May 2010

# Lead In Drinking Water

## Questions and Answers

**Q1 How do I know if I have lead pipes/lead service lines in my home?**

A1 Older homes built prior to the mid-1950s are more likely to have lead pipes and service lines.

If your home was built between the mid-1950s and 1989, you likely don't have lead pipes or service lines, but there might be lead in some fixtures or solder used to connect your pipes.

Homes built after 1989 are unlikely to have any lead in pipes, service lines, solder or joints.

Any plumber or home inspector can identify lead pipes.

To determine if your service pipes are made of lead, you should get in touch with your city or municipality.

**Q2 How can I get my water tested?**

A2 If you suspect that you may have lead materials in your service lines or lead in your plumbing and you wish to have your tap water tested, please contact your municipality.

Alternatively, you could get your water tested by one of Ontario's licensed laboratories.

Go to the Ministry of the Environment website: http://www.ene.gov.on.ca/en/water/tapwater/index.php to view a list of provincially-licensed labs and an interactive map with contact information for municipalities.

**Q3 What should I do if I live in a house with lead service lines?**

A3 Run the water from the drinking water tap if it has been sitting in the pipes for six hours or more. Water should be flushed for at least five minutes.

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

If there are children age six and under or pregnant women living in

the house, follow the recommendations listed below.

Request water testing from your city or municipality.

Contact your city or municipality to discuss replacing the lead service pipes to your house.

**Q4 What should households with children the age of six and under and pregnant women do if they have lead service lines?**

A4 If your water has been shown to have lead levels **below** the standard of 10 micrograms per litre, it is recommended that you run your water for at least five 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 been shown to have lead levels **above** the standard of 10 micrograms per litre, children and pregnant women should use an approved filtration system to reduce lead or use bottled water. **This recommendation is particularly important for infants whose formula is prepared by adding tap water to liquid concentrate or powder.**

The NSF International listing of filtration systems certified to reduce lead has recently changed based on new, more stringent testing protocols.

New Advice:

As of July 16, 2007, NSF International posted to its website a revised list of filters that meet its new, more stringent testing protocol for the NSF-53 standard for reducing lead in drinking water. Pour-through filters were not included in this NSF list of filters that will reduce lead in drinking water.

You may still find on store shelves pour-through water-pitcher filtration systems and replacement filters for them that have the NSF-53 certification seal for lead. These filters may not reduce lead levels to below the standard of 10 micrograms per litre. Even though these packages of old stock have a NSF-53 certification seal, they do not meet the new certification requirements for reducing lead in drinking water.

Continuing Advice:

NSF International continues to list filtration systems that include faucet mounted and plumbed-in models, as certified to NSF-53.

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.

The NSF website has an up-to-date list of filters that meet the NSF-53 standard. The website is at www.nsf.org/certified/dwtu. 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.

**Q5 Why did NSF International change the certification for pour-through, water-pitcher filters?**

A5 NSF International sets the standards for certifying filtration devices such as pour-through, water-pitcher filters.

NSF changed the standard for certifying this type of filter on the advice of researchers. The new standard takes into account concerns that particulate lead in drinking water may not be reduced by the pour-through type of filter.

This new standard is more protective.

As of July 16, 2007, no pour-through filters on the market are identified on the NSF website as meeting the new NSF-53 standard to reduce lead to the Ontario drinking water standard.

**Q6 Why is lead a concern specifically for children the age of six and under and pregnant women?**

A6 **Children the age of six and under:** Younger children are still developing and are therefore more sensitive to the neurological and blood effects of lead. As well, children in general absorb lead more easily than adults. Particular recommendations are made for formula-fed infants because the water used to make the formula can contribute 40 – 60 per cent of an infant's lead intake; drinking water in older children and adults only contributes approximately 10 per cent of total lead intake.

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

**Q7 What should pregnant women do to reduce potential exposure to lead in drinking water in the workplace?**

A7 If there is a concern about workplaces with lead service lines,

pregnant women should ask their employers what could be done to address the potential for exposure to lead in drinking water from the taps and fountains or consider drinking water from an alternative source.

For more information for pregnant women, see the information in Qs and As 3 to 5 about households with lead service lines and actions that can be taken by pregnant women in the home or workplace to reduce exposure to lead in drinking water.

**Q8 What should those who have lead service pipes do if they have only older children and non-pregnant women in the house?**

A8 Run the water from the drinking water tap if it has been sitting in the pipes for six hours or more. Water should be flushed for at least five minutes.

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

Request water testing from your city or municipality.

Contact your city or municipality to determine whether they have a tap water testing program, and a program to replace the lead service line to your house.

**Q9 Do breastfeeding mothers need to use filtered water or bottled water if they have lead service pipes?**

A9 No. 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. Breastfeeding mothers should follow the recommendations for non-pregnant women.

**Q10 Do older children and non-pregnant women need to use filtered water or bottled water if they have lead service pipes?**

A10 Generally, no. Older children and non-pregnant women usually get only a small percentage of their lead from water. In young children, lead exposure can also come from eating dirt and dust from the environment. Levels slightly over the acceptable level of 10 micrograms per litre are very unlikely to increase blood lead levels in children or adults.

**Q11 If I have lead service lines, can I use the water for bathing, showering, and washing dishes and clothes?**

A11 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.

