

## Spring/Summer 2021

### Central/Eastern NY Lead Poisoning Resource Center

Travis Hobart MD, MPH, Medical Director  
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## Sources of Lead Exposure

The most common source of childhood lead exposure is from old, deteriorating lead paint. However, there are additional sources that should be assessed to correctly identify all potential exposures. The following sources are less-common causes of elevated lead levels but should always be assessed when a child has an elevated blood lead level. Since there is no safe level of exposure to lead, the most effective solution is removal of the source of exposure.

### Secondhand Lead Exposure

Secondhand lead exposure occurs when an occupational exposure is accidentally brought home and children become exposed. Most of the time, interventions to prevent these occupational exposures do not occur until it is discovered that a family member has been exposed<sup>1</sup>. Some workers who could possibly be exposed to lead include construction workers, plumbers, welders, glass manufacturers, artists, auto technicians, and gunsmiths. Visit <https://www.cdc.gov/niosh/topics/lead/jobs.html> for a complete list.

#### Prevention

- Remove work clothes and shoes before entering your home.
- Launder your clothing by itself, separately from the rest of your household.
- Take a shower prior to getting home or as soon as you get home.

Additional Resources for Occupational Exposure: <https://www.health.ny.gov/publications/2543.pdf>

### Toys

Toys may contain lead-based paint if they were made outside of the United States or were made in the United States prior to the lead paint ban. Parents can keep up to date on products that have been recalled for containing lead, by checking the U.S. Consumer Product Safety Commission (CPSC) Recalls page. Although it is uncommon that toys contain lead-based paint, it is possible. CPSC Recalls:

[https://www.cpsc.gov/Recalls?combine=lead&=Apply&field\\_rc\\_date%5Bdate%5D=&field\\_rc\\_date\\_1%5Bdate%5D=](https://www.cpsc.gov/Recalls?combine=lead&=Apply&field_rc_date%5Bdate%5D=&field_rc_date_1%5Bdate%5D=)

### Water

Homes are more likely to have lead-based pipes or fixtures with lead-based solder if they were built prior to 1986. Lead can enter the water source by leaching off old lead pipes or pipes that have lead-based solder. This occurs when the pipes erode, especially likely if the drinking water is not properly treated by the water provider, as happened in Flint, MI. Additionally, brass or chrome-based faucets with lead-based solder can transfer lead into water at the tap, especially when hot water is being run.

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**Prevention**

- Run the tap water for 30-60 seconds prior to using and ensure the water coming out is cold.
- Only use cold water for drinking, cooking, and preparing baby formula. Heat the water as needed after it comes out of the faucet.
- Replace plumbing fixtures if they are known to contain lead.

**The Lead and Copper Rule**

In December 2020, the EPA finalized and submitted a list of proposed changes to the current Lead and Copper Rule. The following are the major changes that were proposed:

- Requires that community water systems test for lead in drinking water in elementary schools and childcare facilities in their area.
- Requires water systems to follow new tap sampling procedures that will better locate elevated levels of lead in drinking water that are more accurate.
- Requires a new, lower threshold of 10 ppb. If exceeded, water authorities must implement more and rapid corrosion control treatment and start lead service line replacement programs.
- Requires water systems to fully replace at least 3% of lead service lines each year when 10% of sampling results are above 15 ppb.
- Requires water systems to identify and make public the locations of lead service lines.
- Requires water systems to provide more timely sample notifications.
  - If a sample from a home returns and is over 15 ppb of lead, the water system must notify occupants of the home within three days.
  - If there is a systemwide action level exceedance, all customers will be notified within 24 hours.
  - If a sample returns and is under 15 ppb, occupants will be notified within 30 days.

To learn more about the changes to the Lead and Copper rule, visit: <https://www.epa.gov/ground-water-and-drinking-water/supporting-materials-final-revisions-lead-and-copper-rule>

To learn more about lead service line replacement, visit: <https://www.epa.gov/ground-water-and-drinking-water/lead-service-line-replacement>

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#### Medicines and Other Products

There are several other products from countries around the world that can contain lead and are risks for lead exposure. These include spices, herbal and Ayurvedic medicines, ointments and pastes, cosmetics, candy, glazed pottery, metal jewelry, and incense. For more information on the specifics of these products, visit the following:

<https://www.health.ny.gov/environmental/lead/sources.htm>

<https://www.cdc.gov/nceh/lead/prevention/sources/foods-cosmetics-medicines.htm>

#### Lead Care II

The Lead Care II (LCII) is a CLIA-Waived, point-of-care blood lead testing system, that provides results in 3 minutes. It requires a blood sample from a fingerstick and can be completed at the time of a well-child visit. Health Care Providers who implement the LCII will need to commit to reporting the blood lead level results in a timely manner to NYS Department of Health, have proper training completed prior to using the machine, and have a CLIA-Waiver in place for the device. There are several benefits to implementing this machine in your practice such as:

- Most patients and parents/guardians are more willing to agree to fingerstick testing as opposed to venous testing.
- Immediate results allow parents or guardians to be educated about elevated blood lead levels including potential life-long effects of lead poisoning and prevention strategies.
- The provider gets an opportunity to schedule appropriate follow up if venous confirmatory testing is needed, while the parents or guardians are already in the office.
- Testing rates and compliance increase, especially among practices that usually utilize an external lab for blood draws.
- Reimbursement is available for testing with CPT code 83655.

