

## Safety Corner

### How to control the risk of lead exposure at workplace?

Workers may be exposed to lead during installation, maintenance, removal, or renovation of lead pipes, plumbing fixtures and fittings, lead linings in tanks, radiation protection, leaded glass, etc., or through work involving soldering, lead metal, lead alloys, rechargeable batteries, paint with lead pigment, or lead bullets, etc. When a material containing lead is processed, for example through grinding, heating, the lead dust, fumes or mist produced may be inhaled into the body through eating, drinking, and smoking substance that contains an unacceptable level of lead. Lead exposure over time may lead to adverse health effects such as headaches, abdominal pain, depression, irritability, nausea, etc. Prolonged exposure may cause serious health effects such as kidney damage, nerve and brain damage, paralysis, and even death.

A risk assessment should be conducted when there is possibility of lead exposure at workplace. The assessment should identify materials that contain lead, work processes that can create lead dust, fume or vapour, and the pathways for lead exposure. The following risk control measures can be adopted to reduce the risk of lead exposure:

- Review work processes to reduce the number of workers people exposed to lead-related substance and work process, the amount of lead to which they are exposed and the length of time each worker is exposed.
- Apply control that are in line with industry best practice and keep all controls in good working order. This include mechanical controls (e.g., extraction, respiratory protection), administrative controls (e.g., supervision, medical surveillance) and operator behaviour (following instructions, use exhaust ventilation system where provided, use respirator and protective clothing when needed, keep the worksite clean)
- Provide adequate training and supervision to make sure workers are doing the job in the right way and using controls properly to reduce their exposure.
- Use only a vacuum with a HEPA filter or wet cleaning methods when removing lead dust. Never use compressed air for cleaning.
- Eat, drink, or smoke in areas away from the worksite exposing to lead dust.
- Store street clothes separate from work clothes. Never wear contaminated clothing home.

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