

How do I know if I have a silica-related disease?

Contact your physician if you suspect that you have been exposed to silica. To evaluate potential silica-related diseases, a physician will conduct the following:

- A work exposure history
- A physical examination
- Diagnostic tests such as chest X-rays and lung function tests



Where can I get more information?

Texas Department of State Health Services
<http://www.dshs.state.tx.us/epitox>

National Institute for Occupational Safety and Health
<http://www.cdc.gov/niosh>

Occupational Safety and Health Administration
<http://www.osha.gov>

The majority of the source material in this brochure was adapted from the Occupational Safety and Health Administration (OSHA) and the National Institute for Occupational Safety and Health (NIOSH) websites.

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Facts about Silica Exposure in the Workplace

Environmental & Injury
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Texas Department of State Health Services

What is silica?

Crystalline silica is one of the most common minerals in the earth's crust. It is found in sand and many types of rocks and ores, including quartz.

Respirable silica dust is invisible to the naked eye. It is so light that it can remain airborne for a long time. Because it can travel long distances in the air, it can affect populations not otherwise considered to be at risk.

How can silica exposure occur?

When small pieces of silica dust enter the air that you breathe, they can become trapped in your lungs. Even the smallest pieces of dust can harm you. As the dust builds up in your lungs, the lungs become damaged, and it becomes harder to breathe.

Working in jobs that create respirable crystalline silica dust increases your chances of silica exposure.



Potential silica exposure: worker sandblasting.

What occupations are at risk of exposure to silica?

Some examples include:

- Highway and bridge construction and repair
- Building construction, demolition, and repair
- Abrasive blasting
- Masonry work
- Concrete finishing
- Drywall finishing
- Rock drilling
- Mining
- Sand and gravel screening
- Dental technicians
- Sandblasting

How can workers prevent silica exposure?

- Avoid working in dust whenever possible
- Use personal protective equipment properly
- Check that all ventilation systems and protective equipment are repaired and work correctly
- Avoid eating, drinking, or using tobacco products in dusty work areas
- Wash your hands and face before eating or drinking
- Shower and change clothes after working in contaminated areas before getting in your car and going home
- Get a regular medical checkup with pulmonary function tests and X-rays
- Follow Occupational Safety and Health Administration (OSHA) and Mine and Safety Health Administration (MSHA) regulations

How can silica affect my health?

Inhaling silica dust is the leading cause of silicosis. Silicosis is a fibrotic lung disease that is disabling and often fatal. The effects of silicosis cannot be reversed, but developing silicosis can be prevented.

People with silicosis usually developed the disease after being exposed to silica dust at work. Other diseases may also be linked to breathing respirable silica dust.

The silica in the lungs may overwhelm the body's immune system and weaken a person's ability to fight infection.

There are three types of silicosis:

1. Chronic silicosis usually occurs after 10 or more years of exposure to crystalline silica at low levels. This is the most common type of silicosis.
2. Accelerated silicosis results from exposure to higher levels of crystalline silica and occurs 5 to 10 years after exposure.
3. Acute silicosis can occur after only weeks or months of exposure to very high levels of crystalline silica. Death can occur within months.

What are some symptoms of silicosis?

- Shortness of breath
- Severe cough
- Wheezing
- Weakness
- Chest pain
- Reduced lung capacity
- Difficulty breathing
- Bluish or grayish skin color

As the disease advances:

- Shortness of breath becomes worse
- Cough becomes worse
- Lung X-rays show scar tissue
- Tiredness increases
- Loss of appetite can occur

