

To the Editor:

This is an article from a series of monthly columns by Environmental Law Specialist Dianne Saxe, one of the top 25 environmental lawyers in the world, and Ms. Jackie Campbell. These articles are available for publishing at no charge, provided Dr. Saxe and Ms. Campbell are cited as the authors. Dr. Saxe can be contacted at (416) 962-5882 or admin@envirolaw.com. For more information, visit <http://envirolaw.com>.



News Article

Lead safe renovations

This spring, dear friends of mine renovated an old house. Because they are committed to recycling wherever possible, they saved the old doors and decided to refinish them themselves. In a bare patch of their backyard, they merrily stripped and sanded 14 layers of paint off the old doors, marvelling at the many colours the house had gone through over the century. It was a dusty task, but they were proud of their handiwork. They raked up the dust and thought nothing more about it.

What's wrong with this picture?

It never occurred to my friends that the dried paint on their old doors, or the dust from sanding them down, could be dangerous to their health, or to that of their beloved pet. Yet chances are that at least some of that paint contained lead. The lead may have done no harm while safely attached to the door, under several layers of more recent colours. But once they breathed the dust, got it on their skin, and scattered it on their dog's play area, they had unintentionally exposed themselves (and visiting children) to a serious health hazard. And the renovators hadn't been much more careful with the rest of the house!

Lead-safe renovation of older houses, which is now mandatory in the United States, could make a significant contribution to public health. Recent health Canada documents (such as *Proposed Risk Management Strategy for Lead*, July 2011) confirm that lead is ubiquitous in Canada, and in Canadians, but that there is no safe threshold for lead exposure. Small children and pregnant women are most at risk from lead toxicity. Babies and infants often suck on objects, including their (unwashed) hands. Lead has a sweet

taste, making it tempting; children absorb lead more easily, and are more susceptible to its adverse effects.

As the Canadian Public Health Association put it, in their *Prescription For a Healthy Canada: Towards a National Environmental Health Strategy*:

Lead is a highly toxic heavy metal, once used in paint, gasoline, PVC, and pipes. Lead is still used in the production of batteries, ammunition, metal products (solder and pipes), jewellery, devices to shield X-rays, and computer monitors (to block radiation). Lead poisoning causes a range of chronic health effects. Lead exposure in children can cause cognitive deficits, developmental delays, hypertension, impaired hearing, attention deficit disorder, reduced intelligence, and learning disabilities. In the elderly, accumulated lead is released into the blood, contributing to various health effects, including cataracts, Alzheimer's disease, Parkinson's disease, other forms of dementia, high blood pressure, cardiovascular disease, and impaired kidney function.¹

Compared to adults with low levels of lead in their blood, adults with elevated blood lead levels are two-and-a-half times more likely to die of a heart attack, 89 per cent more likely to die of a stroke, and 55 per cent more likely to die of cardiovascular disease.²

Even more frightening, higher blood lead levels in preschoolers are linked with higher rates of violent crime later in life.³

Removing lead from gasoline, from paint, and from incinerator emissions was a huge public health success that has also reduced crime. According to the [Canadian Health Measures Survey](#) (CHMS), every Canadian has lead in their blood, but average blood lead levels have dropped by two thirds in the last 30 years. the most lead is now found in:

- Older people (60 to 79 years)
- those with lower household incomes;
- Those born outside Canada;
- Those living in older homes;
- current or former smokers (lead may be present in tobacco);
- drinkers (lead is present in several types of alcohol, especially wine, and may also leach from containers in which alcohol is stored).

¹ p. 26 of the Summary for Policy Makers

² A. Menke et al., "Blood Lead Levels Below 0.48umol/L (10ug/dL) and Mortality Among US Adults," *Circulation* 114 no. 13 (2006): 1388-94, cited in *Prescription for a Healthy Canada*, p.3

³ http://www.icfi.com/Markets/Community_Development/doc_files/LeadExposureStudy.pdf

- The current “action level” for intervention to reduce lead is 10 mcg/dL,⁴ but there is good evidence that [this number is still too high](#).

Where is today’s lead coming from? Lead is still found in consumer products like lead acid car batteries, mini-blinds, toys and inexpensive [jewellery](#), and in some folk medicines. Health Canada issues frequent advisories about lead hazards of [children’s jewellery](#), and some steps are being taken to improve regulation of these products. Under the new [Children’s Jewellery Regulations](#) to the *Canada Consumer Product Safety Act*, it is illegal to import, advertise or sell jewellery for children that contains high levels of lead. Similar rules now apply, under the *Hazardous Products Act*, [Consumer Products Containing Lead \(Contact with Mouth\) Regulations](#), to consumer products that contain lead in a part that may be touched, licked, mouthed or swallowed during normal use.

Lead has also been found in cosmetic products, like [lipsticks](#); Health Canada is developing a [guidance document on heavy metal impurities in cosmetics](#); the proposed maximum levels of lead in cosmetics is 10 parts per million (ppm). In May, Environmental Defence reported that [cosmetic products tested for lead](#) and other heavy metals found that the majority of products tested contained at least two heavy metal contaminants; one lip-gloss containing 110 ppm!

But most of the lead that shows up in our blood is there because we used to scatter it blithely around. Hundreds of thousands of tonnes of lead from gasoline lie in urban soils and along highways, and may be moved from place to place during construction. Lead arsenate may contaminate former apple orchards; there is lead in some old industrial areas and near large painted structures, like bridges. And housing built before 1980 may still have dangerous levels of lead from old plumbing and paint.⁵ Peeling or flaking paint can easily be swallowed by young children, but any kind of damage to old paint can release lead-laden dust or fumes; this includes the friction of opening and closing doors and windows. Large amounts can be released from sanding, scraping, or heating lead-based paint. Outdoors, lead dust can contaminate gardens, walkways, sandboxes and play areas, and can then be tracked back inside by pets or humans.

For these reasons, there are potential benefits to human health if everyone were to follow the good lead hygiene recommendations of the CMHC, the Canadian Association of family physicians, and Women’s College Hospital. These include lead safe renovations, as well as making sure children wash their hands frequently; not wearing outdoor shoes indoors; checking for lead content in toys, children’s jewelry, folk medicines, and hobby products; and keeping bare areas sodded. If you hire a renovator for an older home, remember to ask them about lead safety. And if you sand or strip old paint yourself, assume that it contains a dangerous level of lead.

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⁴ fewer than 1% of those tested

⁵ 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).