



**Resource 16-4: Plumbism: Risk factors, assessment and intervention
(children age <15 years)**

Plumbism (Lead Poisoning)		
		Comment
Most common source	Lead-based paint, found in majority of homes built prior to 1957 (if not de-lead)	Lead-based paint banned for residential use since 1978. Plumbism risk increases for individuals living in older homes with lead-based paint that are undergoing renovation.
Greatest risk group	Young child living in, or frequently visiting, a home with the above-mentioned characteristics	Less common is a young child living with an adult whose hobby or work involves lead exposure or who lives near an industrial area where lead release is likely
Greatest risk age	Ages 2–3 y if lead-based paint is the source, although all children age ≤6 y should be considered at risk All ages at risk for non-paint Pb sources	Plumbism from lead-based paint is uncommon in children >age 4 y unless developmental disability or pica is present. Additional household Pb sources include children’s toys from unregulated sources and inexpensive jewelry. These items are problematic when placed in the mouth.
Additional non-paint Pb sources	Potentially seen in all ages Primary prevention efforts should focus on avoidance of these products in all ages.	The use of select folk remedies places adults and children at risk for lead poisoning; up to 30% of childhood plumbism is caused by folk medicine use. Greta and Azarcon (also known as alarcon, coral, luiga, maria luisa, or rueda) are traditional remedies used in Latino communities to treat upset stomach (<i>empacho</i>), constipation, diarrhea, and/or vomiting, and for relief of teething discomfort in babies. Greta and Azarcon are fine orange powders with a lead content as high as 90%. Ghasard, an Indian folk remedy used as a tonic, and Ba-baw-san, a Chinese folk remedy used to treat colic or to calm a fussy child, are products that contain lead. Many candies produced in Mexico have been noted to contain lead. Additional Pb sources include lead-based products used in stained glass and bullet making. Appropriate Pb-containment practices should be followed by participants in these activities.

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Plumbism (Lead Poisoning) (cont.)

<p>Prevention of lead poisoning</p>	<p>Focusing on the child age ≤6 y</p>	<p>Test at-risk housing for the presence of Pb-based paint. If de-leading or moving to a residence without Pb-based paint is not an option, or if child regularly visits a location with Pb-based paint, the following measures should be carried out:</p> <ul style="list-style-type: none"> • Keep child away from peeling paint or chewable surfaces painted with lead-based paint. • Create barriers between living/play areas and lead sources. • Regularly wash children's hands and toys to remove Pb-based paint dust. • Regularly wet-mop floors and wet-wipe window components to keep Pb-based paint dust contained. • Prevent children from playing in bare soil; if possible, provide sandboxes. Soil around the foundation of a building painted with Pb-based paint often contains high levels of lead.
<p>Clinical presentation of lead poisoning</p>	<p>Few manifestations, if any; environmental history is critical for identification of children at risk.</p>	<p>In cases of severe lead poisoning, anorexia, constipation, recurrent abdominal pain are occasionally reported.</p>
<p>Intervention in plumbism</p>	<p>First-line therapy is to remove the Pb hazard. Chelation therapy for higher levels (see next column)</p>	<p>Chelation therapy is considered a mainstay in the medical management of children with blood lead levels (BLL) >45 µg/dL. An expert in the management of lead chemotherapy should be consulted prior to use of chelation agents.</p>

Sources: Badawy MK. Pediatric Lead Toxicity, available at <https://emedicine.medscape.com/article/1009587-overview>
Centers for Disease Control and Prevention. Lead in Foods, Cosmetics, and Medicines, available at <https://www.cdc.gov/nceh/lead/prevention/sources/foods-cosmetics-medicines.htm>
Centers for Disease Control and Prevention. Lead Poisoning Prevention, available at <https://www.cdc.gov/nceh/lead/prevention/default.htm>

Plumbism: Assessment and Intervention (Children Age <15 Y)	
<10 µg/dL	Likely minimal lead exposure; educational intervention to avoid exposure <i>There is no known safe lead level in children.</i>
10–14 µg/dL	Repeat to confirm within 1 mo; educational intervention to avoid or reduce exposure, followed by repeat testing in 3 mo
15–19 µg/dL	Repeat to confirm within 1 mo; educational intervention to reduce exposure, followed by repeat testing in 2 mo
20–44 µg/dL	Repeat to confirm within 1 wk; aggressive hazard assessment, including environmental assessment by local health department; intervention to reduce exposure
45–69 µg/dL	Repeat to confirm within 2 d; aggressive environmental intervention to reduce exposure; chelation therapy is recommended
≥70 µg/dL	Medical emergency; repeat testing immediately to confirm; begin chelation therapy; hospitalize patient, with care provided by clinical experts in plumbism treatment

**Source: Badawy MK. eMedicine: Pediatric Lead Toxicity,
available at <https://emedicine.medscape.com/article/1009587-overview>**