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Managers Toolkit

Let's Talk:
Silica Dust - Health Monitoring

The Health in Industry Management Standard

AIOH Australian Institute of Occupational Hygienists

BOHS British Occupational Hygiene Society

What is the concern about Engineered Stone ?

Stone benchtops are made from engineered stone. This is ground stone such as crystalline silica combined with resin.

The crystalline silica content in stone bench tops can vary however engineered stone bench tops can contain up to 95 per cent crystalline silica.

Cutting, grinding, polishing and trimming stone benchtops can release very small particles of crystalline silica into the air called respirable crystalline silica.

Inhaling respirable crystalline silica is a significant risk to health. Check with your regulator, as health monitoring may be required for all workers in this industry, .

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What are the health effects ?

Exposure to silica dust can lead to the development of:

PMF

- Silicosis (an irreversible scarring and stiffening of the lungs)
- Accelerated silicosis leading to Progressive Massive Fibrosis (PMF)
- Chronic Obstructive Pulmonary Disease (COPD) often observed as emphysema and bronchitis
- Lung cancer
- Kidney disease
- Auto-immune diseases such as rheumatoid arthritis

Cases of accelerated silicosis have recently been published in the news media, occurring specifically in workers in the engineered stone industry.

It is estimated that 230* people develop lung cancer each year as a result of past exposure to silica dust at work. Not all exposed workers will develop cancer; cancer risk increases with long term or repeated high level exposure.

*Cancer Council Australia

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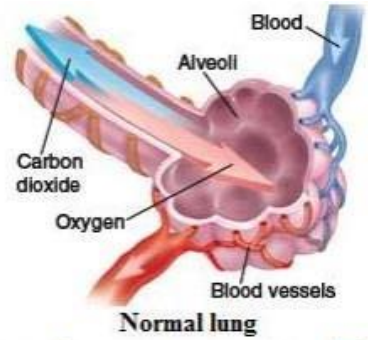


Accelerated Silicosis

Accelerated silicosis occurs following exposure to high levels of crystalline respirable silica.

Accelerated silicosis can develop after 3-10 years of exposure.

Accelerated silicosis causes scarring of the lungs leading to progressively worsening shortness of breath.

People with accelerated silicosis usually go on to develop

progressive massive fibrosis (PMF)

PMF results in severe shortness of breath for which there is no treatment and no cure.

Without a lung transplant, PMF is usually fatal.

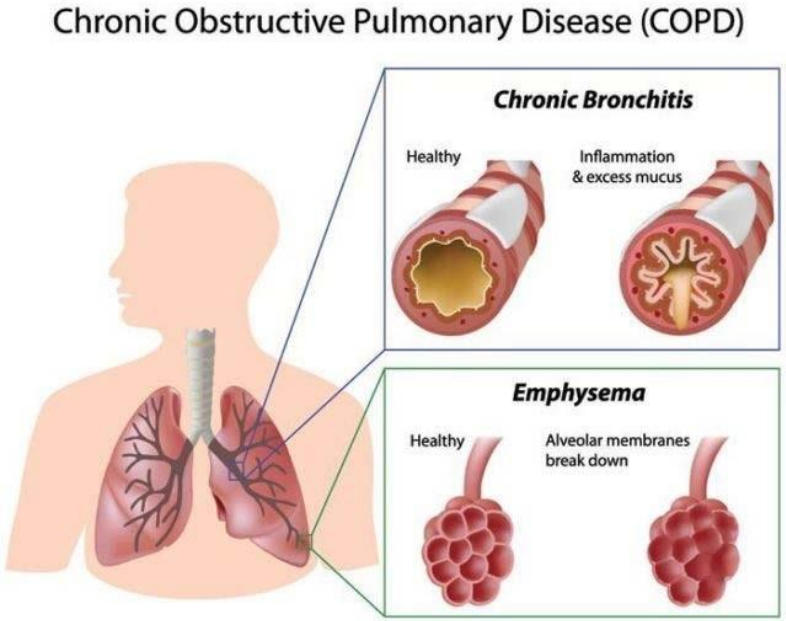


Illustration courtesy of HealthFlexHHS

COPD occurs following long term exposure to dusts like silica which damage the tissue in the upper respiratory system.

Symptoms of COPD include:

- breathlessness after exertion
- in severe cases, breathlessness on minimal exertion or even at rest
- wheezing
- coughing
- coughing up sputum (mucus or phlegm)
- fatigue
- cyanosis – a blue tinge to the skin caused by insufficient oxygen
- increased susceptibility to chest infections.

Health Monitoring

The health monitoring requirements for workers exposed to respirable crystalline silica from engineered stone dust is dependent on local State guidelines.

