

CHILD HEALTH MANUAL**SECTION:** N.D. HEALTH TRACKS – EPSDT**SUBJECT:** LEAD SCREENING**POLICY - LEAD SCREENING:**

Children ages 6 months to 72 months are considered at risk for lead toxicity and should be screened for lead poisoning. Children found to have blood lead levels of 10 $\mu\text{g}/\text{dL}$ or above should be evaluated utilizing recommendations contained within this manual.

PROCEDURE:

- Within each local agency, when providing North Dakota Health Tracks – EPSDT screening, the following children must have a blood lead test:
 - Children at ages 12 and 24 months.
 - All children ages 36 to 72 months if they have not been previously screened for lead poisoning.
- All children younger than 72 months will have a lead screening questionnaire completed at a minimum of once per year:
 - If the caregiver answers “yes” or “not known” to any question on the lead screening questionnaire, a blood lead test must be collected.
 - If the caregiver hesitates in answering any question, be sure to discuss whatever the concern is. Sometimes a special circumstance or concern is not addressed in the questionnaire.
 - For evaluation, see [Childhood Lead Poisoning Evaluation Questionnaire SFN-59322](#), and [Guidelines for Childhood Lead Poisoning Evaluation Questionnaire](#) for guidelines. Public health nurses conducting North Dakota Health Tracks – EPSDT screening will follow approved lab protocols for obtaining capillary blood specimen when blood lead test is required.
- Blood samples will be sent to appropriate lab per agency policy.
- Management guidelines for elevated blood lead levels will be followed.
 - See Subject 7, pages 2 and 3 for these guidelines.
- For a list of lead screening laboratories, refer to www.epa.gov/lead/pubs/nllaplist.pdf.
- If a hemoglobin is needed, take it before any more massaging of finger for lead sample. Hemoglobin should be obtained before the lead sample to avoid over massaging of the finger for the hemoglobin sample.

Initial Follow-up Policy

Upon receiving notification of elevated capillary blood lead test (10 $\mu\text{g}/\text{dL}$ or above):

- Immediately notify parent/caregiver that further testing is required.
- Explain need for recheck of blood lead test with venipuncture. Provide education and maintain communication with family. See www.ndhealth.gov/aq/iaq/lbp/info.htm.

DATE: 01/10

Subject 7
Page 1 of 7

CHILD HEALTH MANUAL**SECTION:** N.D. HEALTH TRACKS – EPSDT**SUBJECT:** LEAD SCREENING

- Refer to family physician (10 $\mu\text{g}/\text{dL}$ or above).
 - Provide capillary blood test results to local clinic if needed.
 - Have authorization to disclose information form signed by parent/caregiver so primary care provider (PCP) can release test results. Use HIPPA compliant agency release of information form or [Authorization to Disclose Information \(SFN 1059\)](#).
- Assist parent/caregiver in setting up appointment with provider.
- If parent/caregiver refuses to comply, an abuse and neglect report (960 form) may need to be filed with county social services.

Follow-up If Elevated Blood Lead Level Confirmed With Venipuncture (10 $\mu\text{g}/\text{dL}$ or above)

- Elements in follow-up for family may include:
 - Referral to the NDDoH website: www.ndhealth.gov/aq/iaq/lbp.
 - Providing reassurance to family.
 - Providing prevention and abatement education.
 - Communicating with child's primary care provider (PCP).
 - Monitor blood level and possible treatment response.
 - Repeat venipunctures may be recommended every three to six months.
 - Consider a home assessment for source of lead.
 - Monitor blood level and possible treatment response.
 - Family and compliance issues:
 - Follow-up with the family to ensure that the lead source is removed and cleaning is completed.
 - If blood levels remain moderate to highly elevated, child may have to be removed from the environment until the source can be found and eliminated.
 - Social Services may need to be involved for further investigation of medical neglect of child (960 form).

See page 4 of this subject for contact information for the Lead-Based Paint Program.

DATE: 01/10

Subject 7
Page 2 of 7

CHILD HEALTH MANUAL

SECTION: N.D. HEALTH TRACKS – EPSDT

SUBJECT: LEAD SCREENING

Table 2.2. Time Frames for Environmental Investigation and Other Case Management Activities According to a Child's Blood Lead Level^a (BLL)

A diagnostic BLL is the first venous BLL obtained within six months of an elevated screening BLL.

