Ontario

FACT SHEET

Ministry of the Environment

WHAT YOU SHOULD KNOW ABOUT LEAD IN SOIL

May 13, 2008

Lead is a toxic heavy metal that is released into the environment through industrial sources. Lead can enter the environment in various ways, for example: the historic use of leaded gasoline (now banned for cars in Canada), disposal of lead wastes and peeling or flaking of lead-based paint. House dust may also contain lead originating from contaminated soil or from lead-based paint. In varying amounts, lead is in our diets, water, air, soil, and consumer goods.

How are children affected by lead?

Young children, infants and pregnant women are most at risk from lead exposure. Exposure to lead can have a harmful effect on the physical, intellectual, and behavioral development of children. The harmful effects of lead become more severe as lead exposure increases, but even exposure to low levels of lead presents a risk. In fact, no “safe” level of lead exposure has yet been identified through research. Therefore, exposure to lead should be minimized.

Typically, how much lead is in soil in residential areas?

Residential areas tend to have lead levels in soil that are less than 100 parts per million (ppm). In residential areas adjacent to current or historic commercial or industrial operations, lead levels in soil may be higher.

In older residential areas, lead levels in surface soil may be found to be higher than 200 ppm. This may be because of close proximity to road traffic (the past use of leaded gasoline), erosion of leaded paint from buildings and fences, and past or current industrial sources.

Is lead in soil harmful to my family’s health?

Lead contaminated soil and dust are considered a major source of exposure for children, in part due to their frequent hand-to-mouth activity. Depending on the concentration of lead in the soil and household dust, this may lead to elevated levels of lead in children’s blood.

The Ministry of the Environment advises that there is minimal risk from exposure to soil with lead levels below 200 ppm. However, the ministry also strongly advises that you take measures to reduce your child’s exposure to lead in soil.

If you have any concerns about your child’s exposure to lead, please contact your local health department or your family doctor.

What can I do to reduce my family's exposure to lead from soil and dust?

There are several things you can to do reduce your exposure to lead:

- Keep your children away from bare, suspect soil.
- Wash childrens hands and faces after they have been playing outdoors and before eating.
- Don't let your children eat paint chips. They like them because the lead in the paint makes the chips taste sweet.
- Clean your home regularly using a damp mop or cloth. Vacuuming and sweeping, both common means of house cleaning, can actually increase dust levels in the home. Use rugs, curtains and slipcovers that can be cleaned easily.
- Have forced air ducts cleaned by professionals and replace or clean furnace filters often.
- Avoid bringing outdoor soil inside by removing outdoor shoes.
- Brush pets often as their fur collects dust. Pets should be brushed outside if possible.
- Make sure your garden is at least a metre (three to four feet) away from sources of flaking paint such as walls, sheds, porches and fences, and at least one metre from roads, driveways, and downspouts. Gardeners should consider bringing in clean soil for growing vegetables.
- Wash all vegetables thoroughly and peel root crops, before eating them.
- Some children's toys and crayons may contain lead. Be aware of consumer alerts issued by government agencies regarding the potential for lead exposure from consumer products.

Is it safe to eat vegetables from my garden?

Lead enters and is stored in vegetables grown in lead-contaminated garden soils. The amount of lead taken up and stored in these vegetables will vary depending on the type of vegetable, the type of soil, your gardening practices and the amount of lead in the soil. Although lead normally increases in plants as they age, it is taken up and stored differently in roots and in plant leaves. For example, lettuce leaves can store seven times more lead than the roots of carrots. Beet leaves contain more lead than beet roots. Therefore, it is not always safe to assume that root vegetables will contain more lead than leafy vegetables. Fruit crops such as tomatoes, berries, apples and cucumbers, present a much lower risk because they take up and store very little lead.

There is minimal risk in consuming home-grown vegetables grown in soil containing less than 200 ppm of lead. However, this is only a guide. Eating vegetables grown in soil contaminated with lead will increase your exposure to lead and the risk to your health. Infants and young children are particularly at risk if produce grown in lead contaminated soil is used in baby food recipes.

How can I get more information?

If you live in the vicinity of a current or historical source of lead pollution and you suspect your soil may be contaminated, contact your local Ministry of the Environment office for information. The contact information for the ministry office closest to you can be found in the Government of Ontario section of the telephone directory.

Contact your local health unit or your family doctor if you are concerned about lead exposure or have questions about health effects.

For further information visit the Ministry of Environment's web site at www.ene.gov.on.ca 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

Additional Resources

Ministry of Environment: Questions and Answers on Lead In Drinking Water
www.ene.gov.ca/en/water/6325e01.pdf

Health Canada's "It's Your Health" information sheets on "Lead"
www.hc-sc.gc.ca/iyh-vsv/environ/lead-plomb_e.html

Health Canada's "It's Your Health" information sheets on "Lead-based Paint"
www.hc-sc.gc.ca/iyh-vsv/prod/paint-peinture_e.html.

Canadian Mortgage and Housing Corporation "Lead in Your Home"
https://www.cmhc-schl.gc.ca