



Lead Poisoning

Lead and Road Construction

What is lead?

Lead is a metal found naturally in the earth. It had been used for centuries in many products and materials before its effects were known. Its use in paint, plumbing and gasoline has contributed to widespread public health concern.

Why is lead exposure a health concern?

Lead acts as a poison if it enters the human body. Once lead gets into the body, it can stay there for a long time. It is stored in three places: the blood, organs and bones. Lead stays in the blood for about a month, and in organs for several months, but it can remain in the bones for years. It affects the brain and nervous system, reproductive capabilities, the kidneys, the digestive system and the body's ability to make blood.

What are the symptoms of lead poisoning?

Small amounts of lead can build up in the body and cause temporary symptoms or permanent damage. Early signs of lead poisoning may include: tiredness, headache, metallic taste and poor appetite. Advanced lead poisoning symptoms include: mood swings, sleeping problems, stomach cramping, constipation, memory loss, a tingling sensation in the extremities, and muscle and joint aches.

How can I be exposed to lead?

Lead commonly enters the body in two ways. Lead can be ingested (swallowed) when drinking, eating, smoking, chewing gum, applying cosmetics or performing other hand-to-mouth activities. It can be inhaled by breathing in lead dust or fumes. At the construction site, old paint on metal bridges and other steel structures may contain lead. Lead poisoning has occurred in workers during abrasive blasting, sanding, cutting, burning, or welding of bridges and other steel structures coated with lead-containing paints. Anyone near such work can be exposed to lead. Lead was added to gasoline until 1978 and lead from vehicle exhaust settled on roads, freeways and nearby soil. The lead in these roads and soils remains indefinitely. Workers may be exposed to lead through digging, drilling, chipping, or the expansion or resurfacing of old road surfaces or adjacent shoulders -- particularly near old or repainted bridges.

What can I do to protect myself and my family from being exposed to lead from my construction site?

Lead particles can be invisible, but there are things you can do to protect yourself and your family:

- Find out if the paint you are stripping, sanding, heating or cutting contains lead.
- Wear proper respiratory protection per the OSHA standard.
- Use wet cutting, wet drilling and water sprays to help keep dust levels low.
- Use local-exhaust ventilation (HEPA filtration).
- Practice good personal hygiene: clean your hands before handling food or smoking and do not eat, drink or smoke in dusty areas.
- Change into clean clothes before leaving the work site. Do not wear work clothes home as lead dust on your clothes, shoes or in your vehicle can poison your family. Children are particularly sensitive to the toxic effects of lead and can be exposed to the lead that you take home from your work site.
- Have your blood lead levels checked periodically.
- Have your family members check blood lead levels periodically.

How often should my blood lead level be checked?

Blood lead level (BLL) is a term used to describe the amount of lead in the blood, measured in micrograms per deciliter ($\mu\text{g}/\text{dL}$). The typical BLL for U.S. adults is less than $10 \mu\text{g}/\text{dL}$.

The New York State Department of Health (NYSDOH) recommends that:

- An **initial blood lead test** be conducted **to establish the BLL** of each worker at risk for exposure to lead.
- Monthly testing be continued for all individuals with a **BLL greater than $25 \mu\text{g}/\text{dL}$** , or if there is an increase of **$10 \mu\text{g}/\text{dL}$** or more from a previous test.
- Blood lead testing be limited to once every six months for workers with a BLL below **$25 \mu\text{g}/\text{dL}$** or an increase of less than **$10 \mu\text{g}/\text{dL}$** in six months.
- A BLL greater than or equal to **$50 \mu\text{g}/\text{dL}$** must be followed by another test within **two weeks**.
- If worker removal criteria are reached in subsequent BLLs, medical removal protocols and special protection benefits as defined in the OSHA standard must be enforced. Medical removal is to continue until two consecutive BLLs are found to be at or less than $40\mu\text{g}/\text{dL}$.
- **Any BLL greater than $10 \mu\text{g}/\text{dL}$ means that lead is getting into your body and you should refer to our additional guidance for workers and adults on how to lower or eliminate this exposure (see link in the “For more information” box to the left).**

For more information

If you would like more information on exposure to (and control of) lead in the workplace, contact the NYSDOH, Bureau of Occupational Health and Injury Prevention at 518-402-7900.

Additional information on controlling and monitoring lead in the workplace is available at the following links:

NYSDOH publication, “Lead on the Job: A Guide for Workers”

www.health.ny.gov/publications/2543/

www.health.ny.gov/environmental/lead/adult_groups.htm