

# Management of Adult Blood Lead Levels

Recommendations for Measured Blood Lead Levels (mcg/dL) in Adults	
BLL > 80	<ul style="list-style-type: none"> <li>• All steps below AND –</li> <li>• Strongly consider chelation<sup>1</sup></li> <li>• Urgent medical evaluation<sup>2</sup></li> </ul>
BLL 50-79	<ul style="list-style-type: none"> <li>• All steps below AND --</li> <li>• Consider chelation with significant symptoms<sup>1</sup></li> </ul>
BLL 30-49	<ul style="list-style-type: none"> <li>• All steps below AND --</li> <li>• Remove from exposure</li> <li>• Prompt medical evaluation<sup>2</sup></li> <li>• Consultation with Poison Control</li> </ul>
BLL 20-29	<ul style="list-style-type: none"> <li>• All steps below AND --</li> <li>• Minimize Exposure</li> <li>• Remove from exposure if pregnant</li> <li>• Remove from exposure if repeat BLL in 4 weeks remains &gt; 20</li> </ul>
BLL 10-19	<ul style="list-style-type: none"> <li>• All steps below AND --</li> <li>• Discuss Health Risks</li> <li>• Decrease Exposure</li> <li>• Monitor BLL's<sup>3</sup></li> </ul>
BLL 5 - 9	<ul style="list-style-type: none"> <li>• Monitor BLL's if ONGOING exposure<sup>3</sup></li> <li>• Conduct lead exposure investigation<sup>4</sup></li> </ul>

<sup>1</sup> If patient has symptoms or levels that require chelation or toxicological consultation, physician should immediately contact the Michigan Regional Poison Control Center at 800-222-1222

<sup>2</sup> Complete medical evaluation:

<sup>2a</sup> Questions regarding hypertension, cardiovascular risk factors, renal abnormalities and malaise, gout, arthralgias and myalgias and recent emotional lability

<sup>2b</sup> Specific lab work to consider includes CBC with differential, LFT's (liver function tests), BUN, creatinine, urinalysis, uric acid, FEP (free erythrocyte protoporphyrin), or zinc protoporphyrin, pregnancy test, sperm count and motility.

<sup>3</sup> If a person is removed from exposure the blood lead will decrease approximately 50% every 4-5 weeks. If the blood lead has not decreased on a repeat test in 4-5 weeks then there is the likelihood of ongoing exposure. If the blood lead is decreasing than one can continue to repeat at 4-5 weeks until value returns to a normal level.

<sup>4</sup> Obtain exposure history, including information about work and home environment, hobbies, alternative and complementary medications and supplements. See attached "Flint Adult Lead Exposure Questionnaire". For detailed exposure investigation and assistance in mitigation please contact Bob Scott or Martha Stanbury at the Michigan Department of Health and Human Services Division of Environmental Health at 517-335-8350.

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## Flint Adult Lead Exposure Questionnaire

1. Is the patient currently drinking water from the Flint municipal water system?
2. Has the patient had their home tested for lead in the water and if so, what was the result?
3. Does the patient work with lead materials at their workplace? Common sources: removing lead paint from metal or homes; making bronze or brass castings; recycling lead storage batteries and working in a firing range.
4. Does the patient live in or often visit a house/building built before 1978 that has been remodeled within the last year?
5. Does the patient have a hobby that involves lead? Common sources: Firing range; reloads bullets; casts bullets; making stain glass products.
6. Does the patient use any traditional folk remedies or cosmetics that are not sold in a regular retail store?
7. Does the patient use non-commercially prepared pottery or leaded crystal?
8. Has the person sustained a gunshot wound and have bullets/bullet fragments or shrapnel still in their body?

## References

- California Department of Public Health. Medical Guidelines for the Lead-Exposed Worker. April 2009. <http://www.cdph.ca.gov/programs/olppp/Documents/medgdln.pdf>
- AOEC. Medical Management Guidelines for Lead-Exposed Adults. April 2007. [http://www.aoec.org/documents/positions/MMG\\_FINAL.pdf](http://www.aoec.org/documents/positions/MMG_FINAL.pdf)
- CSTE. MANAGEMENT GUIDELINES FOR BLOOD LEAD LEVELS IN ADULTS. June 2013. <http://c.ymcdn.com/sites/www.cste.org/resource/resmgr/OccupationalHealth/ManagementGuidelinesforAdult.pdf>