

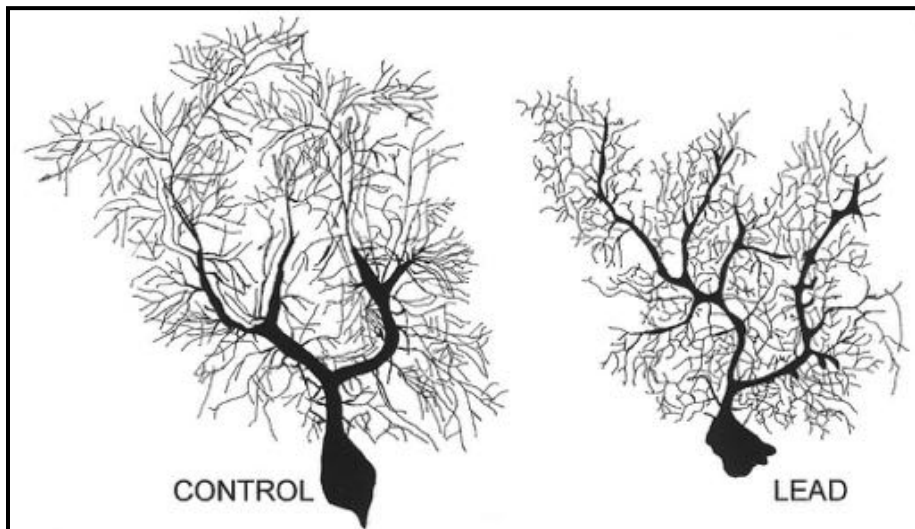
May 12, 2016 Council of NJ Grantmakers Lead Forum Summary

In May 2016 in Newark, more than 40 New Jersey private, corporate, and family funders attended a Council of New Jersey Grantmakers (CNJG) Funders Forum: *New Jersey's Childhood Lead Poisoning Crisis*. The purpose of the forum was to educate funders about the problem of lead exposure among New Jersey children. The forum built on interest generated by the lead poisoning crisis in Flint, MI. Policy leaders, clinical researchers, and medical practitioners spoke at the event about the impact of lead exposure and current efforts to protect children, and discussed opportunities for philanthropy to play a role in making these efforts more effective going forward.

Important insights included:

- Lead is particularly dangerous to children. A child's body absorbs and retains lead more readily than an adult's body, and the lead is more likely to be deposited in the brain. Right now, the only regular mechanism for recognizing lead contamination is a positive blood test in a child. We are literally using our children as lead detectors.

EFFECTS OF LEAD ON DEVELOPING BRAIN CELLS



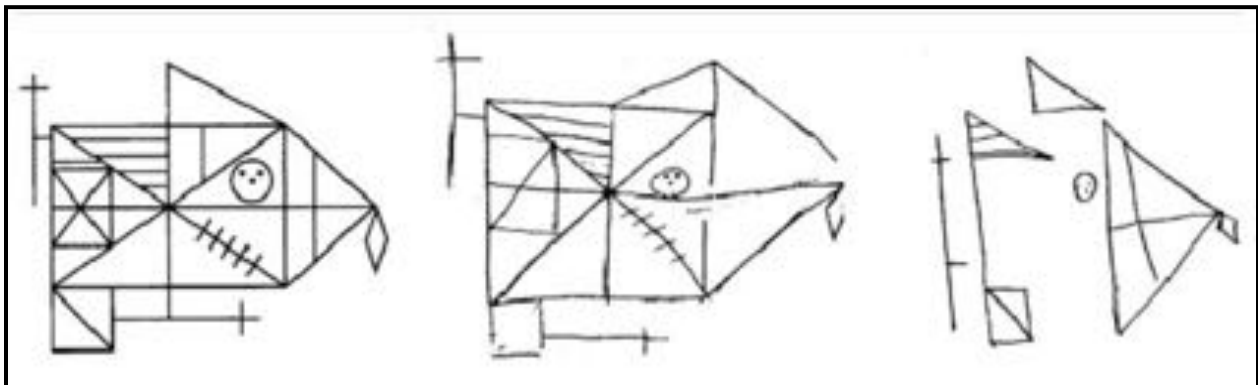
(source: Lidsky presentation, citing Patrick & Anderson, 2000)

- Until May 2016, NJ children with lead levels below 10 $\mu\text{g}/\text{dL}$ were not considered poisoned, even though the CDC had set the definition at 5 $\mu\text{g}/\text{dL}$. New Jersey has since set the definition to mirror the CDC level. In addition, testing is imprecise. The half-life of lead in blood is only 35 days, though in the brain it is 2 years and in long bones 30 years. This suggests that blood test results are capturing only a fraction of the problem.
- Although school water supplies have been in the headlines, experts estimate that 80% of lead poisoning happens in buildings, via ingestion of lead paint, which was outlawed only in

1978. Lead contamination of water is of particular concern, however, for pregnant women and infants on formula.

- Conditions of poverty exacerbate the problem. Poor nutrition (high-fat, low-iron diets) magnifies the uptake of lead. Frequent moves in and out of poor housing mean that it is difficult to match poisoned children with a particular source of contamination.
- The numbers of children affected are staggering, yet the data are rarely reported and can be difficult to interpret. The percentage of children eligible for kindergarten in 2012-2013 whose blood tests have shown levels $\geq 5 \mu\text{g/dL}$ (the CDC definition of poisoning) was 19% in Irvington, 15% in Trenton, 14% in Newark, and 13% in Camden. But environmental neurotoxicologists say there is no safe level. Children testing at $\geq 2.5 \mu\text{g/dL}$ comprised 65% of eligible entering kindergarteners in Irvington, 54% in Newark, 51% in Trenton, and 42% in Camden.¹
- Schools are often unaware that a child has been lead poisoned and uninformed that lead poisoning is not a temporary ailment -- it causes permanent and untreatable brain damage. It impedes memory, attention, language, and executive functioning – all compromising the ability to learn. (There is no requirement to report lead status to schools.)

EFFECT OF LEAD ON VISUAL MEMORY (source: Lidsky presentation)



COMPLEX FIGURE

NORMAL CHILD

LEAD-POISONED CHILD

The forum emphasized the critical role public policy and advocacy could play in preventing lead poisoning in the first place.

¹ The typical measure of children affected by lead poisoning can be misleading because results are generally reported only for the calendar year in which testing took place and the location of residence at the time tested. The numbers reported above were calculated by NJ Department of Health statisticians by (1) identifying the highest test result for any single child, (2) summing the cumulative number of children (who were tested at ages 0-6) who registering lead poisoning above a particular level and who are eligible for kindergarten, (3) determining via census data the single-year kindergarten population in that location, and then (4) calculating the proportion. Caveats: children move, and a child who tested positive in Irvington may actually enter school in Newark, and vice versa.