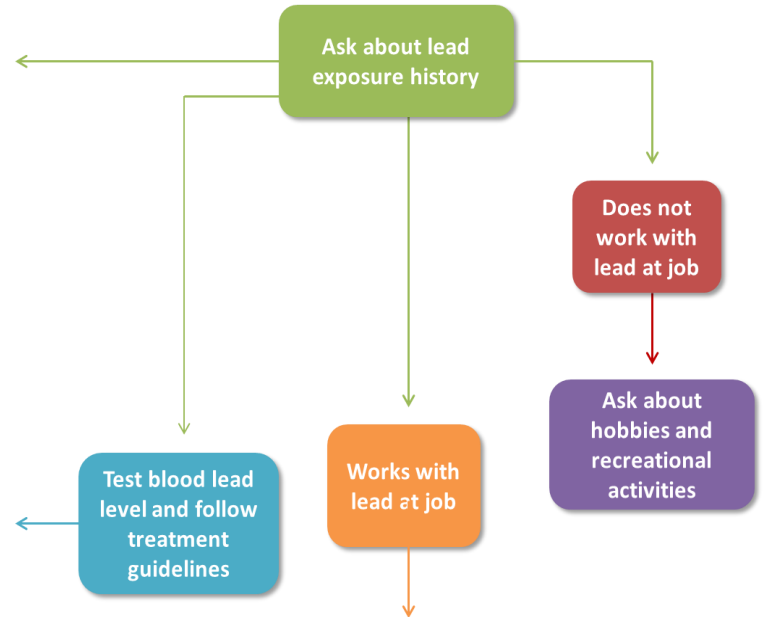


ADULT MEDICAL MANAGEMENT

Provider Quick Guide for Lead Testing and Adult Treatment

Exposure History	
Adult lead poisoning is difficult to diagnose; ask the right questions to find out if your patient has been exposed to lead	
Occupational History	<ul style="list-style-type: none"> Ask about current or previous jobs and hobbies working with lead
Environmental History	<ul style="list-style-type: none"> Ask if they live in a home built before 1978, or in a place with ongoing renovations
Health Case History	<ul style="list-style-type: none"> Ask about hygiene habits, smoking, alcohol consumption, hobbies, childhood EBLL

Management Guidelines	
AOEC Recommendations, Check Website for more information: http://www.aoec.org/documents/positions/MMG_FINAL.pdf	
<5 mcg/dL	<ul style="list-style-type: none"> No action needed Monitor BLL if ongoing exposure
5 - 9 mcg/dL	<ul style="list-style-type: none"> Lead education factsheets (Lead & Adults, etc.) Minimize exposure Consider removal from exposure for pregnancy and certain conditions Monitor BLL
10 - 19 mcg/dL	Continue with above, AND: <ul style="list-style-type: none"> Consider removal for certain medical conditions or BLL > 10 for an extended period of time Monitor BLL
20 - 29 mcg/dL	<ul style="list-style-type: none"> Remove from exposure if pregnant Remove from exposure if repeat BLL in 4 weeks remains >20 mcg/dL Do ZPP for BLL >25 mcg/dL Annual lead medical exam recommended
30 - 49 mcg/dL	<ul style="list-style-type: none"> Remove from exposure Prompt medical evaluation
50 - 79 mcg/dL	Continue with above, AND: <ul style="list-style-type: none"> Consider chelation with significant symptoms
> 80 mcg/dL	Continue with above, AND: <ul style="list-style-type: none"> Urgent medical evaluation



OSHA Lead Standards Medical Evaluation	
The OSHA Lead Standard states that a medical evaluation for lead poisoning needs to include the following:	
Job History	<ul style="list-style-type: none"> With attention to lead exposure
Medical History	<ul style="list-style-type: none"> Attention to cardiovascular, gastrointestinal, hematologic, renal, neurological, & reproductive systems
Personal History	<ul style="list-style-type: none"> Hygiene habits, smoking, alcohol consumption, hobbies
Physical Exam	<ul style="list-style-type: none"> Blood pressure reading If respirators used, pulmonary function tests Attention to cardiovascular, gastrointestinal, hematologic, renal, neurological, & reproductive systems
Lab Testing	<ul style="list-style-type: none"> Blood Tests for Lead & ZPP Hemoglobin, hematocrit BUN and serum creatinine

