

Lead Exposure at Manitoba Firing Ranges

Information for Operators - Factsheet

Why worry?

Elevated blood lead levels have been reported in workers, volunteers, and recreational shooters who frequent indoor firing ranges. Unless proper precautions are taken, everyone who uses firing ranges can be exposed to hazardous amounts of lead.

Exposure to high levels of lead can cause heart disease, depression, fatigue and memory loss. It can also affect digestive function, concentration and sleep. Additionally, lead can affect kidney function and blood production and increase blood pressure. Extremely high levels can be fatal.

Obvious symptoms of lead exposure usually do not occur until blood lead levels are very high. Individuals may have high blood levels that are affecting their health, without being aware.

Please see the *Lead Exposure at Manitoba Firing Ranges* fact sheet for more information.

Where does the lead come from?

Most ammunition contains lead. Lead particles are released into the air and onto surfaces when guns are fired and when bullets strike the target or trap. These airborne lead particles can be inhaled, and lead dust that settles on surfaces is easily transferred to hands, leading to the ingestion of lead during activities such as eating, drinking or smoking.

As well, lead dust can be tracked outside the facility through footwear and clothes, so both shooters and workers may be bringing lead dust home, creating a health risk for their families. Even at outdoor ranges, high lead levels in one's personal breathing zone and on surfaces can present a hazard, despite the natural ventilation.

How to reduce lead exposure at your firing range:

For indoor ranges:

- **Ventilation System**
 - The ventilation system should be running when the range is in use.
 - Ventilation systems for indoor firing ranges should be maintained and regularly assessed by someone with good knowledge of range design.

For both indoor and outdoor ranges:

- **Housekeeping**
 - Housekeeping practices should be performed on a regular basis to remove lead from surfaces.
 - Wet wiping or mopping, and HEPA vacuuming should be used on surfaces.
 - Repeatedly mist the sand and debris with water while cleaning the bullet trap to minimize airborne lead dust.
 - Regularly clean all surfaces within the building, especially tables used for eating, with all-purpose household detergent.
 - Adequate personal protective equipment should be worn by those involved in maintenance or cleaning of range areas and surfaces.
 - Volunteers who clean and maintain the shooting gallery should be rotated frequently.
 - Children and adolescents should not be allowed to perform housekeeping or maintenance activities at the range.

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- No carpets or rugs should be placed in the shooting gallery or adjacent to the firing range, as they are difficult to clean and accumulate lead dust.
- **Personal Hygiene**
 - Eating, drinking or smoking at the firing range should be prohibited.
 - Everyone using the range should be encouraged to wash up after shooting or performing housekeeping or maintenance activities.
 - After shooting, housekeeping or maintenance, clothes and shoes should be changed at the range and put in an airtight bag for transport.
 - Clothes worn at the range should be stored separately from other clothes and be washed separately from other household laundry.
- **Volunteer Health and Safety**
 - Volunteer firing ranges should have a trained health and safety volunteer to initiate and supervise education of all range users.
- **Education**
 - All range users should be aware of the adverse effects of lead on health, symptoms of lead toxicity and how to minimize exposure.
 - The most effective method for reducing lead exposure during shooting is to encourage the use of **lead free ammunition**.
 - Please circulate the *Lead Exposure at Manitoba Firing Ranges* fact sheet to all users of your shooting range. Also, post it in highly visible locations in the range to inform and remind range users how to prevent lead exposure.
 - If workers, volunteers or recreational shooters believe they have had significant exposure to lead, they should be advised to speak with their health care provider.

The *Lead Exposure at Manitoba Firing Ranges* fact sheet is available at:

www.gov.mb.ca/health/publichealth/environmentalhealth/lead.html