



OH&S Bulletin



Silica (Sand) Dust Kills

We've heard bosses say that we shouldn't be worried about silica dust, because sand is a natural product, but we've heard that one before with asbestos. In fact exposure to silica dust can be just as deadly.

Unacceptable levels of Silica dust occurs on far too many sites during construction and demolition work involving brick, concrete and mortar structures.

Long term exposure may cause changes in lung function due to particles less than 0.5micorn penetrating and remaining in the lung. Silicosis and acute silicosis are both incurable lung diseases that cause severe symptoms and eventually death. A person with silicosis can develop tuberculosis, or "Silicotuberculosis".

The National Occupational Health and Safety Commission are currently reviewing the carcinogen classification, but the International Agency for Research on Cancer classifies silica in Group 2A,



probably carcinogenic to humans. This means that evidence is limited at this stage.

Some examples of jobs that can create dangerous levels of silica dust are:

- brick cutting and chasing
- angle grinding on concrete or masonry
- concrete cutting
- jack hammering and chiselling of concrete, masonry, sandstone, etc.
- scabbling
- ceramic tile cutting
- drilling of concrete or brick structures
- hand stoning concrete surfaces
- excavation
- cleaning up of dust and debris created by the above activities.

Other building and excavation workers in close proximity to these processes for long periods of time are also at risk.

Under the Occupational Health and Safety (Hazardous Substances) Regulation 1996, the employer must make every effort to control the dust levels and ensure that workers are not exposed to any hazardous substance. Air monitoring is necessary to ensure that exposure standards are not exceeded.



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Equipment used for cutting, grinding, drilling, sweeping, etc. should be fitted with extraction devices to eliminate the dust. Where dust extraction is not possible, wet methods should be used. For many jobs, some form of respiratory protection will also be needed, especially chasing work. All work involving concrete, brick and mortar should carry a requirement for a powered air-purifying respirator.

It is a WorkSafe Australia requirement that workers who experience long term exposure to silica receive medical monitoring. This involves baseline health surveillance before exposure, including occupational and medical histories. A physical examination should be done with emphasis on the respiratory system and standardised respiratory function tests should be done as well as a chest X-ray. Advice should be given regarding the risks of exposure.

The medical examination should be done at least every five years and if there are any abnormal findings they should be reported to the employer so that control measures can be checked. A final medical should be done on termination of employment and the reason for termination should be noted.

Workers often underestimate the dangers of exposure to silica dust because we are so used to it, but now that the medical evidence is coming to light, there is no excuse.

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