

Taking Aim at Lead Exposures in Indoor Firing Ranges

The Challenge

In 2002, the Connecticut Adult Blood Lead Epidemiology and Surveillance (CT ABLES) program received its first report of an elevated blood lead level from indoor firing range exposure. The affected individual had experienced symptoms consistent with lead poisoning and subsequent laboratory tests confirmed blood lead levels in excess of 60 ug/dl. Our CT ABLES investigation revealed that this individual's only lead exposure was at an indoor firing range and that this individual frequently volunteered to clean the firing range in exchange for no-cost shooting time. The cleaning activity almost exclusively involved dry sweeping.

The Response

The CT ABLES program researched potential lead dust sources in indoor firing ranges and developed an educational campaign for indoor range owners, workers, and users. This campaign was focused on preventing exposure to lead dust through the use of proper cleaning schedules and work practices, designing appropriate ventilation, educating users about potential lead health hazards, and informing range workers and users how to obtain blood lead testing. Given the fact that this was a new campaign designed around an issue that was not widely recognized by Connecticut range operators or users, the decision was made to deliver these materials in person to each range rather than by mail. We visited 13 private indoor firing ranges in Connecticut, which we identified through an online search. This allowed us to discuss the issue in person with the range operators, to perform an unofficial brief "inspection" of the facility, and to explain how appropriate prevention activities can be utilized to protect health.

The Impact

In the 5 years prior to our educational campaign, only the case mentioned above was related to the use of an indoor firing range. In the 12 years since (2005-2016), the number of adults with elevated blood lead levels from exposures in firing ranges in excess of 20 ug/dl reported to the CT ABLES program has steadily increased year over year, from 4 in 2005 to almost 50 in 2016. In fact, from 2011-2016 approximately 40% of all individuals with elevated blood lead levels (> 20 ug/dl) reported, and over half of those with very high blood lead levels (> 40 ug/dl), either worked at, or frequently utilized indoor firing ranges and had no other known source of lead exposure. Through our educational campaign, these individuals were not only made aware of the risks of lead exposure to their health, but their families were also protected from take-home lead exposure, their contacts in the shooting community became aware of lead hazards, and indoor range operators made necessary changes to keep their workers and users protected from lead dust in their facilities. The educational campaign is ongoing.

For more information about lead hazards in indoor firing ranges and the CT ABLES educational campaign, please visit our website:

<http://www.ct.gov/dph/occupationalhealth>