

Spot The Safety Violation: Prevent Exposure to Silica Dust



What should this worker be doing to address the clouds of dust surrounding him?



Workers in various trades and industries, including construction, mining, tunnelling, quarrying, masonry, metal foundries and fracking, can be exposed to crystalline silica dust. Why is exposure to dust containing silica hazardous? Because crystalline silica is a mineral that can cause lung cancer and silicosis when inhaled.

So a worker using a jackhammer such as the one in this picture from eICOSH should be using respiratory protection to avoid inhaling the dust generated by the work. In addition, there are water spray attachments that can be used with jackhammers and similar tools to reduce workers' exposure to silica in this dust. (He should also be using hearing protection.)

The OHS laws require employers to protect workers from exposure to silica specifically or from airborne hazards such as silica. One way to fulfil this duty is by developing a plan to limit workers' exposure to crystalline silica to below permissible occupational exposure limits (OELs). (Here's a model plan you can download and adapt.)

This plan should include the steps to be taken to protect workers from exposure to silica, such as:

- Measuring workers' exposures to silica, such as by monitoring the air in the workplace;
- Limiting access to areas where workers could be exposed to silica above the OEL;
- Using dust controls, such as enclosures, water sprays and vacuum dust collection systems;

- Specifying housekeeping requirements and procedures for controlling dust;
- Requiring the use of respiratory protection, when necessary (learn how to select appropriate respirators);
- Conducting regular medical exams for highly exposed workers; and
- Training workers on how to safely perform work that could expose them to silica.

Workers can take the following steps to protect themselves from silica:

- Use all required equipment, including PPE, and follow the employer's work practices to control dust.
- Be aware of the operations and the job tasks that can expose you to crystalline silica and know the steps that should be taken to prevent such exposure.
- Participate in training, exposure monitoring and health screening and surveillance programs to monitor any adverse health effects caused by silica exposure.
- Wear disposable or washable work clothes and shower if facilities are available. Vacuum the dust from your clothes and change into clean clothing before leaving the workplace. **Don't brush or blow the dust off! Don't bring dust home!**
- Be aware of the health hazards related to exposure to crystalline silica. Note that smoking adds to the lung damage caused by silica exposure.
- Avoid eating, drinking, smoking or applying cosmetics in areas where crystalline silica dust is present. Wash your hands and face outside of dusty areas before performing any of these activities.