

# 2023 Childhood Lead Exposure Data Brief

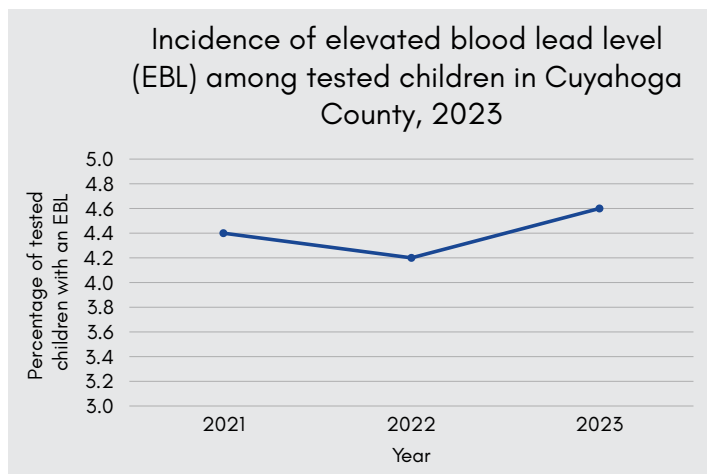
## Cuyahoga County, OH\*

### Why are children at higher risk of lead poisoning?

Most children are exposed to lead in their homes between ages 1 and 3. Exposure is often through chips and dust from lead paint, which has a sweet taste. These particles contaminate household surfaces, as well as toys, pacifiers, and other items children put into their mouths. The brain is vulnerable as a child grows, and in this period of rapid development, exposure to lead interrupts critical functions.

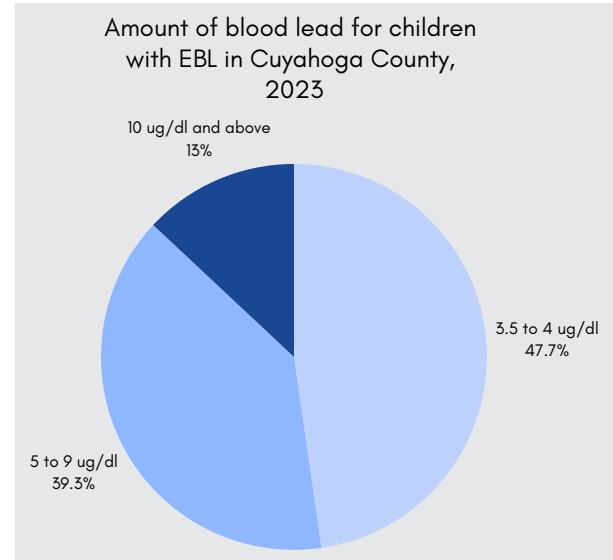
### Who should be tested?

According to Ohio law, children under 6 must be tested for lead exposure if they meet certain criteria, such as being insured by Medicaid or living in a high-risk zip code. Tests are offered at the Cuyahoga County Board of Health and may be available at your child's pediatrician. Refer to the Ohio Department of Health for a full list of qualifications and additional resources.

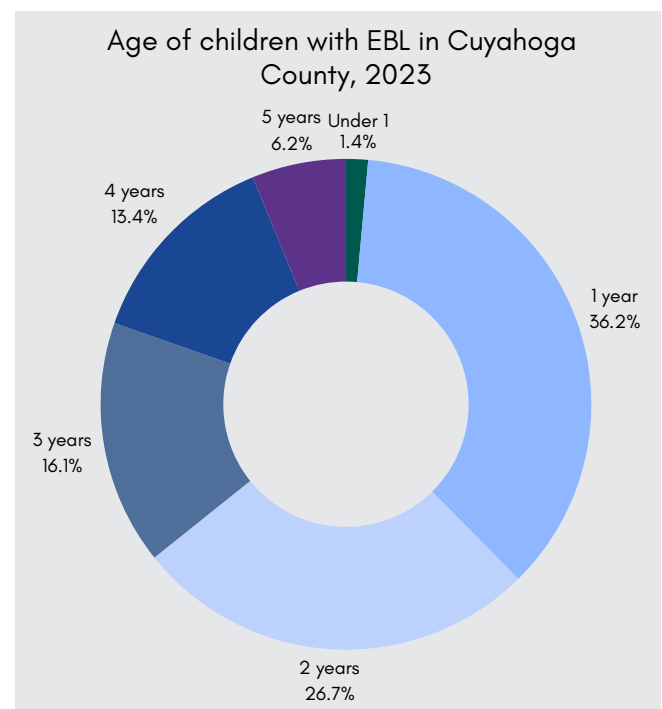


**Above:** The incidence of elevated blood lead levels (EBL) in Cuyahoga County has been stable since 2021. Among children under age 6 who were tested, about 4.5% had an elevated blood lead level.

