

*Scientific Study*

# ***Air Filters Get Clean Bill of Health***

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The use of portable indoor air cleaners both removes and generates pollution. Though, most people who use air cleaners do so in an attempt to reduce pollution in the air they breathe indoors.

Many individuals with asthma, emphysema, respiratory disease, and multiple chemical sensitivity rely heavily on air cleaners to improve the air and reduce ailment-related symptoms. Others use air cleaners to prevent the development of these ailments or for healthier living in the hopes of lessening air pollutants such as wood smoke, pesticides, dryer vent fumes, and other common neighborhood contaminants, which have been linked to disease.

Air cleaners break certain pollutants down and generate other pollutants as by products. This news is rather alarming for many and concerns arise as to whether air cleaners are safe to use.

But there is good news! The pollution generated by air cleaners is far less than the benefits of cleaner air according to scientists at the Department of Civil, Architectural, and Environmental Engineering at the University of Texas.

The researchers evaluated HEPA filters, an electrostatic precipitator, and several ion generators to determine whether they produced more

pollution or lessened pollution overall. They found that the pollutant removal benefits of ozone-generating air cleaners may be outweighed by the generation of indoor pollution.

Ozone, which is produced by air cleaners, initiates reactions with certain volatile organic compounds, producing ultra fine and fine particulates, free radicals, and other undesirable substances.

The scientists operated five different ion generators, each in a room in the presence of a plug-in liquid or solid air freshener. These air fresheners are a source of terpene, a toxic substance. The air cleaners reduced levels of terpene, though formaldehyde increased.

Since air fresheners don't really eliminate odors in the air, but rather perfume it, the elevated formaldehyde levels can be eliminated simply by tossing the air freshener out in favor of regular cleaning to eliminate odor. By taking this simple step, toxic chemicals such as terpenes, formaldehyde, and phthalates are eliminated, making the home and office safer for sensitive groups such as women, children, and those with respiratory problems. Even better news, the air is safer for everyone!

**Reference**

Waring, MS, Siegel, JA, Corsi, RL. Ultrafine particle removal and generation by portable air cleaners. *Atmospheric Environment*. 2008. 42(20);5003-5014.