

VENTILATION AND PORTABLE AIR CLEANERS

Is the virus that causes COVID-19 spread through ventilation systems? Why are portable air cleaners, such as HEPA filtration devices, not necessary in schools?

COVID-19 is mainly spread by liquid droplets that come out of the mouth and nose when a person with the virus coughs, sneezes, or talks. Larger droplets are heavier, and they usually fall to the ground within two meters. Smaller droplets, also known as aerosols, are lighter and they can float in the air for longer.

While transmission via smaller droplets may occur in specific situations, (e.g. aerosol generating medical procedures,) at this time there is no evidence that ventilation systems, in good operating condition, are contributing significantly to the spread of the virus in BC schools. As a result, portable air cleaners (e.g. HEPA) are not required under the provincial [Public Health Communicable Disease Guidance for K-12 Schools](#). As part of the measures currently in place to keep schools safe, school personnel regularly check the mechanical heating, ventilation, and air conditioning (HVAC) systems in schools to ensure that they are working properly.

Like most common respiratory viruses, COVID-19 spreads primarily through respiratory droplet transmission within a short range. Most commonly, students and staff who test positive for COVID-19 acquire the virus through close contact with a case at home or through their social networks. Unfortunately, school-based ventilation changes are unlikely to prevent transmissions in homes and social networks. In-school transmission accounts for approximately 1% of COVID-19 cases.

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