

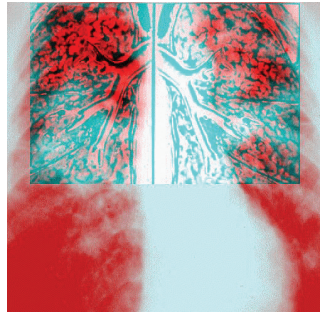


TOOLBOX TALK



SILICOSIS INFORMATION

Silica is found in many minerals common on construction sites, including sand, granite, concrete, brick, and most other types of rock. When workers cut, grind, abrasive blast, jackhammer or perform other tasks that disturb these materials, dust containing crystalline silica can be released into the air. Workers who inhale this dust are at risk.



People working around silica can develop a disease called silicosis. Silicosis is a progressive, disabling and often fatal lung disease due to scar tissue forming in the lungs reducing the lungs' ability to extract oxygen from the air. Cigarette smoking adds to the lung damage caused by silica.

Diseases related to Silica Exposure

- Lung cancer – silica has been classified as a human lung carcinogen.
- Bronchitis/Chronic Obstructive Pulmonary Disorder
- Kidney disease - increased likelihood of kidney disease
- Silicosis - Inflammatory scarring due to crystals in lungs
- Tuberculosis "TB" – Silicosis makes people more susceptible to Tuberculosis
- Scleroderma – a disease affecting skin, blood vessels, joints, and skeletal muscles

Symptoms of Silicosis

- Shortness of breath; possible fever
- Fatigue; loss of appetite
- Chest pain; dry nonproductive cough
- Respiratory failure, which may eventually lead to death

Types of Silicosis

- **Chronic** – This appears after 10 or more years of mild overexposure to silica and may go undetected for years. It is the most common type of silicosis.
- **Accelerated** – This develops between 5 and 10 years of moderate overexposure
- **Acute** – This develops within weeks up to 5 years due to breathing large amounts of silica

Common Sources in Construction

- Sandblasting for surface preparation
- Crushing and drilling rock, stone, and concrete
- Masonry and concrete work
- Demolition or remediation work
- Cement and asphalt pavement cutting or grinding

The disease is 100% preventable if appropriate steps are taken to prevent breathing in the silica.

DO

- Employers should evaluate and implement, when feasible, engineering controls such as dust collection and wet methods to limit the concentrations and exposure to crystalline silica in order to meet the Permissible Exposure Limit (PEL). Employers are responsible for keeping equipment in good condition and for training workers on how to use the equipment.
- Use water sprays or other wet methods to reduce or eliminate the dust at the source, before it becomes airborne from cutting, chipping, drilling, sawing, and grinding.
- Employers should substitute non-crystalline silica for aggregate blasting material.
- When dust collection and wet cutting are not feasible or do not reduce exposure to the PEL, employers should provide, and workers should use, respirators approved for protection against silica and the exposure level in question.
- Wash hands and face before eating, drinking, or smoking away from exposure area.
- 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 work site.

DON'T

- Do not eat, drink or smoke in areas where silica dust is present.
- Do not dry sweep or use compressed air for dust clean up.
- Do not start removing, cutting, sanding, grinding, or disturbing a material that has been determined to contain any level of exposure to crystalline silica without a proper assessment, engineering control measure, and proper personal protection equipment to meet the PEL.

REVIEW QUESTIONS

1. What is the most common type of silicosis?
a) Chronic
 b) Accelerated
 c) Acute

2. Crystalline silica is commonly found in sand, rock, concrete, and stone?
a) True
 b) False

3. Smoking increases the damage caused by silicosis.
a) True
 b) False



OSHA Standard
 No. 1926.651
 Excavation Manual



Work Safely with Silica



Crystalline Silica
 Centers for Disease Control and Prevention

Talk Given By:	Date:
Company Name:	Location:
Printed Name	Signature

Under the Occupational Safety and Health Act, employers are responsible for providing a safe and healthy workplace and workers have rights. OSHA can help answer questions or concerns from employers and workers. OSHA's On-site Consultation Program offers free and confidential advice to small and medium-sized businesses, with priority given to high-hazard worksites. For more information, contact your regional or area OSHA office, call 1-800-321-OSHA (6742), or visit www.osha.gov.

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