Silicosis Research Assessment

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What is Silicosis?

Silicosis is a long-term lung disease that is caused from breathing in silica dust.

Silica is a mineral found in soil, sand & many natural rocks.

Silica is also used in engineered &or manufactured stone, & other construction materials.

Artificial stone contains more silica than natural stone.

What are the symptoms of silicosis?

In early stages of silicosis, there may be no symptoms.

Some common symptoms of silicosis are:

* Ongoing shortness of breath
* Persistent or chronic cough
* Weakness & tiredness
* Chest pain
* Weight loss

The symptoms slowly get worse over time, even if you stop breathing in silica dust.

Eventually, you may find simple activities, such as walking or climbing stairs, difficult.

You might also have trouble sleeping & eating properly.

What Causes Silicosis?

Working with materials containing silica without proper protective equipment.

Your body can get rid of some dust, but your lungs can’t cope if:

* You inhale a lot of silica dust over a long period.
* You work with products containing a high amount of silica.

Silica dust damages your lungs over time.

Types of silicosis

The types of silicosis, which are based on the type of exposure and the effects on your lungs, include:

* **Acute silicosis** — which develops within weeks or months of exposure to very high levels of silica dust.
* **Accelerated silicosis** — due to exposure to large amounts of silica dust for less than 10 years.
* **Chronic silicosis** — due to exposure to low levels of silica dust for more than 10 years.

Chronic silicosis is generally uncommon. Acute silicosis is also rare. The risk of getting accelerated silicosis has started to rise. This might be due to the widespread installation of artificial stone in kitchens and bathrooms.

Who is at risk of silicosis?

You can be exposed to silica dust if you work with:

* Bitumen
* Brick
* Cement
* Artificial stone products
* Granite
* Grout
* Mortar
* Quartz
* Sand
* Soil
* Stone

You are at risk of developing silicosis if your work involves:

* Making and installing composite (engineered or manufactured) stone countertops.
* Excavation, earth moving and drilling plant operations.
* Clay and stone processing machine operations.
* Paving and surfacing.
* Mining, quarrying and mineral ore treating processes.
* Tunnelling.
* Construction labouring activities.
* Brick, concrete or stone cutting, especially using dry methods.
* Abrasive blasting (blasting agent must not contain greater than 1 per cent of crystalline silica).
* Foundry casting.
* Angle grinding, jack hammering and chiselling of concrete or masonry.
* Hydraulic fracturing of gas and oil wells.
* Pottery making.

Not everyone who works with silica dust develops silicosis. The chances of getting silicosis depend on:

* How much silica dust you come into contact with.
* How long you were exposed to it for.

When should I see my doctor?

If you are exposed to silica dust at work your employer should provide health monitoring.

If you are not part of an occupational health monitoring program, you can visit your doctor. Tell them about:

* Your exposure to silica dust.
* Your use of safety equipment, such as face masks.

Make an urgent appointment with your doctor if you develop symptoms of silicosis and work, or have worked, with products that create silica dust.

How is silicosis diagnosed?

To work out if you have silicosis, your doctor will ask you about your symptoms. They will examine you and listen to your lungs.

The doctor may send you to a lung specialist and order tests such as:

* a chest x-ray
* a CT scan of your chest
* lung function testing
* blood tests
* 6-minute walk exercise test
* bronchoscopy and biopsy
* ultrasound scan

How is silicosis treated?

Unfortunately, if you have silicosis the damage to your lungs cannot be cured. It is also hard to predict how quickly your symptoms will progress (get worse).

There are some things you can do to help reduce complications and improve your quality of life:

* avoid further exposure to silica dust.
* quit smoking or vaping.
* eat well and stay active, or start exercising.
* keep your vaccinations, such as your annual flu jab, up to date.

You might want to talk to someone and get mental health support for dealing with a chronic condition.

Your doctor might recommend treatments to help with your breathing, such as:

* an inhaler
* anti-fibrotic medication (medicine that may help reduce the rate of scarring in your lungs)
* cough suppressants
* oxygen therapy if you have a low-level of oxygen in your blood
* lung lavage (a specialist procedure to wash out your lungs)

In severe cases, you might need a lung transplant.

Can silicosis be prevented?

Silicosis can be prevented by:

* avoiding prolonged exposure to silica dust.
* wearing effective protective equipment, such as masks.
* wetting down tools and materials to suppress dust.
* using tools that have dust-collecting attachments.

All workplaces, employers and employees in Australia must follow workplace health and safety procedures. These regulations give guidance on how to prevent silicosis. Ask your employer about personal breathing equipment if you are going to be exposed to silica dust.

Workplace monitoring schemes help to identify silicosis early, even before you have any symptoms.

Complications of silicosis

Exposure to silica dust and silicosis can lead to other serious health problems and lung infections, such as:

* bronchitis
* emphysema
* lung cancer
* tuberculosis (TB)
* kidney damage

Resources and support

Visit [Lung Foundation Australia](https://lungfoundation.com.au/) for more information about lung health.

[Safe Work Australia](https://www.safeworkaustralia.gov.au/doc/working-silica-and-silica-containing-products/english) has information on working with silica-containing products in multiple languages: Chinese, Arabic, Greek, Italian and Vietnamese.

If you have silicosis, you may be able to get compensation. To learn more, visit the [Safe Work Australia website](https://www.safeworkaustralia.gov.au/) and speak with your employer.

If you want to know more about silicosis or need advice on what to do next, you can call the healthdirect helpline on 1800 022 222 (known as NURSE-ON-CALL in Victoria). A registered nurse is available to speak with 24 hours a day, 7 days a week.