Blood lead level ($\mu\text{g}/\text{dL}$) ^b	Actions	Time frame for beginning intervention
10-14	Provide caregiver lead education. Provide follow-up testing. Refer the child for social services if necessary.	Within 30 days
15-19	Above actions, plus: If BLLs persist (i.e., 2 venous BLLs in this range at least 3 months apart) or increase, proceed according to actions for BLLs 20-44.	Within 2 weeks
20-44	Above actions, plus: Provide coordination of care (case management). Provide clinical evaluation and care. ^c Provide environmental investigation and control current lead hazards.	Within 1 week
45-70	Above actions.	Within 48 hours
70 or higher	Above actions, plus hospitalize child for chelation therapy immediately.	Within 24 hours

^aThe Advisory Committee on Childhood Lead Poisoning Prevention encourages programs to develop methods to deliver environmental assessment services to caregivers for children living in high-risk dwellings regardless of the children's blood lead levels.

^bMicrograms per deciliter of whole blood measured in a venous sample collected following an elevated screening measurement.

^cThe recommended clinical evaluation is described in Chapter 3, "Medical Assessment and Interventions."

Adapted from "Managing Elevated Blood Lead Levels Among Young Children: Recommendations from the Advisory Committee on Childhood Lead Poisoning Prevention," Centers for Disease Control and Prevention, March 2002, Page 36.

DATE: 01/10

Subject 7
Page 3 of 7

CHILD HEALTH MANUAL**SECTION:** N.D. HEALTH TRACKS – EPSDT**SUBJECT:** LEAD SCREENING**FOLLOW-UP INFORMATION ON LEAD**

- Questions about the following should be directed to Lead-Based Paint (LBP) Coordinator, Division of Air Quality, North Dakota Department of Health, 918 East Divide Avenue, 2nd Floor, Bismarck, North Dakota 58501. Phone: 701.328.5188. www.ndhealth.gov/aq/iaq/lbp
 - The state health department's blood lead surveillance program
 - Lead abatement
 - Environmental blood lead investigations
 - Medical evaluation and management of individuals exposed to environmental lead
- Questions about the laboratory analysis of blood lead levels should be directed to the lab conducting the analysis.
- For up-to-date information about consumer safety, refer to the U.S. Consumer Product Safety Commission website: www.cpsc.gov.

POLICY – ENVIRONMENTAL FOLLOW-UP:

Lead screening tests confirmed by venipuncture to be 20 µg/dL or higher must have an environmental assessment conducted to determine source of the lead poisoning. For results less than 20 µg/dL, the health-care provider (physician, mid-level clinician, nurse or case manager) may request an environmental investigation at his or her discretion.

GUIDELINES:

- GENERAL GUIDELINES FOR HOME ASSESSMENT
 - Explain the rationale for assessment, as this may be intrusive and stressful for the family.
 - Explain the general procedure and why it is needed.
- RESOURCES FOR ASSESSMENT
 - Examples of Interior and Exterior Building Component Types – Guidelines for the Evaluation and Control of Lead-Based Hazards in Housing, Table 7.1
 - A National Lead Laboratory Accreditation Lab (NLLAP) must be used for environmental sample analysis. A list of these laboratories can be found at www.epa.gov/lead/pubs/nllaplist.pdf or you may obtain a list from North Dakota Department of Health, 701.328.5188.
 - Under North Dakota State Lead Regulations, the only person who can legally take a paint chip sample that will hold up in a court of law is a North Dakota State Certified Lead Based Paint Risk Assessor or Lead Based Paint Inspector. For a list of qualified companies, see www.ndhealth.gov/AQ/IAQ/LBP or contact the NDDoH Lead-based Paint Program (701.328.5188) to have the Lead-Based Paint Coordinator bring out an XRF analyzer that can tell you immediately whether you have lead based paint without doing destructive sampling or sending the paint chip to the lab.

DATE: 01/10

Subject 7
Page 4 of 7

CHILD HEALTH MANUAL**SECTION:** N.D. HEALTH TRACKS – EPSDT**SUBJECT:** LEAD SCREENING

- **BACKGROUND INFORMATION**
 - The number-one source of lead poisoning in children in North Dakota is lead paint.
 - All lead was removed from household paint and varnish in 1978.
 - Paint and varnish produced before 1920 would have the highest content of lead.
 - Doors and window frames painted with paint and varnish would have the highest content of lead.
 - Exterior house paint also would have higher lead content.
 - Older lead-based paint may be located under newer paint. Check for layers of paint.
 - A paint chip the size of a dime with 30 percent lead content will cause childhood blood lead poisoning.
 - Ingestion of lead dust equivalent to 1/8 of a teaspoon will cause childhood lead poisoning.
- **INVESTIGATE USE OF FOLK/HOME REMEDIES**
 - Folk/home remedies for an illness may contain lead.
 - Primarily a practice among Hispanic, African and Asian populations.
 - The remedies are administered for digestive problems (which might be one of the early indicators of lead poisoning).
- **INVESTIGATE HOBBIES OR OCCUPATIONS**
 - Pottery
 - Stained glass
 - Fishing weights
 - Loading shotgun shells with lead
 - Battery recycling
 - Some industries
 - Electronic soldering
- **INVESTIGATE DISHES**
 - Some dishes or china contain lead, especially if manufactured outside of the United States.
 - Fiesta brand of dishes. Pre-1972 (about) Fiesta dinnerware all contained lead in the glazes. If making your own dishes, make sure that lead-free glaze is used.
 - Lead crystal glasses or bottles: Do not store liquids (including alcoholic beverages) in this type of container.
 - Food should not be stored in dishes containing lead. Hot-spicy foods may leach lead.
- **INVESTIGATE PLUMBING SOURCES**
 - Lead water pipes in older homes.
 - Lead solder used commercially in plumbing until 1976.
 - Lead solder still sold and may be used by self-builders.
 - Lead found in plumbing fixtures.

