



Fitzgerald Health Education Associates, Inc.

Resource 17-10: Plumbism: Risk factors, assessment and intervention

Plumbism (Lead Poisoning)		
		Comment
Most common source	Lead-based paint, found majority of homes built prior to 1957 if not delead.	Lead-based paint banned for residential use since 1977. Plumbism risk increases for individuals living in an older home 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 whose lives with an adult whose hobby or work involves lead exposure or lives near an industry that is likely to release lead
Greatest risk age	Ages 2-3 if lead-based paint is the source.	Plumbism from lead-based paint is uncommon in children >4 years unless developmental disability or pica. Additional household Pb sources include children's toys from unregulated sources and inexpensive jewelry. These items are problematic when places in the mouth.
Non paint Pb sources	Potentially seen in all ages	The use of select folk medications 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 and used to treat upset stomach (empacho), constipation, diarrhea, vomiting, and for relief of discomfort in teething babies. Greta and Azarcon are fine orange powders that have a lead content as high as 90%. Ghasard, an Indian folk remedy used as a tonic, and Babaw-san, a Chinese folk remedy used to treat colic or to calm a fussy child, are products that contains lead.
Clinical presentation of lead poisoning	Few if any; environmental history is critical for identification of children at risk.	With severe lead poisoning, anorexia, constipation, recurrent abdominal pain are occasionally noted.
Intervention in plumbism	First line therapy is to remove the Pb hazard. Chelation therapy for higher levels (see next table).	Chelation therapy is considered a mainstay in the medical management of children with blood lead levels (BLL) > 45 µg/dL. The treatment should be done in consultation with an expert in the management of lead chemotherapy prior to using chelation agents.

Source- Bregstein, J. Rosking, C., Miller, S. (2005) Emergency medicine. In Polin, R., Ditmar, M. Pediatrics Secrets (4th ed.) Philadelphia: Elsevier. Pp 132-173.

Centers for Disease Control and Prevention: Folk remedies, available at : <http://www.cdc.gov/nceh/lead/tips/folkmedicine.htm>, accessed 11.9.09.

Plumbism: Assessment and Intervention (Children <15 Years Old)	
0 - 9.9 ug/dL	No significant lead exposure; Educational intervention to avoid exposure
10 - 14.9 ug/dL	Repeat to confirm within 1-3 months; Educational intervention to avoid or reduce exposure
15 - 19.9 ug/dL	Repeat to confirm within 1-2 months; Educational intervention to reduce exposure
20 - 44.9 ug/dL	Repeat to confirm within 1 week; Aggressive environmental intervention to reduce exposure
45 - 69.9 ug/dL	Repeat to confirm within 1 week; Aggressive environmental intervention to reduce exposure, consider chelation therapy
≥ 70 ug/dL	Medical emergency; repeat to confirm immediately; begin chelation therapy; hospitalize patient with care provided by clinical experts in plumbism treatment

Source- American Academy of Pediatrics, Pediatrics 1995; 96:155-160.

Marcus, S., eMedicine:Lead toxicity, available at <http://www.emedicine.com/EMERG/topic293.htm>, accessed 11.9.09.

Centers for Disease Control and Prevention: Folk medicines, available at <http://www.cdc.gov/nceh/lead/tips/folkmedicine.htm>, accessed 1.18.10.