

Lead-based paint—Welding and cutting

A U.S. study of lead-exposed construction workers found that the children of these workers were six times more likely to also have high levels of lead in their blood.

According to the study,

- only half of the workers changed clothes before the end of their shift
- almost all washed their work clothes at home
- half wore their work shoes home
- most did not shower at work before coming home.

Explain dangers

If you weld, cut, or heat metals containing lead-based coatings, you may be at risk of breathing in lead.

Lead is also hazardous if swallowed. It can contaminate your skin or clothes and find its way onto food, drinks, cigarettes, or anything that comes in contact with your mouth.

Lead can be tracked into your home or car and possibly expose family and friends. Lead is especially dangerous for children.

Some of the health effects associated with lead exposure include

- Damage to the nervous system and kidneys
- Cramps, nausea, vomiting, and weight loss
- Reduction in red blood cells (anemia)
- Abortion in pregnant women or infertility in men.

Exposure to lead may lead to lung or stomach cancer, as shown by experimental animal studies.

Identify controls

- Do not eat, drink, smoke, or chew gum in the work area. Do not store food nearby.
- Wash your hands with soap and water before breaks and at the end of the work shift. Be sure to scrub under your nails and use disposable towels.

- To prevent lead from being tracked home or into your car, change out of work clothes at the end of the work shift and leave them at work or place them into a plastic bag for washing. Do not wash them together with regular laundry.
- Place signs in the work area to warn workers of the lead hazard. Ensure nearby workers obey them.
- You should have at a minimum a half-mask particulate respirator with N, R, or P filter and 95, 99, or 100% efficiency. Inspect it to ensure it does not have any holes, it fits snugly, and that the straps fit properly around your head.

Coatings should be stripped at least four inches on both sides of the weld or cut line. Do not burn off coatings to strip. If the coating is not stripped and you are cutting or welding repeatedly and for a long time, additional measures are required. They include:

- Using a more efficient respiratory protection such as
 - a full facepiece air-purifying respirator equipped with N, R, or P filter and with 100% efficiency
 - a tight-fitting powered air-purifying respirator with a high-efficiency filter
 - a half-facepiece or full-facepiece supplied-air respirator in continuous flow
 - a half-facepiece supplied-air respirator in pressure demand or other positive pressure mode.
- Using a partial or full enclosure around the welding or cutting activity
- Ensuring that local exhaust ventilation is provided and used
- Cleaning up the work area regularly by using a HEPA vacuum, wet sweeping, or wet shoveling method.

Demonstrate

If the paint has been tested for lead, review the report with the crew.

Using the manufacturer's instructions, show them how to perform a seal check of the respirator.