**Q12 How should I be "running" or "flushing" the water to lower my exposure to lead?**

A12 People with lead service lines should "run" or "flush" their water lines when the water has been sitting in the pipes for longer than six hours as follows:

Let the water run from the cold drinking water tap for at least five minutes or as long as is necessary to completely replace the water in the plumbing with fresh water from the distribution system. For example, more than five minutes of flushing may be necessary if the building is located far away from the street.

To avoid having to run your water each time it has been sitting in the pipes for six hours or more, you can run your water as described above and then fill kettles, pitchers and pots with enough flushed water for drinking and food preparation during the day.

**Q13 What is the province doing to address the lead issue and ensure safe, clean drinking water for Ontarians?**

A13 Ontario's action plan to address possible elevated levels of lead in some neighbourhoods includes:

- A regulation for schools and day nurseries to test for lead annually. Any of these facilities with plumbing installed in 1990 or after must flush their systems weekly. Facilities with plumbing installed before 1990 must flush their systems daily but can change to weekly flushing if there are good lead test results in all plumbing for at least two years.
- Making it mandatory through an amendment to O.Reg.170/03 for municipalities to regularly sample for lead at a specified number of taps, notify home and facility owners of the results from their taps and take corrective action in systems with elevated lead levels.
- Assisting low-income parents with infants and young children and pregnant women

living in older neighbourhoods with the cost of filters where they are recommended.
- Providing expert advice to municipalities (e.g.,preparation of corrosion control plans) which will enable municipalities to better control lead levels.
- Encouraging municipalities to conduct public education campaigns, such as inserts in water bill mailings.
- Providing best practices for municipalities, such as on-bill financing, to help make lead line replacement more affordable for homeowners.

**Q14 What is the community lead testing program?**

A14 The community lead testing program is a new lead sampling requirement of the Drinking Water Systems Regulation under the Safe Drinking Water Act, 2002. The regulation was amended in July 2007 in order to reduce elevated levels of lead in drinking water at the tap.

Further amendments that came into force on December19, 2009 reduced the regulatory burden for smaller systems without compromising public health.

Municipal and non-municipal drinking water systems are required to take plumbing samples from a mix of private residences and non-residential buildings as well as samples from the distribution system. Samples may only be taken with the consent of the occupant of the premises. The results of the testing will help determine if lead in drinking water is an existing, developing or potential problem within a particular community.

**Q15 What are the benefits of the program? Why should I volunteer to have the system owners take samples in my home?**

A15 Participating in the sampling program provides you with an opportunity to determine your drinking water quality with respect to lead. For those who are found to have excess levels of lead, the local medical officer of health will give advice about ways to reduce any potential health risks from the lead in the drinking water.

All of those participating in the program will be contributing to the system owner's (e.g. municipality) knowledge regarding lead in the drinking water system. Depending on the findings, municipalities may have to prepare a corrosion control plan which will examine ways to reduce the leaching of lead from the distribution system or plumbing.

**Q16 How often will the water be tested?**

A16 Samples will be taken twice a year: once between December 15 and April 15 and once between June 15 and October 15. You may be asked to volunteer for your water to be tested again. This will assist in determining the relationship between water temperature and lead concentrations in drinking water.

**Q17 What is lead?**

A17 Lead is a naturally occurring substance present in our soil, food and air. Lead has many industrial uses and has been used in water systems since the late 1880s. While lead can leach into drinking water from lead service lines and plumbing, the bulk of human exposure is from other sources.

Over the past few decades, the level to which the general public is exposed to lead has significantly decreased due to 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 used for tin cans and drinking water pipes was reduced or eliminated by the mid-to-late 1980s.

Recently, there has been increased discussion in Ontario about lead in drinking water. This renewed interest has come about because some older homes with lead service lines in parts of the province were found to have elevated levels of lead in their water when samples were taken at the tap.

The information below is being provided to address questions regarding potential health risks associated with exposure to lead in drinking water.

**Q18 Does Ontario have a drinking-water quality standard for lead?**

A18 Yes. The Ontario drinking water quality standard for lead is 10 micrograms per litre or 10 parts per billion, which is based on a national standard. The drinking water regulatory limit is based on a conservative (more protective) estimate of how much lead in drinking water can contribute to a child's total exposure to lead from all sources.

**Q19 What about lead in sources other than drinking water?**

A19 Lead exposure comes from food, air, soil and dust, and in young children, lead exposure can also come from eating dirt and dust from the environment.

Lead in air and outside dust, inside homes and in soil near homes, and in food has been significantly reduced by the elimination of lead in gasoline, paint and solder in tin cans.

In older houses, lead-based paints may remain a source of lead exposure, particularly to children who may eat lead-based paint chips or ingest house dust through normal hand to mouth activity.

For further information visit the Ministry of the Environment's Drinking Water Ontario website at www.ontario.ca/drinkingwater or contact:

Public Information Centre
Ministry of the Environment
135 St. Clair Avenue West
Toronto, ON M4V 1P5
Tel: (416) 325-4000 or 1-800-565-4923 or
picemail.moe@ontario.ca.

**More information**

For more information about reducing exposure to lead from sources other than drinking water see Health Canada's *Effects of Lead on Human Health* fact sheet at www.hc-sc.gc.ca/hl-vs/iyh-vsv/environ/lead-plomb-eng.php.

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