

Lead Exposure – Health Hazards

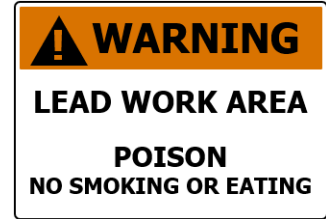
Workers can be exposed when coming in contact with lead in solder, plumbing fixtures, rechargeable batteries, leaded glass, brass, or bronze objects, and radiators. Some paint in older buildings may contain lead and if the paint is disturbed, lead dust may be dispersed in the air.

Method of Exposure

Inhalation – dust and fumes in the air
 Ingestion – hands are contaminated by touching contaminated surfaces, clothing, or objects and then are used to eat food, drink, or smoke.

Health Effects

- Neurological effects (brain and nervous system)
- Gastro-intestinal effects (stomach, intestines, and colon)
- Anemia (blood effects and diseases)
- Kidney disease



Identifying Lead Exposure

When there is reason to believe that workers may be exposed to lead, either by their work or by other work occurring in the area, testing must be done to assure lead levels are below Action Levels (AL) and Permissible Exposure Limits (PEL).

- A Lead Competent Person must be appointed if the possibility of exposure over the AL exists.
- The AL at which lead protective measures are required is 30 micrograms per cubic meter (30 $\mu\text{g}/\text{m}^3$ meter) over an 8-hour period.
- The PEL for lead is 50 micrograms per cubic meter 50 $\mu\text{g}/\text{m}^3$ over an 8-hour period.



50 $\mu\text{g}/\text{m}^3$

Safe Work Requirements

If the exposure is above the AL, workers must be protected against exposure above the PEL.

- Medical surveillance and testing must be done for workers exposed to lead more than 30 days in a year.
- Lead work areas may need to be isolated to prevent the spread of lead in the atmosphere and to reduce exposure to affected employees.
- Signage must be posted to warn of the hazard.
- Respirators and protective clothing may be required that protect against breathing the fumes or dusts.
- Decontamination procedures including clothing and personal showers are required to prevent the spread of lead outside the lead-operation area.

