Information on Lead exposure

What is lead?

Lead is a toxic heavy metal with many uses in industry, construction, and manufacturing. Though it is no longer commonly found in consumer products, you might still be exposed to it through older products and homes, or contamination of the environment through water, dust, and soil.

Why should I be concerned?

Lead causes serious health problems. The greatest risk is during fetal and early childhood development because lead is toxic to the brain and nervous systems, even at low levels. It can impair cognitive and social development in children and affect fetal brain development before birth if a pregnant person is exposed to lead.

In adults, lead causes damage throughout the body, most seriously to the brain, kidneys, and heart, and can also cause high blood pressure and anemia.

Very high levels of lead exposure (e.g., due to consuming products contaminated with large amounts of lead) can cause severe and sudden illness.

Though lead levels in the Canadian population and the environment have declined significantly since the 1970's, evidence indicates that levels previously thought to be 'normal' still cause harm. We now know there is no safe level of lead in the blood.

Who is at risk?

Children under the age of five are most at risk of significant health effects and most likely to engage in behaviour that exposes them to lead (putting things in their mouth and crawling on the ground). People who are pregnant should also be cautious about lead exposure since it can affect the developing baby.

Individuals more likely to be exposed to lead are those who live in areas with industries such as mining or smelting (particularly people that directly work with lead, and their families), those who live in older and un-renovated homes, and those with hobbies that involve lead such as hunting or fishing.

How could I be exposed?

How can I avoid exposure?

Lead has been removed from most consumer products because of its health effects. However, British Columbians are still exposed to lead from some sources. Some examples are dust from industries that use lead, degraded paint in older homes, and privately imported health products or cosmetics. Drinking water in Canada is required to have very low levels of lead when delivered to consumers, and building codes restrict the use of lead in plumbing that carries drinking water. If you live in an older home, replacing your fixtures or flushing your taps before drinking can help to minimize any possible lead in drinking water.

For a comprehensive list of potential sources of lead and how to minimize exposure, please visit Health Canada's frequently asked questions about lead.
What are the symptoms of lead exposure? How is it diagnosed?

High blood lead levels are often asymptomatic, meaning you may not feel any differently, but even low levels can cause harm. A blood test is needed to determine the level of lead in your body.

In the most serious poisonings, adults may experience changes to how their skin feels, abdominal cramps and an altered mental state such as confusion.

If you think you could have been exposed to lead, including through plumbing, renovations, or other sources, speak to your health care provider to decide whether you should get tested.

How are lead exposures detected and investigated?

If you have lead detected in your blood, your health care provider will determine where you were exposed and how best to reduce your exposure. They may work with public health staff to determine if any other people might be at risk from the same source.

Laboratory tests for lead levels in BC are also confidentially reported to the British Columbia Centre for Disease Control (BCCDC). This surveillance system allows experts to assess which areas have higher rates of lead exposure and alerts public health staff to clusters of lead exposure that might need to be investigated.

How is lead exposure treated?

Preventing exposure to lead is the best way to avoid harm. If exposure has already occurred, removing ongoing exposures is the most important treatment strategy. This gives your body a chance to remove the lead on its own.

Depending on your blood results, your treating health care provider may recommend other strategies for helping to remove lead from your body, and you will likely need to be retested for lead in your blood over the weeks and months following diagnosis.

Where can I go for more information?

- Your local health care practitioner
- BC Drug and Poisons Information Centre
  http://www.dpic.org or 1-800-567-8911 (available 24/7)
- Health Canada
- Healthlink BC
  https://www.healthlinkbc.ca/health-topics/hw119898
- WorkSafeBC