**Below:** A blood lead level of at least 3.5 ug/dL is considered elevated. In Cuyahoga County, among children with elevated blood lead levels, most had blood lead content between 3.5 and 4ug/dL. Over 10% of these children had a blood lead level of 10ug/dL or above.



**Below:** In Cuyahoga County, most children with an EBL were 1 or 2 years old. Children are required to be tested at age 1 and 2 if they are at high risk of exposure, and they may be tested up until age 6 if not tested previously.



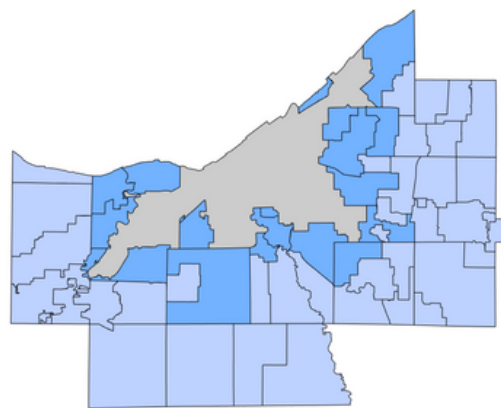
## Exposure is often clustered in geographic areas.

The most significant risk factor for lead exposure is housing built before 1978. Old paint is the primary source of lead in children, who are typically exposed by ingesting paint chips and dust. For this reason, living in an older home that is poorly maintained is a major concern.

Two-thirds of homes in Cuyahoga County suburbs were built before 1970 and likely used lead paint. In first ring communities – those that share a border with the city of Cleveland – this number jumps to over 80%.

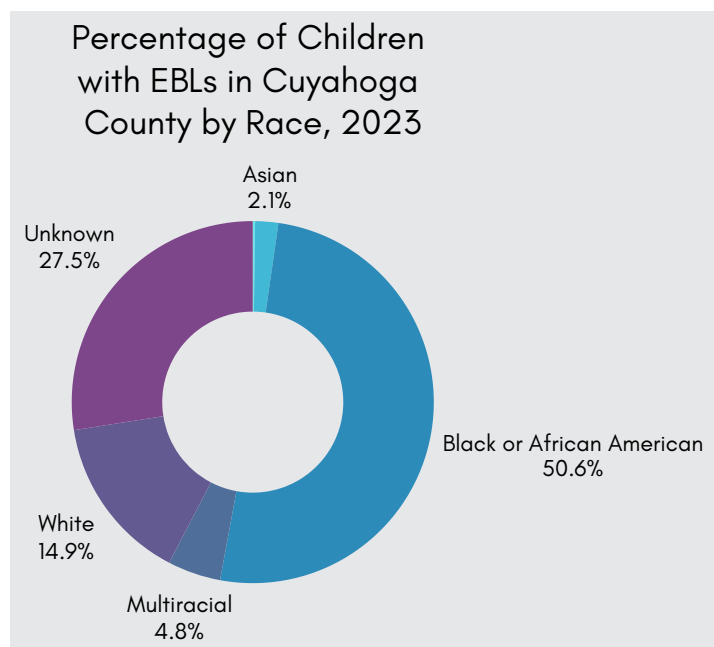
In particular, lead exposure is concentrated in areas of historical disinvestment, where segregation and redlining practices have persistent effects.

Outside of Cleveland, over 85% of children in Cuyahoga County with an elevated blood lead level live in first ring suburbs. In 2023, communities with the highest counts of elevated blood lead levels were **Cleveland Heights, East Cleveland, Garfield Heights, Euclid, and Parma.**



