



# Lead Exposures during Pregnancy: A National Crisis of Detection

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## Editorial

A fifteen-month-old child demonstrated neurologic impairment. No obvious associations with genetics or environmental exposure are noted. The pediatrician requests blood lead testing. Results are <2 µg/dL. Will we rule out lead exposure? Or should we?

Only 10 states out of 50 require blood lead testing of children between 1 and 2 years old. Only two states, New York and Minnesota, require that pregnant women be assessed for risk of lead exposure at their first prenatal visit and as of October 2019 in the case of New York, at delivery. Why is it that only two states seem to be concerned about prenatal exposure to lead?

In 1995, one of the authors (RKM) was involved in establishing the New York state prenatal guidelines for lead screening in pregnant women and has been counseling and working with health care providers and pregnant women through our services – Mother To Baby UR Medicine, the Finger Lakes Children's Environmental Health Center (a New York State Center of Excellence in Children's Environmental Health) and the Western New York Lead Poisoning Resource Center. Over the years, these services have worked closely with the NYS Department of Health, county health departments and obstetricians, family medicine physicians and pediatricians and their staffs across New York State and beyond to remind them of the importance of testing young children and pregnant women for lead.

It's our opinion that more states across the US should be proactive regarding the debilitating effects of lead on the developing child by enacting requirements for childhood and prenatal risk assessment and testing to avoid these damaging exposures to lead.

Our team at the University of Rochester handles multiple cases at a time of women with significant lead exposures during pregnancy. The CDC action level for lead is currently a blood lead level of 5 µg/dL, meaning that pregnant women with blood lead levels >5 µg/dL need to be followed closely during their pregnancy. Unfortunately, most pregnant women do not have blood lead levels checked during their pregnancies, so lead exposure often is undetected. As mentioned in the opening example, lead exposure early in life may result in lead being stored in mother's bones for many years, even generations. Lead then can be mobilized and enter the bloodstream in the 2<sup>nd</sup> and 3<sup>rd</sup> trimesters when the sequestered lead is drawn out along with calcium at a time when the fetus needs calcium for skeletal development.

We have had to treat too many pregnant women for lead exposures with lead levels in excess of 50 µg/dL. These maternal lead blood levels can lead to even higher levels in the newborn, who would require lead chelation therapy at birth.

Do not be silent in considering lead exposure in pregnant women. Perform risk assessment and test pregnant women for lead during their pregnancies. Women with previous lead exposure may need more frequent monitoring of their blood lead levels during pregnancy. Early detection can prevent significant lead transmission to the fetus.

For details on screening and action, please see the following for eliminating the silence of lead poisoning in mothers and babies:

[https://www.health.ny.gov/environmental/lead/pregnant\\_women.htm](https://www.health.ny.gov/environmental/lead/pregnant_women.htm)

<https://www.cdc.gov/nceh/lead/docs/publications/leadandpregnancy2010.pdf>

<https://mothertobaby.org/lead/>

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<https://www.leg.state.mn.us/docs/2008/other/080007.pdf>  
<https://mothertobaby.org/baby-blog/when-you-dont-feel-sick-how-lead-poisoning-can-sneak-up-on-moms-and-kids/>

<https://www.urmc.rochester.edu/childrens-hospital/lead-poisoning-resource-center.aspx>.