

Hexavalent Chromium (Cr⁺⁶)

What is Hexavalent Chromium?

Hexavalent chromium is a form of the metallic element chromium. Chromium is a naturally occurring element found in rocks, animals, plants, soil, and volcanic dust and gases. It comes in several different forms, including trivalent chromium and hexavalent chromium. Trivalent chromium [chromium (III)], is proposed to be an essential nutrient for the body. Hexavalent chromium [chromium (VI)], is generally produced by industrial processes.

Does Hexavalent Chromium have any additional names?

Hexavalent chromium can also be referenced as Cr VI, Cr⁺⁶, Chromium (VI).

What are the known health effects?

Hexavalent chromium is considered a health risk whether it contacts the skin, is inhaled, or is ingested. It can cause nausea, gastrointestinal distress, stomach ulcers, skin ulcers, allergic reactions, kidney and liver damage, reproductive problems, along with lung and nasal cancer.

How does exposure occur?

Hexavalent chromium is likely naturally occurring, it can enter surface water drinking water supplies from unintended leaks and spills, landfill leachate, wastewater discharges (due to its uses in consumer goods and manufacturing).

Hexavalent chromium exposure occurs through breathing it in, ingesting it in food or water, or direct contact with the skin.

Is this contaminant regulated?

Hexavalent chromium is an emerging contaminant that is not yet federally regulated. Under the Safe Drinking Water Act, the EPA established the UCMR program to monitor for priority unregulated contaminants. We were required to test for hexavalent chromium under UCMR update #3.

How can I reduce exposure?

Hexavalent chromium in drinking water can be removed at home by reverse osmosis.

Additional information regarding Hexavalent Chromium, including the information referenced, can be found at:

https://www.niehs.nih.gov/health/materials/hexavalent_chromium_508.pdf

https://www.wqa.org/Portals/0/Technical/Technical%20Fact%20Sheets/2016_Chromium.pdf