Quarterly HOTLINE: Effective November 12, 2018

0025016 Lead, Industrial Exposure Panel, Adults LEAD-IND

Specimen Required: Patient Prep: Collect from patient aged 16 years or older.
Collect: Royal blue (K_2EDTA or Na_2EDTA) or tan (K_2EDTA).
Specimen Preparation: Transport 7 mL whole blood (royal blue). (Min: 2 mL) **OR** Transport 3 mL whole blood (tan). (Min: 2 mL)
Storage/Transport Temperature: Refrigerated.
Remarks: Trace Elements requisition form may be required (ARUP form #32990).
Unacceptable Conditions: Serum. Specimens collected in tubes other than Royal Blue (K_2EDTA or Na_2EDTA) or tan (K_2EDTA). Heparinized, hemolyzed or clotted specimens.
Stability (collection to initiation of testing): Ambient: 30 hours; Refrigerated: 5 weeks; Frozen: Unacceptable

Interpretive Data: Elevated results may be due to skin or collection-related contamination, including the use of a noncertified lead-free collection/transport tube. If contamination concerns exist due to elevated levels of blood lead, confirmation with a second specimen collected in a certified lead-free tube is recommended.

Reference interval and interpretive comments are based on the "Recommendations for Medical Management of Adult Lead Exposure, Environmental Health Perspectives, 2007." Thresholds and time intervals for retesting, medical evaluation, and response vary by state and regulatory body. Actions described by OSHA in 1978 and finalized in 1983 are shown below. Contact your State Department of Health and/or applicable regulatory agency for specific guidance on medical management recommendations.

"Occupational Safety and Health Standards: Lead (1983). 29 CFR Part 1910.1025 App C"

Action required for workers with Elevated Lead Values OSHA, Occupational Exposure to Lead, 1978

No. of Tests	Lead	Action Required
1	Greater than or equal to 40.0 µg/dL	Notification of worker in writing; medical examination of worker and consultation.
3 (average)	Greater than or equal to 50.0 µg/dL	Removal of worker from job with potential lead exposure.
1	Greater than or equal to 60.0 µg/dL	Removal of worker from job with potential lead exposure.
2	Less than 40.0 µg/dL	Reinstatement of worker in job with potential lead exposure is based upon symptoms and medical evaluation.
		OSHA requirements in effect since 1978 call for the measurement of whole blood lead and zinc protoporphyrins (ZPP) (NCCLS document C42-A, Nov. 1996) to evaluate the occupational exposure to lead. OSHA requires ZPP whole blood testing to be reported in units of µg/dL. For adults, conversion of ZPP units of µg/dL whole blood assumes a hematocrit of 45 percent. Conversion factor: µmol/mol heme x 0.584= µg/dL. Information sources for reference intervals and interpretive comments provided below include the "CDC Response to the 2012 Advisory Committee on Childhood Lead Poisoning Prevention Report" and the "Recommendations for Medical Management of Adult Lead Exposure, Environmental Health Perspectives, 2007." Thresholds and time intervals for retesting, medical evaluation, and response vary by state and regulatory body. Contact your State Department of Health and/or applicable regulatory agency for specific guidance on medical management recommendations.

Age	Concentration	Comment
All ages	5-9.9 µg/dL	Adverse health effects are possible, particularly in children under 6 years of age pregnant women. Discuss health risks associated with continued lead exposure. For children and women who are or may become pregnant, reduce lead exposure.
All ages	10-19.9 µg/dL	Reduced lead exposure and increased biological monitoring are recommended.
All ages	20-69.9 µg/dL	Removal from lead exposure and prompt medical evaluation are recommended. Consider chelation therapy when concentrations exceed 50 µg/dL and symptoms of lead toxicity are present.
<19 years of age	Greater than 44.9 µg/dL	Critical. Immediate medical evaluation is recommended. Consider chelation therapy when symptoms of lead toxicity are present.
≥19 years of age	Greater than 69.9 µg/dL	Critical. Immediate medical evaluation is recommended. Consider chelation therapy when symptoms of lead toxicity are present.

See Compliance Statement B: www.aruplab.com/CS