



THE DANGERS OF LEAD EXPOSURE IN LAW ENFORCEMENT

Lead exposure in law enforcement is a dangerous and often overlooked threat to police users. At the shooting range it is standard for police users to wear hearing protection and eye protection, but far too often, insufficient precautions are being taken to mitigate lead exposure. With the frequency of firearm training, officers (and subsequently their families) can be exposed to lead on a consistent basis due to the “take home” nature of lead. Lead can remain on your hands and clothes long after your range session and become a continuous source of exposure if not properly cleaned.



LEAD EXPOSURE REVEALED AFTER USING D-LEAD TEST KIT

LEAD EXPOSURE AT SHOOTING RANGES

A review of lead exposure at shooting ranges was published in the National Library of Medicine, where they examined 36 studies on lead exposures at shooting ranges [1]. The studies primarily focused on before-after comparisons of shooters, particularly shooters in law enforcement and military. The review concluded that nearly all of the participants in the 36 studies had elevated blood lead levels (BLL) above what is considered safe by the CDC and NIOSH. The average BLL among adults is 0.92 micrograms per decilitre ($\mu\text{g}/\text{dl}$) [2]. Blood lead levels above $5\mu\text{g}/\text{dl}$ is the case definition for an elevated blood level. Full results can be see on the chart below. As your body processes lead in the bloodstream, your BLL's will naturally go down, but consistent and sustained exposure combined with BLL's above $5\mu\text{g}/\text{dL}$ is where health complications from lead poisoning occurs.

33%

OF PARTICIPANTS SHOWED BLOOD LEAD LEVELS BETWEEN 10-20 $\mu\text{g}/\text{DL}$

ASSOCIATED HEALTH RISKS

- Decreased kidney function
- Increased blood pressure
- Increased risk of hypertension
- Increased risk of tremors
- Decreased cognitive function
- Decreased hearing
- Increased incidence of ALS

51%

OF PARTICIPANTS SHOWED BLOOD LEAD LEVELS ABOVE 20 $\mu\text{g}/\text{DL}$

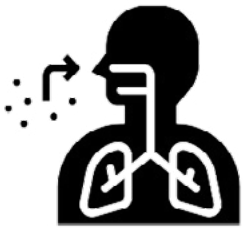
ASSOCIATED HEALTH RISKS

- Anemia
- Migranes
- Delayed reaction time
- Paroxysmal extreme pain disorder
- Mood disorders
- Difficulty concentrating
- Slow motor nerve conduction

Lead dust lingers in the air and collects on shooters' hands and clothing. There are many factors that can help reduce lead exposure at shooting ranges, including respirators, suppressors, and improved ventilation. However, lead that remains on skin or clothing can be both ingested and inhaled by eating, rubbing your nose, mouth, or eyes without properly cleaning your hands. When it comes to removing lead from your hands and clothing, regular soaps and detergents are not sufficient.

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THE MOST COMMON WAYS LEAD CAN GET ABSORBED INTO YOUR BODY:



INHALATION



EATING



TOUCHING FACE



CLOTHING

Why is just washing your hands with regular soap and water not sufficient? Lead is difficult to wash off. Lead is heavy, sticky, difficult to wet and holds a static charge. All these factors make it adhere strongly to your skin, clothes, shoes, and gloves. Lead reacts with most soaps to form a soap scum, where instead of washing off the lead, you end up gluing it to the surface you are trying to clean. Typical skin cleaners only remove between 30-70% of lead from the skin. Long-term understanding of lead exposure and the increase in reported lead poisoning cases amongst law enforcement have led to companies like ESCA Tech to develop their line of lead cleaning products that remove over 98% of lead from the skin/clothes. Rampart can work with your agency to find the best lead mitigation products for your needs.

RECOMMENDED LEAD CLEANING PROTOCOL:

- ✓ Clean hands with lead wipes or soaps after shooting
- ✓ Always clean hands before eating, avoid touching eyes/mouth/nose until you can clean your hands
- ✓ Clean firearms and exposed surfaces with surface wipes or cleaners
- ✓ Wash clothing/uniforms with lead detergent
- ✓ Shower after heavy range session with body wash



D-Wipe Towels are a convenient, portable way to clean lead residue from the hands, arms, face and body.



