

# **wellcare<sup>®</sup> information for you about Chromium & Groundwater**

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## **What is Chromium?**

Chromium is a naturally-occurring element that exists in several different forms. The most common forms are chromium(0), chromium(III) and chromium(VI). Chromium(III) occurs naturally in the environment, while chromium(VI) and chromium(0) are created by industrial processes.

Chromium(0) is a metal used for making steel. Chromium(VI) and chromium(III) are used in making dyes and pigments, leather tanning, wood preserving, and chrome plating.

The EPA reports that the largest chromium releases from industrial use occurred in these states, in order of the size of the release: Texas, North Carolina, Indiana, Ohio, Utah, Arkansas, Kentucky, Pennsylvania, Georgia and Idaho.

## **What are the health effects of Chromium?**

Chromium enters water, air, and soil primarily in the chromium(III) and chromium(VI) forms. Ingesting large amounts of chromium(VI) can cause stomach upsets and ulcers, convulsions, kidney and liver damage, and circulatory system disorders. Some studies have linked chromium(VI) to cancer in laboratory animals, though the amounts of chromium given to the animals far exceed the amounts that would be present in drinking water. Chromium(III) is an essential nutrient with relatively low toxicity.

## **How do I test for Chromium?**

The EPA requires public water suppliers to test for chromium and treat water with total chromium levels above 100 parts per billion. Well owners should follow this standard. Contact your state or local health department for a list of state-certified laboratories in your area.

## **What are the treatments for Chromium in drinking water?**

The EPA approved the following methods to remove chromium from drinking water: coagulation/filtration, ion exchange, reverse osmosis and lime softening. A licensed well professional can assist you in determining the best treatment for your situation.

### For more information about Chromium

Agency for Toxic Substances and Disease Registry (ASTDR). Chromium. Retrieved on May 29, 2007 from [www.atsdr.cdc.gov/tfacts.htm](http://www.atsdr.cdc.gov/tfacts.htm)

U.S. Environmental Protection Agency (EPA). Consumer Factsheet on: CHROMIUM. Retrieved on May 25, 2007 from [www.epa.gov/safewater/contaminants/dw\\_contamfs/chromium.html](http://www.epa.gov/safewater/contaminants/dw_contamfs/chromium.html)

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### For more information on your drinking water

Contact your local water well professional or health department for information on ground water in your area. The following websites provide up-to-date information on efforts to protect drinking water supplies and steps you can take as a private well owner. In addition, you may contact the **wellcare®** hotline at **1-888-395-1033**.

Underwriters Laboratories Inc. Drink Well™ Well Water Testing  
U.S. Environmental Protection Agency  
Water Quality Association

[www.uldrinkwell.com](http://www.uldrinkwell.com)  
[www.epa.gov](http://www.epa.gov)  
[www.wqa.org](http://www.wqa.org)

### For more information about wells and other wellcare® publications

**wellcare®** is a program of the **Water Systems Council (WSC)**. WSC is a national nonprofit organization dedicated to promoting the wider use of wells as modern and affordable safe drinking water systems and to protecting ground water resources nationwide. This publication is one in a series of **wellcare®** information sheets. There were more than 60 available at the time this document was published. They can be downloaded FREE from the WSC website at [www.watersystemscouncil.org](http://www.watersystemscouncil.org). Well owners and others with questions about wells or ground water can also contact the **wellcare®** hotline at **1-888-395-1033** or visit [www.wellcarehotline.org](http://www.wellcarehotline.org)



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