

AT THE END OF THE WORKDAY, EVERYONE GOES HOME SAFE.

# Work Safely With Concrete

## Toolbox Talk



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**C**oncrete is a common building material that can be used in a variety of ways. It's generally made by combining cement, sand, aggregate (small stones), and water. When these materials are mixed in the correct amounts and if they're further strengthened by adding re-bar, fiberglass strands, or plastic rods, the concrete can be used to build roads, bridges, buildings, septic tanks, floors, concrete blocks, and even countertops for homes. However, anyone who uses or works around concrete and cement should understand the potential health hazards and follow safe handling procedures to prevent harmful exposures.

There are some applications of concrete that necessitate the addition of other materials that could adversely affect health if improperly handled. Additions may include alkaline compounds (such as lime) that are corrosive to human tissue, small amounts of crystalline silica that are abrasive to skin and causes damage to lungs, or small amounts of chromium that can cause allergic reactions. The risk of illness or injury from these additions in the concrete depends on the level and length of exposure and the sensitivity of the individual.

Adverse health effects from concrete or cement are generally the result of exposure through skin

contact, eye contact, or inhalation.

**Skin Contact:** getting cement dust or wet concrete on your skin can cause burns, rashes, and skin irritations. Sometimes workers become allergic if they've had skin contact with cement over a long period of time.

**Eye Contact:** getting concrete or cement dust in your eyes may cause immediate or delayed irritation of the eyes. Depending upon how much and how long you get the dust in your eyes, effects to your eyes can range from redness to painful chemical burns.

**Inhalation:** inhaling cement dust may occur when workers empty bags of cement to make concrete. When sanding, grinding, cutting, drilling, or breaking up concrete, the dust generated has the same hazards as the dust from cement. Exposure to cement or concrete dust can cause nose and throat irritation. Long term exposure to concrete dust containing crystalline silica can lead to a disabling lung disease called silicosis.

There are ways to prevent or control negative health effects when working with concrete and cement. First of all, dress for protection. Wear alkali resistant gloves, long sleeves, and pants to reduce skin exposure to concrete or cement dust, and waterproof boots that are taller than the concrete is deep. Wear safety glasses with

side shields to protect the eyes or if it's very dusty, goggles. Don't wear contact lenses. When dust can't be avoided, wear employer-approved respiratory protection. Remember to wash your hands and face before eating, drinking, smoking, or using the toilet at the end of the day.

### **Real Life Application:**

One morning an employee was inside a cement material storage silo scraping the sides to remove built-up materials. One side of the cement material collapsed while the employee was at the bottom of the silo. The employee became engulfed by dry cement inside the cement silo and died at the site being crushed and asphyxiated by the dry cement.

### **Talking Points:**

1. Which of the above materials are we handling on our job sites?
2. How are we protecting ourselves from an adverse effect using these materials?
3. How could the employee of the incident avoided death?

