



Silicosis: Facts for Workers in Ontario

What is silicosis?

Silicosis is a work-related lung disease. It can form after many years of inhaling high levels of silica dust in the air. Many workers who have silicosis show no signs of it. Some workers become disabled. Rarely, will a worker die because of silicosis.

Silicosis has no cure, but exposure to silica in the workplace can be prevented. For prevention information, see the section called 'More information.'

Who gets silicosis?

Workers with silicosis have usually been exposed to high levels of silica dust in their work at one time. Those most at risk are mine, foundry and construction workers. Risky activities include:

- sandblasting
- drilling, chipping and hammering rock or other material that is made of silica
- blasting, crushing, loading, shovelling and dumping rock that contains silica
- demolition, dry sweeping or using compressed air to clean materials that contain silica

How do you get silicosis?

You can get silicosis only from breathing in silica. If you breathe in (inhale) crystalline silica dust, the particles in the dust get trapped in air spaces in your lungs. The particles cause your lung tissue to become inflamed.

Nodules (clumps or clusters of cells) and scars (fibrous tissue) form around the trapped silica particles. This can take 10 to 15 years to happen, and even longer for the scars to show up on an x-ray. If the nodules keep growing, more scars form and it becomes hard for you to breathe.

The risk and severity of silicosis depend on:

- risk increases with exposure to more dust or exposure over longer periods of time
- the size of the dust particles (particles must be small enough to reach your lungs)

Research tells us that inhaling silica dust can also increase the risk of getting lung cancer.

What are the types of silicosis?

There are three major types of silicosis: chronic, accelerated, and acute.

Chronic silicosis

Chronic silicosis is most common. You can get it after many years of contact with low levels of silica dust in the air. Chronic silicosis can be simple or complicated.

Simple silicosis shows small nodules. On a chest x-ray, the nodules look like solid or unclear areas in the upper part of the lungs. People who have simple silicosis have no symptoms of the disease. Although simple silicosis may never grow more serious, long-term exposure to silica dust may lead to complicated silicosis.

Complicated silicosis is also called progressive massive fibrosis (PMF). Nodules seen on the chest x-ray grow larger. The first symptoms may be shortness of breath with exercise, wheezing or sputum that causes coughing. However, some people with the disease have no symptoms. Complicated silicosis can feel worse if you have other lung diseases. Occasionally, it can lead to disability. Severe complicated silicosis can result in heart disease with lung disease, called cor pulmonale.

Accelerated silicosis

Accelerated silicosis is almost the same as chronic silicosis. However, it forms more quickly and the lung scars show up sooner. You can get accelerated silicosis when you are exposed to large amounts of silica dust over a short time. Nodules appear on a chest x-ray five years after your first exposure to silica dust. The disease can quickly get worse.

Acute silicosis

Acute silicosis forms after inhaling large amounts of silica dust over a few days or months. Signs of the disease are shortness of breath, fever, cough and weight loss. Many people with acute silicosis have stable health. For a few people, it leads quickly to death.

What happens if you have silicosis? Can you still work?

If you do not feel sick, you can keep working. Research shows that if the amount of silica dust is kept low, you will avoid more harm to your lungs. Your doctor may suggest that you have no more contact with silica dust. You may not be able to keep working if:

- you had a lot of exposure to silica dust
- you have another illness or disability

Workers with silicosis have a higher chance of getting tuberculosis (TB) and should get regular TB skin tests.

What can your employer do?

Your employer has to keep the amount of silica dust low. Under Ontario's *Occupational Health and Safety Act*, silica is classified as a designated substance. The employer is required to provide safety measures when a designated substance is used in the workplace. Ask your employer or joint health and safety committee, if there is one, about the silica control program in your workplace. Safety measures will help to protect you and reduce your exposure to silica at work.

What can you do?

Stay informed about your health. If you are exposed to silica dust at work, tell your doctor. Where the law says that a medical surveillance program is needed, you can choose to be part of it. In such cases, your employer must offer and pay for the program. A medical surveillance program includes:

- medical and work history tracking
- regular physical exams
- chest x-rays
- lung function tests

The doctor may follow your health more closely or refer you to a specialist. Your doctor or the specialist may also carry out a medical surveillance program. Participating in a medical surveillance program can:

- help find silicosis early and
- stop it from getting worse.

If you have silicosis, talk with your employer and file a claim with the Workplace Safety and Insurance Board (WSIB). The WSIB will write to your doctor for a copy of your medical report to see if you're entitled to compensation. A WSIB adjudicator will make a decision about your claim by talking to you, your employer and your doctor.

For more information about silicosis and your workplace

- Read the material safety data sheet (MSDS) for the silica used in your workplace.
- Call the Ministry of Labour for your rights under the *Occupational Health and Safety Act*. Look up the number in your local telephone directory or go to www.gov.on.ca/LAB/ohs on the internet or call Publications Ontario at 1-800-668-9938.
- Call the Canadian Centre for Occupational Health and Safety (CCOHS), 1-800-668-4284 or go to www.ccohs.ca/oshanswers/chemicals

- Read the WSIB's Resource Sheet for Workplace Health and Safety and What Happens When You File a Claim for Silicosis with the WSIB. You can get these by calling 1-800-663-6639 or on-line at www.wsib.on.ca
- Look at the Oklahoma State University Environmental Health and Safety website at www.pp.okstate.edu/ehs/training/silicos.htm

Workplace Safety and Insurance Board

Ontario's Workplace Safety and Insurance Board (WSIB) plays a key role in the province's occupational health and safety system. Funded by employers, the WSIB is one of the top 10 disability insurers in North America. In addition to a strong prevention mandate, the WSIB provides insurance for injuries and illnesses incurred in workplaces covered under the *Workplace Safety and Insurance Act* and supports early and safe return to work for injured workers.

This information is available in several languages by calling our information hotline at 416-344-4999 toll-free 1-800-465-5606 or Telephone Service for the Deaf (TTY): 1-800-387-0050