



## This is an official **DHEC Health Update**

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### **Update to CDC's Blood Lead Reference Value for Children**

#### **Summary**

On Thursday, October 28, 2021, the Centers for Disease Control and Prevention's Lead Poisoning Prevention Branch announced an **update to the Blood Lead Reference Value (BLRV) from 5.0 micrograms per deciliter (mcg/dL) to 3.5 mcg/dL\* in children.**

This change provides an opportunity for additional progress in addressing longstanding disparities in lead exposure and blood lead levels (BLLs) in children.

DHEC is sharing materials from the CDC about the BLRV change, along with reminders about collection and reporting of blood lead test results.

- [CDC Call to Action](#)
- [DHEC's Recommendations and Reminders for Providers](#)
- [DHEC Case Management and Environmental Assessments](#)
- [Links for Additional Information](#)
- [Reporting Blood Lead Test Results](#)

#### **Background**

Despite the overall decline of blood lead levels over time, lead exposure remains a significant public health concern for children because of persistent lead hazards in the environment. Even low levels of lead in blood have been shown to affect IQ, ability to pay attention, and academic achievement. There are still millions of locations throughout the United States with lead hazards and large numbers of children at risk for lead exposure. Significant disparities in exposure and health outcomes continue to exist across racial, ethnic, and socioeconomic status.

In 2012 CDC introduced the concept of a blood lead "reference value" to identify children with higher levels of lead in their blood compared to most children, based on the 97.5<sup>th</sup> percentile of the blood lead distribution in U.S. children ages 1–5 years from the most recent two cycles of data from the National Health and Nutrition Examination Survey (NHANES). At that time, the BLRV for children corresponding to the 97.5<sup>th</sup> percentile was established at 5 micrograms per deciliter (mcg/dL). CDC reviewed the most recent data derived from the 2015-2018 NHANES cycles and determined that the current 97.5<sup>th</sup> percentile is 3.5 mcg/dL. The Lead Exposure and Prevention Advisory Committee (LEPAC) unanimously voted on May 14, 2021 in favor of updating the reference value to 3.5 mcg/dL.

The BLRV is not a clinical reference level defining an acceptable range of blood lead levels in children nor is it a health-based toxicity threshold. The BLRV is used as a screening tool to: (1) identify children who have higher levels of lead in their blood compared with most children, and (2) assess the effectiveness of prevention efforts.

By lowering the BLRV to 3.5 mcg/dL, children with blood lead levels (BLLs) between 3.5 and 5 mcg/dL will now be identified as having blood lead levels higher than most other children. Updating the reference value allows CDC, federal partners, and health departments to focus resources on children with the highest lead exposure compared to most children in that age range to reduce blood lead levels and identify sources of exposure. By paving the way for early intervention and the prevention of additional exposure and associated harm, updating the BLRV supports the Administration's commitment to health equity and addressing environmental justice.

### **CDC Call to Action**

CDC would like healthcare providers to:

1. Formally adopt the updated BLRV of 3.5 mcg/dL [for addressing results of lead testing for children under 16 years of age.]
2. Publicly promote the BLRV to identify children with BLLs that are higher than most U.S. children's levels.
3. At minimum, perform [CDC's recommended child-specific response actions](#) at or above the BLRV.
4. Take earlier action to identify and mitigate exposures [especially] for children ages 1–5 years with BLLs at or above the BLRV of 3.5 mcg/dL:
  - a. Strive to ascertain possible sources of exposure by taking an environmental history, provide nutritional counseling related to iron and calcium intake, and consider laboratory evaluation of iron status when appropriate.
  - b. Provide guidance on exposure reduction, regardless of whether a source(s) is identified, and link patients and families to health departments [for additional services such as environmental inspections](#) and remediation when indicated.
  - c. Conduct follow-up testing using venous samples after any remediation activities have taken place to ensure exposure reduction was effective and BLLs are not increasing.
  - d. Assess developmental progress at regular intervals and provide referrals to supportive services as needed.

### **DHEC's Recommendations and Reminders for Providers**

- Continue blood lead testing of children as required by Medicaid and/or recommended by public health:
  - Test at 12 months of age and again at 24 months of age. ([Medicaid](#))
  - Test if a child 3-5 years of age has no record of a lead test. ([Medicaid](#))
  - Test as required/recommended for [Head Start attendees](#).
  - Test as recommended for [refugee](#) and [internationally adopted](#) children.
  - Test children, especially under six years of age, if there is another child in the household with an elevated blood lead level. ([SC Statute](#))