A study was done to look at the effectiveness of the Lead Care II machine. The authors wanted to see if there would be an increase in testing rates when the LCII was implemented in provider offices. They found that that while utilizing the LCII, the largest increase in testing rates was seen when the test was done at the same time of the child's routine immunizations. The authors concluded that it is key for the testing method to be widely accepted among the community and to provide the testing alongside familiar programs for children, to overall increase lead testing rates and compliance<sup>ii</sup>.

It is important to note that the LCII is helpful in providing initial lead testing for children ages one and two and for those children up to age six who have at least one related risk factor:

<https://www.health.ny.gov/publications/6670.pdf>. However, follow up venous tests must be done for any child who has an elevated fingerstick test (as defined as  $\geq 5$  ug/dl).

Please reach out to us for more information or assistance regarding implementation of a LCII or visit:

<https://www.health.ny.gov/environmental/lead/laboratories.htm>

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## **Educational Resources**

### **Central New York Environmental Health Asset Map**

The Central/Eastern NY Lead Poisoning Resource Center, in collaboration with the Central New York Children's Environmental Health Center, mapped out environmental health resources throughout 14 counties in the Central New York region. This map highlights important resources for environmental health concerns and provides contact information and services offered by local and regional organizations. The map can be utilized by community members or providers for referring patients to resources. Please contact us with any feedback or if you would like to see any resources added.

[https://www.google.com/maps/d/viewer?mid=1No\\_K4-AaaGDrtsFL3tFjs7FKy4gtZIRp&usp=sharing](https://www.google.com/maps/d/viewer?mid=1No_K4-AaaGDrtsFL3tFjs7FKy4gtZIRp&usp=sharing)

### **Prescriptions for Prevention**

Created by the New York State Children's Environmental Health Centers, Prescriptions for Prevention are resource prescription cards that each focus on a common environmental health concern. The front of each prescription explains simple steps for reducing the exposure and the back lists key resources that families can use to help address the concern.

To see all available Prescriptions for Prevention, please visit: <https://nyscheck.org/rx/>. To see prescriptions that are localized for the Syracuse area, please visit: <https://nyscheck.org/syracuserx/>. Prescriptions for Prevention are available as hard copy prescription pads for your office to utilize; please reach out with any inquiries.

### **Baby Food and Heavy Metals**

We continue to see headlines regarding heavy metals, such as lead, mercury, and arsenic, being found in many baby foods. It is important that families receive the most accurate and up to date information from their providers. The NYS Children's Environmental Health Centers have compiled resources on heavy metals in food and drink products to keep families informed and to reduce their exposure.

<https://nyscheck.org/heavy-metals-in-baby-food-and-juice/>

### **Maternal and Child Environmental Health Lead Poisoning Prevention Toolkit**

The toolkit provides educational, advocacy, and planning resources for public health agencies working to prevent and mitigate maternal and child lead poisoning. Fortunately, in New York State, some of the examples given are already in place due to the current Lead Poisoning Guidelines

(<https://www.health.ny.gov/publications/6671.pdf>) through the New York State Department of Health.

However, there are still further steps that can be taken to maximize prevention against lead poisoning.

The toolkit provides various examples of action items for the following focus areas: Clinical Settings, Housing, Childcare and Schooling, Community, Products and Industry, and Family Engagement and Partnerships. <https://mchleadtoolkit.org>

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#### **Presentations**

The following educational opportunities were recorded and are available to watch at your leisure.

SUNY Upstate Project ECHO: **Lead Exposure and Environmental Justice** by Dr. Travis Hobart. Watch the recording here: <https://drive.google.com/file/d/1WAs9CC5fdxHAY0c7GNsLJP0k5sEAY0hC/view>

Montefiore Medical Center's New York State Regional Lead Poisoning Prevention Resource Center's Annual Conference: **Lead Poisoning: It's Still Making News**. Watch the recording here: <https://montefiore.ent.box.com/s/5gelt59hrcfbtd8c7iqoldeozu9zaida>

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<sup>i</sup>Colarossi, J. (2019). Children of Construction Workers Are at Risk of Secondhand Lead Exposure. The Brink-Environmental Health. Retrieved from <http://www.bu.edu/articles/2019/workplace-lead-exposure/>

<sup>ii</sup> Boreland, F., Lyle, D., Brown, A., & Perkins, D. (2015). Effectiveness of introducing point of care capillary testing and linking screening with routine appointments for increasing blood lead screening rates of young children: A before-after study. *Archives of Public Health*, 73(1). doi:10.1186/s13690-015-0111-y