

## Silicosis in Countertop Fabricators

Severe Silicosis in Engineered Stone Fabrication Workers – California, Colorado, Texas, and Washington, 2017-2019

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### Overview

Workers who cut and finish stone slabs for countertops are at risk for silicosis. Silicosis is a disabling, irreversible and sometimes fatal lung disease caused by inhaling crystalline silica.

One increasingly popular raw material used in countertop fabrication is engineered stone, a manufactured quartz-based composite. Engineered stone contains nearly twice the amount of silica than does natural stone (>90%, compared with <45% in granite). Workers are exposed to silica dust when they cut, grind and polish engineered as well as natural stone.

Cases were identified independently in four states and confirmed based on computed tomography (CT) scan of the chest or lung biopsy findings.

### Key Findings

- Eighteen cases (2 fatal) of silicosis have been identified in stone fabrication workers in 4 US states during the period 2017 – 2019.
  - Most workers (11 of 18) were aged less than 50 years and diagnosed with severe, progressive disease.
  - In addition to silicosis, 2 workers had latent tuberculosis infection and 5 had concurrent autoimmune disease.
  - 1 worker was employed at a Washington state business and was identified through SHARP's respiratory disease surveillance system.
- Effective workplace exposure control includes tools equipped with water feeds and well-designed local exhaust ventilation.
- Updated occupational silica standards were implemented in 2016 at the U.S. federal and state levels. The update includes a reduced respirable crystalline silica Permissible Exposure Level (PEL) of 0.05 mg/m<sup>3</sup> as well as medical monitoring for exposed workers.

### Impact

Stone fabrication workers are at risk for silicosis, particularly if they use engineered stone. Employers should be aware of this risk and take steps to control workplace silica exposures in accordance with updated occupational standards, including medical surveillance of exposed workers.

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### Research for Safe Work

The SHARP Program at the Washington State Department of Labor & Industries partners with business and labor to develop sensible, effective solutions to identify and eliminate industry-wide hazards. Learn more at [www.Lni.wa.gov/Safety-health/safety-research/sharp-publications/research-findings](http://www.Lni.wa.gov/Safety-health/safety-research/sharp-publications/research-findings)