TIPS FOR PREVENTING SILICOSIS

IF IT'S SILICA, IT'S NOT JUST DUST

U.S. Department of Labor

National Institute for Occupational Safety and Health

Hotline
1-800-35-NIOSH

WHAT CAN EMPLOYERS DO TO PREVENT SILICOSIS?

✓ **Make a commitment** to prevent silicosis at your worksites.

✓ **Comply with OSHA and MSHA regulations** on respirable crystalline silica. If your employees are overexposed, reduce exposure levels through the use of engineering controls. While these controls are being installed, or if they are being repaired, provide appropriate respiratory protection.

✓ **Perform air monitoring** of worksites as needed, and when required by law, and take corrective action when silica levels are excessive. Monitoring provides a basis for:

- Selecting and ensuring the effectiveness of engineering controls
- Selecting proper respiratory protection
- Seeing if work practices to reduce dust levels are effective
- Determining if a medical surveillance program is necessary.

✓ **Install and maintain engineering controls** to eliminate or reduce the amount of silica in the air and the build-up of dust on equipment and surfaces. Examples of controls include: exhaust ventilation and dust collection systems, water sprays, wet drilling, enclosed cabs, and drill platform skirts. Practice preventive maintenance because the extreme abrasiveness of the silica dust can damage the systems you install.

✓ **Report all cases of silicosis** to state health departments and to MSHA, and record cases on OSHA logs, as required.

✓ **Post warning signs** to identify work areas where respirable silica is present.

Related OSHA and MSHA Regulations

OSHA enforces a permissible exposure limit, which is the maximum amount of airborne crystalline silica that an employee may be exposed to during an eight-hour shift. MSHA enforces its own exposure limits, has rules requiring controls for drills, and requires air sampling in certain situations.

Other relevant OSHA and MSHA regulations include: respiratory protection, posting of warning signs, housekeeping, recordkeeping or reporting of occupational illnesses, abrasive blasting, personal protective equipment, and training. OSHA has rules on hazard communication, safety and health programs in construction, and access to employee exposure and medical records.

A reminder to both workers and employers:
The American Lung Association recommends quitting smoking for better lung health. Call 1-800-LUNG-USA for more information.

✓ **Substitute less hazardous materials** than crystalline silica for abrasive blasting, when possible. Try to use automatic blast cleaning machines or cabinets that allow operating the machines from outside using gloved armholes.

✓ **Supply vacuums** with high-efficiency particulate air (HEPA) filters, and advise employees to vacuum, hose down, or wet-sweep work areas, instead of dry sweeping.

✓ **Train workers** about health effects, engineering controls and work practices that reduce dust, the importance of maintenance and good housekeeping, as well as on the proper type and fitting of respirators. Make sure they know what operations and materials present a silica hazard.

✓ **Establish a written respiratory protection program**. Outfit employees with appropriately selected, properly fitted, approved respirators when engineering controls alone are insufficient to keep exposures within safe levels. Be sure respirators are kept clean and properly maintained and that employees are trained in their use.

✓ **Provide medical examinations** for employees who may be exposed to respirable crystalline silica, as recommended by NIOSH, and have X-rays read by a specialist in dust diseases. Develop a plan for reducing exposures of employees whose X-rays show changes consistent with silicosis.

WHAT CAN WORKERS DO TO PREVENT SILICOSIS?

Respirable crystalline silica dust can cause silicosis, a sometimes fatal lung disease. Silica is the second most common mineral in the earth's crust and is a major component of sand, rock, and mineral ores. Worker exposures can occur in a wide range of industries such as construction, mining, foundry work, glass making, agriculture, shipyards, railroads and quarrying, to name a few. Ask your employer if the dust on your job contains silica. The following measures will help to protect you:

✓ **Work with your employer to prevent silicosis** at your worksite.

✓ **Use engineering controls** installed by your employer to reduce silica dust levels, and make sure they are properly maintained. Tell your employer when they aren't working properly.

✓ **Minimize dust** by following good work practices, such as removing dust with a water hose or vacuum with a high-efficiency particulate filter rather than blowing it clean with compressed air, or by wet sweeping instead of dry sweeping.

✓ Suggest to your employer to **substitute less hazardous materials** than crystalline silica for abrasive blasting.

✓ **Wear, maintain, and correctly use approved particulate respirators** when engineering controls alone are not adequate to reduce exposure below permissible levels. Beards and mustaches interfere with the respirator seal to the face, making most respirators ineffective.

✓ If you must sandblast, **use type CE positive pressure abrasive blasting respirators**.

✓ **Participate in air monitoring, medical surveillance, and training** programs offered by your employer or when required by law.

✓ **Talk to your employer, employee representative, or union** if you are concerned about the dust in your workplace. Ask for results of air sampling done at your worksite. You may also contact the local or national office of the Occupational Safety and Health Administration (OSHA) or the Mine Safety and Health Administration (MSHA) for information. Our job is to protect your health.

As a reminder, whenever you work with toxic materials, it is always a sound practice to:

Change into disposable or washable work clothes at your worksite, if possible; shower, where available; and change into clean clothing before leaving the worksite.

Avoid eating, drinking, or using tobacco products in work areas where there is dust or other toxic materials.

Wash your hands and face before eating or drinking.

OSHA:	**Call your nearest regional or area office**
MSHA:	**703-235-1358 (Coal)** **703-235-8307 (Other mining)**