



Environmental & Occupational Health Hazards Program

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LEAD HAZARDS IN THE FIRING RANGE

*Adult Blood Lead
Epidemiology Surveillance
(ABLES) Program*

Exposure to lead dust in firing ranges is very common, and so are questions about what an exposure may mean. This fact sheet provides you with answers to some commonly asked questions about how an exposure to lead dust may affect your health.



How am I exposed to lead in the firing range?

You can become exposed to lead at the range by breathing in lead fumes or touching lead dust that settles on surfaces. When a weapon is discharged in a firing range, lead dust is aerosolized (dispersed as microscopic particles in the air) and fumes are generated. Leaded ammunition and primers are the main source of lead dust in firing ranges.

What are the health effects of lead exposure?

If not detected early, people with high lead levels in their bodies can suffer from high blood pressure, digestive problems, shakiness, irritability, memory and concentration problems, difficulties during pregnancy, and muscle and joint pain. You can also carry lead from the range home to your family on your clothes, shoes, and body. Lead carried in this way is referred to as "take-home lead." Take-home lead can affect children by causing damage to the brain and nervous system, behavior and learning problems, slowed growth, hearing problems, and headaches.



Make firing range safety a top priority for you and your family.



How can I reduce my exposure to lead at the firing range?

Individuals using the firing range, as well as those working at the range can be exposed to lead. Lead exposure at the firing range can be minimized by following some simple safety practices:

For Employees:

Avoid Exposure to Lead Dust During Cleaning

Always use wet mopping to pick up lead dust. Wet mopping should be used to clean firing range floors, because it is more difficult for moistened dust to become airborne. If a dry mop or broom is used, dust containing lead can be easily picked up into the air and can pose a health hazard. After cleaning, discard dirty water and remember to wash all cleaning tools immediately. Dispose of all lead-containing materials, including wastewater, in accordance with state guidelines. Never use a dry mop or a broom.

If vacuuming, a HEPA (High Efficiency Particulate Air) vacuum should be the only type of machine used in order to prevent fine lead particles from re-entering the air. A HEPA vacuum is different than a regular household vacuum, because

it traps the very fine particles that are too small to see. Never use a regular household vacuum, because some lead particles are blown back out through the exhaust to become airborne and contaminate surfaces that have been cleaned.



Maintain Adequate Ventilation

Always maintain adequate ventilation. Good ventilation can significantly reduce airborne lead levels in the firing range. Air should circulate across all shooting booths carrying the gun smoke away from the shooter's face.

The airflow should remain steady, since turbulence caused from the fired weapon will cause fumes to travel toward the shooter.

TIP: By using jacketed and plated ammunition, especially with a non-lead primer, airborne lead levels can be significantly reduced.

For Everyone:

Remember to Use Good Hygiene!

Never eat, drink, or smoke in the range shooting areas.

Remember to always wash your hands, arms, and face before eating, drinking, or smoking. Fine particles of lead dust can easily adhere to your skin and hair, resulting in the accidental ingestion of lead particles. Shower as soon as you arrive home, as this ensures that any other lead residue is washed out of your hair and from other

body parts. Wash all tools that come in contact with lead dust, especially if they are not stored in the shooting areas.



Never Take Lead Home with You!

Lead dust can settle on your body and clothes, where it can be carried into your home and car. Always change out of contaminated clothing articles prior to leaving the firing range and place them in a plastic garbage bag for laundering.

Wash range clothing separately from the rest of the family's clothing; this prevents any possibility of cross-contamination. In addition, shoes and

boots used at the range should be left at the range, or adequately cleaned before leaving to prevent lead dust from entering your automobile and home.

Remember, even small amounts of lead can pose a health risk.



Wiping lead dust off your hands.

This fact sheet is funded in part by the National Institute for Occupational Safety and Health. (NIOSH).

11/01/20

Where can I find more information?

Fact Sheet: Reducing Lead at Indoor Firing Ranges, New York State Department of Health
<http://www.health.state.ny.us/nysdoh/lead/shoot.htm>

Fact Sheet: Firing Ranges, The Airborne Lead Hazard, Commonwealth of Massachusetts, Departments of Labor and Workforce Development
<http://www.mass.gov/dos/leaddocs/Lead-firing.htm>

Fact Sheet: Lead Fact Sheet, Centers for Disease Control and Prevention
<http://www.cdc.gov/niosh/topics/ranges/>

HEPA Vacuum for Lead Dust Removal, Michigan Department of Community Health
<http://www.michigan.gov/leadsafe>

How Much Cleaning is Enough? An Evaluation of Alternative Post-Lead Hazard Intervention Cleaning Procedures; Vermont Housing and Conservation Board & University of Cincinnati Department of Environmental Health.
http://www.leadsafehousing.org/Vermont_Cleaning_Paper.pdf