

Air cleaners don't stop you getting sick, research finds

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Air filtration systems do not reduce the risk of picking up viral infections, according to new research from the University of East Anglia.

A new study published today in *Preventive Medicine* reveals that technologies designed to make social interactions safer in indoor spaces are not effective in the real world.

The team studied technologies including air filtration, germicidal lights and ionizers. They looked at all the available evidence, but found little to support hopes that these technologies can make air safe from respiratory or gastrointestinal infections.

Prof Paul Hunter, from UEA's Norwich Medical School, said, "Air cleaners are designed to filter pollutants or contaminants out of the air that passes through them. When the COVID pandemic hit, many large companies and governments—including the NHS, the British military, and New York City and regional German governments—investigated installing this type of technology in a bid to reduce airborne virus particles in buildings and small spaces.

"But air treatment technologies can be expensive. So it's reasonable to weigh up the benefits against costs, and to understand the current capabilities of such technologies."

The research team studied evidence about whether air cleaning technologies make people safe from catching airborne respiratory or gastrointestinal infections. They analyzed evidence about microbial infections or symptoms in people exposed or not to air treatment

technologies in 32 studies, all conducted in real-world settings like schools or care homes. So far, none of the studies of air treatment started during the COVID era have been published.

Lead researcher Dr. Julii Brainard, also from UEA's Norwich Medical School, said, "The kinds of technologies that we considered included filtration, germicidal lights, ionizers and any other way of safely removing viruses or deactivating them in breathable air. In short, we found no strong evidence that air treatment technologies are likely to protect people in [real-world](#) settings.

"There is a lot of existing evidence that environmental and surface contamination can be reduced by several air treatment strategies, especially germicidal lights and high efficiency particulate air filtration (HEPA). But the combined evidence was that these technologies don't stop or reduce illness.

"There was some weak evidence that the air treatment methods reduced likelihood of [infection](#), but this evidence seems biased and imbalanced. We strongly suspect that there were some relevant studies with very minor or no effect, but these were never published. Our findings are disappointing—but it is vital that public health decision makers have a full picture.

"Hopefully those studies that have been done during COVID will be published soon and we can make a more informed judgment about what the value of air treatment may have been during the pandemic."

More information: Effectiveness of filtering or decontaminating air to reduce or prevent respiratory infections: A systematic review, *Preventive Medicine* (2023). DOI: 10.1016/j.ypmed.2023.107774 , [www.sciencedirect.com/science/ ... ii/S0091743523003602](http://www.sciencedirect.com/science/.../ii/S0091743523003602)

Provided by University of East Anglia

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