

# Blood Lead Exposure in Utah

## What is Lead Exposure?

Lead exposure is one of the most common and preventable childhood health problems in the United States. Children become exposed to lead when by ingesting items containing lead or breathing in leaded dust. According to the Centers for Disease Control and Prevention (CDC), no level of blood lead is considered safe. The CDC and the Utah Department of Health consider an elevated blood lead level to be  $\geq 5$  micrograms per deciliter ( $\mu\text{g}/\text{dL}$ ). Currently, the Utah Department of Health is in the process of revising the definition of an elevated blood lead level from  $\geq 10 \mu\text{g}/\text{dL}$  to  $\geq 5 \mu\text{g}/\text{dL}$ , which is why various documentation may have both levels.

Children under the age of 6 years are at the highest risk for lead exposure because of their rapidly developing bodies and behaviors such as crawling and putting their fingers or other objects, which may be contaminated with leaded dust, into their mouths. Therefore, the main emphasis for lead poisoning prevention is among this age group. Older children as well as adults can still be exposed to lead and have adverse health effects. The information contained in this document pertains to all ages.

It is important to note that the measurements for blood lead levels and lead levels found in drinking water are NOT the same thing. Blood lead levels are measured in ( $\mu\text{g}/\text{dL}$ ) while lead levels in drinking water are measured in parts per billion (ppb). There are many factors that influence blood lead levels and the lead levels found in water, soil, dust, etc. For more information on lead in drinking water, please refer to the Utah Department of Environmental Quality/Division of Water Quality (see page 3).

### Utah Blood Lead Data ( $\geq 10 \mu\text{g}/\text{dL}$ ):

Utah:	Age (years)	Year	Prevalence Rate	Geometric Mean
	0-5	2014, 2015, 2016	0.6%, 0.3%, 0.4%	1.1, 1.4, 1.3
	6-15	2014, 2015, 2016	1.3%, 0.0%, 2.3%	1.4, 2.5, 1.0
U.S.:	0-5	2014, 2015	0.53%*, 0.5%*	

(\*Centers for Disease Control and Prevention-most recent data available. Note: the CDC does not track ages 6-15 years old)

## How are Children Affected by Lead?

A child exposed to lead may not show any signs of lead exposure.

Lower blood lead levels may cause:

- 1) Damage to the nervous system, kidneys, and the brain
- 2) Hearing damage
- 3) Learning disabilities
- 4) Behavioral problems
- 5) Decreased muscle and bone growth

Higher blood lead levels may cause:

- 1) Seizures
- 2) Unconsciousness
- 3) Death

Symptoms that are associated with lead exposure may include:

- 1) Loss of appetite/weight
- 2) Stomach ache
- 3) Irritability
- 4) More tired than usual
- 5) Hyperactivity
- 6) Constipation
- 7) Headache
- 8) Frequent vomiting
- 9) Reduced attention span
- 10) Insomnia

### **What Can Parents Do?**

- 1) Talk to your health care provider or local health department about having your child tested for lead. A blood lead test is the only way to find out if your child has an elevated blood lead level. Your child's health care provider can recommend treatment if your child has been exposed to lead.
- 2) Determine the source of lead exposure and take corrective action to remove the source of lead exposure:
  - a. Lead-based paint (if your home was built before 1978, have your paint tested)
  - b. Water (plumbing that may have leaded pipes or fixtures or copper pipes with lead solder joints - have your water tested for lead)
  - c. Work - lead may be brought home from the work place (remodeling, welding/metal work, painting, auto repair, mining, renovation, radiator repair, construction, printing, electronics, etc.)
  - d. Hobbies (ceramics, gun reloading, target practice, fishing weights, stained glass, refinishing furniture)
  - e. Soil (may be contaminated with peeling or chipping paint from outside of homes or buildings)
  - f. Products (vinyl mini blinds, metal candle wicks, crayons, older toys, cosmetics, newspapers/magazines, etc.)
  - g. Food (stored in opened cans, kept and/or cooked in ceramic, lead crystal or pewter containers)
  - h. Home or folk remedies (greta, azarcon, pay-loo-ah, kohl, ghasard, etc.)
- 3) Have your child eat foods high in iron, calcium, vitamin C, and low in fats.
- 4) Wash your child's hands and toys often.
- 5) Wear gloves and use soap and water to clean floors, window sills, and other surfaces regularly.

- 6) If your work involves lead, wash up and change your clothes before coming home.

### **Where Can Parents Get Additional Information?**

- 1) Utah Poison Control Center (1-800-222-1222 or <http://poisoncontrol.utah.edu>)
- 2) Local Health Department
- 3) Utah Department of Health/Environmental Epidemiology Program (1-801-538-6191 or <http://epht.health.utah.gov/epht-view/topic/ChildhoodBloodLead.html>)
- 4) Centers for Disease Control and Prevention (<https://www.cdc.gov/nceh/lead>)
- 5) Utah Department of Environmental Quality/Division of Water Quality (1-801-536-4300 or <https://deq.utah.gov/Divisions/dwq/index.htm>)
- 6) U.S. Environmental Protection Agency (1-800-424-LEAD [5323] or <http://www.epa.gov/lead> and Safe Drinking Water Hotline – 1-800-426-4791)

### **Guidance for Health Care Providers**

- 1) Utah Poison Control Center (1-800-222-1222 or <http://poisoncontrol.utah.edu>)
- 2) Utah Department of Health/Environmental Epidemiology Program (1-801-538-6191 or <http://epht.health.utah.gov/epht-view/topic/ChildhoodBloodLead.html>).
- 3) Centers for Disease Control and Prevention (<https://www.cdc.gov/nceh/lead> and
  - a) Managing Elevated Blood Lead Levels Among Young Children:  
[https://www.cdc.gov/nceh/lead/casemanagement/casemanage\\_main.htm](https://www.cdc.gov/nceh/lead/casemanagement/casemanage_main.htm)
  - b) Screening and Case Management Guidelines:  
<https://www.cdc.gov/nceh/lead/publications/#screening>)