

Lead poisoning highly prevalent among school-aged children in Uganda

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Researchers at Mount Sinai School of Medicine have found that children living near the Kiteezi landfill in Kampala, Uganda, have blood lead levels nearly 20 times as high as the typical lead level found in U.S. children. The data are published in the current issue of *Environmental Health Perspectives*.

Led by Leonardo Trasande, MD, Assistant Professor of [Preventive Medicine](#) and Pediatrics and Co-Director of the Children's Environmental Health Center at Mount Sinai School of Medicine, researchers evaluated 163 children ages four to eight from nine schools located near the Kiteezi landfill, a site known to contain high levels of [lead](#) and other heavy metals. They found that 20.5 percent of the children had elevated blood lead levels (EBLL) greater than 10 micrograms, the level believed to cause developmental and intellectual impairment.

"Exposure to such high levels of lead can seriously hinder [brain development](#)," said Dr. Trasande. "While the developing world has made great strides in reducing exposure by phasing out lead in gasoline and paint, our study shows that it is still pervasive in the environment."

Dr. Trasande's team took blood samples and questionnaire data from the children and obtained soil samples from their homes and schools, which are all within 1.5 miles of the landfill. Families that owned more household items and dug wells for their water supply had less chance of EBLLs. Families that consumed more canned food were more at risk,

possibly because of lead solder used in cans, and at one point increase in [socioeconomic status](#) was associated with 0.57 microgram decrease in [blood lead](#). Most importantly, [children](#) living within a half mile of the landfill were 3.4 times more likely to have EBLs.

"The results of our study are disturbing to say the least, and emphasize the importance of effective waste management strategies to curb the prevalence of lead in this population," said Dr. Trasande. "We hope to study this issue further, especially as it relates to the contamination of the water supply."

In the U.S. and Europe, efforts to reduce lead exposure have been highlight successful, with levels in the U.S. one-tenth of what they were in the 1970s. High levels of lead exposure have been shown to be detrimental to child growth and development.

Provided by The Mount Sinai Hospital

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