

To the Editor:

Here is the next column (November 16, 2007) by Environmental Law Specialist Dianne Saxe. Previously bi-monthly, new columns will come out on a monthly basis, mid-month. These columns are available for publishing at no charge, provided Dr. Saxe is cited as the author. She can be contacted at 416-962-5882 or admin@envirolaw.com. For more information, see www.envirolaw.com.

For previous columns or to suggest topics which you would like Dr. Saxe to address, contact Brent Kulba at 416-972-7401 or kulbab@huffstrategy.com.



Dianne Saxe, PhD in Law
Environmental Law Specialist

ENVIRO LAW: Lead, Children and Crime

The concern about lead in Ontario's drinking water gets extra force from a growing body of research linking blood lead levels in preschoolers and crime rates later in life.

Rick Nevin is one of the researchers who tracked blood lead levels and violent crime over several decades in Canada, the USA, Britain, and several other industrialized countries. His findings suggest that "murder could be especially associated with more severe cases of childhood lead poisoning."

According to his research, exposure to lead during the first few years after birth results in lower IQ scores later in life. This combines with other research that shows a strong association between low IQ and criminal behaviour.

By looking at different countries and analyzing each of their police strategies, economic conditions and other factors associated with crime, Nevin was able to further deduce the crime link to lead. Each country phased out lead in gasoline, plumbing and paint at different times, providing a rigorous test that shows a high degree of likelihood that lead poisoning can influence violent crime rates.

Nevin then goes on to make the link between childhood gasoline lead exposure from 1941 to 1986 and violent crime rates from 1960 to 1998. He found a time-lag of about 23 years between lead poisoning in children and violent crimes. This means a child exposed to high levels of lead is more likely to engage in criminal behaviour 23 years later, and as lead is phased out, there is a subsequent decrease in violent crimes.

In Nevin's view, removing lead from gasoline (and from incinerator emissions) was a huge public health success that has significantly helped to reduce crime. But in Ontario, dangerous exposure may still originate from other sources. Lead from old plumbing can be the first source of exposure for children under two years of age, while interior dust from lead paint used years ago can contribute as much as 69% of total lead exposure.

The Canadian Mortgage and Housing Corporation says old paint in your home may contain lead, depending on when the paint was manufactured (see www.cmhc-schl.gc.ca/en/co/maho/yohoyohe/inaiqu/inaiqu_007.cfm).

Lead was phased out in Canada over a number of years beginning in the 1960s. Only in 1991 did Canadian paint manufacturers voluntarily stop using lead altogether.

If your house was built between 1960 and 1980, the interior or exterior paint may contain small amounts of lead. But if it was built prior to 1960 and contains some of the original paint, likely buried under several layers of newer paint, your house undoubtedly contains high lead levels.

Not to worry if the paint is in good condition, and is not disturbed. But it can be dangerous if the paint is peeling or flaking. Window and door frames with lead paint are particular concerns, as they can produce dust from the friction caused by opening and closing. This dust can circulate through the house, getting onto children's hands and toys, and from there, into their mouths. As well, any paint chips can easily be swallowed by young children. Ledges and trim that are accessible to teething toddlers can also pose a risk.

Special care needs to be taken when renovating an older house. Any kind of damage to old paint can release lead-laden dust or fumes. Large amounts can be released from sanding, scraping, or heating lead-based paint. If the work is on the house exterior, care also needs to be taken to ensure lead paint doesn't contaminate gardens, walkways, sandboxes and play areas. Contaminated soil and sand can then be tracked inside, adding to the lead level indoors.

Nevin calculates that carefully fixing paint and installing new windows in old homes would yield huge financial benefits and go far to reduce Attention Deficit Hyperactivity Disorder, special education, crime and juvenile delinquency. In addition, such a window replacement effort would reduce peak demand for electricity, carbon emissions from power plants, and associated long-term costs of climate change.

Dianne Saxe, one of Canada's leading environmental lawyers, is a Certified Specialist in Environmental Law and member of the Ontario Bar Association Environmental Section Executive. She also holds one of Canada's only Doctorates of Jurisprudence (PhD) in environmental law.

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Other columns by Dr. Saxe available for reproduction include:

Backyard burning is a major source of toxic air pollution in Ontario

Who is responsible for fixing lead-contaminated drinking water?

A little peace and quiet in Ontario municipalities with noise bylaws

Contaminated soil from home heating fuel oil could result in costly clean-ups for homebuyers

Reducing local air pollution in Ontario

Trimming trees for safety

Ontario communities have the right to ban cosmetic pesticide use

Reducing the impact of vehicle idling in front of schools

Ending clothesline bans in Ontario will help save energy and money