

LEAD AND NYC SOILS

Lead (Pb) is a heavy metal that can occur naturally in soils as a result of geologic processes. However, urban soils are likely to have higher levels of lead due to past industrial activities. Lead smelters and incinerators released large quantities of lead into the surrounding environment and lead was also used as an additive in commonly used substances such as paint and gasoline.

While lead was largely phased out of many US products in the late 20th century, lead persists in the soil of many urban areas. Vehicle exhaust, industrial smoke, and dust from construction settled onto nearby soils. Yet contaminated soil is often overlooked as a source of lead exposure for urban residents.

RISKS OF LEAD EXPOSURE

Exposure to lead from soil may occur through eating, drinking, or breathing lead dust particles, and the lead is then absorbed into the bloodstream.

Young children are at higher risk of exposure because of their tendency to put hands and objects into their mouths. Children are also more vulnerable to the health effects of lead than adults as lead may permanently inhibit growth, brain development, and affect behavior. Blood lead levels may decrease after the source of lead exposure is removed but there may be long-term consequences.

New York State requires blood testing of all children at ages one and two. Removing lead from certain products has proven extremely successful: blood lead levels in New York City children have decreased significantly in recent years. If you are concerned about lead exposure, ask your doctor for a blood test.

While there have been significant gains in public health, studies are increasingly showing that there is no safe level of blood lead for children.

Learn more about your soil by getting it tested or through programs at Cornell University, Brooklyn College Urban Soils Lab, the NYC Urban Soils Institute, or the Columbia/Barnard Soil Lead Study.

Sources and further reading

Center for Disease Control and Prevention

www.cdc.gov/nceh/lead

Cornell University

www.blogs.cornell.edu/healthysouls

NYC Department of Health and Mental Hygiene

www1.nyc.gov/site/doh/health/health-topics/lead-pubs.page

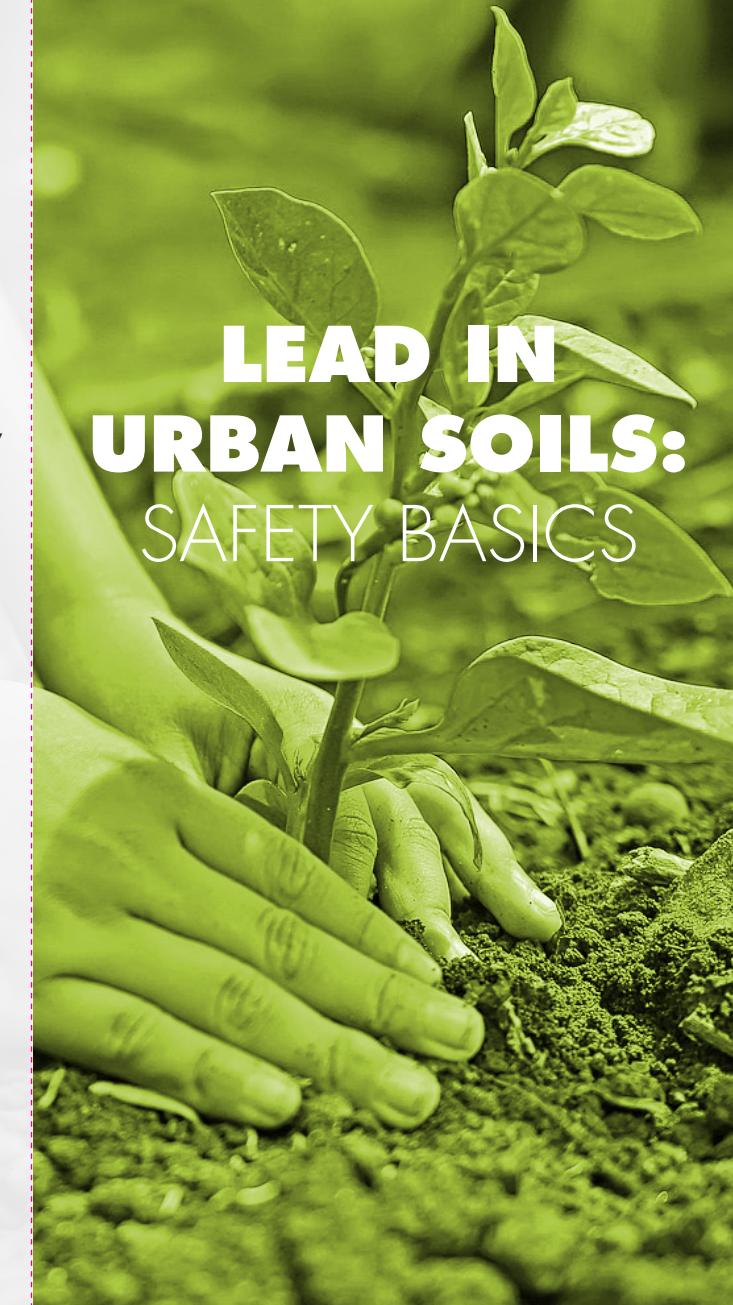


This brochure is part of Strengthening Our Common Ground: Lead in Soils in Greenpoint, a project made possible with funding provided by the Office of the New York State Attorney General and the New York State Department of Environmental Conservation through the Greenpoint Community Environmental Fund.



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LEAD IN URBAN SOILS: SAFETY BASICS

BEST PRACTICES TO REDUCE THE RISK OF LEAD EXPOSURE FROM SOIL



Wash hands after outdoor play and before eating.



Leave toys outside, take off shoes, and wipe your pet's feet after spending time outdoors



Watch young children playing near exposed soil for hand-to-mouth behavior.



Remove dirt before eating homegrown fruits and vegetables; peel root crops, and carefully wash leafy greens.

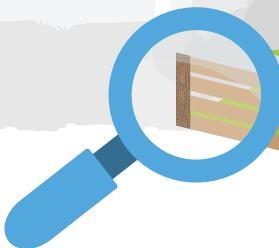


Frequently clean floors and dust window sills with a wet cloth.

HOW TO ADDRESS HIGH LEAD LEVELS IN YOUR SOIL

First of all, don't panic! High levels are fairly common in urban areas and there are many easy ways to stay safe through simple practices.

Keep soil moist to reduce dust that may spread contaminants.



Cover exposed soil with grass, mulch, or other materials, especially in play areas for children.

Know your outdoor space! Learning about the previous land uses of your lot can help to accurately assess risk. Lead levels can vary dramatically within a small area. Levels are most likely to be high near old buildings, roads, or areas of construction and renovation.

Cover walking and garden paths (e.g. with stone, mulch or straw) so potentially contaminated soil is not tracked elsewhere.

Use raised beds or pots with clean soil for growing food in home gardens. For raised beds, include a protective layer (e.g. landscape fabric) between the contaminated and clean soil.

Amend soil by adding compost.



Grow fruiting crops, such as tomatoes and peppers in home gardens, as they typically have less lead than root vegetables or leafy greens. Ensure all garden produce is thoroughly washed.