



Australian Work Exposures Study (AWES): Lead and lead compounds

The issue

Some lead compounds are considered to be carcinogens but limited information is available on exposures to lead in Australian workplaces.

The study

The Australian Work Exposures Study (AWES) asked 5023 workers about common work tasks which could expose them to carcinogens. The AWES data were analysed to provide information on exposures to lead and lead compounds.

Who was exposed?

About six per cent of workers who participated in the AWES were likely to be exposed to lead at work. About half of these workers were employed in the construction industry and more than half were technicians and trades persons.

Table: Occupations of AWES respondents likely to be exposed to lead

Occupation	Number	Per cent
Managers	38	12.4
Professionals	17	5.5
Technicians and trades workers	165	53.7
Community and personal service workers	30	9.8
Clerical and administrative workers	2	0.7
Sales workers	2	0.7
Machinery operators and drivers	12	3.9
Labourers	40	13.0
Total	307	100.0

Based on AWES results about 660 000 Australian workers might be exposed to lead when performing common work activities.

What tasks were they doing?

The main tasks associated with likely exposures were soldering; painting old houses, ships or bridges; plumbing work; cleaning up or sifting through the remains of a fire; radiator repair work; machining metals or alloys containing lead; mining; and welding leaded steel. Some exposed workers worked at or used indoor firing ranges.

What were the exposure assessments?

Exposure levels were assessed as being high or medium for most tasks. Exposures during soldering activities and sanding or stripping old lead paint before painting were considered high because controls like ventilation or respiratory protective equipment were reported as not being used.

Exposures when plumbing, fire-fighting or machining lead-plated metals or lead alloys should be low when controls are used but control use was not always reported.

Exposures when repairing radiators or during mining operations were considered high but information on the use of controls was not available.

Limitations

The AWES is a population-based survey which does not specifically examine workers in industries like battery recycling or lead smelting where exposures are likely to be high.

Key messages

Most workers exposed to lead will not develop cancer from these exposures but they have an increased risk of doing so.

Many of the reported exposures to lead can be prevented using lead-free alternatives and known controls to prevent exposures to lead like:

- using soldering booths or ventilation when soldering, or
- using power sanders fitted with dust collectors when sanding.

Preventative efforts should initially focus on encouraging employers and workers to use simple, readily available controls to prevent workplace exposures.

More information

An executive summary and the full report which this brief is drawn from can be found at Australian Work Exposures Study (AWES) - Lead and lead compounds report webpage.

