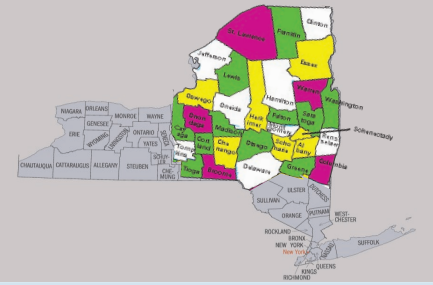




LEAD CENTERPOINT



Resolution of Elevated Blood Lead Levels

Howard L. Weinberger, MD

I am often asked the question:

“How long does it take for a child’s elevated blood lead level to come down to an acceptable level?”

This is a more complicated issue than it might appear at first glance. We should note, of course, that there is no normal blood lead level, so the term “acceptable level” is used.

We are pleased to report that level has come down over the past 30 years as a result of the phase out of lead from gasoline beginning in the 1970’s and the legislation in 1978 banning lead from inclusion in interior and exterior house paint.

I usually respond to the original question with the simple answer: “it depends”.

I don’t mean to be flippant with my response, but it really does depend on a number of variables, the most important being-

how high was the blood lead level when tested?

and, for how long was it elevated?

It’s easy enough to answer the first item, but it is often impossible to know for how long the blood lead level was elevated.

The NY State Department of Health mandates blood lead testing for all one and two year olds. If universal testing were accomplished, it would help identify those with elevated blood lead levels within a relatively narrow time period in early childhood. An elevated blood lead would trigger a search for the source of exposure and efforts to limit continued exposure.

A critical third variable is ongoing exposure to lead after identifying a case. Unfortunately, many children with elevated blood lead levels live in older rental properties which may not be well maintained. It is also true that housing instability includes frequent moves which may put the child at further risk of exposure in a new location.

These factors make for a strong argument to follow the New York State DOH mandate to test all one and two year olds. Primary prevention of lead exposure should be our goal.

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Centers of Excellence in Children's Environmental Health Established

Travis Hobart, MD, MPH

The state of New York has had a longstanding commitment to treating and preventing childhood lead poisoning, establishing Lead Poisoning Resource Centers (LPRCs) in the state in 1994. Though we certainly haven't solved the problem yet, we have made significant progress. The rates of lead poisoning have been coming down for decades, and scientific studies continue to demonstrate the various long term effects of low levels of exposure, leading to improved screening and risk management. As Dr. Weinberger alludes in another article in this newsletter, we are committed to primary prevention of lead poisoning and continue to work with our community partners toward that goal. We have all been encouraged lately by the increasing number of voices calling for change.

Unfortunately, lead is not the only environmental hazard faced by our children. Their small developing bodies are at heightened risk for any toxins in the air they breathe, the water they drink, or the homes in which they live. Lead may be one of the more recognized toxins, but many others have been found to be dangerous, and many new potential dangers enter the consumer marketplace every year. According to the National Toxicology Program run by the federal government, there are more than 80,000 consumer chemicals registered in this country and the health effects are not known for the vast majority of them. We are pleased to report that a group of clinician/scientist/advocates in New York, including experts in the field like Dr. Phillip Landrigan and Dr. Ruth Lawrence, have been working for years to research the various environmental hazards and educate health care providers and the public about these other risks. Last year, after years of advocacy by these pediatricians and their community partners, the NY state legislature voted to set aside \$2 million per year to help protect kids from toxins. Seven Centers of Excellence in Children's Environmental Health have been established around the state, with the primary Center at Mount Sinai Icahn School of Medicine. Locally, we have Centers at SUNY Upstate Medical University and at Albany Medical Center, co-located with our Central and Eastern New York LPRCs, respectively. In addition, the Finger Lakes Center is based at the University of Rochester and covers Binghamton and the Southern Tier, overlapping with some of the Central NY LPRC region. New York is the first state in the country to create such a network of experts in pediatric environmental health, and we think it's a major step toward protecting our children from unnecessary risk.

The Centers can provide education and consultation about childhood exposures to hazards such as mold, allergens, heavy metals, pesticides, and household consumer products. We will be having frequent telehealth "clinics" using the Project ECHO model to discuss clinical cases with healthcare providers and give guidance for patient management. In addition, our mandate from the state Department of Health includes work with community groups to help educate the public about these risks and work to prevent exposure. As we have been consistently advocating in our lead poisoning work, primary prevention is the goal.

