

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 the blood lead levels in children at 12 and 24 months of age and children up to 6 years of age who have not previously had a blood lead level (BLL) screen. Children should also be screened whenever their history indicates concern for lead poisoning. For more information, refer to [Lead: Risk Assessment Guidance for Lead in Blood \(www.health.state.mn.us\)](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. It may not be possible to have a complete record of blood lead test results on the C&TC documentation forms, due to the time required for results to be available. Test results may be located elsewhere in the chart but documentation forms should indicate where this information can be found. For documentation examples, refer to [MHCP C&TC Provider Documentation Forms \(www.dhs.state.mn.us\)](http://www.dhs.state.mn.us).

Screening Procedure

Either capillary or venous blood may be used as the specimen for the BLL screen. When the result is greater than or equal to 5 micrograms lead per deciliter of blood (5mcg/dL), a venous blood lead test is required to confirm the results of the capillary draw.

Referral and Follow-up

A child with a venous BLL greater than or equal to 5mcg/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 \(www.health.state.mn.us\)](http://www.health.state.mn.us)
- [Childhood Blood Lead Clinical Treatment Guidelines \(www.health.state.mn.us\)](http://www.health.state.mn.us)

Follow-up blood testing for elevated BLL

If result of capillary screening test is (in micrograms per deciliter (mcg/dL))	Perform diagnostic test on venous blood within
5 – 14.9 mcg/dL	3 months
15 – 44.9 mcg/dL	1 week
45 – 59.9 mcg/dL	48 hours
≥ 60 mcg/dL	Immediately (emergency lab test)

(Minnesota Department of Health, 2015)

Guidelines for Women during Pregnancy and Lactation

A risk assessment for lead exposure is recommended for all pregnant women. Blood lead screening is recommended for pregnant women identified as being at risk of elevated BLL. Treatment actions should be based on the woman's BLL. Infants born to mothers with elevated BLL greater than 5mcg/dL should be tested at birth. Breastfeeding may be initiated for maternal blood lead levels less than 40mcg/dL, depending on the infant's BLL.

Importance of Screening

Lead toxicity can affect every organ system. Even low levels of exposure produce many subtle health effects (Centers for Disease Control and Prevention, 2015).

In young children, the effects of low levels of lead exposure may not appear until they enter school and display learning difficulties, reduction in IQ, or behavior problems (American Academy of Child and Adolescent Psychiatry, 2012).

Childhood lead poisoning can lead to irreversible health effects later in life and with future generations including neurological damage, renal disease, hypertension, and other cardiovascular effects, reproductive toxicity, and developmental problems (World Health Organization, 2010)

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

Certain populations of children are at increased risk of lead poisoning: children enrolled in Medicaid programs, refugees, and immigrants.

The most common source of lead is found in dust created by the leaded paint found in houses built before 1978. For more information, refer to [Lead Poisoning Prevention - Common Sources \(www.health.state.mn.us\)](http://www.health.state.mn.us).

Professional Recommendations

Centers for Disease Control and Prevention

In 2012, the CDC decreased the BLL that requires referral from 10 micrograms per deciliter (mcg/dL) to 5 mcg/dL. A BLL of 5 mcg/dL or higher requires intervention to prevent further lead hazard exposure and elevation in blood lead levels (Centers for Disease Control and Prevention, 2015).

Resources

Minnesota Department of Health

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

Minnesota Department of Human Services

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

Centers for Disease Control and Prevention

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

National Center for Healthy Housing

- [Toys and Childhood Lead Exposure Fact Sheet \(PDF\) \(www.nchh.org\)](http://www.nchh.org)

U.S. Consumer Product Safety Commission

- [CPSC Recalls \(www.cpsc.gov\)](http://www.cpsc.gov)

American Academy of Pediatrics

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

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

Minnesota Department of Health. (2015). *2015 Blood Lead Surveillance Report*. St. Paul: Minnesota Department of Health.

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

For More Information

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To obtain this information in a different format, call: 651-201-3760.