

FREQUENCY OF MEDICAL EVALUATION

SITUATION: Preplacement exam before assignment to a job with an exposure at or above the workplace Action Level or when changing activities in a current job that may result in an exposure at or above the workplace Action Level.

WHAT MUST BE DONE: A Medical Examination

SITUATION: Exposure to lead at or above the workplace Action Level for more than 30 days per year.

WHAT MUST BE DONE: A BLL and ZPP every 6 months.

SITUATION: A BLL \geq 40 $\mu\text{g}/\text{dL}$.

WHAT MUST BE DONE: A BLL and ZPP every 2 months until two consecutive samples are $<$ 40 $\mu\text{g}/\text{dL}$. A Medical Evaluation every year. Worker Notification in writing of the BLL by the employer. Worker notification of Medical Removal Protection benefits by the employer.

SITUATION: Employee has a medical condition placing him/ her at increased risk of material impairment to health from lead exposure **or** a BLL \geq 60 $\mu\text{g}/\text{dL}$ **or** one of the following (select the one that covers the longest time period): The average of the last 3 BLLs is \geq 50 $\mu\text{g}/\text{dL}$ * **or** The average of all BLLs over the last 6 months is \geq 50 $\mu\text{g}/\text{dL}$ *.

WHAT MUST BE DONE: A BLL and ZPP every month. Worker Medically Removed from areas with lead exposure at or above the workplace Action Level until two consecutive BLLs are \leq 40 $\mu\text{g}/\text{dL}$. Medical Evaluations when deemed appropriate by the physician.

SITUATION: If a worker is exposed above the workplace Action Level and: Develops signs or symptoms of lead poisoning **or** Is planning to have children **or** Has difficulty breathing while using a respirator.

WHAT MUST BE DONE: The worker can request a Medical Evaluation.

SITUATION: If a worker has had limitations placed on him/her while performing a job with lead exposure at or above the workplace Action Level.

WHAT MUST BE DONE: Medical Evaluations when deemed appropriate by the physician.

*Unless the most recent BLL was \leq 40 $\mu\text{g}/\text{dL}$, in which case the employee need not be Medically Removed.

In compliance with state regulations, the Utah Department of Health collects and records occupational blood lead reports. The Health Department also offers educational materials and consultation referrals to health care providers.

Under the **Utah Injury Reporting Rule** (R386-703), all blood lead tests are reportable to the Bureau of Epidemiology.

Currently, all reports are being received by clinical laboratories (both in-state and out-of-state), except those facilities using a point of care machine (i.e., LeadCare II). Health care providers are also encouraged to report elevated BLLs of \geq 5 $\mu\text{g}/\text{dL}$. These reports should include the following information about the case:

- Name
- Sex
- Date of Birth
- Telephone number (if available)
- Home Address
- BLL
- Test Date/Sample Date
- Name of person or agency submitting the report
- Occupation

For more information contact:

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OCCUPATIONAL LEAD EXPOSURE

Information for
Health Care Providers



Environmental Epidemiology Program

May 2018

Under the **OSHA Lead Standard (29 CFR 1910.1025)** you as a health care provider, have primary responsibility for evaluating lead toxicity in the workers who are your patients.

WHO IS COVERED UNDER THE OSHA LEAD STANDARD?

All workers exposed to metallic lead, inorganic lead compounds, and organic lead soap are covered under the OSHA Lead Standard. The employer is required to establish a medical surveillance program for all employees who are or who may be exposed above the **workplace Action Level** of 30 micrograms of airborne lead per cubic meter of air averaged over an 8-hour period for more than 30 days per year. Only agricultural workers are exempt from this law.

EXAMPLES OF JOBS ASSOCIATED WITH LEAD EXPOSURE

- Lead production or smelting
- Brass, copper or lead foundries
- Demolition of old structures
- Thermal stripping or sanding of old paint
- Indoor firing ranges
- Bullet manufacturing
- Stained glass
- Ceramic glaze mixing
- Battery manufacturing
- Radiator repair
- Construction
- Scrap metal handling
- Lead soldering
- Welding of old painted metal
- Machining and grinding
- Mining/Milling operations

PHYSICIAN RESPONSIBILITIES UNDER THE OSHA LEAD STANDARD

Any physician who has a stated or unstated contractual arrangement with an employer or who is consulted by an employee requesting a second opinion has certain duties under the OSHA Lead Standard. While the Lead Standard may not apply to physicians who see lead exposed workers in other settings, it is recommended that the standard be used as a guideline for monitoring and treatment. **Physician duties under the Lead Standard include:**

- 1) Conducting a Medical Evaluation
- 2) Notifying the employee of any condition requiring follow-up.
- 3) Submitting a written report to the employer regarding the results of the Medical Evaluation. **The report should include:**
 - a) Blood Lead Level (BLL);
 - b) Employee's fitness for duty in a job with lead exposure;
 - c) Any special equipment required by the employee;
 - d) Any limitations or restrictions to be placed on the employee while performing a job with lead exposure.The **employer is required** to give a copy of the report to the employee.
- 4) Sharing all nonwork-related findings with the employee only.
- 5) Recommending that the employee be **Medically Removed** (transferred to a job with lead exposure below the workplace Action Level and without loss of pay or benefits) when he/ she has:
 - a) A medical condition placing him/ her at increased risk of material impairment to health from lead exposure or
 - b) A BLL $\geq 60 \mu\text{g/dL}$ or
 - c) One of the following (select the one that covers the longest time period):
 - i) The average of the last 3 BLLs is $\geq 50 \mu\text{g/dL}^*$ **or**
 - ii) The average of all BLLs over the last 6 months is $\geq 50 \mu\text{g/dL}^*$.
- 6) Recommending when the employee be returned to his/ her previous work after being Medically Removed.

*Unless the most recent BLL was $\leq 40 \mu\text{g/dL}$.

The information contained in this summary is not to be considered a substitute for the provisions of the OSHA Lead Standard (29CFR 1910.1025).

WHAT CONSTITUTES A MEDICAL EVALUATION?

- **OCCUPATIONAL HISTORY** with attention to previous lead exposure.
- **MEDICAL HISTORY** of past and present medical conditions with specific attention to cardiovascular, gastrointestinal, hematologic, renal, neurological, and reproductive systems.
- **PERSONAL HISTORY** of hygiene habits, smoking, alcohol consumption, and hobbies.
- **PHYSICAL EXAMINATION** with special attention to neurological, gastrointestinal, cardiovascular, hematologic, and renal systems. A BLOOD PRESSURE reading is a required part of the physical examination.
- **PULMONARY STATUS** if respirators are at the worksite.
- **LABORATORY TESTING FOR:**
 - Blood Lead Level (BLL);
 - Hemoglobin, hematocrit, red cell indices, and examination of peripheral smear morphology;
 - Zinc protoporphyrin level (ZPP);
 - BUN and serum creatinine;
 - Routine urinalysis with microscopic examination;
 - Pregnancy test or semen evaluation if requested by employee.
- **ANY ADDITIONAL TESTS OR EXAMS** that the physician deems necessary.

HEALTH EFFECTS THAT MAY BE SEEN WITH ELEVATED BLOOD LEAD LEVELS IN ADULTS

- Abdominal pain, nausea, constipation, weight loss;
- Arthralgia, myalgia, paresthesia;
- Headache, mood changes, memory and concentration problems;
- Fatigue, muscle exhaustibility, tremor, paresis. "wrist-drop";
- Anemia, increased systolic blood pressure, impaired kidney function;
- Nephropathy;
- Abnormal/ decreased sperm, spontaneous abortion, stillbirth.