

## How Does a Gas Mask Protect Someone?

Gas masks were invented during the first World War in response to a new factor on the battlefield, chemical warfare. Gas masks can protect a person by directly removing dangerous toxins or by providing an air supply separate from the natural environment. Although [gas masks](#) can protect against the risks of a biological and chemical attack, a person needs to be familiar with how to use a gas mask correctly.

A [gas mask](#) is a mask put on over the face to protect the wearer from inhaling "airborne pollutants" and toxic gases. The mask forms a sealed cover over the nose and mouth, but may also cover the eyes and other vulnerable soft tissues of the face. Some gas masks are also respirators, though the word gas mask is often used to refer to military equipment (e.g. Field Protective Mask, etc.) (The user of the gas mask is not protected from gas that the skin can absorb.)

### History

1. According to the Royal Society of Chemists, Edward Harrison invented the gas mask during World War I to protect British troops from German gassing. Harrison's work saved countless lives, but the testing of the gas mask eventually cost Harrison his own life. Harrison and his team spent many hours testing the gas mask on themselves. Three years after perfecting the mask, Harrison died.

### Particulate Removal

2. A particulate respirator directly removes airborne pathogens before a person starts breathing them into the lungs. An electrostatic filter is put over the mouthpiece and collects dangerous poisons in the filter for later disposal. This is why a [gas mask](#) requires careful maintenance; the filters eventually become clogged with spores or chemical residue.

### Air Supply

3. A self-contained breathing apparatus, SCBA for short, provides a supply of air to the user instead of filtering out dangerous chemicals. The mask is directly connected to a tank of compressed air. This is often used for marine environments, hence the term scuba diver, and dangerous environments that would clog a filter mask too fast, like fighting a fire.

### Training

4. The United States government does not endorse any single gas mask, but the Centers for Disease Control does test the safety of masks used by employees on the job. Because of the variety of gas masks on the market, it is suggested by the CDC that an individual practice using a mask for emergency preparedness. This includes reviewing what a particular mask protects against and how to maintain it.

### Warning

5. According to the CDC Respirator Fact Sheet, a gas mask does not guarantee safety from biological and chemical poisons. Some poisons attack through the skin, and require extra protection. Gas masks also do not provide oxygen in case of fire. The cartridges on a gas mask can also wear out, so replacing them frequently is essential to ensuring maximum safety.