LEAD IN DRINKING WATER
QUESTIONS & ANSWERS

How can lead get into my tap water?

Despite the high quality of drinking water delivered to consumers from regulated water treatment facilities and distribution systems, the lead from older service connections and plumbing can leach into tap water. Leaching can happen when water flows through older lead service connections or plumbing, particularly if they are corroding, or through brass fittings that may have high lead content. Higher concentrations of lead are generally found in samples taken from taps that have not been turned on for more than six hours in homes built before 1960.

Is lead in my drinking water a health concern?

There are many environmental sources of lead, such as paint, soil and dust. As these materials are ingested, the lead they contain can accumulate in our blood. Lead in drinking water is a minor contributor to overall blood lead levels in adults.

Blood lead levels across Canada are quite low and have been falling over the last few decades due to regulations to reduce environmental contributors of lead, such as the removal of lead from all gasoline.

Elevated blood lead levels are a concern for unborn babies and children five years of age or younger because they absorb lead more readily than older individuals.

What is Alberta's standard for lead in drinking water?

The Guidelines for Canadian Drinking Water Quality, adopted by Alberta through regulation, specifies a maximum acceptable concentration for a number of parameters. The maximum acceptable concentration for lead in drinking water to protect public health is 10 micrograms per litre (parts per billion).

How can I tell if my water contains lead in excess of the maximum acceptable concentration in the Guidelines for Canadian Drinking Water?

Lead dissolved in water cannot be seen, and has no taste or smell. Laboratory analysis is necessary to determine lead levels in your water.

Lead in drinking water poses a potential health threat only to unborn babies and children five years of age and younger. Water testing is only recommended in homes built before 1960 where pregnant women or young children reside.

How can I get my water tested?

There are two agencies in Canada that maintain lists of accredited laboratories:

- The Canadian Association for Environmental Analytical Labratories (http://www.caeal.ca/)
- The Standards Council of Canada (http://www.scc.ca/en/index.shtml)

Who will pay to replace lead pipes?

The section of service pipe between the water main and the curb stop is owned by the municipality / water utility. The municipality / water utility is responsible for the costs associated with this portion of the line.

The section between the curb stop and the house is owned by the home owner. The homeowner is responsible for costs associated with this portion of the line.

How do I know if my plumbing or service connection contains lead?

Generally, the age of a home is a good indicator of the likelihood of having lead service connections. Homes built prior to 1960 are most likely to have lead in their water service connections.

A plumber or home inspector can identify lead pipes in your home. You can also contact your municipality to determine if your service connections are lead.

What should I do if I live in a house with a lead service connection?

Lead service connections are only of concern in homes where pregnant women and/or children five years of age or younger reside. For non-pregnant adults and children six and older, lead in drinking water is a minimal risk. In homes where lead levels in drinking water do not exceed the acceptable limit of 10 µg/L, it may be that no further action is required.

While lead in drinking water poses a minimal health risk, pregnant women and parents of children five years of age and younger living in older homes can further reduce the health risk by:

- Install and ensure proper maintenance of a filtering device approved by the National Sanitation Foundation (http://www.nsf.org/);
- Use cold, flushed water for drinking and preparing food; and
- Avoid hot tap water – hot water may contain higher concentrations of lead.

If my water tests higher for lead than the national standard, what should I do?

In older homes where pregnant women and/or children five years of age or younger reside and the water test indicates that lead levels in the drinking water exceed 10 µg/L but do not exceed 30 µg/L, the following is recommended:

- Install a water filtration device approved by the National Sanitation Foundation (NSF) to remove lead, replacing filtration cartridges according to the manufacturer's instructions. On the website, select the "lead reduction" box under the "Reduction Claims for Drinking Water Treatment Units – Health Effects" section, and then click "Search" to see the status of specific products.
- Contact Alberta Health Link at 1-866-408-LINK (5465).

If the lead level exceeds 30 µg/L it is recommended that you DO NOT use the tap water for food preparation or drinking without a water filtration device approved by the NSF for removing lead. Further steps may include:

- Install a water filtration device approved by the National Sanitation Foundation (NSF) to remove lead, replacing filtration cartridges according to the manufacturer's instructions. On the website, select the "lead reduction" box under the "Reduction Claims for Drinking Water Treatment Units – Health Effects" section, and then click "Search" to see the status of specific products.
- Contact Alberta Health Link at 1-866-408-LINK (5465).

What should I do until a water filtration device is installed?

Until a water filtration device is installed, the following will help decrease exposure to lead in drinking water:

- Run or flush the taps 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 or drink preparation
- Use ready-to-use infant formula
- If your water lead levels exceed 30 ug/L it is recommended that you not consume water until a water filtration device is installed

Why is lead in drinking water of concern for children and pregnant women?

Lead in drinking water is considered a low health risk, especially compared to other environmental sources. However, children five years of age or younger are developing quickly, and the volume of water they consume compared to their body size could lead to elevated blood lead levels. Young children absorb lead more easily than older children and adults. Specific recommendations are made for formula-fed infants because the lead in water used to make formula could contribute 40-60 per cent of an infant's overall lead intake.

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

While lead in drinking water may pose a minimal health risk, pregnant women and parents of children five years of age or younger living in older homes (pre-1960), and

where lead levels in drinking water exceed 10 ug/L, can reduce the health risk by installing and ensuring proper maintenance of a filtering device approved by the National Sanitation Foundation. On the website, select the “lead reduction” box under the “Reduction Claims for Drinking Water Treatment Units – Health Effects” section, and then click “Search” to see the status of specific products.

What about drinking water consumed in public facilities?

Lead service connections were not used in the development of public facilities. Until 1960, only service connections from water mains to households and housing complexes of eight units or less were made of lead.

I lived in an older home for 40 years before moving. Should I be worried about the lead I may have consumed in the tap water in my old home?

For non-pregnant adults and children six and older, lead in drinking water is a minimal risk. Blood lead levels decline within a month after the environmental source is removed. Persons concerned about health effects from lead should talk with their physicians.

Do breastfeeding mothers need to use filtered water or bottled water if they have lead service connections?

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

What should households with older children and non-pregnant adults do if they have lead service connections?

Older children and adults are at very low risk of adverse health effects from lead in drinking water. Health risks are generally associated with long-term exposure to lead from other environmental sources. Nevertheless, concerned homeowners can have their water tested for lead levels.

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

Yes, for any age group, activities such as bathing, cleaning dishes and washing clothes will not cause undue exposure to lead, regardless of the water lead level.

What about lead in sources other than drinking water?

Lead is a substance present in our soil, food and air. While lead can leach into the drinking water from lead service lines, the bulk of human exposure is through other sources. Lead exposure in young children, for instance, is generally from ingesting or inhaling dirt and dust.

Over the past few decades, restrictions have been placed on the use of lead as an additive in gasoline, paint and solder. Lead additives were completely removed from gasoline in the early 1990s and from paint in the mid-1970s. Lead in solder used for tin cans and drinking water pipes was reduced or eliminated in the late 1980s. These measures have reduced the public's exposure to lead.

Where can I get more information?

For more information, contact your municipality or your water provider.

For health information with respect to lead, call Alberta HealthLink at 1-866-408-LINK (5465).

For information on the quality of drinking water from your service provider, contact Alberta Environment's information line at 780-427-2700 (dial 310-0000 first for toll-free access).