



LEAD SAFETY

INTRODUCTION

Lead is a chemical element with the symbol Pb (from Latin: *plumbum*). Its density, workability, and corrosion-resistance are among the metal's attractions. Lead is used in building construction, lead-acid batteries, bullets and shot, weights, as part of solders, pewters, fusible alloys, and as a radiation shield.

Lead interferes with a variety of body processes and is toxic to many organs and tissues including the heart, bones, intestines, kidneys and reproductive and nervous systems. Symptoms of exposure include abdominal pain, confusion, headache, anemia, irritability, and in severe cases seizures, coma and death. It interferes with the development of the nervous system and is therefore particularly toxic to children, causing potentially permanent learning and behavior disorders.

UW personnel need to be aware of the hazards exposure to lead poses and the ways to either eliminate or control those hazards. One way of controlling hazards is to use procedures or develop strategies to work with **lead-containing materials (LCM)** in as safe a manner as possible.

LEAD-BASED PAINT

Lead based paint may be present on interior and exterior building materials of buildings built before 1978. In the United States, laws banning lead-based (paint containing 5% or greater lead) house paint were not passed until 1971, and it was phased out and not fully banned until 1978. Lead continued to be in paint coatings at lower concentrations, the current limit is less than 0.1%. Paint containing less than 5% lead is classified as lead-containing paint. In addition,

lead has been used to line walls as shielding where radiation is used; therefore, it is present in medical areas on campus.

Intact lead paint under normal conditions does not pose a health threat. However, if the material is in poor condition or cracked, drilled, sanded or otherwise disturbed, it could result in lead containing dust being released into the air and/or onto surfaces that could present a health risk.

Any work involving disturbance of lead paint must only be performed by personnel who have received lead worker training using proper work practices, containment equipment, and personal protective equipment.

RESPONSIBILITIES

UW EH&S assists departments with the development of a lead safety program; keeps departments apprised of changes in relevant regulations; and develops resources that strengthen local safety policies. EH&S performs lead worker and lead awareness training, including annual refreshers. EH&S performs air monitoring for exposure to lead during representative activities where airborne lead may be at or above the action level of 30 $\mu\text{g}/\text{m}^3$.

University maintenance departments are responsible for properly managing lead in their buildings and related spaces. The UW has developed a Lead Safety Program. This plan outlines functions EH&S, the department and/or their contractor will perform with regards to training, notification, monitoring, jobsite controls, safe work practices, recordkeeping, etc., for maintaining LCM and for instances when lead may be disturbed.

Supervisors have all the responsibilities of a UW employee and are responsible for executing their department's safety programs on a day-to-day basis; referring unusual or difficult safety issues to their department for resolution; and being the safety leadership at UW and within their respective department. They must ensure Work Plans for Lead-Containing Materials are complete prior to projects involving disturbance of lead.

Employees, students and other personnel are required to follow their department's lead safety practices and policies; and notify their supervisors of unsafe conditions or work as soon as possible. Everyone working with lead containing materials should avoid contaminating their clothing and transporting lead dust to vehicles and homes.

PREVENTING EXPOSURE

You can help prevent the potential of lead exposure to yourself and others by observing the following practices:

- **Immediately report damage** to ceilings, walls, painted brick, or other painted building surfaces to your supervisor or building coordinator.
- **Ask to see the Lead Paint Survey** before the start of a project that may involve disturbing LCM.
- Lead Paint Surveys are kept with the [Facilities Services Regulated Building Materials Management Office](#) (206.685.3357 or asbestos@u.washington.edu).
- If there has not been a survey conducted and the **building was built before 1978** then all paints are considered lead-containing.
- **Be careful not to damage painted building materials** or materials that may contain lead. For example do not:
 1. Disturb walls or ceilings
 2. Pound in nails to hang pictures
 3. Put hooks in ceilings for plants
 4. Install wall-hung shelving
- **Do not enter construction areas** when lead projects are being performed. A sign will be posted that says "Danger Lead Work Area – May Damage Fertility or the Unborn Child – Causes Damage to the Central Nervous System – Do Not Eat, Drink, or Smoke in this Area".

- **Wash your face and hands** with soap and water if you feel you may have contacted lead-containing dust.
- **Use Facilities Services** for any projects where lead-containing materials may be disturbed.
- **Do not use compressed air or shake** clothing to remove dust. Use wet wiping or a HEPA vacuum dedicated to lead work when lead dust may be present.

Guidelines for developing procedures for proper cleanup and disposal of lead-contaminated debris are given in the EH&S Lead Design Guide for Projects.

All injuries, including those apparently caused by lead exposure, must be reported using the Online Accident Reporting System (OARS).

The University is involved in a variety of activities to control lead hazards on campus. The University has conducted surveys to identify areas where LCM is present and manages LCM in place. If you suspect a material in your work area may be LCM and it appears damaged or in poor condition, contact the [Facilities Services Regulated Building Materials Management Office](#) at 206.685.3357 or [EH&S](#) at 206.543.0465.

Other controls are required by the Department of Labor & Industry Division of Occupational Safety and Health (DOSH) to protect workers when working with LCM. For more information refer to the [Washington state lead standard](#) and the [EH&S Training](#) page.

REFERENCES

- WAC [296-155-176](#), Lead in Construction
- WAC [296-62-07521](#), Lead in General Industry
- EPA [Residential Lead-Based Paint Hazard Reduction Act of 1992](#) (Title X)
- HUD [Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing](#) (2012 edition)
- EPA [40 CFR Part 745 - Lead-Based Paint Poisoning Prevention in Certain Residential Structures](#)
- EPA [Lead Renovation, Repair and Painting Program \(RRP\) Rule](#): This requires that those engaged in RRP activities in homes or child-occupied facilities (such as day care centers and kindergartens) built prior to 1978 be trained and certified in lead-safe work practices, and use these work practices to guard against lead contamination. It also requires that contractors provide information on lead safety prior to beginning work.