NIOSH Personal Protective Equipment Checklist for Workers

☐ Respirator, as required by your employer
☐ Coveralls, including shoe covers
☐ Safety goggles
☐ Chemical resistant gloves

Additional Resources

NM Department of Health
nmhealth.org/go/lead

National Institute for Occupational Safety and Health (NIOSH)
Preventing Occupational Exposures to Lead and Noise at Indoor Firing Ranges
**Lead Hazards at the Range**

**Why is it important to know about lead safety?**
Indoor firing and shooting ranges are common sources of lead exposure. Workers may be at risk for lead exposure and lead poisoning.

Minimize your exposure to lead by:
- Knowing how lead can hurt your body
- Protecting yourself
- Finding out how much lead is in your blood

**How does lead get into the body?**
Most ammunition and primers are the main source of lead exposure at the range. When a gun is fired, the lead fumes in the “gun smoke” are released into the air and can settle onto surfaces.

Lead can enter the body through:
- The LUNGS when you breathe
- The MOUTH when you swallow

Lead is absorbed into the bloodstream and found in the blood, liver, kidneys, and bones.

**Blood Lead Levels and Health Effects**

<table>
<thead>
<tr>
<th>Blood Lead Levels</th>
<th>Health Effects</th>
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</thead>
<tbody>
<tr>
<td>≥80 µg/dL*</td>
<td>Danger! 80 µg/dL* or higher. Severe health effects are likely. The damage may be permanent and may occur quickly.</td>
</tr>
<tr>
<td>70 µg/dL</td>
<td>Alert 70 to 79 µg/dL. Serious health problems may occur.</td>
</tr>
<tr>
<td>60 µg/dL</td>
<td>Caution 60 to 59 µg/dL. Health effects may be occurring even if you have no symptoms.</td>
</tr>
<tr>
<td>50 µg/dL</td>
<td>– Adult blood lead levels should be kept below 10 µg/dL. However, no amount of lead is safe.</td>
</tr>
<tr>
<td>40 µg/dL</td>
<td>– Levels below 10 µg/dL can be harmful to children and developing fetuses.</td>
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<tr>
<td>30 µg/dL</td>
<td></td>
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<tr>
<td>20 µg/dL</td>
<td></td>
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<tr>
<td>10 µg/dL</td>
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</tbody>
</table>

*µicrograms lead per deciliter blood

**How can lead hurt the body?**
If not tested early, people with lead in their blood can suffer from:
- Increased blood pressure
- Muscle and joint pain, stomach pain
- Decreased kidney function
- Memory and concentration problems
- Difficulties during pregnancy

Lead is especially harmful to children and can cause damage to the growing brain and nervous system.

**How can I protect myself?**

**For employees:**
- Use recommended NIOSH personal protective equipment for lead
- Use a wet cleaning method
  - Wet wipe surfaces, use a wet mop, or use a HEPA vacuum.
  - **NEVER** dry sweep the range

**For everyone:**
- Wash hands, forearms, and face before eating and drinking
- Get blood testing to monitor lead levels
  - Consider testing your children as well
- Shower and change into clean clothes and shoes before leaving the range
- Wash and keep dirty work clothes and shoes separate from other clothing

**By using jacketed and plated ammunition, especially with a non-lead primer, lead levels can be reduced.**