Ultraviolet (UV) technology for air purifiers

Using a UV light air purifier in your home

There are many different types of air purifiers to consider when making an investment. Researching the different types of air purification systems is arguably the most important step in the air purifier buying process. This step is important because each type of air purifier uses its own distinctive technology to combat air quality issues. Air purifiers that use Ultraviolet (UV) light, for example, are most effective at eliminating mold, mildew, bacteria, and germs.

COMMON BENEFITS OF UV LIGHT AIR PURIFIERS:

-Effectively eliminate mold spores

-Effectively eliminate mildew

-Effectively [eliminate bacteria and germs](https://specialtyairpurifiers.com/air-purifiers-by-concern/bacteria-germs-and-viruses/best-air-purifier-for-bacteria-viruses/)

What is ultraviolet (UV) light?

UV rays are considered a form electromagnetic radiation commonly known as light. The light itself travels in waves, and each form of light has a different wavelength. The wavelengths of UV rays are shorter than visible light and therefor lie just outside the visible spectrum for humans.

You’ve probably heard of UV light when discussing the effects of the sun because they are harmful to human skin. The sun produces three forms of UV light that can be harmful to human skin: UV-A, UV-B, and UV-C.

Types of UV light

UV-A

95% of the light that reaches the earth

Damaging to human skin

Commonly used in tanning beds

UV-B

About 5% of the light that reaches the earth

Linked to sunburns and skin cancer

UV-C

The earth’s atmosphere thankfully blocks 100% of this form of light

Easily destroys cells and other living organisms

UV lamps are used to produce UV-A light in air purifiers

How is UV light used in air purifiers?

UV air purifiers frequently contain a series of UV lamps that are used in conjunction with a series of particulate filters. When air is drawn into the purifier, it first flows through an activated carbon or HEPA filter and then proceeds to an internal chamber of UV lamps. The initial particulate filters trap larger contaminants and release only smaller microorganisms into the UV light chamber. As UV light penetrates these microorganisms, UV rays destroy their genetic makeup, which damages their DNA and leaves them functionless.

What are the best uses for UV light air purifiers?

There are several types of air purifiers and each type serves a different purpose. Some air purifiers eliminate smoke, some remove pet dander, and others reduce odor.

While HEPA filters are great for removing particles at least .3 microns in size, UV light air purifiers are great for eliminating microscopic cells. Specifically, UV air purifiers effectively eliminate microorganisms such as mold, mildew, bacteria, and germs.

When using a UV air purifier, you not only trap organisms, but also kill them. Killing these organisms is important because they have the ability to multiply. For example, mold spores are released by mold. These spores float through the air until they find another location to create more molds. An air purifier with a UV lamp will draw in these spores and destroy them before being inhaled or creating mold in a new location.

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