Contaminants in Drinking Water: Heavy Metals

What are heavy metals?

Heavy metals exist naturally in the environment and can be toxic to people in certain quantities. They include aluminum, arsenic, cadmium, calcium, chromium, cobalt, copper, iron, magnesium, manganese, nickel, strontium, vanadium, and zinc.

How do heavy metals affect people?

People need small amounts of certain heavy metals like calcium and iron for good nutrition. When people consume too much of a heavy metal, it can result in severe health problems such as liver, kidney, and intestinal damage, cancer, and anemia (which is when the body has fewer red blood cells than it should).

How do people get exposed to heavy metals?

People can be exposed to heavy metals by breathing in contaminated air, eating, or drinking contaminated food and water, and absorbing heavy metals through the skin. Common sources of heavy metals include agricultural and industrial runoff, mines and factories, and commercial tobacco smoke.

How do heavy metals get in drinking water?

Heavy metals can contaminate drinking water sources through groundwater movement, water pipe corrosion, and surface water run-off. Heavy metals are being detected at higher than natural levels in surface water and soil, as these metals are pulled from the earth's crust through human activity such as industrialization, agriculture, and mining.

How can I prevent heavy metal exposure?

The first step to prevent heavy metal exposure is to test your home's drinking water. This can be done by hiring a testing service or ordering a test kit and doing the testing yourself. It is also important to be aware of any local drinking water advisories where your home is located.

How can I get rid of heavy metal in my drinking water?

If heavy metals are identified in your home's drinking water, it's crucial to address them by:

- Installing and maintaining a water filtration system that specifically removes or reduces heavy metals in drinking water
- Plumbing: Consider replacing old pipes to safer alternatives like copper or plastic
- Consider drinking bottled or purified water until the plumbing is addressed or a filter is installed

Where can I learn more about heavy metals?

For more information on heavy metals or for technical assistance, contact GLITEC (Great Lakes Inter Tribal Epidemiology Center) at 715-588-3324 or consult your local health department.

Sources:

Briffa J, Sinagra E, Blundell R. Heavy metal pollution in the environment and their toxicological effects on humans. https://www.sciencedirect.com/science/article/pii S2405844020315346. Published September 2020. Accessed July 2023.

WATER TESTING

In Tribal Schools & Childcare Centers

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