

The Lead Exposure Hazard

By Billy Two Bears

(AKA probate Bill Flory)

This article is being generated to help the membership understand the lead exposure that may occur while we enjoy our common sport and develop methods for reducing the exposure we each receive, by taking precautionary steps to reduce or eliminate the exposure.

From the shooting perspective, all of us are exposed or have the risk of exposure to lead entering our bodies through the inhalation of dust, ingestion of contaminated food or water, or through handling of bullets, fired brass and casting.

Until the mid 90's lead was also a common product found in primers as it extended the storage life of primers. However under pressure from the EPA, the American primer manufacturers reformulated their mix to exclude lead.

Why are we concerned about lead exposure?

The human body confuses lead with calcium and stores it in the bones, where much of our blood products are produced. Once in the blood stream, lead can damage much of the body in very small incremental steps. Lead in the blood stream is referred to as serum lead and can cause damage to the nervous system, the brain, liver and kidneys, and in extreme cases mental retardation, and death.

How can I find out if I have significant exposure?

Those who are regularly exposed to lead vapor or dust should have their blood serum checked each year. Physicians only order such tests when they know the individual has higher exposures to lead than the average person, so if you do not tell him/her about your exposure they will not normally order the test. **Ask your physician to order a serum lead test when you take your annual physical.** Your physician can recommend treatment plans where they are warranted.

What are some of the ways I may be exposed to lead dust or vapors?

Those who are exposed to lead vapors which are generated in the melting and reforming of lead are the most susceptible to sever damage, however even if one does not cast bullets, sufficient lead may enter the body through other activities, to cause harm.

Sweeping dusty areas in enclosed spaces at the range will stir up lead dust which is then inhaled. Eating food without washing your hands will deposit lead onto the food you eat. Beverage containers that are not covered will collect lead dust which can be ingested if they are not cleaned before drinking from them.

How can I reduce my exposure and still enjoy shooting?

Some recommend that no food be consumed while lead is present; however there are times when this is not possible. Suggested alternatives are **place food in zip lock bags, which are then stored along with beverages in coolers** or containers that are not exposed to the lead in the atmosphere. Prior to eating, leave the area where the exposure may occur and then wash your face and hands prior to eating. It is possible to eat directly from the zip lock bag without touching the food.

When handling fired brass remember it held lead bullets or may have contained older primers, which contained lead. **Wear dust masks, and avoid stirring up the dust** in the brass any more than necessary. **Use brass polish in the cleaning media** in your tumbler to both shine your brass and to trap lead dust in the media itself. **Change your media regularly and when sorting brass from media again reduce the amount of dust disturbance.** There are closed containers that may be used for this purpose, or a vacuum may be connected to a hood under which such activity occurs. Make sure your vacuum has a “HEPA” filter to trap the lead dust in the filter inside the vacuum or you will blow lead dust everywhere.

When disposing of lead contaminated products, wear the dust mask, bag and seal the material you are disposing and place it inside trash containers with lids that fit securely on them.

Finally, **pay attention to frequent hand washing, taking showers after a day at the range, and washing clothing from the range separately from other clothing.** When removing it take it off outside the living space of you home, If possible, and then place it directly into a sealed container or the washer for laundering.

Watch the dust you inhale, wear dust masks anytime you are handling lead, brass or cleaning range areas where lead dust may accumulate.

There are hand cleaners that scavenge lead from the skin. They contain benzylconium chloride. I’m told these are available at the range shack and from Long’s or other Pharmacies in a product known as “Wet Ones” that contain this compound.

Dust can be minimized by wetting it down before cleaning, with a water hose or by misting with the same hose.

The following web sites have additional information regarding lead exposure, the lead hazard and reduction/mitigation programs.

[Http://www.ynhh.org/pediatrics/prevention/sources_lead.html](http://www.ynhh.org/pediatrics/prevention/sources_lead.html)

[Http://www.cdc.gov/nceh/lead/lead.htm](http://www.cdc.gov/nceh/lead/lead.htm)

[Http://www.haz-map.com/leadfact.htm](http://www.haz-map.com/leadfact.htm)

[Http://www.precisioncartridge.com/lead.html](http://www.precisioncartridge.com/lead.html)

http://www.osti.gov/energycitations/product.biblio.jsp?osti_id5164926

If you have suggestions or comments on how to improve the range operations to reduce exposure to our members and customers please let Ted Johnson know.

Thanks to Dr. Richard Eastman and Ted Johnson as contributors to this article