

Living with silicosis



Lung
Foundation
Australia

Silicosis is an occupational lung disease mainly caused by inhaling respirable crystalline silica dust. This fact sheet contains information on who is at risk of developing silicosis, how common it is, and the types of silicosis. It also contains information on its symptoms, as well as disease management and treatment.

What is silica?

Silica is a naturally occurring mineral found in soil, sand, granite and many other rocks. It is also found in a number of commercial products such as artificial (engineered) stone, bricks, concrete, drywall, mortar and tiles, and even in some plastics and recycled building products. Over time, inhaling this dust causes inflammation which leads to scarring of the lung tissue. This can cause stiffening of the lungs, making it difficult to breathe.

Exposure to silica dust can also cause:

- Chronic Obstructive Pulmonary Disease (which includes emphysema and chronic bronchitis)
- Lung cancer
- Chronic kidney disease
- Scleroderma and other autoimmune conditions
- A predisposition to infections such as tuberculosis and fungal diseases.

Who gets silicosis?

People who are at risk of developing silicosis are those who work with any silica-containing materials. People performing certain tasks with these materials, such as cutting, drilling, grinding and polishing, are at risk of breathing in hazardous levels of silica dust. Silica dust is transparent, so the level of visible dust is not a good indicator of the risk to the worker.

Types of silicosis

There are three types of silicosis – acute, accelerated (otherwise known as progressive) and chronic. The level of exposure and the length of time a person is exposed will affect the type of silicosis which may develop.

Acute silicosis is rare but follows short-term, high exposure to silica dust (usually weeks to less than two years). People with acute silicosis typically experience severe symptoms of breathlessness and cough.

Accelerated (or progressive) silicosis

tends to develop after a period of three to ten years of exposure to higher concentrations of silica dust. The disease progresses more quickly than chronic silicosis.

Chronic silicosis is the most common form of the disease. In cases where lung scarring is severe and extensive, this is known as Progressive Massive Fibrosis (PMF). Chronic silicosis tends to develop after more than ten years of exposure to lower concentrations of silica dust.

How common is silicosis?

The full scale and impact of silicosis in Australia is still unknown but the numbers are increasing. This is thought to mainly be a result of the housing boom, where the demand for artificial stone kitchen, bathroom and laundry benchtops has increased. However, exposures in tunnelling and road building may also have contributed to this increase, with a resurgence of silicosis cases also reported in the mining industry.

Symptoms of silicosis

Initially, people with silicosis may not notice any symptoms, except in acute silicosis. Over time, as the disease progresses, symptoms slowly develop, even if exposure to silica dust has ceased. Progression of the disease can vary considerably among individuals, for reasons that are not yet understood.

Common symptoms of silicosis include:



Shortness of breath



Dry or productive (sputum) cough



Wheeze

Other symptoms of silicosis may include:



Tiredness



Chest pain



Weight loss

“Having silicosis is like breathing through a sock.”

Richard, lives with silicosis.

Diagnosis

The first step to diagnosing silicosis is a discussion with your GP about your symptoms (if present) and your work environment. Your GP will take a detailed work history, both current and former, to understand the extent of your exposure to silica dust, including any possible measures that were implemented at your workplace to reduce dust inhalation. To confirm a diagnosis, you will need a referral to a respiratory specialist or occupational specialist doctor.

Through visits with your GP and specialist, you are likely to undergo a series of tests, including:



Lung-function (breathing) tests



Chest X-ray



High-resolution CT scan (HRCT)



Blood tests



6-minute walk test



Bronchoscopy and biopsy



Endoscopic ultrasound guided biopsy

Once a diagnosis has been made, your treating healthcare team will outline how your disease and symptoms will be monitored and managed.



If you've been involved in any health surveillance or monitoring schemes and have the results, take these with you to your doctor's appointments.

Prognosis

Each person experiences silicosis differently. Some people can remain stable for many years whereas others may decline rapidly. The course of the disease is variable and influenced by many factors, including the severity of your disease, whether you have a history of smoking or vaping, your genetic predisposition towards lung disease and if you have other medical conditions. Information about your prognosis is best provided by your specialist doctor.

Early detection and reduction of further exposure to silica dust is vital. This may mean changing your job or leaving the industry entirely, even though this can be challenging. Preventing continued exposure to silica dust is the best way to reduce the risk of further damage to your lungs.