**REPORT ALL BLOOD LEAD DATA TO THE
DIVISION OF PUBLIC HEALTH 1-800-897-LEAD**

ADULT MEDICAL MANAGEMENT

Provider Quick Guide for Occupational Lead Exposures

GUIDELINES FOR LEAD IN ADULTS

Health Education for Adult Lead Poisoning

Continue monitoring BLLs and share this information with patients

- Test BLL and ZPP if BLL is over 25 mcg/dL. Retest as needed
- Educate on adding calcium, iron, and vitamin C to diet
- Measure and monitor changes in blood
- Educate on protective measures that can be taken
- **Encourage testing of other members in the house, especially children and pregnant women**
- Explain risk of take-home lead exposure for adults working with lead

Monitoring Blood Lead for Occupational Lead Exposures

Tests at these intervals for comprehensive monitoring of BLLs:

- Test prior to employment
- Test new employees at **1 month**
- Test employees at **4 months** if BLL is above Action Level
- If BLL is stable below 40 mcg/dL, **test annually**
- If stable between 40-60 mcg/dL, test **every 3 months**
- If over 60 mcg/dL, test **monthly**
- Test anyone with an increase of more than 20mcg/dL from the last BLL **monthly** until BLL is stable
- Test anyone showing an upward trend from one test to another, **monthly** until BLL is stable
- If medical removal from work, retest within 2 weeks, and then monthly until BLL is under 40 mcg/dL for 2 consecutive tests

Occupations with Risk of Lead Exposure

These activities may expose people to high levels of lead:

- Painting, renovating, or remodeling pre- 1978 buildings
- Welding
- Firearms manufacturing, firing range instructors & cleaners
- Batteries & ammunition manufacturing
- Shooters and shooting competitions
- Making jewelry, ceramic items or stained glass
- Foundry work, soldering
- Making cables and cable splicers
- Manufacturing or “biting” lead fish sinkers
- Waste incinerator & metal recycling
- Repairing or cleaning automobile radiators

Worker Protections through OSHA

The OSHA lead Standard provides guidelines for worker protection

- When a medical condition puts workers at a greater health risk, recommend removal to a job with no lead exposure
- A BLL $\geq 50 \mu\text{g/dL}$ may require immediate medical removal from lead exposure **with no loss of pay or benefits**
- You may need to submit a written report to the employer with details on the BLL, & any special equipment or limitations required for the employee’s health
- Consult the OSHA Lead Standards online for specific details: <https://www.osha.gov/SLTC/lead/>

Possible Effects of Lead

The symptoms of lead exposure can be subtle, non-specific, and may not even be seen in many patients with exposure

5 - 9 mcg/dL	10 - 19 mcg/dL	20 - 39 mcg/dL	40 - 79 mcg/dL	≥ 80 mcg/dL
<ul style="list-style-type: none"> • Possible adverse effects suggested by epidemiological studies 	<ul style="list-style-type: none"> • Possible spontaneous abortion • Reduced newborn birth weight • Possible blood pressure changes • Possible renal dysfunction 	<p>Same as lower levels, and:</p> <ul style="list-style-type: none"> • Possible non specific symptoms like headache, fatigue, sleep disturbance, decreased libido, loss of appetite • Possible CNS effects like memory and attention deficit 	<p>Same as lower levels, and:</p> <ul style="list-style-type: none"> • Lowered sperm counts and abnormal sperm • Subclinical peripheral neuropathy • Possible hypertension • Possible anemia • Possible renal damage • Possible gout 	<p>URGENT MEDICAL CONDITION</p>