**Above:** First ring suburbs (dark blue) share a border with the city of Cleveland (gray).

## Black and African American children are more often exposed to lead.



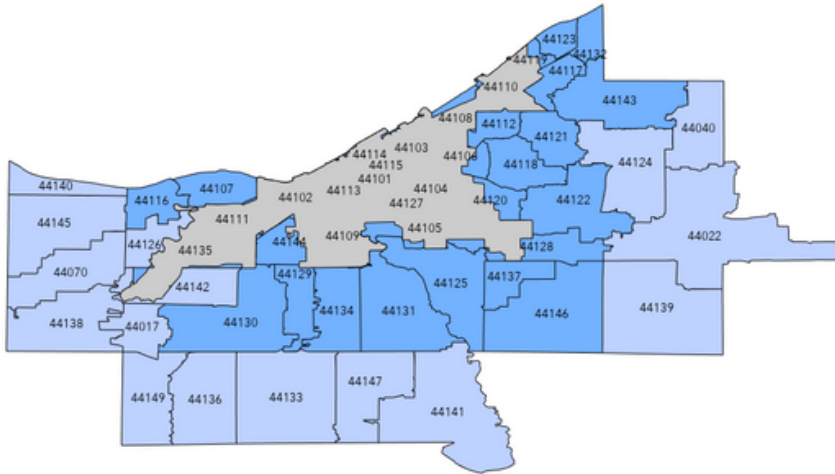
**Above:** There are significant racial disparities among children with elevated blood lead levels. Given the large proportion of missing data on self-reported race (27.5% Unknown), these figures are likely underestimated.

In 2023, over 50% of children with an elevated blood lead level were Black or African American. Areas of Cleveland and Cuyahoga County that were historically subject to racist housing practices and policies are still home to mostly African American residents today. These areas are also associated with higher poverty rates and additional environmental health concerns.

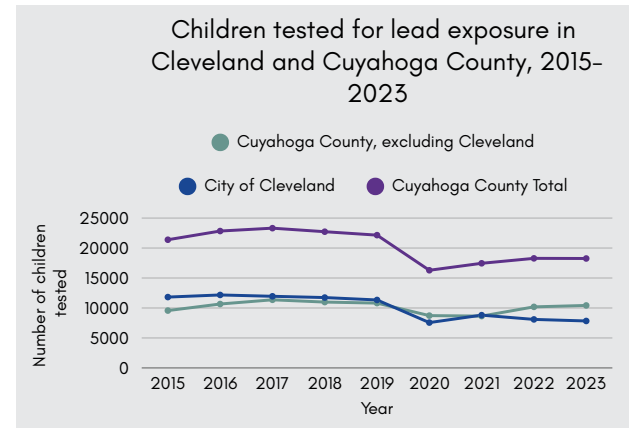
Some refugee and migrant children may also have an increased risk of lead exposure. This is due to a number of factors, including exposure in their country of origin; cultural goods that may be contaminated, such as food and candy; and jewelry, cosmetics, and other household products that may contain lead.

## Testing for lead is crucial, especially for children in high-risk areas.

In high-risk zip codes, all children under 6 are required to be tested for lead exposure. These zip codes are largely located in the city of Cleveland and first ring suburbs. However, less than 25% of children in first ring suburbs were tested in 2023. Zip codes outside the city of Cleveland with the highest EBL counts were **44112, 44118, 44125, 44107, and 44121**.



**Above:** High-risk zip codes, as determined by the Ohio Department of Health, are depicted in the dark blue and gray areas of the map. The gray area indicates the city of Cleveland.



**Above:** In 2020, Cuyahoga County saw a sharp decline in lead testing for children under 6 due to the COVID-19 pandemic. The city of Cleveland and the surrounding area have not yet returned to pre-pandemic testing rates.

## Lead exposure has lasting consequences for children and communities.

Even small amounts of lead in the blood have long-term behavioral and physical consequences. These include delayed development, damage to the nervous system, and difficulties with learning and attention. Symptoms may not appear right away, particularly at low levels, which is why screening for lead exposure is crucial.

At higher lead levels, children may have lifelong health conditions and social challenges. According to researchers at Case Western Reserve University, Cleveland students with a blood lead level of at least 5 ug/dL faced educational setbacks and increased involvement in the juvenile justice system. As adults, these same children were also more likely to be in prison, experience homelessness, and rely on social services and public assistance for basic needs.

## Methodology

Lead testing information is protected and securely accessed via the Data Ohio platform. This data is provided by Ohio Healthy Homes Lead Poisoning Prevention Program (OHHLPPP) at Ohio Department of Health (ODH). The Department specifically disclaims responsibility for any analyses, interpretations, or conclusions from these data.

For children with multiple blood lead tests in 2023, the highest blood lead test per child was counted. Elevated tests in this report consist of confirmed blood tests only.

2023 lead testing data for the City of Cleveland is publicly available through from the Cleveland Department of Public Health's 2023 Lead Poisoning Data Brief ([FINAL DRAFT Lead Poisoning Data Brief 2023](#)).

Historical lead testing data for Cuyahoga County and the City of Cleveland (2015-2022) was taken from the Cuyahoga County Board of Health Elevated Blood Lead Level Reports ([Lead Poisoning – Elevated Blood Lead Level Reports | CCBH](#)).

