



Worksite: _____ Instructor: _____ Date/Time: _____

TOPIC C304: SILICOSIS (CRYSTALLINE SILICA EXPOSURE)

Introduction: Silicosis is an occupational disease caused by exposure to dust from crystalline silica, one of the most common minerals on our planet. Silicosis is a progressive, disabling lung disease caused by breathing dust that contains particles of crystalline silica so small you can only see them with a microscope. Silicosis isn't curable, and sadly, workers still die from the disease, but it's preventable. The keys to prevention are simple, identify workplace activities that create crystalline silica dust and then either eliminate the dust, or control it so that workers aren't exposed to it.

Identifying hazardous activities: You may be using products or materials that contain crystalline silica and not even know it. If your workplace is dusty, or if you work with materials that produce dust, you should be concerned about silicosis and crystalline silica hazards.

Activities that could put workers at risk:

Manufacturing: Metal casting; Working with glass products; Ceramics, clay and pottery; Asphalt paving material; Cut stone and stone products; Abrasives; Paint and rubber products; Filtered food and beverages.

Construction: Chipping, hammering and drilling rock, Abrasive blasting; Crushing, loading, hauling and dumping rock; Cement work; Sawing, hammering, drilling, grinding, and chipping masonry or concrete; Demolition of concrete or masonry structures; Dry sweeping or using pressurized air to blow concrete, rock or sand dust.

How to eliminate or control crystalline silica dust hazards: Once the activities that expose workers to hazardous levels of crystalline silica have been identified, you need to eliminate the exposure or control it so that it's not hazardous. Here are some suggestions.

In work activities where there's a potential to eliminate silica exposure:

Use substitutes

- The best way to eliminate exposure is to use materials that don't contain crystalline silica. This is an example of the "engineering" approach to hazard control. There are a number of abrasive materials that can be used to eliminate crystalline silica exposure including metal or plastic shot, organic materials such as apricot pits and corn cobs and emery, garnet or glass beads

In work activities where exposure to silica can't be eliminated:

Use dust-containment systems

- Install dust-collection systems on machines that generate dust or using enclosed cabinets with gloved armholes to do hazardous tasks
- Use wet drilling or sawing methods to control dust. Remove dust and debris with a wet vacuum, or hose it down rather than blowing it around with compressed air or dry sweeping it
- Ventilate. Use local-exhaust ventilation systems to keep work areas dust free

Use PPE

- PPE such as respirators and dust masks can protect workers from hazards, but it doesn't eliminate them. If the equipment fails, or it's not appropriate for a particular job, workers can still be exposed
- If you work with materials containing crystalline silica, you should always practice good personal hygiene. Wash your hands before eating, drinking or smoking. Shower, if possible, and change into clean clothes before leaving the worksite. Never eat, drink, or use tobacco in abrasive blasting areas

Conclusion: Though silicosis shows no symptoms at first, the victim eventually has trouble breathing and develops a severe cough. Other symptoms include fatigue, loss of appetite, chest pains and fever. Only a complete work history, chest X-ray, and a lung-function test will determine whether a worker has the disease. If you think you may have silicosis should see a medical doctor who specializes in occupational medicine.

Employee Attendance: (Names or signatures of personnel who are attending this meeting)

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_____	_____
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These guidelines do not supersede local, state or federal regulations, and must not be construed as a substitute for, or legal interpretation of, any OSHA regulations.