

Safe Water

Lead in Drinking Water

What is lead?

Lead is a toxic metal used for years in products found in and around homes. Lead is also found almost everywhere in nature and can be found in the air, soil, dust, drinking water, food, and in consumer products.

Over the past 25 years, government guidelines have reduced exposure to lead. Lead level in drinking water **must** be below 10 micrograms per litre (ug/L) of water after flushing.

How does lead get into tap water?

Typically, lead enters your water after it leaves your local water treatment plant or well.

Levels of lead in drinking water can result from:

- use of lead solder in plumbing
- lead service connections that link the house to the main water supply
- lead pipes in the home
- from brass fixtures

Older homes, those constructed before 1955, often contain lead water service lines.

In newer homes, excessive leaching from leaded solder and brass fixtures (e.g. faucets), may occur for the first year until a protective oxide layer has formed in the pipes.

For long periods of time, more than 6 hours, lead can dissolve into water left standing in household piping made with these materials.

Health effects of lead

Cases of lead poisoning in Canada are rare. Health effects are most severe for:

- infants /children under 6 years of age
- pregnant women and nursing mothers

Because children under 6 years have a smaller mass and higher metabolism, exposure to high levels of lead in drinking water can result in delays in physical or mental development.

Lead from water may account for up to 10% of the lead/blood level in children. The major sources of lead are non-water related.

For adults, high lead levels can result in kidney problems or high blood pressure.

Reduce exposure to lead in water

The Ontario standard for lead is 10 ug/L.

If your water has lead levels below the standard of 10 micrograms per litre, you should run your water for at least 5 minutes after an extended period of **non-use**.

Filtration systems or bottled water are not needed in this type of scenario.

If your water has lead levels above the standard of 10 ug/L follow these steps:

- Flush the cold water tap for 5 minutes every morning before use or any time water is not used for longer than 6 hours.
- Do **not** use water from the hot water tap for drinking or cooking. Do **not** boil tap water to remove lead. Lead cannot be removed by heating it.
- Tap water is safe for bathing, showering, brushing teeth, washing dishes and clothes.
- Children and pregnant women should use filtered water to reduce lead or use bottled water. This is important for infants whose formula is prepared by adding tap water to liquid concentrate or powder.
- Consider installing certified tap/faucet mounted filters or filters.
- Building owner(s) can have a plumbing assessment a plumber or water quality professional.
- If lead service lines exist, consider replacing the privately owned portion of the service line.

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What can households, with children under 6 years of age and pregnant women, do?

Drinking water accounts for only a small amount of total lead intake, however, reduce lead exposure whenever possible, especially in young children and fetuses.

Pregnant women can pass lead in their blood to their fetus during pregnancy. Therefore, recommendations are made to keep lead levels in pregnant women as low as possible.

- If using a filter attached to the tap, let the water run for at least 30 seconds.
- Check label on bottled water to ensure it is lead-free. Lead content is listed on the "Analysis Label" and also referred to as "Pb". The water is lead-free if the value is zero. Not all bottled water is lead-free.
- If your water has been tested, and lead levels are below 10 ug/L, flush your water for at least 5 minutes before use. Filtered / bottled water are not needed.

What should households with older children and non-pregnant women do?

Run the drinking water tap if it has been sitting in the pipes for 6 or more hours.

Run water for at least 5 minutes.

- Use cold, flushed water for drinking and preparing food.
- Water from the hot water tap should not be consumed as heated water contains higher lead levels.

Do breastfeeding mothers need to use filtered water or bottled water?

"No." The amount of lead found in breast milk of women who drink tap water in homes served by lead service lines does not constitute a risk to their infant's health.

Breastfeeding mothers should follow the recommendations for non-pregnant women.

Do older children and non-pregnant women need to use filtered water or bottled water?

Generally **"no."** They only get a small percentage of their lead from water. Most lead exposure comes from food.

Young children can be exposed to lead from eating dirt and dust from the environment.

Levels slightly above 10 ug/L are very unlikely to cause health effects for older children and non-pregnant women.

If my child has been drinking water from the tap, should I be concerned?

"No." Major sources of lead exposure have decreased since the elimination of lead in gasoline, paint and solder in tin cans.

Talk with your health-care provider if you have specific health concerns.

Run or flush water to lower lead exposure

People with lead service lines or had lead detected in their water should "run" or "flush" water lines if water has been sitting in the pipes for longer than 6 hours as follows:

- Let water run from the cold water tap at medium flow for 5 minutes, or
- Take a shower or run a major appliance such as a washing machine or dishwasher. Let the water from the cold drinking water tap run for 2 minutes at medium flow before using for drinking or food preparation.
- To avoid running water each time it has sat for 6 hours or more, you can run your water as described above, then fill kettles, pitchers and pots with enough flushed water for drinking and food preparation during the day.

Lead from other sources

In older houses, lead-based paints may remain a source of [lead exposure](#), particularly to children who may eat lead-based paint chips or dust.

If I have no lead service lines in my home. Do I need to be concerned?

"No." The City of Sarnia water has low levels of lead – typically less than 1 microgram/L. Concerns have only been raised about homes built before 1952. Call Lambton Public Health at 519-383-8331 ext. 3576, or 1-800-667-1839 for more information.

For more information:

[Health Canada](#)

[CMHC](#)