

LEAD POISONING



LEAD AND ADULTS

Health Effects of Lead Exposure in Adults

Lead Poisoning in Adults

- Lead can enter the body by breathing or swallowing lead dust, fume, or mist.
- Even if you feel fine, lead can damage your body and cause an array of symptoms.
- Lead is absorbed into the bloodstream and can be stored in soft tissues and bone. Lead stored in the bones is gradually released back into the body over time.
- There are no safe levels of lead in the blood. Experts agree that an adult blood lead level $\geq 25 \mu\text{g}/\text{dL}$ is of concern.

Symptoms at Associated Blood Lead Levels (BLL)

BLL	Symptoms
15 $\mu\text{g}/\text{dL}$	Increase in blood pressure, harmful to fetus
20 $\mu\text{g}/\text{dL}$	Headaches
30 $\mu\text{g}/\text{dL}$	Damage to sperm, slower reflexes, tiredness, reproductive problems, kidney damage
40 $\mu\text{g}/\text{dL}$	Muscle and joint pains, stomach pain, constipation
50 $\mu\text{g}/\text{dL}$	Diarrhea, loss of appetite, anemia, sleep problems
60 $\mu\text{g}/\text{dL}$	Memory problems, mood swings, trouble concentrating
80 $\mu\text{g}/\text{dL}$	Sharp pains in stomach
100 $\mu\text{g}/\text{dL}$	Severe brain damage

Testing for Blood Lead in Adults

- A blood test is the only way to learn the level of lead in your blood. Talk to your doctor about getting tested for lead.
- If you work with lead and live with young children or pregnant women, talk to your doctor about testing them.

Action Steps

Blood Lead Monitoring

In an environment where worker is exposed to OSHA Action Level (regardless of BLL):

- Evaluate blood lead prior to exposure
- Test blood lead every month for the first 3 months
- Test blood lead every 6 months and at annual exam

Worker with a blood lead $\geq 40 \mu\text{g}/\text{dL}$ within the past 12 months or at a level requiring medical removal:

- Medical evaluation annually
- Monitor every 2 months until 2 consecutive tests $\leq 40 \mu\text{g}/\text{dL}$

Worker with blood lead $\geq 50 \mu\text{g}/\text{dL}$:

- May indicate medical removal
- Test blood lead monthly

Any symptoms of lead poisoning or worker with difficulty breathing while wearing respirator

- Evaluate blood lead immediately

Available Resources– Call or email if you have questions

Adult Blood Lead Surveillance Program	800-897-LEAD (5323) in NH 603-271-4507	http://www.dhhs.state.nh.us/dphs/bchs/clpp http://www.dhhs.nh.gov/dphs/hsdm/ohs
Northern New England Poison Center	800-222-1222	http://www.nnepc.org
Workwise NH	603-358-2465	http://www.keene.edu/academics/conted/safety/workwise
National Institute for Occupational Safety & Health (NIOSH)	800-CDC-INFO (800-232-4636)	http://www.cdc.gov/niosh/topics/ABLES/ables.html
Occupational Safety and Health Administration (OSHA)	603-225-1629	http://www.osha.gov/SLTC/lead
National Lead Information Center (NLIC)	800-424-LEAD (5323)	http://www.epa.gov/lead/forms/lead-hotline-national-lead-information-center
NH Coalition for Occupational Safety & Health (NH COSH)	603-232-4406	http://www.nhcosh.org





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A Guide to Working with Lead in Industry

Steps You Can Take at Work

Here are some tips to lower your risk of lead poisoning and “take-home” lead:

- Wash hands and face before eating, drinking, or smoking.
- Eat, drink, and smoke only in areas free of lead dust and fumes.
- If a ventilation system is used at work, make sure it is on and working properly.
- Wear a clean, properly fitted air purifying respirator equipped with purple P100 filters (at a minimum level of protection) in all work areas that have lead dust or fumes. Your employer must train you on how to use the respirator.
- Change into work clothes and shoes before working with lead. Store street clothes in a clean place.
- If possible, shower at work before going home.
- Wash work clothes separately from regular laundry. Run washer through an empty cycle if possible.
- Make sure keys and cellphones used at work, are kept away from kids.
- For clean-up, use wet cleaning methods and use a special *High Efficiency Particulate Air* (HEPA) vacuum.
- Avoid biting lead fishing sinkers, wires, cables, that may contain lead.

THE OSHA LEAD STANDARD

The Lead Standard specifies the limit of lead in the workplace and responsibilities of the employer

For those exposed to airborne lead at or above the **OSHA Action Level** of 30 $\mu\text{g}/\text{m}^3$ for more than 30 days/year, OSHA requires:

- Medical screening & blood lead testing
- Medical removal protection (temporary removal from the job task due to elevated blood lead)

For those exposed to airborne lead at or above the **Permissible Exposure Limit** (PEL) of 50 $\mu\text{g}/\text{m}^3$, employers must:

- Post a warning sign
- Install ventilation
- Provide showers & changing rooms
- Provide medical screening & blood lead testing
- Provide medical removal protection

For more details refer to the OSHA Lead Standard at:
www.gpoaccess.gov/cfr/index.html

BLOOD LEAD TESTING

The only way to know about an elevated BLL is testing

An employer must make blood lead testing available at least:

- Every 6 mos. for employees with an airborne lead exposure above the Action Level for more than 30 days/year.
- Every 2 mos. for anyone who's last blood lead was $\geq 40 \mu\text{g}/\text{dL}$.
- Monthly for an employee during temporary medical removal due to an elevated blood lead level.

Don't panic if your blood lead level is high

- Your blood lead level can be brought down. Your doctor will develop a medical plan based on the amount of lead in your body. Visit your doctor regularly until your blood lead level is no longer a problem.

