

# Lead Testing

## CHILD AND TEEN CHECKUPS (C&TC) FACT SHEET FOR PRIMARY CARE PROVIDERS

Blood lead level (BLL) testing is required at the 12 and 24 month C&TC visits and at visits up to 6 years if not performed at 24 months of age. There is no safe BLL for children.

### C&TC Requirements

#### General

Blood lead level (BLL) tests are required at 12 and 24 months during C&TC visits and for children up to 6 years of age who did not have a BLL test at the 24-month visit. Test children if their history indicates concern for lead poisoning or if their risk factors change; the testing will be covered as part of the C&TC visit.

Retest newly arrived refugees less than 72 months of age three to six months after placement in a permanent residence (Minnesota Department of Health, 2022). Refer to the [Blood Lead Screening Guidelines for Minnesota](#).

#### Personnel

Medical assistants or lab technicians may complete the testing. A licensed healthcare provider must interpret the results and ensure appropriate follow-up: physician, nurse practitioner, physician assistant, or registered or public health nurse (RN, PHN) who has completed the C&TC Comprehensive Screening training through the Minnesota Department of Health (MDH).

### Documentation

Provider documentation forms do not need a complete record of laboratory test results. They should indicate where in the chart the test results can be found.

For documentation examples or for use as a template with your electronic medical record, refer to the [C&TC Provider Documentation Forms](#).

BLL is a program requirement for children enrolled in Head Start, so results should be included in Head Start documentation.

### Procedure

A risk questionnaire alone does not meet C&TC requirements. A blood lead test is the only way to tell if a child was exposed to lead.

A blood lead test may be performed on either capillary or venous blood samples. Wash the child's hands before performing capillary BLL tests.

- [Steps for collecting capillary BLL tests](#)

A venous blood lead test is required to confirm capillary results greater than or equal to five micrograms of lead per deciliter of blood ( $\geq 5$  mcg/dL).

## Confirmatory Testing Timeline for Elevated Capillary BLLs Samples

If the result of capillary screening test is:	Confirm with a venous draw no later than:
5 – 14.9 mcg/dL	1 month
15 – 44.9 mcg/dL	1 week
45 – 59.9 mcg/dL	48 hours
≥ 60 mcg/dL	Immediately

Source: Childhood Lead Treatment Guidelines for Minnesota (Minnesota Department of Health, 2019).

## Referral and Follow-Up

A child with a BLL greater than or equal to 5 mcg/dL must receive appropriate follow-up from their primary care provider. Refer to [Childhood Blood Lead Treatment Guidelines](#) for protocols.

All blood lead tests are required to be reported to MDH by the lab or clinic analyzing the sample. Health care providers do not need to call MDH to report, unless they suspect a failure to report properly. If a blood lead test result is  $\geq 5$  mcg/dL, MDH shares the result with Local Public Health who does case management. If the result is  $\geq 5$  mcg/dL on a venous sample, it is also shared with risk assessors who complete an environmental risk assessment to test for sources of lead.

## Guidelines for Women During Pregnancy and Lactation

MDH recommends blood lead screening for pregnant women at risk of having an elevated BLL. Infants of mothers with an elevated BLL need specific follow-up. Refer to [Blood Lead Screening Guidelines for Pregnant and Breastfeeding Women in Minnesota](#).

## Blood Lead Reference Value and Elevated Blood Lead Level Definition

As of 2021, the Centers for Disease Control and Prevention (CDC) blood lead reference value (BLRV) is 3.5 mcg/dL (Centers for Disease Control and Prevention, 2022). In 2023, the definition of an elevated blood lead level (EBLL) was lowered in Minnesota statute from 5.0 mcg/dL or greater to 3.5 mcg/dL or greater.

MDH is currently updating its guidelines, including recommendations regarding treatment and case management of children with EBLLs of 3.5 to 4.9 mcg/dL. In the meantime, health care providers may choose to do follow-up testing for people with blood lead levels 3.5-4.9 mcg/dL if they feel that is in the best interest of their patient.

## Importance of Lead Testing

There is no safe blood lead level for children. Lead toxicity can affect every organ system. Even low levels of exposure produce many health and learning effects (Centers for Disease Control and Prevention, 2022).

