

Take the Lead Out..... at Work

Did you know that if you work with lead you could be bringing this toxic metal home on your clothes, shoes, skin, hair and hands? Take-home lead can cause lead poisoning in children and other family members. To prevent lead from getting into your home and vehicle always wash or shower and changing out of your work clothes and work shoes before leaving work. Even better, protect yourself with safe work practices such as:

- Work in a well-ventilated area, and use local exhaust ventilation when available
- Wash your hands and face before you eat, drink or smoke
- Eat, drink and smoke only in areas free of lead dust and fumes
- Do not take contaminated work clothing or shoes exposed to lead home
 - If you must, put them in a plastic bag and wash your work clothes separately
- Use a properly fitted respirator
- Wet cleaning and/or vacuum dusts that contain lead, don't dry sweep or blow

There are a number of common jobs that are known to expose employees to lead in the workplace:

- Thermal stripping or sanding of paint that contains lead
- Building or home renovation and remodeling
- Radiator manufacturing and repair
- Bridge work (Steel bridge maintenance in particular)
- Shooting range work
- Demolition of structures containing lead
- Battery manufacturing, recycling, and maintenance
- Metal production
- Metal scrap cutting and recycling
- Ceramic glaze mixing
- Lead soldering
- Welding or cutting of metal painted with paint that contains lead
- Plumbing
- Glass manufacturing

Lead is harmful to the brain, nervous system, blood, and kidneys, and accumulates in your body, so it is important to make sure you do not ingest or inhale lead on the job. It is critical that you do not bring lead home with you, especially if you have young children or a pregnant family member in your house. Lead is particularly dangerous to children and developing fetuses, and even relatively low exposure to lead can result in lower IQ scores, learning disabilities and, behavioral problems. There is no "safe" exposure level for children to lead.

While ingesting or inhaling lead can be fatal, this is very rare in adults; however, chronic lead poisoning does occur. Symptoms of lead poisoning in adults includes high blood pressure, joint and muscle pain, difficulties with memory or concentration, headache, abdominal pain, and mood changes. Another alarming effect of lead poisoning can be sterility in men and miscarriage, stillbirth or premature birth in pregnant women. You should immediately notify your employer if you develop signs or symptoms associated with lead poisoning or if you need medical advice concerning the effects of current or past exposure to lead.

The most common test for lead is called the blood-lead level test, which measures how much lead is in your bloodstream in micrograms of lead per deciliter of blood ($\mu\text{g}/\text{dl}$). Adults blood lead levels are typically below $5 \mu\text{g}/\text{dl}$. L&I consider blood lead levels above $5 \mu\text{g}/\text{dl}$ to be harmful, and OSHA states adults with blood levels $30 \mu\text{g}/\text{dL}$ or higher should be immediately seen by a doctor. While lead levels in blood can be reduced, some of the harmful effects of lead on the body can be permanent.

There are a number of requirements employers must follow to stop take-home lead exposure. Depending on the type of work being done and the likely hood lead is present employers may need to:

- Tell you if your work involves lead and train you on lead safety
- Test workplace air for lead and blood lead levels in workers
- Control lead dust and fumes in the workplace
- Provide protective work clothing and equipment for workers
- Give workers a place to wash hands and take a shower
- Provide workers a place to change into clean clothes.

OSHA has regulations to protect workers from lead exposure in both general industry (1910.1025) and construction (1926.62). Washington State Department of Labor and Industry (L&I) has regulations to protect both general industry and construction workers from lead exposure in WAC 296-62-07521 and WAC 296-155-176. Washington State is updating these rules in to one (WAC 296-857, Lead) and the draft version has a number of changes from the previous rules.

The draft rule establishes a monitoring requirement for employers if airborne concentrations lead if conditions exist that could potentially expose employees to lead at or above $10 \mu\text{g}/\text{m}^3$ TWA₈ (time weighted average over an 8 hour day). An airborne concentration of lead equal to or greater than $10 \mu\text{g}/\text{m}^3$ will require employers to track appropriate work practices to limit lead exposures. The permissible exposure limit (PEL) for lead will be reduced from $50 \mu\text{g}/\text{m}^3$ to $20 \mu\text{g}/\text{m}^3$. If employees are going to be exposed to lead at or above $20 \mu\text{g}/\text{m}^3$ TWA₈, their employer must control their exposure to lead using a formal written plan and provide employees with appropriate respiratory protection and hygiene facilities.

The draft rule also establishes criteria for surface level lead concentrations, these are considered “safe harbor” lead levels. For areas that are considered “clean” such as lunch or break rooms, the maximum surface lead level is $4.3 \mu\text{g}/\text{dm}^2$ of surface area ($\mu\text{g}/\text{dm}^2$). In lead work areas the maximum is $27 \mu\text{g}/\text{dm}^2$ and $43 \mu\text{g}/\text{dm}^2$ for inaccessible surfaces. If there is no concern for lead exposure, then there is no hygiene requirement.

If employees are exposed to any amount of lead on the job employers will be required to provide training on:

- Operations and locations in the work area where lead is present
- How to detect the presence or release of lead in the work area
- Steps employees can take to protect themselves from lead

If you would like to see a copy of the Draft Lead rule, please click [HERE!](#)