**What is a UV Air Purifier?**

Ultraviolet (UV) light has long been known for its potential as a [germicide](https://www.wisegeek.com/what-is-germicide.htm). Some forms of [UV light](https://www.wisegeek.com/what-is-uv-light.htm)can kill or sterilize germs and other microorganisms. Many air purifiers utilize this aspect of UV light to help clean the air. These purifiers are often attached to a heating and cooling system to purify the air in a home, office, or other type of building. A UV [air purifier](https://www.wisegeek.com/what-is-an-air-purifier.htm) may be effective in reducing adverse reactions to airborne allergens.

UV light is not part of the [visible light](https://www.wisegeek.com/what-is-visible-light.htm) spectrum. There are three wavelengths of UV, and each has a different effect on cells and [DNA](https://www.wisegeek.com/what-is-dna.htm). UV-A and UV-B are the two longer wavelengths of UV light, and they are often associated with tanning skin. A UV air purifier typically does not use either UV-A or UV-B light.

The shortest UV [wavelength](https://www.wisegeek.com/what-is-a-wavelength.htm), UV-C, is used in UV air purifiers because it is effective in breaking down the DNA of microorganisms like mold, bacteria, and viruses. Sunlight bombards the Earth with UV-C constantly, but the UV light in a UV air purifier shines a brighter, more highly concentrated beam of this light on a closed space. This concentration intensifies the germicidal effects of UV-C. It may also cause temporary skin redness and eye pain if a person comes in close contact with UV-C light.

While some UV air purifiers can stand alone in a room, most are installed in the duct work of a heating or cooling system. The UV-C lights may lose their potency if they accumulate dust on their surface, so the system is usually installed near an [air filter](https://www.wisegeek.com/what-is-an-air-filter.htm). Industry standards suggest that these light bulbs be replaced every year to maintain effectiveness.

An air purifier that uses UV light to destroy germs, viruses, and bacteria is often used in conjunction with another [air filtration](https://www.wisegeek.com/what-is-air-filtration.htm) system. The UV air purifier only kills the microorganisms, and usually cannot remove them like a filter does. The combination of a true [HEPA](https://www.wisegeek.com/what-is-a-hepa-filter.htm) filter with a UV-C light can create a highly effective air purification system for homes, offices, or, with high-powered systems, clean rooms for the computer industry.

Basic air filters may accumulate microorganisms on their surface. Sometimes, these can become breeding grounds for bacteria and mold. As a result, air purifiers that use both filters and UV-C lights may effectively keep the bacteria from forming in the filtration system. Studies have shown that many [allergy](https://www.wisegeek.com/what-is-an-allergy.htm) sufferers experience some relief of their symptoms when using a UV air purifier in conjunction with a basic air filtration system.

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