## Resources

### Minnesota Department of Human Services

- [C&TC Schedule of Age-Related Screening Standards](#)
- [Minnesota Health Care Programs \(MHCP\) Provider Manual - C&TC Section](#)

## Minnesota Department of Health

- [Child and Teen Checkups \(C&TC\)](#)
- [Lead](#)

## Centers for Disease Control and Prevention

- [CDC's Childhood Lead Poisoning Prevention Program](#)

## References

Centers for Disease Control and Prevention. (2022). *Blood Lead Reference Value*. Retrieved from [www.cdc.gov/nceh/lead/data/blood-lead-reference-value.htm](http://www.cdc.gov/nceh/lead/data/blood-lead-reference-value.htm)

Centers for Disease Control and Prevention. (2022). *Health Effects of Lead Exposure*. Retrieved from [www.cdc.gov/nceh/lead/prevention/health-effects.htm](http://www.cdc.gov/nceh/lead/prevention/health-effects.htm)

Minnesota Department of Health. (2019). *Childhood Blood Lead Treatment Guidelines for Minnesota*. Retrieved from [www.health.state.mn.us/communities/environment/lead/docs/reports/cbltreatsummary.pdf](http://www.health.state.mn.us/communities/environment/lead/docs/reports/cbltreatsummary.pdf)

Minnesota Department of Health. (2022). *Minnesota Domestic Refugee Health Screening Guidance*. Retrieved from [www.health.state.mn.us/communities/rih/guide/index.html](http://www.health.state.mn.us/communities/rih/guide/index.html)

## For More Information

The Child and Teen Checkups (C&TC) program is administered through a partnership between the Minnesota Department of Human Services and the Minnesota Department of Health.

For questions about this fact sheet or to obtain this information in a different format, call 651-201-3650 email [health.childteencheckups@state.mn.us](mailto:health.childteencheckups@state.mn.us).

Revised 06/2024

## Resource Links

- [Blood Lead Screening Guidelines for Minnesota](#) ([www.health.state.mn.us/communities/environment/lead/prof/guidelines.html](http://www.health.state.mn.us/communities/environment/lead/prof/guidelines.html))

- [C&TC Provider Documentation Forms](https://mn.gov/dhs/partners-and-providers/policies-procedures/minnesota-health-care-programs/provider/types/ctc-resources) (<https://mn.gov/dhs/partners-and-providers/policies-procedures/minnesota-health-care-programs/provider/types/ctc-resources>)
- [https://www.cdc.gov/biomonitoring/pdf/lead-fingerstick-poster-508.pdf?CDC\\_AAref\\_Val=https://www.cdc.gov/biomonitoring/pdf/Lead\\_Fingerstick\\_Poster-508.pdf](https://www.cdc.gov/biomonitoring/pdf/lead-fingerstick-poster-508.pdf?CDC_AAref_Val=https://www.cdc.gov/biomonitoring/pdf/Lead_Fingerstick_Poster-508.pdf)
- [Childhood Blood Lead Treatment Guidelines](http://www.health.state.mn.us/communities/environment/lead/docs/reports/cbltreatsummary.pdf) ([www.health.state.mn.us/communities/environment/lead/docs/reports/cbltreatsummary.pdf](http://www.health.state.mn.us/communities/environment/lead/docs/reports/cbltreatsummary.pdf))
- [Blood Lead Screening Guidelines for Pregnant and Breastfeeding Women in Minnesota](http://www.health.state.mn.us/communities/environment/lead/prof/guidelines.html#pregnant) ([www.health.state.mn.us/communities/environment/lead/prof/guidelines.html#pregnant](http://www.health.state.mn.us/communities/environment/lead/prof/guidelines.html#pregnant))
- [C&TC Schedule of Age-Related Screening Standards](https://edocs.dhs.state.mn.us/lfserver/Public/DHS-3379-ENG) (<https://edocs.dhs.state.mn.us/lfserver/Public/DHS-3379-ENG>)
- [Minnesota Health Care Programs \(MHCP\) Provider Manual - C&TC Section](http://www.dhs.state.mn.us/main/idcplg?IdcService=GET_DYNAMIC_CONVERSION&RevisionSelectionMethod=LatestReleased&dDocName=dhs16_150092) ([www.dhs.state.mn.us/main/idcplg?IdcService=GET\\_DYNAMIC\\_CONVERSION&RevisionSelectionMethod=LatestReleased&dDocName=dhs16\\_150092](http://www.dhs.state.mn.us/main/idcplg?IdcService=GET_DYNAMIC_CONVERSION&RevisionSelectionMethod=LatestReleased&dDocName=dhs16_150092))
- [Child and Teen Checkups \(C&TC\)](http://www.health.state.mn.us/people/childreynouth/ctc/index.html) ([www.health.state.mn.us/people/childreynouth/ctc/index.html](http://www.health.state.mn.us/people/childreynouth/ctc/index.html))
- [Lead](https://www.health.state.mn.us/communities/environment/lead) (<https://www.health.state.mn.us/communities/environment/lead>)
- [CDC's Childhood Lead Poisoning Prevention Program](http://www.cdc.gov/nceh/lead/about/program.htm) ([www.cdc.gov/nceh/lead/about/program.htm](http://www.cdc.gov/nceh/lead/about/program.htm))