

Stay safe together while staying two metres apart

Dr Shane Farrelly MFOM Occupational Health Specialist

## COVID-19 Office Ventilation Considerations

The links below are helpful:

<https://www.building.co.uk/communities/how-buildings-can-fight-coronavirus/5104464.article>

[https://www.ashrae.org/file%20library/technical%20resources/ashrae%20journal/2020journaldocuments/72-74\\_ieq\\_schoen.pdf](https://www.ashrae.org/file%20library/technical%20resources/ashrae%20journal/2020journaldocuments/72-74_ieq_schoen.pdf)

### Take away points

1. Increasing ventilation and filtration rates “above industry minimums” reduces the risk of virus transmission by 50%, according to Professor Allen. He believes that most buildings are using “cheap filters” that capture less than 20% of airborne virus-sized particles and by improving these it would be possible to capture more than 80%.
2. Professor Allen also highlighted the importance of managing humidity. He said some viruses survive best when relative humidity (RH) is low – so there is a role for humidifiers. For example, his research team discovered that increasing RH to between 30 and 50% led to a 32% drop in influenza virus survival. Early results appear to show that the coronavirus survives better on surfaces when RH is 20% and does less well at 50%.
3. Ventilation ductwork should be checked and cleaned if necessary-“Viruses attach to particulate matter in the air and when they hit a filter, they break up. Some stick to the filters, others get trapped in the membrane and some get through,” “Filters allow time for other technologies such as UV radiation to destroy the DNA of viruses.”
4. The Health & Wellbeing in Buildings group also stressed the importance of the direction and height of air flow – a factor that tends to get overlooked. “Having clean air technology that drags contaminated air to the ground and keeps pathogens from being kicked up into the air is very important “Ideally you want to create a laminar air flow in order to distribute clean air and collect polluted air as efficiently as possible.”
5. Consider portable room air cleaners with HEPA filters for offices and training rooms

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6. Regular disinfection of frequently touched surfaces <https://www.cdc.gov/coronavirus/2019-ncov/community/organizations/cleaning-disinfection.html>
7. Minimise air recirculation by
  - A. Disable demand-controlled ventilation
  - B. Open minimum air dampers as high as 100% eliminating recirculation

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