- Test children when a paper screening (EMR or a paper screening form) identifies risks of lead exposure. ([English](#); [Spanish](#))
- Given recent concerns about accuracy with the Lead Care II<sup>®</sup> analyzer, and the shortage of testing materials, filter paper or Microtainer<sup>®</sup> specimen collection methods are equally acceptable for capillary testing of children who have not had prior elevated blood lead levels.
- Assure children’s hands (or feet) are thoroughly cleaned with soap and water and allowed to air dry before collection of capillary specimens. Use of alcohol wipes does not remove lead dust that may be present on fingers or heels.
- **Elevated capillary results at or above 3.5 mcg/dL should be confirmed with venous testing.** See [Recommended Actions based on Blood Lead Value](#) (CDC) for testing intervals and follow-up recommendations by test type and result value.
- [All blood lead test results are reportable to DHEC](#). Providers who send blood specimens out for lead testing at reference laboratories do not need to submit these results to DHEC when received.

### **DHEC Case Management and Environmental Assessments**

When notified by healthcare providers or alerted by DHEC’s lead surveillance data system, DHEC staff can provide nursing case management and environmental assessments (EA) for children with confirmed (venous) elevated blood lead levels of 10 mcg/dL or greater. DHEC may also offer these services for a child who has a confirmed EBLL below 10 mcg/dL in the presence of another risk including, but not limited to, a sibling or housemate with an EBLL below DHEC’s threshold, or a child with behavioral/cognitive/neurological or other health findings that are thought by a referring provider to be related to the child’s lead exposure.

Contact DHEC’s Childhood Lead Poisoning Prevention Program at 1-866-4NO-LEAD (866-466-5323) to request nursing case management and environmental assessments.

### **More Information on the Reduction in the Blood Lead Reference Value**

- [CDC’s Lead Poisoning Prevention Program](#)
- CDC: [Recommended Actions Based on Blood Lead Level](#)
- CDC: [Blood Lead Reference Value](#)
- CDC/MMWR: [Update of the Blood Lead Reference Value – United States, 2021](#)

**Contact DHEC’s Division of Children’s Health and Perinatal Services Lead Line (1-866-4NO-LEAD) with questions about this Health Update.**

### **DHEC Contact Information for Reportable Diseases and Reporting Requirements**

Reporting of blood lead testing results (all results, regardless of test type, test result, or age of patient) is required by SC Statute requiring the reporting of diseases and conditions to your state or local public health department. See [SC Code of Laws § 44-53-1380 et seq.](#) and the DHEC 2021 List of Reportable Conditions available at:

<https://www.scdhec.gov/sites/default/files/Library/CR-009025.pdf>

**All blood lead results are reportable within 30 days.**

**Any elevated results are reportable within 7 days:**

- **3.5 mcg/dL or greater in children, or**
- **5 mcg/dL in adults 16 year of age or older.**

Federal HIPAA legislation allows disclosure of protected health information, without consent of the individual, to public health authorities to collect and receive such information for the purpose of preventing or controlling disease. (HIPAA 45 CFR §164.512).

<h3><b>Blood Lead Test Reporting</b></h3> <p><b>Mail, Fax, Email, or Send via secure FTP all blood lead testing results to DHEC's Bureau of Population Health, Data Analytics, and Informatics.</b></p>	
<p><b>Reporting</b></p> <ul style="list-style-type: none"><li>• Submit electronically via DHEC's web-based reporting system; or</li><li>• Mail to: Lead Surveillance Sims-Aycock Building 2600 Bull Street Columbia, SC 29201</li><li>• Fax Lead reports to: (803) 898-3236; or</li><li>• Email: <a href="mailto:scionlead@dhec.sc.gov">scionlead@dhec.sc.gov</a> to establish electronic reporting</li></ul>	<p><b>For further information, contact:</b> DHEC Bureau of Maternal and Child Health Division of Children's Health and Perinatal Services</p> <p><b>Childhood Lead Poisoning Prevention Program</b> Mills Jarrett Building 2100 Bull Street Columbia, SC 29201 Toll-Free Phone: 1-866-4NO-LEAD (866-466-5323) Division Main Number: (803) 898-0767</p>
<p><b>For information on reportable conditions, see <a href="https://www.scdhec.gov/ReportableConditions">https://www.scdhec.gov/ReportableConditions</a></b></p>	

Categories of Health Alert messages:

<b>Health Alert</b>	Conveys the highest level of importance; warrants immediate action or attention.
<b>Health Advisory</b>	Provides important information for a specific incident or situation; may not require immediate action.
<b>Health Update</b>	Provides updated information regarding an incident or situation; unlikely to require immediate action.
<b>Info Service</b>	Provides general information that is not necessarily considered to be of an emergent nature.

\* The abbreviation mcg/dL is used for micrograms per deciliter in this document, as the Greek mu character (μ) might not appear correctly on some screen readers.