

Use of Air Purifiers to Reduce COVID-19 Exposure

According to the Environmental Protection Agency (EPA):

When used properly, air cleaners and HVAC filters can help reduce airborne contaminants, including viruses in a building or small space. By itself, air cleaning or filtration is not enough to protect people from exposure to the virus that causes COVID-19. (www.epa.gov/coronavirus/air-cleaners-hvac-filters-and-coronavirus-covid-19)

However, air filtration, in conjunction with other best practices recommended by the Centers for Disease Control and Prevention (CDC), can help reduce the potential transmission of COVID-19. To read the CDC's recommendations for employers to reduce virus transmission, visit www.cdc.gov/coronavirus/2019-ncov/community/guidance-business-response.html.

Choosing a Portable Air Cleaner

Portable air cleaners are designed to draw in air and move it through a filter before returning the now clean air to the room. To reduce virus transmission, the purifier needs to be capable of removing particles less than 1 μm . Air cleaners are rated by how much air they can filter, their clean air delivery rate (CADR) per square footage in an hour. For instance, an air cleaner listed for a 500 sq ft. room might exchange the air in that space five times in an hour, but if placed in a larger area will only exchange the air three times, making it less effective. Five or six air changes in an hour are recommended to reduce virus transmission. Visit <https://schools.forhealth.org/ventilation-guide> for a ventilation rate assessment guide to help you determine the size of purifier needed for your space.

Additional Considerations

- Some air cleaners generate ozone. These should not be used in occupied spaces as ozone can irritate the airways. Electrostatic precipitators and ionizers, or negative ion air purifiers, also produce harmful by-products and should not be used.
- Noise is another consideration; some air purifiers can be loud. Check with the manufacturer to ensure that the noise level at the CADR level, usually the highest level on which the unit operates, is not too loud for your environment. If necessary, use a higher rated unit in a smaller space so that the unit can be run at a lower and quieter speed or use two air purifiers. If using two units, do not position them to blow air across occupants.
- HEPA filters should be replaced regularly as recommended by the manufacturer. The unit should be vacuumed and cleaned on a regular schedule – this should be done outside. Filter disinfection is not needed or recommended.
- Air filtration should be maximized in the space 2 hours before and after occupancy.

What This Means for Counties

When used as part of an overall plan to improve air quality, air purifiers can help reduce the transmission of the virus that causes COVID-19, especially in poorly ventilated spaces. To be effective, air purifiers should have a HEPA filter rated to remove particles less than 1 μm and exchange the air in the area five or six times per hour. For more information, contact CTSI at (303) 861 0507. [ctsi](https://www.ctsi.org)