



Respiratory Protection

Construction jobs can expose workers to unsafe airborne contaminants (e.g., dust, fumes) that can harm health and lead to serious diseases. To prevent exposure to airborne contaminants, employers should prioritize eliminating the hazard, replacing the hazard, or implementing [engineering controls](#) (e.g., local exhaust ventilation) or administrative controls (e.g., rotating workers between hazardous tasks). However, when these controls are not feasible or are insufficient to reduce harmful exposures, workers should wear appropriate respiratory protection. To be effective, respirators must be properly selected and the user fit tested. Workers must be trained and follow employer and manufacturer's instructions for the [proper use](#), inspection, maintenance, and storage of respirators. This includes proper donning (putting on) and doffing (taking off) procedures.

Different types of respirators, such as filtering facepiece respirators (FFRs), elastomeric half-mask respirators (EHMRs), elastomeric full-facepiece respirators (EFFRs), and half-mask, full-facepiece, and hood or helmet powered air-purifying respirators (PAPRs), can be used to protect workers from airborne contaminants. Your employer should provide respirators that are approved by the National Institute for Occupational Safety and Health (NIOSH) for use under the direction of a [written respiratory protection program](#) as required by the Occupational Safety and Health Administration (OSHA).

Andrea's Story

Andrea spent the day on a renovation project sawing concrete with a handheld masonry saw. Andrea did not wear a respirator because she used water to suppress the dust. However, due to the direction of the wind that day, the water suppression was less effective than usual, and she was still exposed to airborne contaminants. After completing the project, Andrea noticed her chronic bronchitis worsened.

- ✘ What should Andrea have done to protect herself from the airborne contaminants?
- ✘ Have you or someone you know ever suffered from an occupational lung disease?

How can we stay safe today?

What will we do at the worksite to promote respirator use and prevent respiratory-related illnesses?

Remember This

- NIOSH sets [Recommended Exposure Limits \(RELs\)](#) for airborne contaminants such as silica dust. OSHA mandates legally enforceable [Permissible Exposure Limits \(PELs\)](#) with which employers must comply.
- As required by OSHA, employers are responsible for providing a NIOSH-approved respirator to each employee whenever such equipment is necessary to protect the health of the employee (29 CFR [1926.103/29 CFR 1910.134](#)).
- The equipment provided must have the words "NIOSH Approved" on the packaging to provide the expected level of protection for the job at hand. The respirator's [approval label](#) will help you identify the protection level (e.g., N95). If you have a question about whether a respirator is needed for a specific task or which type to use, talk to your supervisor or foreperson. Follow the manufacturer's instructions for each specific respirator model.
- The [NIOSH Trusted-Source web page](#) provides information to help employers select the correct respirator.
 - FFRs are disposable respirators comprised of a filter material that removes particles.
 - Reusable EHMRs and EFFRs use replaceable filters/cartridges to remove gases, vapors, or particles. EFFRs also provide eye and face protection.
 - PAPRs use a battery-powered blower and filter/cartridge to remove gases, vapors, or particles.

When using respirators, always do so as part of an OSHA-compliant respiratory protection program, which includes medical evaluations, fit testing, and training. Fit testing is required to make sure tight-fitting respirators provide the expected protection.

Perform the manufacturer-recommended maintenance on EHMRs, EFFRs, and PAPRs. Replace filters/cartridges when they are damaged, soiled, causing noticeably increased breathing resistance, or airflow rates fall below minimum requirements for PAPRs.



Respiratory Protection



- ☑ If engineering and administrative controls are not in place or are insufficient and workers are exposed to hazards at levels above OSHA's PELs, respiratory protection is required.
- ☑ Employers must implement an OSHA-compliant respiratory protection program, which includes medical evaluations, fit testing, and training.
- ☑ If respiratory protection is required at the worksite, respirators must be properly selected and the user fit tested. Respirators should be stored and made available when needed. Users must put them on and take them off according to the manufacturer's instructions.

**GET
INFORMATION**

CDC/NIOSH INFO: 1-800-CDC-INFO (1-800-232-4636) | TTY: 1-800-232-6348 | [cdc.gov/info](https://www.cdc.gov/info) | [cdc.gov/niosh](https://www.cdc.gov/niosh)

CPWR: Contact 301-578-8500 | cpwr-r2p@cpwr.com | www.cpwr.com/toolbox-talks

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