Management

Currently, there is no cure for silicosis. However, there are treatments and management strategies available which may slow progression of the disease and help reduce symptoms. Management of silicosis is based on each person's individual medical and social situation. Your treating healthcare team will work with you to determine the most appropriate options for you, including lifestyle changes. Smoking cessation and avoiding vaping is essential to help you stay as healthy as possible.

Current treatment options



Medication

Currently, there are no medications which have proven to be effective for the treatment of silicosis. However, a number of existing medications for other conditions are being trialled to determine their effectiveness, including:

- **Reliever medications:** help to open up the airways and make breathing easier.
- **Inhaled corticosteroids:** these probably do not have any benefit in people with silicosis, although they may assist with other co-existing lung diseases. Oral steroids (tablets) have not been shown to have any benefit.
- **Anti-fibrotic medication:** this has been shown to help slow the rate of fibrosis in other lung conditions like Idiopathic Pulmonary Fibrosis.
- **Cough suppressants:** speak with your specialist doctor about whether there are any medications to help reduce your cough.



Whole lung lavage

This procedure is currently being trialled in Australia to determine the benefits and risks as a treatment for people living with silicosis. It involves a general anaesthetic and flushing several litres of a

salt-water solution through each lung with the aim of “washing out” damaging silica crystals. If shown to be effective, it will most likely have a role in the treatment of acute silicosis or early stages of silicosis.



Oxygen therapy

Oxygen therapy may be prescribed by your doctor if you have low blood oxygen levels. It can assist with shortness of breath and to help you stay active. Some people only use oxygen when exercising; others may need to use it overnight or on a continuous basis.



Lung transplantation

If you have very severe silicosis, and your condition is worsening, your doctor may recommend lung transplantation. If you are a suitable candidate, your doctor will discuss the risks and benefits of the surgery, as it is a major procedure.

Self-management options



Access mental health support

Living with silicosis can significantly impact your mental health and emotional wellbeing as you and your family navigate a ‘new normal’. It’s important to access support early. Whether it’s a trusted mate, family member or a mental healthcare professional such as a psychologist or social worker, talking about how you feel and expressing your worries and concerns can help.



Exercise

Exercise is important for people with silicosis, as it can help reduce symptoms like breathlessness, and improve your ability to do everyday activities. It can also relieve stress and help with feelings of anxiety and depression. It may be hard to know how

much or what type of exercise is suitable, so speak to your treating healthcare team about a referral to an exercise physiologist or physiotherapist to provide you with a personalised exercise program.



Make healthy choices

Healthy ways to look after your body include maintaining a healthy diet with lots of fruit and vegetables and getting plenty of rest. Less healthy choices, such as smoking or vaping and excessive alcohol and illicit substance use, may seem like they are helping you to cope initially, but are likely to ultimately make you feel worse. Seek help from a mental healthcare professional to find some more healthy ways to cope.



Ensure your vaccinations are up to date

People with silicosis can have more difficulty recovering from respiratory illnesses, so it’s important to protect yourself with available vaccinations. Talk to your treating healthcare team about which vaccinations are suitable for you, including the seasonal influenza, COVID-19 and pneumonia vaccinations.

If you do start to develop a respiratory illness, see your doctor as soon as possible for management and treatment, to prevent any worsening of your disease.

Legal and financial advice

Financial loss from changes in work are often a real challenge for people living with silicosis. If you intend to make a worker’s compensation claim, you should do this as soon as possible after your diagnosis, as time limits apply in each state and territory. Compensation schemes, which also differ in each state and territory, may help you with medical expenses, loss of income or compensate you for pain and suffering.



FURTHER INFORMATION AND SUPPORT

Contact Lung Foundation Australia for more information, to access our support services and join our mailing list for regular updates and latest news.

Lung Foundation Australia Services

- Information and Support Team
- Lung disease information resources
- Education webinars
- Lung Cancer and Respiratory Support Nurses
- Support groups

External Links

- **Silicosis Support Network** www.silicosissupport.org.au/
- **Safe Work Australia** www.safeworkaustralia.gov.au/

- Peer-to-peer connections
- Referral to pulmonary rehabilitation and Lungs in Action exercise programs
- E-newsletter
- Occupational Lung Disease National Directory

- **European Lung Foundation** www.europeanlung.org/en/
- **Health and Safety Executive** www.hse.gov.uk/

Lungfoundation.com.au | Freecall 1800 654 301 | enquiries@lungfoundation.com.au

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Published: July 2021

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