

# Childhood Lead Screening

## A Guide for Health Professionals



Childhood lead poisoning is still a major preventable public health problem.

Lead has adverse effects on almost all organ systems in the body. Even at low levels, children's intelligence, hearing and growth can be irreparably damaged.



COLORADO  
Department of Public  
Health & Environment

### Who should receive a blood lead test?



All children at 12 months and at 24 months who are living in High-Risk Zip Codes should receive a blood lead screen.



All children who are determined to be at high risk for lead poisoning by answering "Yes" to any of the High Risk Questions.

### High Risk Questions

Ask parents/guardians the following questions. If any questions are answered with "Yes", it is recommended to test the child for possible lead exposure

**Y/N** Does your child live in or regularly visit a house that was built before 1950 (this could apply to a home day care center or the home of a babysitter or relative)?

**Y/N** Does your child live in or regularly visit a house that was built before 1978 with recent or ongoing renovations or remodeling (i.e., within the past six months)?

**Y/N** Has a sibling or playmate been diagnosed or treated for lead poisoning?

**Y/N** Does your child live with an adult whose job or hobby involves exposure to lead (e.g., mining, automobile repair, welding, construction, plumbing, shooting, hunting, fishing)?

**Y/N** Does your child live near a lead smelter, battery recycling plant, or other industry likely to release lead?

**Y/N** Has your child been in Mexico, Central America, or South America in the past year?

**Y/N** Have you ever given your child any of these home remedies: Azarcon, Alacron, Greta, Rueda, Pay-loo-Ah?

**Y/N** Does your child eat or drink from imported pottery or ceramic cookware?

**Y/N** Does your child eat foods containing spices (turmeric) purchased in import stores or other countries, or imported candies (tamarind or chili)?

**Y/N** Does your child have pica or have a habit of eating dirt or other non-food items?

### Colorado's Lead Screening Recommendations

Colorado guidelines currently recommend testing for all low income children in Colorado. Children should be screened at 12 months and 24 months of age with either a capillary or venous blood specimen. Low income children include:

1. Medicaid-eligible children
2. Child Health Plan Plus eligible children
3. Colorado Indigent Care Program eligible children

### Additional Recommendations

Low-income children between the ages of 36 months and 72 months of age should have a screening blood lead test if they have not been previously screened for lead.

Children residing in the Denver area in Zip codes 80216, 80203, 80204, or 80205 are considered to be at increased risk for lead exposure, based on studies in those low income neighborhoods, and should be tested according to the above schedule.

Refugee children between 1 and 6 years old eligible for Domestic Health Screenings at Denver area refugees clinics should be screened at intake with a repeat test in 3 to 6 months.



# Health Effects of Lead Exposure

## Lower Blood Lead Level

Developmental delay  
 Learning difficulties  
 Irritability  
 Loss of appetite  
 Weight loss  
 Sluggishness and fatigue  
 Abdominal pain  
 Vomiting  
 Constipation  
 Hearing loss

## Extremely High Blood Lead Level

Severe brain damage  
 Death



A child's IQ will drop one to three points for every increase of 10 µg/dL in the child's blood lead level.

On a community level, lead exposure is associated with an increase in the number of children with developmental deficits and learning disorders.

Lead poisoning can be hard to detect, as signs and symptoms don't appear until dangerous amounts have accumulated.

## Common Sources of Lead in Colorado



Homes built before 1978 with chipping, peeling or flaking paint, or imported toys with lead-based paint.



Imported spices, such as tumeric, coriander, black pepper, thyme, and hanuman sindoor.



Imported glazed pottery, commonly used to cook beans or hot chocolate.



Home remedies such as greta or azacron used to treat stomach illness or empacho.



Soil or dust tracked into the house contaminated with lead.



Household plumbing in older houses.



Work in lead related industries such as construction, mining, welding, or plumbing. Hobbies such as hunting and fishing that use leaded bullets or fish sinkers.

## What should I do after I've tested a child for blood lead?

### 1. Report all Blood Lead Level (BLL) results to the Colorado Department of Public Health and Environment (CDPHE)



Contact the CDPHE Lead Surveillance program for electronic reporting at

[cdphe\\_leadreports@state.co.us](mailto:cdphe_leadreports@state.co.us)

Blood lead level	Time to report	Reporting to CDPHE required by law
≥10 µg/dL*	7 business days	Yes
<10 µg/dL	30 business days	Yes

\*Immediately consult with Poison Control (1-800-222-1222) and CDPHE for levels above 45 µg/dL.

### 2. Confirmational Testing for elevated blood lead levels (EBLL)



Any capillary or finger-stick screening BLL above 10 µg/dL must be confirmed with a venous sample.

All children should have a hemoglobin or hematocrit test performed, as anemia is associated with EBLLs.

### 3. CDC recommend schedule for follow up testing

Venous blood lead level (µg/dL)	Early follow-up (first 2-4 tests after identification)	Late follow-up (after BLL begins to decline)
≥5-9	3 months*	6-9 months
10-19	1-3 months*	3-6 months
20-24	1-3 months*	1-3 months
25-44	2 weeks-1 month	1 month
≥45	As soon as possible	As soon as possible

\* Some case managers or PCP's may choose to repeat blood lead tests on all new patients within a month to ensure that their BLL level is not rising more quickly than anticipated.

For more information please contact the CDPHE Lead Surveillance Program 303-692-2708 or at [cdphe\\_leadreports@state.co.us](mailto:cdphe_leadreports@state.co.us)



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