

Lead Screening

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

C&TC Requirements

General

C&TC providers are *required* to screen blood lead levels (BLL) in children at 12 and 24 months of age, and children up to 6 years of age who did not have a BLL screen at the 24-month visit. In addition, children should be screened whenever their history indicates concern for lead poisoning. For more information, refer to the [Blood Lead Screening Guidelines for Minnesota \(www.health.state.mn.us\)](http://www.health.state.mn.us).

Personnel

Physicians, nurse practitioners, physician assistants, nurses, medical assistants or lab technicians may complete lab screening for lead.

Documentation

Documentation of lead testing must include laboratory tests ordered, date, results, appropriate referral and follow-up. Due to the time required for results to be available, it might not be possible to have a complete record of blood lead test results on the C&TC documentation forms. Test results may be located elsewhere in the chart but the documentation forms should indicate where to find this information. For documentation examples, refer to MHCP C&TC Provider Documentation Forms (www.dhs.state.mn.us).

Screening Procedure

The only definitive way to find out if a child was exposed to lead is to do a BLL screening test. Administering a risk questionnaire alone without a BLL test at 12 and 24 months of age does *not* meet C&TC requirements.

The specimen for the BLL screen may be either capillary or venous blood. The child's hands

should be washed before capillary BLL tests are done. Alcohol wipes do not sufficiently remove lead dust.

When the result is greater than or equal to 5 micrograms lead per deciliter of blood (5 mcg/dL), a venous blood lead test is required to confirm the results of the capillary draw. After confirmation, venous follow-up tests are preferred, but capillary results are accepted.

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. For specifics on case management and treatment, refer to these resources:

- [Childhood Blood Lead Case Management Guidelines \(www.health.state.mn.us\) for local public health \(Revised 2017\)](http://www.health.state.mn.us)
- [Childhood Blood Lead Clinical Treatment Guidelines \(www.health.state.mn.us\) for medical providers](http://www.health.state.mn.us)

MDH receives all BLL test results drawn in MN. Elevated results are referred to local Public health for follow-up.

Follow-up Testing for Elevated BLL

If result of capillary screening test is:	Perform diagnostic test on venous blood within:
5 – 14.9 mcg/dL	1 month
15 – 44.9 mcg/dL	1 week
45 – 59.9 mcg/dL	Within two business days
≥ 60 mcg/dL	Immediate Venous Confirmation

Blood lead levels should continue to be monitored until they are below 5mcg/dL.

Source: Childhood Blood Lead Case Management Guidelines (Minnesota Department of Health, 2017). *These are local public health case management guidelines. Medical treatment guidelines are to be published by MDH in 2018.*

Guidelines for Women During Pregnancy and Lactation

Conduct a lead risk-screening questionnaire at the first prenatal visit for each pregnant woman. MDH recommends blood lead screening for pregnant women identified as at risk of having an elevated BLL. Refer to [Blood Lead Screening Guidelines for Pregnant and Breastfeeding Women in Minnesota](http://www.health.state.mn.us) (www.health.state.mn.us).

Importance of Screening

Lead toxicity can affect every organ system. Even low levels of exposure produce many subtle health and learning effects (Centers for Disease Control and Prevention, 2015). There is no safe blood lead level for children.

A blood lead test is the only way to know if a child has been exposed to lead. Refer to [Childhood Lead Exposure](http://www.health.state.mn.us) (www.health.state.mn.us).

Recommendations

Centers for Disease Control and Prevention

A BLL of 5 mcg/dL or higher requires intervention to prevent further lead exposure and elevation in blood lead levels (Centers for Disease Control and Prevention, 2015).

Resources

Minnesota Department of Health

- [Lead Poisoning Prevention](http://www.health.state.mn.us) (www.health.state.mn.us)
- [Child and Teen Checkups \(C&TC\)](http://www.health.state.mn.us) (www.health.state.mn.us)

Minnesota Department of Human Services

- [MHCP Provider Manual, C&TC Section](http://www.dhs.mn.us) (www.dhs.mn.us)

Centers for Disease Control and Prevention

- [CDC's Childhood Lead Poisoning Prevention Program](http://www.cdc.gov) (www.cdc.gov)

American Academy of Pediatrics

- [Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents, 3rd Edition](http://www.brightfutures.aap.org) (www.brightfutures.aap.org)

References

American Academy of Child and Adolescent Psychiatry. (2012, November 1). *Lead Exposure in Children Affects Brain and Behavior*. Retrieved from American Academy of Child & Adolescent Psychiatry: http://www.aacap.org/aacap/families_and_youth/facts_for_families/fff-guide/Lead-Exposure-In-Children-Affects-Brain-And-Behavior-045.aspx

American Academy of Pediatrics Council on Environmental Health. (2016, June). Prevention of Childhood Lead Toxicity. *Pediatrics*, 138(1), 1-15. Retrieved from <http://pediatrics.aappublications.org/content/140/e20171490.full.pdf>

Centers for Disease Control and Prevention. (2015). *Blood Lead Levels in Children: What do parents need to know to protect their children*. Retrieved from Centers for Disease Control and Prevention: https://www.cdc.gov/nceh/lead/acclpp/lead_levels_in_children_fact_sheet.pdf

Minnesota Department of Health. (2017). *2017 Blood Lead Surveillance Report*. St. Paul: Minnesota Department of Health.

World Health Organization. (2010). *Childhood Lead Poisoning*. Geneva: WHO Press. Retrieved from <http://www.who.int/ceh/publications/leadguidance.pdf>

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 651-201-3760 email health.childteencheckups@state.mn.us.

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