# Silica Dust Dangers and Safety Measures Stats & Facts



**FACTS**

1. Use engineering controls and containment methods such as blast-cleaning machines and cabinets, wet drilling, or wet sawing of silica-containing materials to control the hazard and protect adjacent workers from exposure.
2. Practice good personal hygiene to avoid unnecessary exposure to other work site contaminants such as lead.
3. Wear disposable or washable protective clothes at the work site.
4. Shower (if possible) and change into clean clothes before leaving the work site to prevent contamination of cars, homes, and other work areas.
5. Conduct air monitoring to measure worker exposures and ensure that controls are providing adequate protection for workers.
6. Use adequate respiratory protection when source controls cannot keep silica exposures below the NIOSH REL.
7. Provide periodic medical examinations for all workers who may be exposed to respirable crystalline silica.
8. Post warning signs to mark the boundaries of work areas contaminated with respirable crystalline silica.
9. Provide workers with training that includes information about health effects, work practices.

**STATS**

- Current estimates that 2 million U.S. workers are still exposed to silica.
- Silicosis deaths represent 4 to 8 percent of the silicosis cases per year. “This means estimates based on deaths alone miss more than 90 percent of the silicosis cases in the country.” By that calculation, some 2,500 to 5,000 silicosis cases could be occurring each year.
- 1 to 2 million U.S. workers are still exposed to silica.
- During 1968-2002, silicosis was recorded as the underlying or contributing cause of death on approximately 74 million U.S. death certificates; and of these deaths, 98% were males. Racial distribution consisted of 88% white, 11% black, and <1% other race. From 1968 to 2002, the mortality rate has dropped by 93%.5 Yet, in 2007, the U.S. Occupational Safety and Health Administration (OSHA) estimated that more than two million employees are exposed to silica in general industry, construction, and maritime industry.

NIOSH acknowledges that an unknown number of the 3.7 million workers in 2002 engaged in agriculture had exposure to silica from dust-generating activities. According to the U.S. Bureau of Mines, silica is present in nearly all of mining operations.

- OSHA data for September 2017 to April 2018 reveal that training violations made up 16 percent of all OSHA silica citations, while respiratory protection lapses constituted 6 percent of all violations. Finally, 3 percent of the citations related to the medical surveillance program, and 2 percent addressed violations of the housekeeping provisions (dry brushing and dry sweeping, as well as most uses of compressed air for cleanup are now prohibited).
- 561 cases of silicosis were confirmed between 1979 and 2013, an average of 18 new cases a year.
- Cases exposed to silica dust while working in the construction industry quadrupled after 1992.
- 41% of NJ silicosis cases were exposed while working as machine operators or laborers.
- Silicosis was identified an average of 8 years earlier in sandblasters than in workers who had never sandblasted.
- Silicosis cases tend to be diagnosed late in life, making timely worksite interventions challenging.