Lead Poisoning
Quick Guide for Lead Testing and Treatment in Utah

Recommendations for Lead Poisoning Detection and Follow Up in Children

There is no known safe level of lead in children and it adversely affects nearly every organ system. Increased levels have been associated with lowered IQ scores, ADHD, aggression as well as other physical and mental disorders.

The only way to detect lead poisoning is through a blood test. A capillary (finger stick) is the quickest testing method and it may be done in your doctor’s office. Another more accurate method is from a venous blood draw. A capillary test will need to be confirmed by a venous blood draw if the blood lead level is ≥5 µg/dL. Utah does not require blood lead testing on all children, although there is a federal mandate that all children with Medicaid insurance be tested at 1 and 2 years of age and children entering Head Start must be tested. The CDC and the American Academy of Pediatrics recommend routine lead exposure screening and encourage testing of all children.

All blood lead test results are required to be reported to the Utah Department of Health (UDOH). See below for information to be reported. All blood lead samples analyzed within a clinic/office (i.e. Lead Care II point of care machines) must be reported directly to the UDOH. If using an outside clinical laboratory for blood lead analysis, the lab will report directly to the UDOH. Confirmed elevated venous blood lead levels ≥5 µg/dL should be reported to the county health department for case management.

Refugee and immigrant children are at a higher risk of lead poisoning and need to have their blood lead level checked within 1-3 months of arrival if between the ages of 6 months and 16 years of age. In addition, follow up testing should be done 3-6 months after resettlement on children 6 months to 6 years of age.

What information needs to be submitted to the state:

First and last name, date of birth, gender (or age if no DOB), zip code of patient, blood lead value in µg/dL, source of blood lead venous or capillary (V or C), date of test, location where blood sample drawn and where lab test was performed (Clinic/hospital/office Lead Care II machine). All blood lead tests can be reported daily, weekly or monthly. Spreadsheets are best.

Report All Blood Lead Results to:
Email: EPICDEPFAX@utah.gov
Fax: 801-538-9923

State Contact: Mark E. Jones, LEHS, Epidemiologist
Environmental Epidemiology Program
Utah Department of Health
P.O. Box 142104
288 North 1460 West
Salt Lake City, Utah 84114-2104
Office: 801-538-6191
Email: markejones@utah.gov
# Recommendations on Management of Childhood Lead Exposure

## Capillary or Venous <5 μg/dL
1. Review lab results with family. If point of care testing done in office, report all levels to state Health Department (see front for reporting information). Outside clinical labs report to the state directly.
2. Repeat the blood lead level in 6–12 months if the child is at high risk or risk changes during the timeframe. Ensure levels are done at 1 and 2 years of age.
3. For children screened at age <12 months, consider retesting in 3-6 months as lead exposure may increase as mobility increases.
4. Perform routine health maintenance including assessment of nutrition, physical and mental development, as well as iron deficiency risk factors.
5. Provide anticipatory guidance on common sources of environmental lead exposure: paint in homes built prior to 1978, soil near roadways or other sources of lead, take-home exposures, related to adult occupations, imported spices, cosmetics, folk remedies, and cookware.

## Venous 5–14 μg/dL
1. Perform prior steps as described above for levels <5 μg/dL
2. Re-test venous blood lead level within 1-3 months to ensure the lead level is not rising. If it is stable or decreasing, retest the blood lead level in 3 months. Once reported to the state, the local health departments should follow up with case management. Check the CDC or the National Lead Information Center for resources regarding lead poisoning prevention and programs.
3. Take a careful environmental history to identify potential sources of exposures (see #5 above) and provide preliminary advice about reducing/eliminating exposures. Take care to consider other children who may be exposed.
4. Provide nutritional counseling. Diets rich in Iron, Calcium and Vitamin C will not lower elevated blood lead levels, but may reduce lead absorption. Lead is absorbed better on an empty stomach so encourage regular, healthy meals and snacks including foods rich in iron, calcium and vitamin C. Some children may be eligible for Special Supplemental Nutrition Program for Women, Infants and Child (WIC) or other nutritional counseling.
5. Ensure iron sufficiency with adequate laboratory testing (CBC, Ferritin, CRP) and treatment per AAP guidelines.
6. Perform structured developmental screening evaluations at child health maintenance visits, as lead’s effect on development may manifest over years.
7. Give parents Baby Watch Early Intervention (BWEI) information for developmental concerns http://www.utahbabywatch.org. Children ages 0-3 yrs. automatically qualify for services through BWEI for a venous blood lead level >10 μg/dL.

## Venous 15–44 μg/dL
1. Perform steps as described above for levels 5-14 μg/dL.
2. Confirm the blood lead level with repeat venous sample within 1 to 4 weeks.
3. Additional, specific evaluation of the child, such as abdominal x-ray should be considered based on the environmental investigation and history (e.g., pica for paint chips, mouthing behaviors). Gut decontamination may be considered if leaded foreign bodies are visualized on x-ray. Any treatment for blood lead levels in this range should be done in consultation with an expert.
4. Refer to Baby Watch Early Intervention http://www.utahbabywatch.org. Children ages 0-3 yrs. automatically qualify for services through BWEI for a venous blood lead level >10 μg/dL.

## Venous >44 μg/dL
1. Follow guidance for BLL 15-44 μg/dL as listed above.
2. Confirm the blood lead level with repeat venous lead level within 48 hours.
3. Consider hospitalization and/or chelation therapy (managed with the assistance of an experienced provider). Safety of the home with respect to lead hazards, isolation of the lead source, family social situation, and chronicity of the exposure are factors that may influence management.
4. Refer to Baby Watch Early Intervention http://www.utahbabywatch.org. Children ages 0-3 yrs. automatically qualify for services through BWEI for a venous blood lead level >10 μg/dL.

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*The info in this sheet is subject to revisions as new processes are set in place given the new state blood lead level reporting rule (Aug. 2017)*

Modified and adapted for Utah by the **Utah Lead Coalition** from AAP site based on Recommendations on Medical Management of Childhood Lead Exposure and Poisoning Factsheet

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