



calgary health region

Lead pipes and drinking water

What is lead?

Lead is a naturally occurring substance present in our soil, food and air. Lead has many industrial uses. Lead pipes were sometimes used to connect homes to municipal water systems until around 1960.

How are people exposed to lead?

Over the past few decades, the level to which the general public is exposed to lead has been reduced significantly because of restrictions in the use of lead as an additive in gasoline, paint and solder. Lead additives in gasoline were completely eliminated in the early 1990s. Lead in paint was banned in the mid-1970s. Lead in solder (the mixed metal alloy used to connect pipes or other pieces of metal) on tin cans and drinking water pipes was reduced or eliminated by the mid-to-late 1980s.

Lead can leach into drinking water from lead service lines and plumbing, although most human exposure to lead comes from other sources.

Whose health is most affected by lead?

Young children five years of age or younger are the most sensitive to the effects of lead because they are still developing and are able to absorb ingested lead more easily than adults. Long-term exposure to lead may increase the risk of subtle impairment of learning capacity and intellectual development.

Pregnant women can pass lead in their blood to their fetus during pregnancy. Lead levels for pregnant women should be kept as low as possible.

Special recommendations are made for infants who drink formula or juice prepared with tap water because the water used to make formula can contribute 40 to 60 per cent of an infant's lead intake.

Do breastfeeding mothers need to use filtered water if they have lead service pipes?

No. Breastfeeding is beneficial to babies and lead transfer from breast milk is minimal. Breastfeeding mothers can follow the recommendations for non-pregnant adults.

Where can I get further information?

For more information about water quality and the pipes serving your home, contact your municipality. For information about health concerns regarding lead, please contact Health Link at 943-LINK (5465) for more information, or visit the Calgary Health Region website at www.calgaryhealthregion.ca.

Does Alberta have a drinking-water quality standard for lead?

Yes. Alberta adopts the Canadian Drinking Water Quality Guideline for lead of 10 micrograms per liter or 10 parts per billion.

For more information, on this and other Calgary Health Region news, please refer to our website at www.calgaryhealthregion.ca

How does lead get into drinking water?

Potential sources of lead can include water-mains, service lines and lead-containing components in household plumbing (pipes, solder, and fixtures).

Homes built before 1960 are more likely to have lead connections. When lead concentrations are above Canada's acceptable standard (10 micrograms per litre) in the drinking water of a home, it likely originated from the lead pipes servicing the home, with a much smaller contribution from the solder and fittings.

What can I do to reduce the risk of exposure if the pipes in my house are lead?

Children five years of age or younger and pregnant women should take steps to reduce their exposure to elevated levels of lead.

Until a water treatment device has been installed:

- Run or flush the drinking water tap for five minutes first thing in the morning or when the water has been sitting in the pipes for longer than six hours;
- use only cold water for food and drink preparation; and
- use ready-to-use infant formula.

Information on how to reduce lead exposure in the home can be found at: http://www.hc-sc.gc.ca/ewh-semt/contaminants/lead-plomb/asked_questions-questions_posees_e.html

In the short-term: Install an approved plumbed-in or on-the-tap filter to reduce lead. Use a filtration system that is certified as meeting the NSF-53 standard for reducing lead. When using these filtration systems it is very important to follow the manufacturer's instructions carefully.

In the long-term: Replace lead pipes.

What if my child has been drinking water from the tap and we have lead service lines?

Should I be concerned?

The major sources of lead exposure for children have decreased significantly over the years because of the elimination of lead in gasoline, paint and solder in tin cans. The current level of lead found in our drinking water is a small part of a person's lead exposure and is not an immediate risk.

If I have lead service lines, can I use the water for bathing, showering, and washing dishes and clothes?

Yes. Activities such as bathing, showering and washing dishes and clothes will not cause undue exposure to lead. Lead in water is not easily absorbed through the skin or mucous membranes.