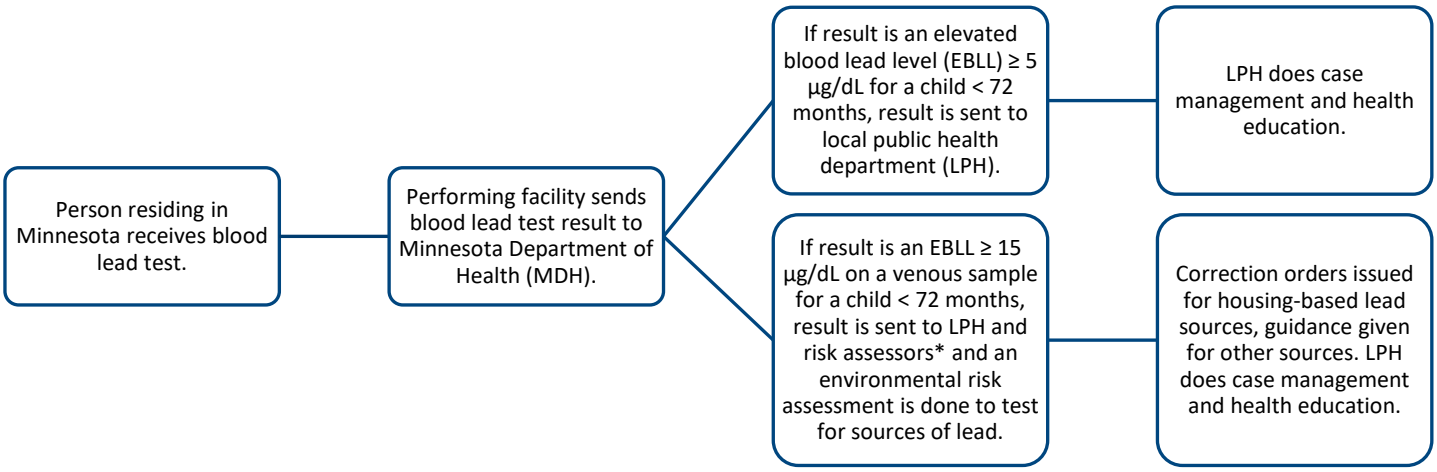
DEPARTMENT OF HEALTH

Childhood Blood Lead Treatment Guidelines for Minnesota

UPDATED 2019

Process and Role of Public Health



*A few jurisdictions perform environmental risk assessments and home visits for venous results at lower blood lead levels.

MDH Lead Poisoning Prevention Contacts

- Call 651-201-4892 for questions regarding:
  - elevated blood lead case management
  - guidance on blood lead testing
- Call 651-201-4919 or email health.bloodleadresults@state.mn.us for questions regarding:
  - reporting blood lead results to MDH
  - incoming/outgoing blood lead results
- Fax number to send blood lead results: 651-201-4909
- Mailing address:
  Minnesota Department of Health (MDH)
  Health Risk Intervention Unit
  P.O. Box 64975
  St. Paul, MN 55164-0975

Resources

- MDH Lead Fact Sheets and Brochures (https://www.health.state.mn.us/communities/environment/lead/fs/index.html)
- MDH Blood Lead Level Guidelines (https://www.health.state.mn.us/communities/environment/lead/prof/guidelines.html)
- MDH Test Result Reporting (https://www.health.state.mn.us/communities/environment/lead/prof/surv.html)
- PEHSU: Recommendations on Medical Management of Childhood Lead Exposure and Poisoning (https://www.pehsu.net/_Library/facts/medical-mgmnt-childhood-lead-exposure-June-2013.pdf)

Treatment Guidelines: Blood Lead Tests on Capillary Samples

BLLs (µg/dL)	ACTIONS BASED ON RESULTS OF BLOOD LEAD TESTS ON CAPILLARY SAMPLES
ALL BLLs	**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).**
Capillary < 5.0	▪ Prevention Education: discuss blood lead testing and high-risk categories, primary sources of lead, and measures to keep children safe from lead. Education should be provided in the family's preferred language. ▪ Retest at 12 and 24 months or if risk factors change. For newly arrived refugees less than 72 months of age, retest 3 to 6 months after placement in permanent residence.

Capillary ≥ 5.0	▪ In addition to the steps described above for lower blood lead levels, perform the following:
	▪ Confirm with a venous draw no later than:
	  ▪ 1 month for Blood Lead Levels (BLLs) 5.0–14.9 µg/dL
	  ▪ 1 week for BLLs 15.0–44.9 µg/dL
	  ▪ 48 hours for BLLs 45.0–59.0 µg/dL
	  ▪ Immediately for BLLs ≥ 60 µg/dL.
	▪ If a clinic is unable to do a venous draw, refer the child to a laboratory or facility able to perform a venous draw.
	▪ MDH refers children < 72 months to local public health departments (LPH).

