

Lead Exposure

WHY THIS MATTERS

Lead is a toxic metal that damages the brain, kidneys, nervous system and reproductive organs — even at low levels. OSHA's Permissible Exposure Limit (PEL) is $50 \mu\text{g}/\text{m}^3$ (29 CFR 1926.62). Workers must be medically removed if blood lead reaches $50 \mu\text{g}/\text{dL}$ in construction. From 2010–2023, construction workers with elevated blood lead levels decreased 37% — but exposures still occur during paint removal, welding, cutting and demolition.

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

OSHA Permissible Exposure Limit (PEL) for lead

$50 \mu\text{g}/\text{dL}$

Blood lead level requiring medical removal (construction)

37%

Decrease in elevated blood lead levels (2010–2023)

5 Rules for Lead Exposure Prevention

Every worker in a lead-exposure area must follow these rules:

- 1 KNOW IF LEAD IS PRESENT**
Pre-1978 paint, soldering, welding galvanized steel, cutting old pipe — all potential lead sources.
- 2 WEAR REQUIRED RESPIRATOR**
Use at minimum a half-face APR with P100 filters when above the action level ($30 \mu\text{g}/\text{m}^3$).
- 3 WASH BEFORE EATING OR DRINKING**
Lead dust on hands transfers to food. Wash hands and face before breaks and lunch — every time.
- 4 NEVER DRY SWEEP OR BLOW DUST**
Use HEPA vacuums or wet methods only. Dry sweeping sends lead dust airborne.
- 5 CHANGE CLOTHES BEFORE GOING HOME**
Lead dust on clothing contaminates your car and home — use disposable coveralls or change on site.

Before You Start — Quick Checklist

- Has the area been tested for lead-containing materials?
- Do you have the correct respirator with P100 filters?
- Is a hand-washing station set up near the work area?
- Are HEPA vacuums or wet methods available for cleanup?
- Do you have disposable coveralls or a change of clothes?
- Has air monitoring been conducted for this task?

How Lead Enters Your Body

Inhalation: Breathing lead dust and fumes is the primary route — sanding, grinding, cutting and welding release lead.

Ingestion: Eating, drinking or smoking with contaminated hands transfers lead directly to your body.

Skin Absorption: Organic lead compounds can absorb through skin — wear gloves and coveralls.

Take-Home Exposure: Lead on clothing and shoes contaminates your vehicle and home — especially dangerous for children.

Health Effects: Kidney damage, nerve damage, anemia, infertility, cognitive impairment — effects can be permanent.

Blood Lead Testing: OSHA requires blood lead testing for workers exposed above the action level. Know your results.

Common Mistakes That Increase Exposure

- ✗ Eating or smoking without washing hands — lead dust enters your body through food and cigarettes
- ✗ Dry sweeping or using compressed air for cleanup — sends lead dust airborne for everyone to breathe
- ✗ Wearing work clothes home — contaminates your car, home and family, especially children
- ✗ Skipping the respirator because "it's just a little sanding" — even small amounts of lead dust are toxic

Safety Tips to Remember

- ✓ Assume paint in pre-1978 buildings contains lead until testing proves otherwise
- ✓ HEPA vacuum everything — never dry sweep, blow or use compressed air in lead work areas
- ✓ Wash hands and face before every break, meal and at end of shift — no exceptions
- ✓ Leave work clothes at work — shower and change before going home to protect your family

Discussion Questions for Your Team

1. Do we know if any materials on this site contain lead?
2. Where is the nearest hand-washing station?
3. Do we have HEPA vacuums available for cleanup?
4. Has anyone on the team had blood lead level testing?
5. What is our procedure for disposing of lead-contaminated waste?

TOOLBOX TALK SIGN-OFF

Date: _____

Supervisor: _____

Project: _____

Location: _____

Attendance sheet attached: [] Yes