

Role of air cleaning in infection control

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ABSTRACT

The COVID-19 pandemic clearly demonstrated the risks associated with exposure to virus-laden aerosols. The methods were proposed to reduce the risks, including technical systems installed in the buildings, such as improved ventilation with outdoor air, filtration, and air cleaning. This presentation will focus on the latter and discuss its effectiveness and impact on energy. The factors influencing the airborne transmission of infectious aerosols will also be discussed, including relative humidity. The results will be generalized to all respiratory infections that can spread through the air. The results will be discussed in light of recommendations regarding air cleaning published by different organizations and committees, including ASHRAE, REHVA, and the Lancet Commission. The presentation will also attempt to discuss future trends regarding the use of air cleaning and the current activities to summarize the science behind air cleaning.

KEYWORDS

Infectious aerosols; Airborne infection; Filtration; UV-C; Ventilation