

Lead Screening

Table 1. Examples of culture-specific exposures associated with elevated lead levels in children.

Exposure	Area of Origin	Reported Uses	Description
Pay-loo-ah	Southeast Asia	Treatment of fever and rash	Orange-red powder. Administered by itself or mixed in tea.
Greta	Mexico	Treatment of digestive problems	Yellow-orange powder. Administered with oil, milk, sugar, or tea. Sometimes added to baby bottles or tortilla dough.
Azarcon	Mexico	Treatment of digestive problems	Bright orange powder. Administered similarly to greta.
Litargirio	Dominican Republic	Deodorant/antiperspirant and treatment of burns and fungal infections of the feet.	Yellow or peach-colored powder.
Surma	India	Improve eyesight	Black powder administered to inner lower eyelid.
Unidentified ayurvedic	Tibet	Treatment for slow development	Small gray-brown balls administered several times a day.
Lozeena	Iraq	Added to rice and meat dishes for flavor	Bright orange spice
Tamarind candies (multiple brand names)	Mexico	Lollipops, fruit rolls, candied jams	'Bolorindo' lollipops are soft and dark brown. Candied jams are typically packaged in ceramic jars.
Lead-glazed ceramics	Often made in Latin America	Bean pots, water jugs	
Make-up and beauty products	Multiple cultures	Decoration	Many types

This table is modified from the one published in the Textbook of Immigrant Medicine, 1st Edition. Patricia Walker and Elizabeth Barrett (Eds). Rajal Moday, Preventive Healthcare in Children, page 517. Copyright Elsevier (2007).

Developed by the U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Childhood Lead Poisoning Prevention Branch and Division of Global Migration and Quarantine, in collaboration with the U.S. Department of State, Bureau of Population, Refugees, and Migration

<http://www.cdc.gov/immigrantrefugeehealth/guidelines/lead-guidelines.html>

Lead Screening

Medical Screening

Screening and Testing Prior to Departure for the United States

None

Recommendations for Post-Arrival Evaluation

Driven by the above data on lead poisoning in refugee children, the U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Childhood Lead Poisoning Prevention Branch and Division of Global Migration and Quarantine, in collaboration with the U.S. Department of State, Bureau of Population, Refugees and Migration, developed the following recommendations to address lead exposure among refugee children. (The full document is available at: www.cdc.gov/lead/factsheets/refugeechildrenfactsheet.htm.)²

1. *Identification of Refugee Children with Elevated Blood Lead Levels.* Check BLL of all refugee children 6 months to 16 years of age at the time of arrival to the United States.
2. Children younger than 6 years of age should undergo clinical nutritional assessments as well as testing for hemoglobin or hematocrit level, with one or more of the following: mean corpuscular volume (MCV) with red cell distribution width (RDW), ferritin, transferrin saturation, or reticulocyte hemoglobin content.
3. Follow-up blood lead testing should be done on all refugee children aged 6 months to 6 years, 3-6 months after their placement in a permanent residence.
4. Provide daily pediatric multivitamins with iron to all refugee children 6-59 months of age when they arrive in the United States.

The status of most refugee children entitles them to Medicaid, the Women, Infants and Children's Program (WIC), and other social services for at least 8 months after their resettlement, regardless of the family financial status.

Evaluation and Treatment of Refugees with Elevated Blood Levels

An in-depth discussion of management of lead is beyond the scope of this document. If a child has a BLL ≥ 10 $\mu\text{g/dL}$, clinicians should refer to the reference "Managing Elevated Blood Lead Levels Among Children" prepared by the CDC, which can be obtained at <http://www.cdc.gov/lead/scientificandeducation.htm>.³ Further information on history taking, medical management, environmental assessments and follow-up testing is available at <http://www.cdc.gov/nceh/lead>. Many of the questions typically asked of children in the United States are not pertinent for refugees, since they might have recently relocated (moved) away from some sources of exposure. However, children's lead levels may increase in a relatively short amount of time (within weeks), and so typical exposures should be solicited. These questions might ask about such exposures as peeling paint in their current residence and whether the child spends significant amounts of time in play areas with bare soil. In addition, folk remedies, traditional therapies, pottery or metal vessels and imported foods may be of particular concern in refugee populations, and these risks should be assessed in a culturally sensitive manner (Table). Case reports have identified parents who denied giving "folk remedies" to their children with high BLL, even when the ultimately identified source is a culturally specific remedy. This confusion may be explained by differences in what are considered "folk remedies" between clinicians and parents. If no lead sources can be identified in children with lead poisoning, clinicians should consider checking BLLs in other family

