



Tool Box Talk

Silica Dust Exposure

Revised November 2018

WHAT IS SILICOSIS?

Silicosis is a condition caused by inhaling too much silica over a long period of time. Silica is a highly-common, crystal-like mineral found in sand, rock, and quartz. Silica can have deadly consequences for people who work with stone, concrete, glass, or other forms of rock.

Silica dust particles act as tiny blades on the lungs. These particles create small cuts that can scar the lung tissue when inhaled through the nose or mouth. Scarred lungs do not open and close as well, making breathing more difficult.

Any level of silica exposure can result in silicosis. There are three types of silicosis:

- ✘ **Acute silicosis** forms a few weeks or months after high levels of silica exposure. This condition progresses rapidly.
- ✘ **Accelerated silicosis** comes on five to 10 years after exposure.
- ✘ **Chronic silicosis** occurs 10 years or more after silica exposure. Even low exposure levels can cause chronic silicosis.

SYMPTOMS OF SILICOSIS

Silicosis is a progressive condition, meaning it gets worse over time. Symptoms may start out as an intense cough, shortness of breath, or weakness. Other possible symptoms include:

- ✘ chest pain
- ✘ fever
- ✘ night sweats
- ✘ weight loss
- ✘ respiratory failure



Having silicosis increases your risk for respiratory infections, including tuberculosis.

You should seek medical attention if you suspect you have silicosis. Your doctor will ask questions about when or how you may have been exposed to silica. They can test your lung function with pulmonary function tests.

HOW SILICOSIS IS TREATED

Silicosis doesn't have one specific medical treatment. The aim of treatment will be to reduce your symptoms. Cough medicine can help with cough symptoms and antibiotics can help treat respiratory infections. Inhalers can be used to open up the airways. Some patients wear oxygen masks to increase the amount of oxygen in their blood.

Patients with severe silicosis may require a lung transplant.

Silicosis has become less common over time thanks to improved work safety measures. However, silicosis can still occur, and there is no cure for it at present.

Your long-term outlook depends on the severity of your condition. Intense lung scarring can develop in both accelerated and chronic silicosis. Scarring destroys healthy lung tissue, reducing the amount of oxygen the lungs can transmit to the blood.

HOW TO PROTECT YOURSELF

Workers can wear respirators to keep from inhaling silica. These masks may be marked for "abrasive blasting" use.

Water sprays and wet cutting methods reduce the risk of silica exposure. Workplaces should meet Occupational Health and Safety (OHS) standards. This includes proper ventilation. Employers can monitor air quality at worksites to ensure that there's no excess silica in the air.

Workers should eat, drink, and smoke away from dust that may contain silica. They should also wash their hands before doing any of these activities to clear their hands of any dust.

WHMIS CLASSIFICATION

Workplace Hazardous Materials Information System (WHMIS) 2015 classifies Crystalline Silica in the form of Quartz as: **Danger! Lung injury and cancer hazard.**

Globally Harmonized System (GHS) Classifications:

- ✘ **Carcinogenicity** – Category 1A (H350)
- ✘ **Specific target organ toxicity, single exposure; Respiratory tract irritation** – Category 3 (H335)
- ✘ **Specific target organ toxicity, repeated exposure** – Category 1 (H372)

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How To Use This Resource

When accidents and incidents happen on the jobsite, we are always quick to point the finger at lack of training, not following practices or procedures, or even improper supervision. The idea that the hazards and dangers associated with the job were not properly communicated to all of the workers is often missed.

Tool Box Talks can go by many names, and although formats may vary, these meetings all serve one purpose: to inform employees and contract workers. Tool Box Talks are short, informal, meetings between management and the workers on a jobsite. The goal of these meetings is to reinforce current safe job procedures, inform workers of new and/or relevant procedures, review recent safety violations/incidents, and ensure workers are up-to-date on the information required to complete their work safely.

Always use a Tool Box Talk form to record the meeting topic, date, who was in attendance, and any follow-up actions to be taken. Not only do these forms help with consistency of record keeping, but they also ensure that nothing is missed. At the end of the meeting have management sign off on the form.

One of the most important aspects of a Tool Box Talk is giving workers an opportunity to voice their concerns and ask questions. All employees have a right to participate in health and safety as it relates to their work and it is the supervisor or manager's responsibility to create an environment for them to do so. Once the meeting is over, and the form is filled out, it should be filed with other documented Tool Box Talks. Remember that Tool Box Talks are short and informal, they are not meant to be intimidating. Use the opportunity to have fun and stay on top of what is necessary to keep safety culture a strong part of the business.



For a full listing of Tool Box Talk topics, visit: www.scsaonline.ca/resources/tool-box-talks

For a copy of the Tool Box Talk form, visit: www.scsaonline.ca/pdf/Tool_Box_Meeting.pdf

ABOUT THE SASKATCHEWAN CONSTRUCTION SAFETY ASSOCIATION

The Saskatchewan Construction Safety Association (SCSA) is an industry-funded, membership-based, non-profit organization that provides cost-effective, accessible safety training and advice to employers and employees in the construction industry throughout the province to reduce the human and financial losses associated with injuries. Registered March 20, 1995, the SCSA is, and has been since inception, committed to injury prevention. Serving almost 10,000 member companies with business offices in both Regina and Saskatoon, the major business units of the association are Advisory Services, Business Development, Corporate Services, Program Services and Training. The mission of the SCSA is constructing safety leadership in Saskatchewan and the vision is to create the safest construction environment in Canada.