

Lead Battles Still Need Attention From Pediatricians

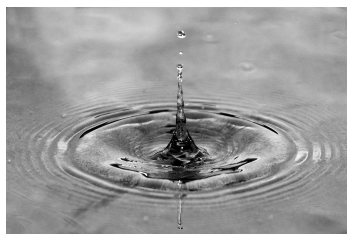
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Lead has been poisoning children for centuries and the battle to stop it is far from won. Flint, Michigan, with the poisoned water has gotten attention recently, but many other cities and towns face similar lead problems, both from water and better known sources such as lead paint in older homes and buildings.

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Lead has been poisoning children for centuries and the battle to stop it is far from won. Flint, Michigan, with the poisoned water has gotten attention recently, but many other cities and towns face similar lead problems, both from water and better known sources such as lead paint in older homes and buildings. A policy review published this month in Pediatrics ([peds.2016-1493](#)) shows how much work there is to do.

Children with elevated blood levels of 5 ug/dl or more on average lose 6.1 IQ points.(1) Single digits don't impress some who remember the double digits that prompted chelation, but that 6.1 IQ point loss matters a great deal for children's futures. That 6.1 IQ point loss might be the difference in whether a child gets into a gifted and talent program. Or it might place a child into a special education class. Other studies have found at least 20% of ADHD cases can be attributed to lead exposure.(2) Lead toxicity is a major risk factor for delinquency and aggression. (3)

More than half a million children aged 1-5 years have blood lead levels of 5 or more.(4) That's almost 3% of US children in this age group. Lead ingestion and absorption is especially problematic during the first two years of life when exploratory behavior includes putting multiple substances in the mouth. Absorption is more efficient in younger children than in older children and adults. (5) Increasing mobility as children learn to crawl and walk also increases opportunity for exposure.

The policy brief identifies recommended actions for pediatricians to prevent lead exposure. Those suggestions include:

- Participation in blood lead level testing of representative samples of children to assess trends in the population;
- Assessment of older housing for environmental risks;
- Understanding of the allowable lead levels in air, water, soil, and house dust and consumer products.

The policy brief is a good summary of the issues involving lead toxicity and worth a read by pediatricians and others interested in children's health and futures. Lead exposure can be devastating to a child with life-long consequences, and it requires serious long-term action by all of us to solve.

1. Lanphear BP, Hornung R, Khoury J et al. Low-level environmental exposure and children's intellectual function: an international pooled analysis. *Environ Health Perspective* 2005; 113(7):894-99.
2. Forelock TE, Lanphear BP, Auinger P et al. The association of tobacco and lead exposure with attention-deficit/hyperactivity disorder in a national sample of US children. *Pediatrics* 2009; 124 (6):e1054-e1063.
3. Needleman HL, Reiss Ja, Tobin MJ, Biesecker GE, Greenhouse JB. Bone lead levels and delinquent behavior. *JAMA* 1996; 275 (5):363-369.
4. CDC. Advisory Committee on Childhood Lead Poisoning Prevention. Low level lead exposures harms children: A renewed call for primary prevention. Atlanta, GA: Centers for Disease Control and Prevention; 2013. (Available at: http://www.cdc.gov/nceh/lead/ACCLPP/Final_Document_030712.pdf).
5. Wright RO, Shannon MW, Wright RJ, Hu H. Association between iron deficiency and low-lead level poisoning in an urban primary care clinic. *Am J Public Health* 1999; 89(7):1049-1053.

Further Reading

- [Postnatal Growth Following Prenatal Lead Exposure and Calcium Intake](#)
- [Iodine Deficiency, Pollutant Chemicals, and the Thyroid: New Information on an Old Problem](#)
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