TREATMENT GUIDELINES CONTINUED ON NEXT PAGE

Treatment Guidelines: Blood Lead Tests on Venous Samples

BLLs (µg/dL)	ACTIONS BASED ON RESULTS OF BLOOD LEAD TESTS ON VENOUS SAMPLES
ALL BLLs	**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).**
Venous < 5.0	▪ Prevention Education: discuss blood lead testing and high-risk categories, primary sources of lead, and measures to keep children safe from lead. Education should be provided in the family's preferred language. ▪ Retest at 12 and 24 months or if risk factors change. For newly arrived refugees < 72 months of age, retest 3 to 6 months after placement in permanent residence.

Venous
5.0–14.9
	In addition to the steps described above for lower blood lead levels on venous samples, perform the following:
	▪ After initial venous result, repeat test on a venous sample every 3 months until < 5.0 µg/dL.
	▪ MDH refers children < 72 months to local public health (LPH); LPH does case management and health education.
	▪ Communicate with LPH regarding potential sources of lead. Test all household members who are likely exposed to lead source(s) or refer them to their primary care provider for blood lead testing within one month.
	  ▪ For housing-based sources, exposed individuals are typically < 72 months.
	  ▪ For non-housing-based sources, household members of all ages may be exposed.
	▪ Assess nutritional status (especially iron & calcium) through a conversation with family about the child's normal diet.
	▪ Complete diagnostic evaluation including a physical exam and history.
	▪ Complete studies to evaluate iron status and treat iron deficiency if present according to Pediatric Environmental Health Specialty Unit (PEHSU) medical management for childhood lead exposure guidelines (link listed above under Resources).
	▪ Check and follow neurologic & developmental status. Refer to programs like Follow-Along or Help-Me-Grow as applicable.
	▪ Education on decreasing elevated BLLs: educate the family and discuss potential sources of lead, reducing or removing exposure, lead abatement, nutrition, the chronic nature of problem, and need for ongoing monitoring of BLLs.
	▪ Provide written, culturally appropriate lead poisoning prevention educational materials.

Venous 15.0–44.9	In addition to the steps described above for lower blood lead levels on venous samples, perform the following: ▪ Household members who are likely exposed to lead sources should be tested or referred to their primary care provider for a blood lead test within one week. ▪ After initial confirmed venous result, repeat test on a venous sample every 3 months or do more frequent monitoring, as needed. MN Poison Control (1-800-222-1222) or Region 5 PEHSU (1-866-967-7337) may be consulted for questions about monitoring frequency. ▪ MDH or the local public health department will conduct an environmental inspection (risk assessment) and public health nursing home visit for children < 72 months of age. A few jurisdictions perform environmental inspections and home visits for venous results at lower blood lead levels on a routine basis or upon parent request. ▪ Through the environmental inspection, the suspected lead sources will be identified. Lead correction orders will be issued for housing-based lead sources, and recommendations will be given for other lead sources.
Venous 45.0–59.9	In addition to the steps described above for lower blood lead levels on venous samples, perform the following: ▪ Household members who are likely exposed to lead sources should be tested or referred to their primary care provider for a blood lead test within two business days. ▪ Reconfirm blood lead test result as soon as possible, even for venous results. ▪ Consult MN Poison Control (1-800-222-1222) or Region 5 PEHSU (1-866-967-7337) for guidance regarding possible chelation treatment, diagnostic tests, and other recommended actions. ▪ Check abdominal radiograph. If swallowed lead object found, lead object should be passed or removed prior to chelation. Consult with MN Poison Control or PEHSU. ▪ Notify MDH immediately if child is hospitalized or chelation is begun. Coordinate care with MDH/LPH, and put an action plan in place. Discuss with MDH and family ways to reduce immediate lead exposure. ▪ After initial confirmed venous result, more frequent monitoring through repeated tests on venous samples will likely be needed. Develop a monitoring plan based on BLL trends that includes repeat tests on venous samples 3 to 6 weeks after chelation therapy is complete. If BLL ≥ 45 µg/dL following chelation, consult with MN Poison Control or PEHSU.
Venous ≥ 60.0	In addition to the steps described above for lower blood lead levels on venous samples, perform the following: ▪ TREAT AS AN EMERGENCY— potential encephalopathy. ▪ Household members who are likely exposed to lead sources should be tested or referred to their primary care provider for a blood lead test immediately.