

Silicosis in Countertop Fabrication Workers: What Providers Need to Know



1. What is Silicosis?

Silicosis is a progressive and incurable fibrotic lung disease that develops due to inhalation of respirable crystalline silica.

Many cases of silicosis have been identified among countertop fabrication workers. Engineered stone materials, also known as quartz, have very high silica content (> 90%) and are especially dangerous.

2. Who is at Risk?

- **Countertop fabricators** who cut, polish, or grind **engineered stone** can be exposed to large amounts of toxic silica dust, which can cause **accelerated silicosis**.
- Most cases identified in California have occurred among young **immigrant men**.
- Most patients report that **dust control measures**, such as water suppression, ventilation, and respiratory protection, were **inadequate in their workplaces**.

3. Identifying Patients with Silicosis

- Patients with silicosis may present with cough and/or shortness of breath, or be asymptomatic.
- Providers should ask **patients about work history** and consider silicosis in both asymptomatic and symptomatic countertop fabrication workers.
- Order chest imaging and pulmonary function tests when silicosis is suspected.
 - Chest x-ray may have limited sensitivity for silicosis; consider follow-up chest CT if x-ray is negative and index of suspicion is high.



4. Diagnostic Criteria

1. History of silica dust exposure
2. Chest imaging and/or lung pathology consistent with silicosis
3. Absence of another explanatory diagnosis



Silicosis Diagnosis: Next Steps

1. Refer patients to Pulmonology and Occupational Medicine.
2. Refer patients to [California Division of Worker Compensation](#) (workers are eligible regardless of immigration status).
3. Report cases to the [California Department of Public Health](#).

5. Silica Medical Surveillance Exams

Cal/OSHA requires medical surveillance exams for silica exposed workers. Providers performing silica medical exams should review the [Cal/OSHA silica regulation](#) for additional information.

Such exams must include:

1. Clinical and occupational history, physical exam
2. Chest X-ray classified by **NIOSH-certified B reader**
 - **Profusion score > 1/0 is abnormal**
3. Pulmonary function tests (spirometry)
4. Latent TB infection test

6. Treatment Options

Treatment options are limited, with no specific therapy identified at this time. Recommendations for management include:

1. **Avoiding** further silica exposure, which may be difficult for patients who depend on this work for their livelihood.
2. **Supportive care** with bronchodilators for symptom management and supplemental oxygen when needed.
3. **Lung transplant** when respiratory failure progresses.

