

Acknowledgement:

This Fact Sheet is one of a series developed by an Interagency Committee with representatives from Saskatchewan Ministry of Health, Regional Health Authorities, Saskatchewan Watershed Authority, Saskatchewan Ministry of Environment, Saskatchewan Ministry of Agriculture, Agriculture and Agri-Food Canada - AESB and Health Canada.

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Barium

(For Private Water and Health Regulated Public Water Supplies)

What Is Barium?

Barium is a soft silver-white metal. In nature, it exists combined with other elements like sulphur, carbon and oxygen. Barium is used in making some electronic devices, fireworks, ceramics and glass. Barium compounds may also be used in oil well drilling, X-ray imaging, and spark plugs.

How Does Barium Get Into Water?

Barium can end up in water and soil due to a number of activities. These activities include the discharge and disposal of drilling wastes, copper smelting, and motor vehicle parts and accessories manufacturing. Some barium compounds dissolve easily in water. These may be found in lakes, rivers, and streams. Natural barium may also be found in water sources.

How Does Barium Affect My Health?

Drinking very high levels of barium compounds over the short term may cause stomach irritation, muscle weakness, increased blood pressure, or cardiovascular disease.

Other Considerations

The more toxic barium compounds often do not dissolve in water and settle out. Barium does not attach to most soils and may end up in groundwater. It does not usually accumulate in aquatic life.

There is no routine medical test to show whether you have been exposed to barium. However, doctors can measure barium in the blood, bones, urine, and feces, using very complex instruments. These tests are usually done only for cases of severe barium poisoning and for medical research.

How Can I Remove Barium From My Drinking Water?

Barium can be removed from water by softening, reverse osmosis, distillation, and electro dialysis.

What Is The Standard For Barium In Drinking Water?

The Health Canada's Guidelines for Canadian Drinking Water Quality and Saskatchewan Environment's Drinking Water Quality Standards and Objectives have established a maximum acceptable concentration (MAC) of 1 mg/L.

How Can I Find Out If There Is Barium In My Water?

Most water quality testing laboratories can determine how much barium is present in a water supply. For information on sampling instructions and containers, you should contact an accredited laboratory. If using the Saskatchewan Disease Control Laboratory, sample containers are available from the laboratory, local Health Regions, or rural municipalities.

Need More Information?

Health Regulated Public Water Supply

For more information on this fact sheet and/or other water quality issues relating to health regulated public water supplies contact your local health region public health inspector.

Private Water Supply

For more information on how barium impacts on human health contact your local health region office. For information on how barium impacts agricultural operations contact Saskatchewan Ministry of Agriculture through your Regional Office, the Agricultural Knowledge Centre at 1-866-457-2377 or on the internet (<http://www.agriculture.gov.sk.ca>).

<p>Government of Saskatchewan Water Information website www.SaskH2O.ca</p>	<p>Water Inquiry Line Questions about water? Call 1-866-SASK H2O (1-866-727-5420) to be referred to proper agency.</p>
<p>Saskatchewan Ministry of Health http://www.health.gov.sk.ca/environmental-health Regional Health Offices Saskatoon: Saskatoon (306) 655-4620 Sunrise: Yorkton (306) 786-0600 Kelsey Trail: Melfort (306) 752-6310 Five Hills: Moose Jaw (306) 691-1500 Sun Country: Weyburn (306) 842-8618 Heartland: Rosetown (306) 882-6474a Prairie North: North Battleford (306) 446-6400 Prince Albert Parkland: Prince Albert (306) 765-6600 Cypress: Swift Current (306) 778-5280 Regina Qu'Appelle: Regina (306) 766-7755 Mamawetan Churchill River: La Ronge (306) 425-8512 Keewatin Yatthe: Buffalo Narrows (306) 235-5811</p>	<p>Saskatchewan Watershed Authority, Head Office, Moose Jaw (306) 694-3900 Website: www.swa.ca <i>Regional Offices:</i> http://www.swa.ca/AboutUs/Contact.asp?type=Offices</p> <p>Sask Water Corporation Head Office, Moose Jaw Customer Service 1-888-230-1111 Website: http://www.saskwater.com</p> <p>Agri-Environment Services Branch * Agriculture and Agri-Food Canada Website http://www4.agr.gc.ca/AAFC-AAC/display-afficher.do?id=1187362338955&lang <i>Regional Office:</i> http://www4.agr.gc.ca/AAFC-AAC/display-afficher.do?id=1254830746884&lang=eng</p>
<p>Saskatchewan Ministry of Health Saskatchewan Disease Control Laboratory, Regina General Inquiry 1-866-450-0000 Phone: (306) 798-2125 // Fax (306) 798-0071 Website: http://www.health.gov.sk.ca/lab</p>	<p>Saskatchewan Ministry of Agriculture General Inquiry 1-866-457-2377 Agricultural Operations Regina (306) 787-4680 Irrigation Development Outlook (306) 867-5500 Website: www.agriculture.gov.sk.ca</p>
<p>Health Canada First Nation and Inuit Health Branch, Regina (306) 780-5434 // FAX (306) 780-5107 Website: http://www.hc-sc.gc.ca</p>	<p>Saskatchewan Ministry of Environment Toll-Free 1-800-567-4224 Spill Emergency Toll-Free 1-800-667-7525 Website: http://www.environment.gov.sk.ca</p>

* Agri-Environment Services Branch (AESB) is an integration of three existing components: Prairie Farm Rehabilitation Administration (PFRA), National Land and Water Information Service (NLWIS) and Agri-Environmental Policy Bureau (AEPB).