

Heavy metal with heavy consequences: Lead's other hazards

Takeaways

- Activities like sandblasting, demolishing, or grinding can cause lead to become airborne and settle on surfaces.
- Exposure to lead can occur by breathing in or swallowing lead dust or fumes or by absorbing lead through the skin.
- Lead exposure can change sperm structure, which impacts both male and female fertility, as well as miscarriages and stillbirth.
- For children, lead exposure can cause developmental delays and behavioral issues.
- Wearing PPE, washing hands, and ensuring contaminated clothing is not brought home are ways to protect yourself and your loved ones.

While some people are generally aware of the negative developmental effects of lead exposure on children, we don't often talk about its impacts on adult reproductive health. Even low levels of routine workplace exposure can cause lead buildup in the body, leading to devastating effects. Here are some examples of lead sources in the workplace:

Example sources

Paint—Lead-based paint is commonly found on steel structures and older buildings. Activities like demolition or sandblasting break down this paint, contaminating surrounding areas and releasing airborne lead dust.

Soil and dust—Any material that contains lead can break down over time to create lead-contaminated dust.

Heating or grinding metal—Heating or grinding metal can create small particles or fumes that contain lead, which can penetrate deep into the lungs.

Exposure routes

Breathing it in—When lead becomes airborne, it is invisible and odorless. It is very likely that you will not know you're being exposed.

Swallowing it—Airborne lead can settle on clothes, food, water, and other objects. It is

important to not eat in areas where you're working with lead and to wash your hands after working with lead.

Absorbing it through the skin—Lead dust can be absorbed through the skin. Dust on your skin, clothes, shoes, or hair is often unnoticed. Touching your eyes, nose, or mouth after handling contaminated items increases your exposure.

Health effects

Lead exposure affects children and adults. In men, even low levels of lead can alter sperm cell structure, which results in lower sperm counts, decreased testosterone, lower fertility, and potential increase in their partner's risk of miscarriage or stillbirth. Women exposed to lead have increased risk of damage to their reproductive health, too. In addition to causing a higher risk of miscarriage, lead can pass through the placenta and can also be transferred from mother to baby through breastfeeding. If lead is brought home from the workplace, it can impact children as well. In children, lead exposure can damage nervous systems and cause developmental delays. Lead exposure doesn't just affect your own health and well-being; it affects your loved ones, too.

Take action (Complete one or more activities as a team)

- GROUP DISCUSSION:** Discuss ways that lead contamination might be brought home and how to prevent it from happening. Let employees know that blood tests can show if they have lead in their body.
- FIELD TRIP:** Walk through your worksite and identify possible sources of lead. Brainstorm ways you can prevent lead exposure based on what tasks are performed and where lead may be (think soil, paint, metals, and other possible sources).
- REVIEW LEAD PROGRAM:** Review existing programs to see how your workplace manages lead exposure. What can you do better to control your lead exposures?

Record your attendees for compliance.

Date of training: _____

ATTENDEE SIGNATURE

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