# Lead in Drinking Water

Porcupine Health Unit, Community Health Inspection Services, Safe Water

This fact sheet will help answer some of the questions you may have about lead in drinking water and health concerns for you and your family.

1. How could I be exposed to lead? Lead is present in many sources including food, dust, soil, some paint products and drinking water. Drinking water's contribution to total lead exposure is very low. For older children and adults, drinking water only contributes about 10% of total lead intake (also see #10). However, water used to make baby formula can contribute 40 to 60% of an infant's lead intake.

2. What is the safe limit for lead in drinking water? Health Canada has established a maximum acceptable concentration for lead in drinking water of 10 ppb (parts per billion) in a free flowing sample of water (water that has been running for several minutes). This drinking water guideline was developed to protect infants and young children—those most at risk.

   Note: One ppb is like one second in 32 years, or one penny in $10 million.

3. How could lead get into my drinking water? The drinking water provided by municipalities is regularly tested and is essentially lead-free. However, most homes built before 1952 have lead water service lines, and prior to 1990, lead solder was also used in plumbing. If water is not being used in the home and it remains "standing" in plumbing that contains lead, the lead can dissolve into the water.

4. How do I know if my water service line is made of lead or if my home has lead solder in its plumbing? If your home was built before 1952, the water service line is likely made of lead. If the plumbing in your home was put in or renovated prior to 1990, lead-based solder was likely used.

5. Can I tell if my water service line is made of lead by looking at it? Yes. The water pipe servicing your home or business should be located in the basement. Scratch the pipe with sandpaper to expose the bare metal. A lead pipe will look dull grey in colour and is easily scratched by a hard object. Copper pipes are red-brown and corroded portions may show a green deposit.

6. Can I have my drinking water tested for lead? Yes. Residents should contact their local municipality for more information.

7. What should I do to reduce the lead in my drinking water? Use cold, flushed water for drinking and preparing food (also see #8). Do not consume water from the hot water tap because heated water generally contains higher lead levels. Do not boil tap water to try to remove lead. Lead cannot be removed from water by heating it.

8. How should I "run" or "flush" the water to lower my exposure to lead? If water has been sitting in the pipes for six hours or more, the lines should be "run" or "flushed". This means that the water should be left to run from the cold water tap at medium flow for at least five minutes before being consumed. Flushing the toilet and washing your hands, running a shower or a major appliance such as a washing machine or dishwasher is also effective.

9. Are some people more at risk from lead? Children less than six years of age are still developing and are therefore more sensitive to the neurological (brain) and blood effects of lead. Children under six years of age also absorb lead more easily than adults.

   Pregnant women can pass lead in their blood to their fetus during pregnancy. That is why pregnant women need to keep their intake of lead as low as possible.

10. If the level of lead in the water is high, what should children under the age of six years and pregnant women do?
    - Drink lead-free bottled water (also see #15).
    - Use an approved filter attached to the tap or plumbing system (also see #14).
    - Use an approved water-pitcher filtration system (also see #14).

    Note: These recommendations also apply when making baby formula (also see #11).

11. **Important note about making baby formula.** Use filtered water or bottled water when making formula. Water used to make baby formula can contribute 40 to 60% of an infant's lead intake.

    When making formula with any water—including filtered or bottled water—it is important to bring the water to a hard rolling boil for two minutes and then cool the water before mixing it with the formula. This follows the usual recommendations for preparing formula for infants under four months of age.

12. **Do breastfeeding mothers need to use filtered water or bottled water if they have elevated lead in their drinking water?** Generally, no. Breastfeeding mothers should follow the recommendations listed in question #8. The amount of lead found in the 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.

13. **What should I do if my child has been drinking water from the tap and we have elevated lead in our drinking water?** Parents should talk to TeleHealth at 1-866-797-0000 or a physician about any specific health concerns. Follow the recommendations noted in #8 and #10.

14. **Do water filters remove lead from water?** Many water filter devices and systems do remove lead. If you choose to use a water filter device or system, make sure that it meets the standards set by the National Sanitation Foundation (NSF) for reducing lead. Look for NSF Certified or an NSF logo on the product label.

    Carefully follow the manufacturers' instructions and be sure that:
    - The water is free of bacteria (municipal water supplies are).
    - The water is run for at least 30 seconds prior to consuming it if the filter is on the tap.
    - The filter is changed as recommended by the manufacturer.

15. **Is all bottled water lead-free?** No. You can check this by reading the label on the bottle. Only drink water that lists a value of zero (0) for lead (the letters Pb may be used instead of lead).

16. **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 do not expose people to lead.

17. **What about lead in sources other than drinking water?** 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. Lead in other sources has been significantly reduced because gasoline, paint and solder in tin cans no longer contain lead.

18. **What else can I do to reduce the risk of exposure to lead?**
    - Do not use ceramic cookware from foreign countries to heat water or store food unless you're sure that they are lead-free.
    - Do not store beverages in lead crystal containers.
    - If you work around lead, shower and change clothing and shoes at work, and wash work clothes separately.
    - Be aware that some hobby activities like furniture refinishing, model building and working with metals or stained glass can be sources of lead.
    - Exterior paints should not be used indoors since they may contain lead.
    - More information on these and additional measures to reduce lead exposure in the home can be found at the Canadian Mortgage and Housing website.

19. **Where can I get more information about lead?**
    - Porcupine Health Unit (www.porcupinehu.on.ca)
    - Health Canada (www.hc-sc.gc.ca)

      Some Commonly Asked Questions About Lead and Human Health

      Guidelines for Canadian Drinking Water Quality
    - The Ontario Ministry of the Environment (www.ene.gov.on.ca)

      Technical Support Document for Ontario Drinking Water Standards, Objectives and Guidelines

**For more information, contact your local health inspector or call 1-800-461-1818.**

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