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Your five senses are of little use in alerting you to respiratory hazards. You usually can’t see, feel or hear them, and they often have no smell or taste. You have to rely on your brain instead and what it has learned in safety training to protect you.

Respiratory hazards are conditions in the air that can cause you harm. Included are substances that can damage the respiratory system consisting of the nose, mouth, throat and lungs. Others are harmful substances which enter the body through the lungs, causing internal damage, poisoning or chronic illnesses. A major respiratory hazard is lack of oxygen which can cause immediate death.

Smoke, fumes, dusts, mists, gases and vapors are some of the substances which may injure you directly. Gases and vapors can also displace life-giving oxygen in the air.

Many corrosive gases signal their presence by irritating the nose, throat and eyes, resulting in coughing or watery eyes. But many other harmful airborne substances don’t give you a clue, such as carbon monoxide which has no color, smell or taste. In the case of deadly hydrogen sulphide, the rotten egg odor quickly disappears because of a reaction called “olfactory fatigue” in which the sense of smell becomes overwhelmed and fails to detect the odor. This can give a person a false sense of safety when in fact respiratory paralysis is quick to follow. Organic solvents cause headaches, dizziness, disorientation and possible lung damage and death.

These hazards often occur in confined spaces, where lack of ventilation allows harmful substances to accumulate and where the normal mix of breathing air is absent.

The only way to identify these hazards is by measuring the

atmosphere periodically and thoroughly. Regardless of how often you measure the atmosphere, air quality in a confined space must be determined immediately prior to entry. The situation may be different in different areas or levels of the confined space and can change in an instant.

You must wear the correct respirator to protect against the particular hazard. Some respirators filter or purify the air. Others supply a separate source of air to breathe.

The respirator will be tested to make sure it fits you exactly so no contaminants can enter. A respirator that fits properly will be an effective seal against contaminants. Some conditions make an effective seal impossible or hard to attain – facial hair, missing dentures, eyeglasses, heavy makeup and others.

Proper maintenance of your respirator is vital to your safety and health. Inspect it for defects before each wearing and clean it to remove contamination after each use, following the manufacturer’s instructions.

Wearing the wrong respirator is as bad as wearing none at all. Be sure you are adequately trained and equipped to deal with respiratory hazards.