

The Dangers of Lead Exposure

What Overexposure to Lead Can Do To You!

Lead exposure occurs when lead dust or fumes are inhaled or when lead is ingested via contaminated hands, food, water, cigarettes or clothing. Lead entering the respiratory and digestive systems is released into the blood and distributed throughout the body. More than 90% of lead that enters the body accumulates in the bones where it is stored for decades. Lead in bones may then be released into the blood, re-exposing organ systems long after the original exposure.

High doses of lead can cause **brain damage, mental retardation, behavior problems, anemia, and a wide variety of other serious damage to the body parts, and in extreme cases, even death.**

Lead interferes with a variety of body processes and is toxic to many organs and tissues including the heart, bones, intestines, kidneys, and reproductive and nervous systems. It interferes with the development of the nervous system and is therefore particularly toxic to children, causing potentially permanent learning and behavior disorders.

Signs and Symptoms of Overexposure

Neurological Effects

- Peripheral neuropathy
- Fatigue / Irritability
- Impaired concentration
- Hearing loss
- Wrist / Foot drop
- Seizures
- Brain dysfunction

Gastrointestinal Effects

- Nausea
- Upset stomach
- Constipation
- Colic

Reproductive Effects

- Miscarriages/Stillbirths
- Reduced sperm count and motility
- Abnormal sperm

Heme Synthesis

- Anemia

Renal Effects

- Chronic nephropathy
- Hypertension

Other

- Joint pain
- Muscle pain



Detection

The main tool for diagnosis is measurement of the blood lead level (BLL). The US Centers for Disease Control and Prevention and the World Health Organization state that a blood lead level of 10 µg/dL or above is a cause for concern; however, lead may impair development and have harmful health effects even at lower levels, and there is no known safe exposure level.

Prevention

There are several prevention strategies one can do that will prevent lead exposure to workers and their families.

- Increase the frequency of hand washing
- Eliminate the presence of lead-containing objects in the workplace and at home.
- Wear protective clothing when doing a task that involves working with lead or lead-based products such as, soldering fumes, stain glass work, bullet making, using a firing range.
- Replace lead weights with stainless steel material or provide a protective envelope around lead and lead-based products.
- If protective clothing is not available then remove clothing and shower after the task. **Do this especially before interacting with family and pets at home.** Not doing so increases their chances of lead exposure as well.
- Wash clothing that has been exposed to lead separately from family clothing.



Consumption of lead can have some very serious impacts on you and your family's health.

No safe threshold for lead exposure has been discovered, therefore, **there is no known amount of lead that is too small to cause the body harm.** Protect yourself and your family, **GET THE LEAD OUT!**