¹<https://ntp.niehs.nih.gov/about/index.html>

²<http://nyscheck.org>

³<https://echo.unm.edu>

Pediatric Society of Onondaga County Supports Ending Childhood Lead Poisoning

Lead poisoning has been recognized as a preventable environmental toxin for more than a century. Children who are not exposed to lead hazards do not have blood lead levels. In Syracuse, the Onondaga County Pediatric Society chose to publicly support a resolution at their May 7, 2018 meeting to end childhood lead poisoning. The Central/Eastern New York Lead Poisoning Resource Center, with offices at Albany Medical Center and the SUNY Upstate Golisano Children's Hospital asks all Pediatric and Family Practice Health Care Providers to join in supporting this effort. Please contact the Resource Center in Albany or Syracuse if you would like a copy of the resolution personalized for your community.

We welcome your questions and concerns about the resolution; contact information for our offices in Albany and Syracuse is listed on page 1 of this newsletter.

Pediatric Society of Onondaga County RESOLUTION:

WHEREAS the Pediatric Society of Onondaga County (PSOC) is the professional group representing the general pediatricians and pediatric medical and surgical subspecialists who care for children in Onondaga County and the surrounding counties in central New York, and

WHEREAS the members of the PSOC have a professional obligation to advocate for the health and welfare of the children in their region, and

WHEREAS the damage to cognitive and behavioral skills caused by elevated lead blood levels in young children is not reversible and has life-long effects, and

WHEREAS the scientific evidence clearly shows that no amount of lead in the blood is safe, and

WHEREAS the primary source of childhood exposure to lead is deteriorating leaded paint manufactured prior to 1979 that is ingested or inhaled, and

WHEREAS approximately 90% of homes and apartments in Syracuse and 75% of homes and apartments in Onondaga County were built before 1979, posing great risk to our children, and

WHEREAS lead poisoning is a risk to anyone, disproportionately affecting young children of color and young children living in poverty,

BE IT THEREFORE RESOLVED that the members of the PSOC believe that all children deserve the opportunity to grow up in lead safe environments,

BE IT FURTHER RESOLVED that we support any and all efforts to repair and/or replace this dangerous housing using safe materials, and

BE IT FURTHER RESOLVED that we support the implementation and strict enforcement of laws aimed to ensure that all homes, rented or owner-occupied, are lead safe or lead free.



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Journal Reviews

Maureen Butler, BSN, RN

Blood Lead Levels of Children in Flint, Michigan: 2006-2016. Gomez HF et al www.jpeds.com *J.Pediatr* 2018 Jun; 197:158-64, Epub 2018 Mar 26. The authors retrospectively reviewed the changes in blood lead levels in children ≤ 5 years old in Flint, Michigan during their exposure to the corrosive Flint River as their water source from 2014-2015 and compared their blood lead levels to those of Flint children measured during the years 2006-2013 and 2016. The findings suggest that the 11 year trend of annual decreases in BLLs in children in Flint, Michigan was reversed to a degree consistent with random variation from 2010 to 2011 and again during the exposure to Flint River water in 2014-2015. The authors indicate that historically the public health efforts to reduce blood lead levels of young children in Flint have been effective during the 11 year period studied.

Case 2: A Neonate Affected by Maternal Pica. Velazquez DM, Markowitz ME et al *NeoReviews* 2017 Mar; 18(3); e184. In this case presentation, the authors review the history of a 38 6/7 week neonate. It was known that the infant's mother had pica (backyard soil and untested ethnic products) during the pregnancy. Maternal BLL was 49 mcg/dl at delivery. The infant's BLL at birth was 78 mcg/dl. On Day 3 of life, chelation was initiated. The article reviews the course of care and follow-up. A review of maternal pica behavior and the increased risk for elevated BLL in new Americans is included. The authors call for increased lead poisoning assessment in this population and intervention as indicated.

Low-level lead exposure and mortality in US adults: a population-based cohort study. Lanphear BP et al *Lancet Public Health* 2018 Apr; 3(4): e177–e184. www.thelancet.com/public-health/Vol3/April2018 Background lead exposure is a risk factor for cardiovascular disease mortality, however the number of lead exposure attributable deaths in the US has not previously been well defined. The authors quantify the relative contribution of environmental lead exposure to all cause mortality, cardiovascular disease mortality and ischemic heart disease mortality. The authors conclude that low level lead exposure is important but largely overlooked as a risk factor for cardiovascular disease mortality in the USA.