poisoning can happen when you absorb too much of any particular heavy metal toxin. This can occur with potentially any metal if it is present in high enough quantities. However, the four most common heavy metals that can get absorbed in toxic amounts are:

- *Cadmium*
- *Arsenic*
- *Mercury*
- *Lead*

Under normal circumstances, it can be difficult to absorb significantly high concentrations of these four heavy metals, but they can be present in food, pollution, and more. Most often, heavy metal poisoning occurs over a long period of time, like working in an industry where you are consistently exposed to a heavy metal toxin without the proper protective gear in industries such as agriculture, medicine, and even the food industry.

Heavy Metal Toxicity Symptoms

Heavy metal poisoning symptoms can vary based on the metal, but some general symptoms that overlap through most instances of excessive exposure to heavy metals include:

- *Nausea and vomiting*
- *Diarrhea*
- *Abdominal pain*
- *Tingling sensation in the hands and feet*
- *Shortness of breath*
- *Sudden chills*
- *Weakness and fatigue*

Children may experience bone deformities or generally weak bones. Heavy metal poisoning during pregnancy can potentially contribute to premature births or miscarriages.

Along with the above, different metals can also exhibit their own specific symptoms, as described hereafter:

Arsenic Poisoning Symptoms

Arsenic is commonly used in chemical pesticides and certain industrial applications. The symptoms of arsenic poisoning include:

- *Drowsiness*
- *Headaches*
- *Confusion*
- *Seizures*

It can also contribute to neurological symptoms, including significant brain damage, nerve disease in your extremities, and a breakdown of the fatty layer covering the nerve fibers, known as the myelin sheath.

Arsenic poisoning can also affect the skin, resulting in a collection of arsenic in the soft layers just below the skin, known as edema. Accumulation of arsenic can also cause white bands extending across the fingernails. Some people may experience bad breath odors that smell like garlic.

With chronic arsenic exposure - usually a result of occupational exposure where the heavy metal toxin is common - people may experience a significant weakening of muscles and muscle aches, along with chills and a fever. They may also exhibit hardened patches of skin on their palms and feet, known as hyperkeratosis, as well as unusual darkening or reddening of the skin and scale-like inflammation. These symptoms can occur between two and eight weeks after initial exposure.

Inorganic arsenic, which can be found in soil, sediment, and groundwater, can accumulate in the liver, kidneys, lungs, and GI tract. While the symptoms may be similar to the above, inorganic arsenic operates slightly differently, leaving a residue within your organs, along with common tissues like skin and hair.

Acute inorganic arsenic poisoning can cause GI issues (diarrhea, vomiting, and nausea), muscle spasms, severe burning in the throat and mouth, and abdominal pain.

Cadmium Poisoning Symptoms

Cadmium is found in batteries, vapor lamps, electroplating, and some soldering products. Symptoms of cadmium poisoning can occur as soon as two to four hours following exposure.

Accumulation of cadmium can lead to muscle pain and lung issues, including:

- *Emphysema*
- *A buildup of fluid in the lungs*
- *Breathlessness*

Cadmium poisoning can also lead to kidney damage that is characterized by:

- *Proteinuria (high levels of protein in the urine)*
- *Liver dysfunction*
- *Softening of bones*

Lead Poisoning Symptoms

Lead is most commonly found in lead-based paint items, which can include toys. It may otherwise be found in art supplies and contaminated dust. Although lead gets stored in the bones, the toxic metal can have severe effects on every organ as well as mental functions. Symptoms can also vary based on your age and the severity of exposure.

In children, lead poisoning symptoms can develop over three to six weeks. Heavy lead exposure can cause kids to suddenly become sluggish, less playful, clumsier, or more irritable.

It may also contribute to:

- *Poor appetite*
- *Constipation*
- *Slurred speech*
- *Fluctuations in kidney function*
- *Iron deficiency anemia, which can appear as unusually pale skin or the craving for non-nutritive substances i.e., dirt, starches, ice, etc.*

Some children may experience significant behavioral or learning problems, including sudden deficiencies in cognitive function and coordination.

In adults, lead poisoning can lead to:

- *Extreme fatigue*
- *Weakness*
- *Pale skin*
- *Shortness of breath*
- *Dizziness or lightheadedness*
- *Headaches*
- *Cold hands and feet*
- *Irritability*
- *Soreness or inflammation of the tongue*
- *Brittle nails*
- *Fast heartbeat*
- *Restless Legs Syndrome*
- *Hallucinations*
- *Mental and behavioral changes i.e., depression, anxiety, etc.*

Mercury Poisoning Symptoms

Mercury is a naturally occurring metal found in soil and water. This means that small amounts of mercury eventually finds its way into certain food products. While that amount is usually not enough to cause alarm, some foods contain more mercury than others.

Mercury poisoning is most commonly attributed to consuming too much methylmercury, an organic form of mercury found in seafood. Eating high amounts of seafood over an extended period of time may contribute to mercury poisoning symptoms.

Mercury poisoning usually occurs over a long period of time. It can result in:

- *Increased irritability*
- *Memory issues*
- *Anxiety*
- *Depression*
- *Tremors*
- *Shyness*
- *Numbness*

In adults, mercury poisoning may also contribute to:

- *Sudden speech and hearing difficulties*
- *Muscle weakness*
- *Lack of coordination*
- *Loss of feeling in the face and hands*
- *Sudden, significant vision changes*

High levels of mercury exposure can also have severe effects on early childhood development. Young children and infants who have been exposed to high levels of mercury may experience delays in fine motor skills, cognition, spatial awareness, and language development later on in life.