

Silicosis Risk for Workers

Attention: Companies and workers who fabricate, finish, or install natural or engineered stone countertops

Why is silica dust bad for your health?

Breathing silica dust can permanently scar your lungs and cause silicosis, a fatal lung disease. A worker in Washington was recently diagnosed with silicosis after 6 years of breathing silica during work on stone countertops. Another worker died recently from silicosis in California.

Symptoms of silicosis usually appear after 15–20 years of exposure, but can occur after only 5–10 years (i.e., in accelerated cases) or even sooner when exposures have been very high.

There is no cure for silicosis.

Silica can also cause COPD (chronic obstructive pulmonary disease), kidney disease, lung cancer; and it can make you more likely to get tuberculosis and other lung infections.

Am I at risk for exposure to silica?

You are at risk for exposure to silica if you:

- Saw, grind, sand, finish, or install natural or engineered stone (also known as quartz surfacing) materials.
- Dry sweep dusty floors.
- Use compressed air to clean dusty equipment, clothing, and other surfaces.

Silica exposure only occurs when dust is in the air. Silica dust settles in your lungs; the more you breathe, the more risk you have.

The amount of silica in natural stone, like granite, is high: typically 10–45%. Engineered stone, also known as quartz surfacing material, has even more silica content (up to 93%) and can release almost twice as much silica dust as natural stone.

What must employers do about silica dust?

Employers are required to keep workers' exposure level to silica dust below 50 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) of air. The best way to



Grinders not equipped with a water delivery or vacuum dust collection system put out a lot of harmful silica dust, as shown above.

How to keep silica dust out of workers' lungs:

- Use stationary saws or other tools and equipment with a built-in or attachable water spray or stream system to wet down dust.
- Use grinders or other tools equipped with a shroud and vacuum collection system to capture dust.
- Regularly inspect and maintain equipment and tools. Sharper tools create less dust than worn tools; keep air filters and water nozzles from being clogged; change out damaged parts.
- Do not dry sweep or blow dust when cleaning surfaces. Use a high-efficiency (HEPA) vacuum or wet sweep floors instead of compressed air.



do that is to select and use tools and machinery equipped with vacuum or water-delivery systems; and follow the manufacturer's instructions for proper use, inspections, and maintenance.

Safety training is also important and required. Workers need to know about silica hazards, their exposures, and how to use dust controls and other protective measures.

See the Respirable Crystalline Silica rule (Chapter 296-840, WAC) for further details about what is required. Table 1 in that rule also provides guidance on dust control measures that could be useful for your workplace tasks and equipment. You can find the rule and safety resources for training on L&I's Silica topic page: www.Lni.wa.gov/Silica.

What can exposed workers do?

Early detection is important to prevent silicosis and other serious diseases. That's why your employer is required to cover costs for preventive medical exams, tests, and other necessary procedures if your exposure meets the criteria in WAC 296-840-145(1).

When possible, avoid spreading silica dust from work to your vehicle or home. For example, bring a change of clothes to work and change out of dusty work clothing and wash your hair before you leave the workplace.

Let your doctor know if you are having breathing difficulties and have a history of exposure to silica dust.

Other resources you can access

To find an **electronic** copy of this Hazard Alert, go to www.Lni.wa.gov/Safety/HazardAlerts.

L&I Safety web page: www.Lni.wa.gov/Safety.

For other related rules, contact your local L&I office or visit the safety rules webpage: www.Lni.wa.gov/SafetyRules.

To find the nearest L&I office, visit www.Lni.wa.gov/Offices.

How can I get help from Labor & Industries?

The Department of Labor & Industries provides consultations, training, and technical assistance at no cost to employers. Call today to schedule a free confidential consultation or go to www.Lni.wa.gov/SafetyConsultants for more information.

You may also call 1-800-423-7233 or visit a local L&I office and ask for the Consultation Manager.

How to keep silica dust out of workers' lungs (continued):

- Use respirators when wet or vacuum dust control systems do not keep exposures below 50 µg/m³.
- When respirators are used, follow requirements for a written Respiratory Protection Program: www.Lni.wa.gov/Respirators.

*This alert was developed by L&I's Division of Occupational Safety and Health (DOSHS) to alert employers, labor groups, and employees to potential hazards associated with work activities. **This is not a rule and creates no new legal obligations.** The information provided includes suggested guidance on how to avoid workplace hazards and describes relevant mandatory safety and health rules. DOSHS recommends you also check the related rules for additional requirements.*