For example, in QLD and WA it is a requirement for any workers involved in fabrication or installation of stone benchtops to have health monitoring.

Where it is not regulated, it is recommended that health monitoring is performed when exposures are not controlled to below 50% Safe Work Australia Exposure Standard (WES) for respirable crystalline silica.

What is Health Monitoring ?

The health monitoring is the process of checking the health of a worker exposed to a hazardous substance such as crystalline silica.

The main purpose of health monitoring is to detect changes to health due to exposure to substances in the workplace as early as possible.

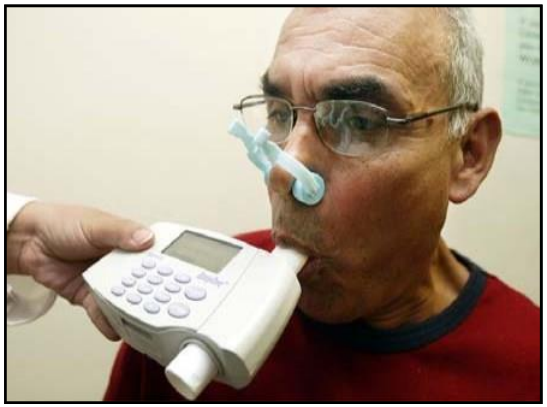
While health monitoring allows early detection of health changes it is NOT a substitute for using effective control measures to eliminate or minimise exposure to crystalline silica.

How to choose a suitable medical practitioner ?

Health monitoring must be done or supervised by a doctor with experience in worker health monitoring such as Fellow of the Australian Faculty of Occupational and Environmental Medicine, The Royal Australasian College of Physicians website.
www.racp.edu.au/about/college-structure/australasian-faculty-of-occupational-and-environmental-medicine/find-a-consultant

These lists are not exhaustive and other doctors may have the necessary experience required to conduct health monitoring for RCS

Workers must be consulted when selecting a doctor and their preference considered if they request a particular doctor. Workers may choose to go to their own GP if they are capable of providing the above service.



What happens in a health check ?

Discuss with the doctor which tests will be conducted and ensure they will provide a level of health monitoring that includes:

- demographic, medical and occupational history.
- records of personal exposure.
- standardised respiratory questionnaire.
- Physical examination focusing on the respiratory system.

Standardised respiratory function test, including:

- FEV1, FVC, FEV1/FVC

It is strongly recommended this testing be undertaken by an accredited respiratory function laboratory and include testing of diffusing capacity,

- Chest X-ray full size PA view.

It is strongly recommended the x-ray be taken and read in accordance with the ILO criteria, for example a B-reader or radiologist registered for coal workers pneumoconiosis screening by the Royal Australian and New Zealand College of Radiologists.

Who pays for health monitoring?

The employer must pay the costs of health monitoring including the costs of the medical services provided and the travel and wage costs of the worker.

What to tell the doctor ?

The following information must be supplied to the doctor:

- The name and address of the business.
- The name and date of birth of the worker.
- A description of all of the worker's tasks that relate to crystalline silica. (together with any exposure monitoring results if available).
- How long the worker has been doing the work.
- Control measures in place at the workplace.
- Respiratory Protective Equipment and Personal Protective Equipment used at the workplace

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The Health Monitoring Report

The doctor who carried out the health monitoring should provide a health monitoring report that only contains information relating to health monitoring for respirable crystalline silica.

- Name and date of birth of worker
- Doctor's details (name and registration number)
- Business details (name and address)
- Dates each aspect of health monitoring was undertaken
- Details of test results that indicate whether or not the worker has been exposed to respirable crystalline silica

The professional view regarding whether:

- The worker has contracted a disease, injury or illness as a result of work with crystalline silica
- Any remedial measures can be taken by the business
- The worker can continue in his/her current work
- Medical counselling is required for the worker.

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The Health Monitoring Report

Once the doctor has provided a health monitoring report a copy must be provided to the employer and the worker as soon as practicable, even if they leave employment at the workplace.

The employer must provide the state WHS regulators, a copy of any report which:

- Shows a worker may have contracted a disease or illness or
- Recommends remedial measures, including whether the worker can continue to work.

Keeping Records

Health monitoring reports must be kept for 30 years. They must be kept confidential and not released to anyone without the worker's consent

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Health monitoring is a crucial part of managing and protecting the health of workers exposed to respirable crystalline silica.

Make sure you understand your obligations under the WHS law.

Current titles in the Lets Talk series

Diesel Fume
Dust Control in Hard Demolition
Dust Control in Soft Strip Demolition
Housekeeping
Painting with Brushes and Rollers
Removal of Lead-Based Paint
Silica
Water Suppression on Tools
Welding Fume
Wood Dust

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