

NYCOSH Asbestos Fact Sheet #6

Respirators: Information for Asbestos Workers

Asbestos is deadly. When inhaled, asbestos fibers can cause lung cancer or other diseases. Construction and renovation work often release high concentrations of asbestos fibers.

Your employer is required by law to protect you from exposure to asbestos fibers. The best way to do this is to use special work practices and engineering control methods that prevent asbestos dust from getting into the air, so that it is not available for you to inhale (breathe in).

When engineering and work practice controls do not adequately decrease the amount of asbestos in the air, you must stop the asbestos from getting into your body.

Wearing the right respirator and wearing it correctly will help ensure that the air you breathe contains as little asbestos as possible.

What is a respirator?

A respirator is a type of personal protective equipment (PPE). It is worn over the nose and mouth. Some respirators also cover the face and eyes. A respirator can protect you against breathing in harmful contaminants that are in the air - if you use it properly.

(For more information on respirators, see the NYCOSH Respirator Basics fact sheet.)

When should I use a respirator?

Respirators are required to be worn:

- when engineering and work practice controls have not yet been fully implemented
- during maintenance and repair jobs if engineering controls cannot be used

- during maintenance and repair jobs when in-place engineering and work practice controls are not sufficient to reduce exposure to or below legal limits.

Respirators should also be worn during emergencies. NEVER WORK ALONE WHILE WEARING A RESPIRATOR.

Where do I get a respirator?

Under the law, your employer must provide you with a respirator. You do not have to pay for the respirator and the cost cannot be deducted from your wages. Respirators and filter cartridges must be approved by NIOSH, the government agency that is responsible for the quality of protective equipment.

Your employer must have a written respirator program. S/he must:

- assess workplace hazards to determine which type of respirator is appropriate
- train you about the respiratory hazards you may be exposed to
- train you in the use and maintenance of your respirator, including seal checks and proper cleaning and storage
- establish a schedule for how often filter cartridges should be changed and make available the information that was used to establish this schedule
- provide annual fit testing and medical evaluations to ensure that you can safely wear a respirator.

The written respirator program must be reviewed annually and updated when new or different types of respirators are used in your workplace.

What kind of respirator should I use?

Not all respirators are alike, and not all respirators protect you equally. The kind of respirator you must wear depends on the amount of asbestos in the air - the more asbestos present, the more protective the respirator must be. The amount of asbestos in the air must be monitored by a qualified person, who will take samples and have them analyzed in a laboratory.

The sampling results will be used to determine what kind of respirator you need to wear. (Caution - disposable respirators and dust masks do not protect against asbestos. They are not legal to use for protection against asbestos.)

The chart on the back of this fact sheet shows some of the different types of respirators and explains the kinds of respirators you need for different exposures. When you look at the chart, remember that your employer *must* give you a powered air purifying respirator (PAPR), which is more protective and more comfortable, *if you request one*.

A PAPR can be used when there is asbestos in the air at any level up to 100 fibers/cc (f/cc), even if the law only requires the lesser protection of a half-face or full-face "negative pressure" mask.

How can I make sure that my respirator fits me?

It is crucial to wear a respirator that forms a tight seal to your face, or it will not keep asbestos fibers out of the air you are breathing inside your mask. Since everyone's face is shaped differently, your employer must allow you to choose from among a selection of at least five (5) sizes from at least two (2) different manufacturers.

Your employer must perform a "fit test" at least once a year to ensure that your respirator fits properly.

Your employer must have you fill out a medical survey each year so that a medical professional can determine whether you are medically qualified to use a respirator.

If the medical assessment disqualifies you from using a respirator, the law requires your employer to allow you to perform equivalent work that does not require use of a respirator.

There are two different kinds of fit tests: qualitative and quantitative. *Qualitative fit testing* involves putting on a hood while wearing the respirator. Chemical test solutions with irritant, bitter, or other undesirable properties are injected into the hood. If you taste or smell the chemical inside your respirator, the respirator does not fit properly and must be adjusted or changed.

Quantitative fit testing uses a calibrated instrument to measure the amount of a chemical substance that penetrates into the respirator while you are wearing it.

SEAL CHECKS:

The only way to ensure that your respirator is protecting you when you put it on is to perform a *seal check* every time you put it on. Every time you put on a negative pressure respirator, such as a half mask or a full-face mask, you **MUST** perform the following procedures:



NEGATIVE PRESSURE CHECK:

To check for leaks when inhaling (breathing in), completely cover the filter cartridges with the palms of your hands so that no air can flow in. Inhale more strongly than usual. If the mask collapses slightly and you do not feel any air entering the mask across your face, the respirator fits properly when inhaling.

**POSITIVE PRESSURE CHECK:**

To check for leaks when exhaling (breathing out), completely cover the exhalation port with the palm of your hand so that no air can flow out. Exhale more strongly than usual. If the mask bulges slightly and you do not feel any air flow escaping across your face, the respirator fits properly when exhaling.

If you can feel air escaping or coming in through the edges of your mask while performing the negative or positive pressure tests, your respirator does not fit and must be adjusted or changed.

Facial hair, scarring, and weight gain or loss may affect the fit of your respirator. Beards and sideburns generally interfere with a good seal to your face.

When you wear a positive pressure respirator, such as a PAPR (powered air purifying respirator), you must perform an air flow check. A PAPR comes with a small gauge which allows you to measure the flow of air from the pump. If the air flow is weak, you must change the battery or the HEPA filter cartridges on your respirator.

NYCOSH Asbestos Fact Sheets:

Fact Sheet #1 - Asbestos

Fact Sheet #2 - OSHA Asbestos Standards

Fact Sheet #3 - New York State Asbestos Law

Fact Sheet #4 - New York City Asbestos Law

Fact Sheet #5 - Asbestos Hazard Emergency Response Act (AHERA)

Fact Sheet #6 - Respirators: Information for Asbestos Workers

See the respirator use chart on the following page.

RESPIRATOR USE CHART FOR ASBESTOS WORKERS

The *maximum use concentration* is the highest concentration of asbestos in air that a given type of respirator will protect against.

	RESPIRATOR TYPE	MAXIMUM USE CONCENTRATION
	<p>Half face air purifying respirator (APR) with HEPA filters</p>	<p>1 f/cc (1 asbestos fiber per cubic centimeter of air)</p>
	<p>Full face air purifying respirator (APR) with HEPA filters</p>	<p>5 f/cc</p>
	<p>Full face powered air purifying respirator (PAPR) with HEPA filters</p>	<p>100 f/cc</p>
	<p>Full face supplied air respirator (SAR) in continuous flow mode or pressure-demand or other positive-pressure mode</p>	<p>100 f/cc</p>
	<p>Dust or comfort mask not NIOSH rated</p>	<p>NOT PERMITTED FOR ASBESTOS WORK</p>
	<p>Disposable respirator rated N95 or better</p>	<p>NOT PERMITTED FOR ASBESTOS WORK</p>