Population data for Cuyahoga County children (excluding the City of Cleveland) was obtained from the 2020 Decennial Census, Table PCT12. (U.S. Census Bureau. "SEX BY SINGLE-YEAR AGE." Decennial Census, DEC Demographic and Housing Characteristics, Table PCT12, [https://data.census.gov/table/DECENNIALDHC2020.PCT12?q=pct12&g=050XX00US39035,39035\\$1600000\\_160XX00US3916000](https://data.census.gov/table/DECENNIALDHC2020.PCT12?q=pct12&g=050XX00US39035,39035$1600000_160XX00US3916000). Accessed on 8 Jul 2025.)

Housing data for Cuyahoga County was obtained from American Community Survey 5-Year Estimates Detailed Tables (ACSDT5Y2023), Table B25034. U.S. Census Bureau, U.S. Department of Commerce. "Year Structure Built." American Community Survey, ACS 5-Year Estimates Detailed Tables, Table B25034, [https://data.census.gov/table/ACSDT5Y2023.B25034?q=B25034&g=050XX00US39035,39035\\$1600000\\_160XX00US3916000&moe=false](https://data.census.gov/table/ACSDT5Y2023.B25034?q=B25034&g=050XX00US39035,39035$1600000_160XX00US3916000&moe=false). Accessed on 8 Jul 2025.

## References

1. Lori Barrette (2020, July 24). Lead poisoning: Is Your child at risk?. URMCC Newsroom. <https://www.urmc.rochester.edu/news/publications/health-matters/lead-poisoning-is-your-child-at-risk>
2. Ohio Department of Health . (2023, October). Blood Lead Testing Requirements For Ohio Children less than 6 Years of Age. Ohio Healthy Homes and Lead Poisoning Prevention Program. [https://odh.ohio.gov/wps/wcm/connect/gov/6ba9ce85-93a8-4fb9-aa8f-05cc8cd1ba53/Blood%2BLead%2BTesting%2BRequirements%2B2023.pdf?MOD=AJPERES&CONVERT\\_TO=url&CACHEID=ROOTWORKSPACE.Z18\\_K9I401S01H7F40QBNJU3SO1F56-6ba9ce85-93a8-4fb9-aa8f-05cc8cd1ba53-py-Jzz3](https://odh.ohio.gov/wps/wcm/connect/gov/6ba9ce85-93a8-4fb9-aa8f-05cc8cd1ba53/Blood%2BLead%2BTesting%2BRequirements%2B2023.pdf?MOD=AJPERES&CONVERT_TO=url&CACHEID=ROOTWORKSPACE.Z18_K9I401S01H7F40QBNJU3SO1F56-6ba9ce85-93a8-4fb9-aa8f-05cc8cd1ba53-py-Jzz3)
3. Centers for Disease Control and Prevention. (2025, March 26). About lead in paint. Centers for Disease Control and Prevention. <https://www.cdc.gov/lead-prevention/prevention/paint.html>
4. U.S. Department of Health and Human Services. (2025, June 3). Racial segregation makes consequences of lead exposure worse. National Institutes of Health. <https://www.nih.gov/news-events/nih-research-matters/racial-segregation-makes-consequences-lead-exposure-worse#:~:text=At%20a%20Glance,to%20racial%20disparities%20in%20health.>
5. Center for Community Solutions. (2018, December 6). Racial Disparities. Center for Community Solutions. <https://www.communitysolutions.com/resources/racial-disparities>
6. Case Western Reserve University. (2025, May 23). Analyzing the blueprints of redlining in Ohio: Cwru Newsroom: Case Western Reserve University. CWRU Newsroom | Case Western Reserve University. <https://case.edu/news/analyzing-blueprints-redlining-ohio>
7. Centers for Disease Control and Prevention. (2021, March 21). Risk factors and refugees and immigrants. Centers for Disease Control and Prevention. <https://www.cdc.gov/lead-prevention/risk-factors/refugees-immigrants.html>
8. Mayo Foundation for Medical Education and Research. (n.d.). Lead poisoning. Mayo Clinic. <https://www.mayoclinic.org/diseases-conditions/lead-poisoning/symptoms-causes/syc-20354717>
9. Study of “downstream” effects of childhood lead poisoning reveals racial, economic disparities in adulthood: Cwru newsroom: Case Western Reserve University. CWRU Newsroom | Case Western Reserve University. (2025, August 11). <https://case.edu/news/study-downstream-effects-childhood-lead-poisoning-reveals-racial-economic-disparities-adulthood>