D-WIPE TOWELS

D-Wipe® Towels are the convenient, portable way to clean metals dust from the hands, arms, face and body. Soft towels are pre-moistened with a gentle pH balanced skin cleaning solution. This solution neutralizes the static charges of metal dust while lifting and binding them to the fabric for quick removal from the skin without rinsing or smearing.

USE FOR:

- ✓ AFTER SHOOTING
- ✓ ARMORING
- ✓ WORKING AT RANGE
- ✓ AFTER GUN CLEANING
- ✓ FORENSIC LABS



D-LEAD SURFACE WIPES

No rinse formula cleans lead from surfaces and equipment after shooting, armoring, or gun cleaning. On porous surfaces coverage can be extended by re-wetting using D-Lead Surface Cleaner. Surface cleaner formula also available in concentrate and spray bottles.

USE FOR:

- ✓ SHOOTING BENCHES
- ✓ FIREARMS
- ✓ WOOD SURFACES
- ✓ VINYL/TILE FLOORS
- ✓ FORENSIC LABS



D-LEAD HAND SOAP

Quickly and efficiently removes heavy metal dust, lead and contaminants from the skin. This mild formula with moisturizing Glycerin is designed for frequent clean up throughout the day. Perfect for range facilities or facilities where frequent work on firearms is done.

USE FOR:

- ✓ AFTER SHOOTING
- ✓ ARMORING
- ✓ WORKING AT RANGE
- ✓ AFTER GUN CLEANING
- ✓ FORENSIC LABS



D-LEAD LAUNDRY DETERGENT

Cleans lead from clothing, towels and respirators after a day at the range, gun cleaning or reloading. Can be used in high efficiency washing machines. Also available in Extra Strength.

USE FOR:

- ✓ CLOTHING
- ✓ TOWELS
- ✓ RESPIRATORS



PRODUCT BREAKDOWN



HAND WIPES

- Case of 8 canisters
- 150 wipes per canister
- Part #: WT-150



HAND WIPES

- Case of 12 canisters
- 40 wipes per canister
- Part #: WT-040



HAND WIPES

- Individual wipes
- 10 boxes, 100 wipes per box
- Part #: WT-1101



HAND WIPES

- 2 large buckets
- 325 wipes per bucket
- Part #: WT-325



HAND WIPES

- Case of 6 canisters
- 70 wipes per canister
- Part #: WT-070



HAND WIPES

- Individual wipes
- Case of 500
- Part #: WT-501



HAND SOAP

- 4.55L bottles
- Case of 4
- Part #: 4222ES-4



HAND SOAP

- 236ml bottles
- Case of 24
- Part #: 4222ES-8



HAND SOAP

- 18.9 L
- 1 bucket
- Part #: 4222ES-5



ABRASIVE HAND SOAP

- 4.55L bottles
- Case of 4
- Part #: 4229ES-4



D-LEAD BODY WASH & SHAMPOOS

D-LEAD LAUNDRY DETERGENT



BODY WASH & SHAMPOO

- 4.55L bottles
- Case of 4
- Part #: 4224ES-4

SHOWER GEL

- 4.55L bottles
- Case of 4
- Part #: 451ES-4

REGULAR

- 4.55L bottles
- Case of 4
- Part #: 3235ES-4

EXTRA STRENGTH

- 4.55L bottles
- Case of 4
- Part #: 3236ES-4



SURFACE WIPES

- Case of 8 cannisters
- 40 wipes per cannister
- Part #: PD-T048

FINAL CLEAN CONCENTRATE

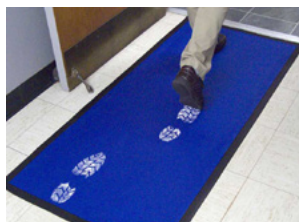
- 4.55L bottles
- Case of 4
- Part #: 2201ES-4

SURFACE CLEANER

- Case of 12 spray bottles
- 946ml bottles
- Part #: 331PD-RT-12

CLEANER CONCENTRATE

- Case of 12 spray bottles
- 946ml bottles
- Part #: 330PD-12



ALL PURPOSE CLEANER

- Case of 4 bottles
- 4.55L bottles
- Part #: 3102ES-4

PERMANENT TACKY MAT

- 28" x 60"
- Part #: FM100-2860

DISPOSABLE TACKY MAT

- 4 pads, 26" x 45"
- 30 sheets per pad
- Part #: FMD-2645