

# LEAD POISONING

# LEAD AND 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

## Health Effects of Lead Exposure in Adults

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

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NH Department of Health & Human Services, Division of Public Health Services

**1-800-897-LEAD or [LeadRN@dhhs.nh.gov](mailto:LeadRN@dhhs.nh.gov)**


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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](http://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.

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