

Safety While Working with Silica

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Over 1.7 million workers in the United States are exposed to respirable crystalline silica, mostly from construction sites working with concrete, according to the Center for Disease Control. Concrete is composed of these crystalline silica particles, which, when breathed in, can cause a non-treatable and often fatal lung disease called silicosis. Symptoms of silicosis include shortness of breath, chest pain, fatigue, weight loss, and respiratory failure.

Although silicosis is irreversible, it can be easily prevented through instituting the following simple safety regulations when employees are handling concrete.

First, ensure employees are working in well-ventilated areas and minimizing dust exposure by applying water sprays, wetting silica dust while in the air, or using saw blades or drills that add water directly to the concrete being cut.

Second, managers need to ensure employees are wearing the appropriate Personal Protective Equipment (PPE). Respirators should always be worn when working in areas with silica exposure. See industry standards for what type of respirator to use, as the makes and models will vary between

jobs. Also, disposable or washable work clothes and gloves should be worn when working in areas where crystalline silica particles are in the air.

Third, employees should vacuum the dust from work clothes, shower as soon as possible after exposure to silica particles, and change into clean clothes.

Fourth, managers should ban eating, drinking, and smoking in areas where silica dust is in the air. In addition, employees should wash their hands before doing any of these activities after exposure to silica dust.

Fifth, and most importantly, managers should be knowledgeable about what tasks in public works expose workers to crystalline silica dust, and ensure that necessary safety precautions are taken before the task begins. Silicosis is a serious illness that is irreversible, but it is 100% preventable when the proper safety measures are taken.

References:

- *Occupational Safety and Health Administration: Crystalline Silica Safety Standards. The US Department of Labor, 3 July 2008. Web. 24 May 2010.*
- *NIOSH Workplace Safety and Health Topics: Silica. Centers for Disease Control and Prevention. 14 May 2010. Web. 24 May 2010.*

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