Protect Your Lungs

Respirators can prevent fibers, mists, fumes, dusts, powders, gases, vapors and other contaminants from getting to your lungs. You might notice the effects of contaminants right away, but there are also dangerous long-term effects of buildup over time. Using the right respirator in the right situation is your key to good health.

Air-Purifying Respirators (APR)

This broad class of respirators includes any device that filters or purifies the air. They come in half-masks, which cover your nose and mouth, or full-face masks, which also cover your eyes.

PARTICLE-FILTERING—This type of APR contains a filter designed to screen out contaminants such as dust, fumes, mists, fibers and powders. The respirator may be a simple, loose-fitting disposable mask or a rubber mask fitted with disposable or cleanable filters. These masks don't protect against gases or oxygen deficiency.

VAPOR- AND GAS-REMOVING—This type of APR is fitted with a cartridge or canister containing chemicals designed to absorb or chemically reduce dangerous gases and vapors. A valve allows air you exhale to escape and then closes so contaminated air can't enter. The particular cartridge or canister you use must be specific for the type of gas or vapor in your work area—the wrong one will not protect you.

Supplied-Air Respirators (SAR)

If the atmosphere in your work area has such a high level of contaminants that there's not enough oxygen in the air, you must use this type of respirator. Supplied-air respirators, also called air-line respirators, connect you by an air hose to an outside source

of clean air supplied by a compressor or compressed-air cylinder. This type of respirator is also used when contaminants can't be filtered or absorbed by APRs. Other situations requiring SARs are environments that are dangerously hot or cold or so toxic that they've been identified as "immediately dangerous to life and health." Under these conditions, you must use a respirator with positive air pressure so there's no chance of contaminants being drawn into the mask when you inhale.

Self-Contained Breathing Apparatus (SCBA)

With a self-contained breathing apparatus you carry a supply of air in a portable tank on your back. This type of protection is used when you need great mobility, when falling objects or machinery can damage an air hose or when the job to be done takes 30 minutes or less. SCBAs are also used to explore an environment where the air quality is unknown.

POINTS TO REMEMBER

- ► Use the appropriate respiratory equipment for the job.
- ► Use the proper filters, cartridges or canisters for the respirator and contaminants.
- ► If you wear glasses with a full-face mask respirator, you may need a specially modified model.
- ► Contact lenses should not be worn with a respirator because pressure changes can pull them off your eyes.
- ► If you experience difficulty breathing, fatigue, irritation in your eyes or respiratory system, dizziness, illness or an unusual odor or taste when using your respirator, leave your work area immediately and report to your supervisor. These could be signs that your respirator is not working properly.

Respirator Fit and Maintenance

Your respiratory safety on the job depends on you wearing a properly functioning and fitting respirator. Tell your supervisor if your respirator interferes with your ability to see, hear or be heard properly, if it restricts movement so that you are unable to do your job safely, or if it has any damaged or worn parts.

Checking the Fit

- Whether you use a full-face respirator or one that covers only your nose and mouth, choose a respirator that's the right size for you and feels comfortable.
- Don't try to make a respirator more comfortable or better-fitting by altering it in any way or repairing it with parts from another respirator.
- Follow instructions for fitting the respirator, adjusting the straps if necessary.
- When a respirator fits properly, the soft, pliable edges of the mask will mold to form a seal to your face, preventing contaminated air from entering.
- Adjust disposable fiber masks by pinching the metal nose strip to fit around your nose.
- Make sure no hair sticks out from the edges of your face mask. Beards, mustaches and long sideburns can interfere with the seal.

Testing the Seal

Perform these tests each time you use your respirator. Enter your work area only if your respirator passes the tests. Some employers provide a test atmosphere of banana oil or irritating smoke that you'll detect if your mask is leaking.

Positive Pressure Test

Cover the exhalation valve so that air can't escape, then exhale gently. The mask will bulge and you should feel increased air pressure until you inhale or uncover the valve. This means that no air is escaping the mask.

Negative Pressure Test

Cover the air intake ports of the respirator with your palms and inhale. Not only should it be difficult to inhale, but the soft parts of the respirator should collapse inward toward your face and remain that way as long as you're inhaling. This means that no air is getting into the mask from the edges. If you feel air coming in, and the mask regains its shape, there's a leak that must be corrected before you use the respirator.

RESPIRATOR MAINTENANCE

- Test your respirator's fit regularly.
- Check filters, cartridges or canisters before each use.
- Regularly check for cracks, dents, holes, hardening and broken or worn straps or buckles.
- Replace elastic straps that have lost their stretch.
- Replace your respirator if the material around the edges has become hard and brittle.
- Replace cartridges or canisters, valves and hoses according to the manufacturer's guidelines.
- Avoid changing parts from one model to another.
- Use only approved parts.
- Make sure cartridges are threaded correctly into place.
- Do pressure tests after replacing cartridges or filters.
- Keep valves clean and functioning properly.
- Replace dry or cracked valves.
- Clean your respirator after each use.
- Wash in mild, soapy water and scrub with a soft brush.
- If sanitizing, leave your respirator in the solution for at least two minutes and rinse thoroughly.
- Never use solvents or harsh cleaning agents on rubber or plastic parts.
- Replace your disposable respirator when it becomes clogged or breathing becomes difficult.
- Store your respirator in a plastic bag away from sunlight and chemicals.
- Avoid placing objects on top of your respirator.