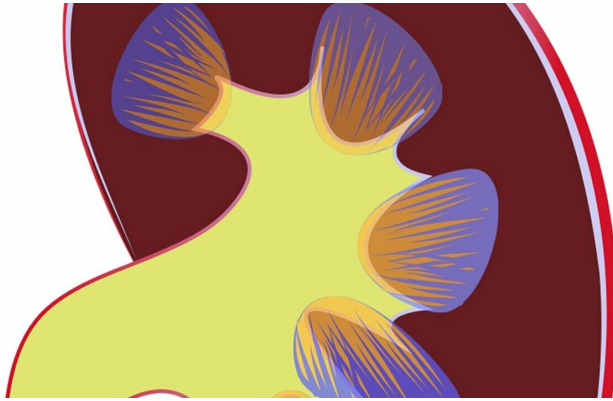


Overweight children exposed to lead in utero may have poor future kidney function

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Overweight children who were exposed to lead in utero and during their first weeks of life have the potential for poorer kidney function in adulthood, according to an Icahn School of Medicine at Mount Sinai study published in *Environment International* in March.

The study found that children with high body mass indexes who had been exposed to lead had lower estimated glomerular filtration rate (eGFR), a measure of how well the kidneys are filtering or cleaning the blood. The researchers measured [blood levels](#) during mothers' pregnancy and later measured eGFR levels in the children when they were between 8 and 12 years old.

Decreased [kidney function](#) is a driver of hypertension, which is a major risk factor for cardiovascular disease, the leading cause of death in the developed world. Obesity is a well-known risk factor for hypertension and [chronic kidney disease](#), and before now, the convergence of kidney toxicants found in the environment and [childhood obesity](#) had not been previously studied.

"This is the first study to assess an association

between perinatal lead exposure at multiple times in early life with eGFR measured in preadolescence," said senior author Alison Sanders, Ph.D., Assistant Professor of Environmental Medicine and Public Health, and Pediatrics, at Icahn Mount Sinai.

"Future longitudinal assessments of exposure to kidney toxicants and preadolescent kidney function will improve our understanding of risk factors for kidney impairment and associated comorbidities."

This epidemiological study of Mexican children is ongoing and will follow the children into adolescence. The study was conducted in Mexico because children there are exposed to higher levels of lead and experience higher risk for kidney problems than American children. Additional study is needed to confirm the relevance of these findings in other populations.

Provided by The Mount Sinai Hospital

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