



Australian Work Exposures Study (AWES): Formaldehyde

The issue

Formaldehyde is considered to be a carcinogen by the International Agency for Research on Cancer but limited information is available on exposures to formaldehyde 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 specific information on exposures to formaldehyde.

Who was exposed?

About three per cent of workers who participated in the AWES were likely to be exposed to formaldehyde 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 formaldehyde

Occupation	Number	Per cent
Professionals	10	8.1
Technicians and trades workers	67	54.0
Community and personal service workers	25	20.2
Labourers	19	15.3
Other	3	2.4
Total	124	100.0

Based on AWES results about 235 000 Australian workers might be exposed to formaldehyde when performing common work activities.

What tasks were they doing?

The main tasks associated with likely exposures were working with particle board, firefighting; cleaning up or sifting through the remains of a fire; sanding prior to painting; sterilising medical equipment; manicuring; and working in a pathology laboratory.

What were the exposure assessments?

Exposure levels were assessed as being medium or low for almost all tasks except for sterilising medical equipment. Exposures were assessed as medium if medical equipment was sterilised in an auto clamp but exposures were assessed as high if open systems were used.

How were workers preventing exposures?

Information on the use of controls to prevent exposures was not collected from all respondents. About 61% of respondents from whom this information was collected reported regularly using respiratory protection or working in areas with area or local exhaust ventilation. However, paper masks used by some respondents may not have been adequate to protect against all potential formaldehyde exposures.

Only about 40% of carpenters who use power tools when working with particle board were considered to use control measures appropriately when the type of ventilation or respiratory protection and the frequency of use was considered.

Limitations

The AWES is a population-based survey which does not specifically examine workers in industries like formaldehyde-based resin manufacturing or particle board manufacturing where some exposures might be high.

Key messages

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

Many exposures to formaldehyde can be prevented using controls to prevent exposures like:

- installing and using ventilation systems where practicable, and
- using power tools fitted with 'on-tool' dust and vapour extraction systems when working with particle board or plywood.

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 Australia Work Exposures Study (AWES) - Formaldehyde report webpage.