DATE: 01/10

Subject 7
Page 5 of 7

CHILD HEALTH MANUAL**SECTION:** N.D. HEALTH TRACKS – EPSDT**SUBJECT:** LEAD SCREENING

- INVESTIGATE TOYS
 - Paint on older toys may contain lead.
 - Toys such as color crayons, costume jewelry, makeup and other plastic products manufactured in foreign countries may contain lead.
- INVESTIGATE MISCELLANEOUS SOURCES
 - Vinyl, plastic or aluminum mini-blinds. Mini-blinds made in the USA after 1996 should be safe.
 - If source of lead is not detected in the home, you may need to investigate other places the child spends time (i.e., child care, grandparents, etc.).
- INVESTIGATE EXTERNAL SOURCES OF LEAD
 - Exterior paint prior to 1920 had 60 percent lead content.
 - In addition, this paint may liquefy and leach into soil around house.
 - May need to have soil analyzed if source is not found inside of home.
 - Check environmental list for a laboratory that can analyze soil samples.
 - Leaded gasoline may be present in soil.
 - Service stations.
 - Farm gas tanks.
- REMODELING OF PRE-1978 HOMES
 - Lead may be present in dust.
 - If samples of dust are needed, contact Lead Based Paint Coordinator at NDDoH (Refer to Subject 7, p. 4).
- SUGGESTIONS FOR CONTROL OF LEAD CONTAMINATION
 - Wet washing is the best way to clean up lead dust. Powdered Cascade automatic dishwasher soap or powdered laundry detergent are good products for home cleaning. These products are effective because they contain a small amount of phosphate which attracts the lead particles.
 - For instructions on wet washing, please see www.health.state.mn.us/divs/eh/lead/fs/cleaningup.pdf.
 - Monthly wet washing is necessary until the source of the lead contamination is eliminated.
 - Avoid sweeping, as this spreads dust-containing lead.
 - Never use your household vacuum cleaner to clean up paint dust or chips from walls, floors or window sills and wells. Your household vacuum cleaner filter cannot pick up and hold the small pieces of lead. It can blow lead dust into the air where people can breathe it in. A special vacuum cleaner called a High Efficiency Particulate Air Filter Vacuum (HEPA) is required is required to clean up lead particles.

DATE: 01/10

Subject 7
Page 6 of 7

CHILD HEALTH MANUAL**SECTION:** N.D. HEALTH TRACKS – EPSDT**SUBJECT:** LEAD SCREENING

- Hand washing after any contact with lead containing particles is very important to avoid ingestion.
- Replace windows as necessary.
- Painting over old paint will not alleviate lead contamination because paint wears off when the window is opened and closed.
- Use caution when removing lead-based paint. Removal of paint with a heat gun or open flames should be avoided, as lead will vaporize when heated and fumes will be inhaled.
 - Wet the paint before and during removal to avoid spreading dust.
 - Paint stripping products may be beneficial to control the spread of the paint dust. Note: Methylene chloride (also called dichloromethane, or DCM) causes cancer in laboratory animals. The U.S. Environmental Protection Agency (EPA) and the U.S. Consumer Product Safety Commission (CPSC) consider the chemical to be a potential cause of cancer in humans.
- **ABATEMENT:** Lead paint abatement is the process of safely reducing lead paint hazards.
 - Lead removal can be very expensive.
 - A NDDoH LBP program coordinator or specialized contractor may be needed to evaluate the area.
 - For information about state-level resources for lead abatement, refer to page 4 of this section.
 - Sometimes it may be necessary to relocate families.
 - Refer to community agencies or churches to assist with temporary relocation.
 - Social service agencies also may be of assistance.
 - Rental units are the responsibility of the landlord.

DATE: 01/10

Subject 7
Page 7 of 7