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OHIOPHCCToolboxTalk

Weekly Safety Meeting

Hazards Of Silica Dust

Crystalline silica is a common mineral in the earth's crust, and is found in many types of rock including sand, quartz, and granite. Silica is present in both work and non-work environments, and exposure to crystalline silica dust has long been known to cause a disease called silicosis. When you inhale crystalline silica the lung tissue reacts by developing fibrous tissue around trapped silica particles. This condition of the lung is called silicosis.

Due to the extensive use of concrete and masonry products in buildings today, construction workers have a potential exposure to crystalline silica. Operations such as dumping of rock, jack hammering, abrasive blasting, sawing, drilling or demolition of concrete and masonry structures are some of the activities that could produce this exposure.

Silica sand or other substances containing more than 1% crystalline silica should never be used as abrasive blasting materials. Where silica exceeds 1% of the content, less hazardous materials should be substituted. In addition, always follow safe work practices when there is possible exposure to silica dust.

FOR APPROPRIATE PROTECTION:
Keep awareness high--which is the key to preventing silicosis. Recognize when silica dust may be generated and plan ahead to eliminate or control the dust at the source.
Use proper respiratory protection when point of operation controls cannot keep exposures below the recommended exposure limit.
Use Type CE pressure-demand, or positive-pressure, abrasive-blasting respirators when sandblasting.
Always use dust control systems when they are available and keep them well maintained.
Be aware that high silica concentrations can occur inside and outside enclosed areas during operations such as concrete or masonry sawing or abrasive blasting.
Do not eat, drink, or smoke in areas where sandblasting is being done, or where silica dust is being generated.
Wear disposable or washable over-garments at the work site.
Wash your hands and face before eating, drinking, or smoking and vacuum (don't blow) dust from your clothing.
Shower if possible and change into clean clothes before leaving the job site to prevent contamination of cars, homes, and other work areas.
Lungs take care of normal dust. Airborne dust and dirt is common at worksites--both at home and on the job. Fortunately, the body's respiratory system does a good of job filtering out dust and most foreign bodies. Fine particulates such as asbestos and silica, however, are so tiny they can get past our filtering system. This may cause serious lung problems over an extended period of time if protection or controls are not used. Respect these tiny invaders. Use the appropriate personal protective equipment and safety precautions.