Developed by the U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Childhood Lead Poisoning Prevention Branch and Division of Global Migration and Quarantine, in collaboration with the U.S. Department of State, Bureau of Population, Refugees, and Migration
<http://www.cdc.gov/immigrantrefugeehealth/guidelines/lead-guidelines.html>

Lead Screening

members. If other family members of various ages have elevated levels, a shared source exposure, such as ceramic ware, spices, foods and remedies, may be present.^{4 5 6}

Appropriate management of children with confirmed elevated blood lead levels is based on the extent of the elevation (www.cdc.gov/nceh/lead/CaseManagement/caseManage_chap3.htm). Follow-up testing is mandatory for all children with documented elevated venous blood lead levels, in addition to the special refugee groups mentioned above, who should be re-evaluated regardless of their initial level. Trends are especially important in refugee populations since, although they may have left the environment of exposure when they migrated, they are generally moving into high-risk housing in the United States.¹ It is not unusual for a child's lead level to continue to rise after migration to the United States, which would demand formal environmental evaluation. Information on recommended follow-up testing can be found at:

http://www.cdc.gov/nceh/lead/CaseManagement/caseManage_main.htm. Children with elevated levels should be reported to State Childhood Lead Poisoning Prevention Programs (CLPPP) or the appropriate State contact. State and local program contacts may be found at: www.cdc.gov/nceh/lead/grants.contacts/CLPPP%20Map.htm.

Additional Information

CDC Lead Poisoning Prevention in Newly Arrived Refugee Children: Tool Kit

(This educational kit has modules intended for both Refugee Resettlement Workers and Medical Providers. It can be downloaded from

http://www.cdc.gov/nceh/lead/Publications/RefugeeToolKit/Refugee_Tool_Kit.htm

CD-ROM copies can be obtained by calling 1-800-CDC-INFO)

CDC.

References

¹ CDC. Elevated blood lead levels in refugee children--New Hampshire, 2003-2004. *MMWR Morb Mortal Wkly Rep.* 2005;54:42-46.

² CDC. Lead exposure among refugee children: Fact sheet.

www.cdc.gov/lead/factsheets/refugeechildrenfactsheet.htm. Last accessed 12/29/07.

³ CDC. Managing elevated blood lead levels among children: Recommendations from the Advisory Committee on Childhood Lead Poisoning Prevention. Available at:

http://www.cdc.gov/nceh/lead/CaseManagement/caseManage_main.htm. Accessed 6/6, 2007.

⁴ CDC. Lead poisoning associated with use of litargirio--Rhode Island, 2003. *MMWR Morb Mortal Wkly Rep.* 2005;54:227-229.

⁵ CDC. Screening young children for lead poisoning: guidance for state and local health officials. Available at:

<http://www.cdc.gov/nceh/lead/guide/guide97.htm>. Accessed 6/6, 2007.

⁶ CDC. Lead poisoning associated with imported candy and powdered food coloring--California and Michigan. *MMWR Morb Mortal Wkly Rep.* 1998;47:1041-1043.

Developed by the U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Childhood Lead Poisoning Prevention Branch and Division of Global Migration and Quarantine, in collaboration with the U.S. Department of State, Bureau of Population, Refugees, and Migration

<http://www.cdc.gov/immigrantrefugeehealth/guidelines/lead-guidelines.html>

Rev. 11-2010