

## Protecting Workers from Lead Exposure at Indoor Firing Ranges

Workers at indoor firing (shooting) ranges may be exposed to dangerous levels of lead. Lead can enter the bloodstream by breathing or ingesting lead particles. Once in the bloodstream, lead can damage various organs and cause health problems. Employers must follow Occupational Safety and Health Administration (OSHA) requirements to limit worker exposure to lead.



Photo: NIOSH

### Sources of Lead Exposure

- Firing lead bullets produces gun smoke that contains lead dust and fumes.
- Impact at the target area can cause lead bullets to break apart and release lead dust.
- Handling spent cartridges can cause lead dust to get on your hands.
- Dry sweeping and using vacuums without high-efficiency particulate air (HEPA) filters will release lead dust into the air.
- Maintenance work such as changing ventilation system filters and vacuum bags can release lead dust.
- Lead dust on hands, clothes, or surfaces can contaminate food, and lead to ingestion.

## Ways Employers Can Help Prevent Lead Exposure

- Provide lead-free bullets and primer.
- Use a separate “push/pull” ventilation system that delivers fresh air from behind the shooting area and moves air downrange from the firearm towards a HEPA filtered exhaust area. Make sure it is operating properly.
- Provide protective clothing to workers performing cleaning and maintenance tasks.
- Train workers to use dust suppression and proper cleaning methods such as HEPA vacuuming and/or wet methods when cleaning bullet traps, berms, and surfaces. Do not allow them to dry sweep — this will create airborne dust.
- Give respirators to workers who perform dusty tasks such as lead bullet recovery, changing filters, and cleaning out the ventilation system and vacuums.
- Provide workers with ready access to handwashing stations.

## How Workers Can Limit Exposure

- Tell your doctor or healthcare provider that you work with lead.
- Learn your blood lead level. Ask your employer if blood lead testing is available. If not, ask your doctor.
- Wear gloves when cleaning guns or wash hands with lead-removing soap afterward.
- Store and consume food and drinks in a lead-free area. Wash your hands before eating, drinking, or smoking.
- Change out of your work clothes and shoes before going home. Keep work clothes away from street clothes. If possible, shower at the end of the work day.

**Your family, especially children and pregnant women, can be harmed by lead exposure.**

**For more information:**



U.S. Department of Labor

**OSHA<sup>®</sup> Occupational Safety and Health Administration**

**[www.osha.gov](http://www.osha.gov) (800) 321-OSHA (6742)**