Concrete and Cement

Concrete isn't just a mixture of cement and water.

It contains some dangerous components.

Alkaline compounds such as lime can be corrosive to the skin.
Chromium causes allergic reactions.
Silica, the lung-damaging substance that is so dangerous a tighter standard was adopted nationwide in 2016.

The risk of illness or injury depends on the level and length of exposure and the individual's sensitivity.

What your employees need to know about concrete and cement

Inhalation of cement dust may occur when workers empty bags of dry cement material to make concrete, cut concrete work tiles, and use jackhammers to break up a sidewalk or road during repairs.

This exposure can cause nose and throat irritation. Long-term exposure to concrete dust containing crystalline silica can lead to a disabling lung disease called silicosis.

However, breathing problems are just one concern. If cement dust or wet concrete comes in contact with the skin, burns, rashes, and skin irritations can develop.

Also, should dust from concrete or cement get in the eyes, immediate or delayed reactions, ranging from redness to painful chemical burns, may occur.

What your employees need to do when working with concrete and cement

To minimize the risk of contact to the skin and eyes, employees need to wear the proper personal protective equipment (PPE).

To reduce the chance of breathing in cement dust:

- Wet down the work area to keep dust out of the air and use wet cutting methods rather than dry-cut masonry products.
- Use engineering control methods such as vacuums to pull the dust out of the air.
- If dust can't be avoided, wear the appropriate respiratory protection, which must be approved by the National Institute for Occupational Safety and Health (NIOSH). Respirators also must be provided upon request.
- Mix dry cement in well-ventilated areas.
- Remember to wash your hands and face before eating, drinking, or using the restroom. And, if wet or dry concrete gets on your skin, wash it off as soon as possible.

What to cover at your safety meeting about concrete and cement

Demonstrate and discuss when to use each of the above control methods. For example, the wet method is considered the number one line of

defense to minimize the risk of breathing in dust particles. But it isn't always appropriate.

On rooftops, the wet method should not be used because it creates a slip/fall hazard for your workers. Vacuum dust collection systems should be used instead.

In addition, review and demonstrate how PPE should be worn and that your employees know where the washing station and first aid kit are.

The skin, eyes, lungs, and other internal organs are at risk when working with cement.
Ensure your workers wear the proper clothing and control the dust particles in the air. This ensures they're on hand daily to help you conclude your projects, minimizing the risk of illness and costly delays.