

Silicosis: what employers need to know



Silicosis is a dangerous, but preventable disease.

Silicosis is an incurable lung disease caused by breathing in crystalline silica dust.

Crystalline silica dust is created from materials containing silica.

Breathing in silica dust for extended periods of time can cause permanent lung damage and possibly death.



Some jobs and tasks put people at risk for silicosis.

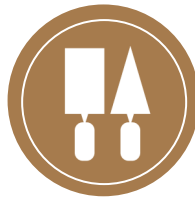
Concrete, stone, mortar, and asphalt are a few materials that contain crystalline silica.

Drilling, grinding, sanding, and chipping these types of materials can create silica dust, increasing the risk for silicosis.

Industries with known risk:



Construction



Masonry



Foundries



Stone fabrication



Mining



Dentistry

Minimize exposure to silica dust in the workplace:

- **Train employees** on the hazards of silica dust, tasks involving silica, and ways to eliminate exposure.
- **Install dust control systems and equipment** such as local exhaust ventilation systems equipped with high efficiency particulate air (HEPA) filtration, machinery with water spraying features, and hand tools with HEPA equipped vacuum dust shrouds.
- **Implement safe work practices**, including the use of wet methods when cutting, and HEPA filter vacuums when cleaning. Avoid dry sweeping, dry cutting, or using compressed air to clean.
- **Develop a written respiratory protection program.**
- **Provide and train workers to use respirators that protect against particulates**, such as half and full face air purifying respirators, or N95 masks. Provide respirators when engineering controls cannot reduce worker exposure to silica.
- Offer and encourage employee participation in **medical monitoring for silicosis** as required by OSHA.
- **Read OSHA's Small Entity Compliance Guide for Construction and General Industry and Maritime** for the respirable crystalline silica standard.
- **Conduct air monitoring when necessary.**¹ OSHA standard [1926.1153 \(d\)](#) explains monitoring options.



Know the symptoms of silicosis.

Silicosis can increase the risk of contracting other lung diseases, such as lung cancer and tuberculosis. It is crucial to realize symptoms early.



Cough



Shortness of
breath



Fatigue



Chest Pain

Medical monitoring for silicosis should include:

- Medical and work history, including status and history relating to tuberculosis and smoking
- A physical exam focusing on the respiratory system
- A digital or film chest X-ray interpreted by a NIOSH-certified B-reader
- A lung function (spirometry) test administered by a NIOSH-certified technician
- Testing for latent tuberculosis infection
- Any other tests deemed medically necessary and related to respirable crystalline silica exposure by a physician or other licensed health care professional

For more information visit:

[Wisconsin DHS Occupational Lung Disease webpage](#)

[WisCon](#)

[OSHA Crystalline Silica topic page](#)

[CDC Silica topic page](#)

1. If unable to follow [Table 1 of OSHA Standard 1926.1153](#) conduct air monitoring to ensure that the 8-hour time weighted average (TWA) for silica levels are below the action level ($25 \mu\text{g}/\text{m}^3$) and permissible levels ($50 \mu\text{g}/\text{m}^3$). Provide appropriate respiratory protection as necessary. At minimum, conduct air monitoring if a change in production, process, control equipment, personnel, or work practices may result in new or additional exposure at or above the action level.

