
Strata Corporations

Why Ventilation is Not a Solution for Second-Hand Smoke

Air filters, purifiers and ventilation systems do not remove all the chemicals in second-hand smoke and should not be considered viable alternatives to smoking bans in multi-unit dwellings. The scientific evidence proves that ventilation and air-cleaning systems do not provide effective protection against the health hazards of second-hand smoke.

While ventilation and related methods can clear some of the smoke from the air, there is no ventilation system that can remove enough toxins to effectively protect the public from the dangers of second-hand smoke.

Some Facts to consider:

- Second-hand smoke (SHS) can drift from one residence to another through cracks in walls, doorways, plumbing and electrical systems, heating and air conditioning ducts and outdoor patio and balconies. Once the smoke enters your home, many of the dangerous chemicals remain in the air and settle on surfaces in the room, like walls, drapes, carpets, furniture and clothes.
- Current heating, ventilation and air conditioning systems do not eliminate exposure to SHS. Rather, the operation of these systems can distribute SHS throughout a building.
- James Repace, an internationally recognized second-hand smoke physicist, reports that tornado-like levels of ventilation would be necessary to reach an acceptable risk level of exposure to SHS.
- The American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) is the world authority on ventilation, setting internationally-recognized standards that are widely adopted as industry norms. ASHRAE issued a position statement on ventilation and environmental tobacco smoke (ETS), updated in June 2013, which states in part:
 - It is the consensus of the medical community and its cognizant authorities that Environmental Tobacco Smoke (ETS) is a health risk, causing lung cancer and heart disease in adults, and exacerbation of asthma, lower respiratory illnesses and other adverse effects on the respiratory health of children.
 - At present, the only means of effectively eliminating health risk associated with indoor exposure is to ban smoking activity.
 - Although complete separation and isolation of smoking rooms can control ETS exposure in non-smoking spaces in the same building, adverse health effects for the occupants of the smoking room cannot be controlled by ventilation.
 - No other engineering approaches, including current and advanced dilution ventilation or air cleaning technologies, have been demonstrated or should be relied upon to control health risks from ETS exposure in spaces where smoking occurs. Some engineering measures may reduce that exposure and the corresponding risk to some degree while also addressing to some extent the comfort issues of odor and some forms of irritation. However, the public now expects smoke-free air which cannot be accomplished with any engineering or other approaches.

Sources:

U.S. Department of Health and Human Services. *"The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General."* 2006.

<https://www.ashrae.org/about-ashrae/position-documents>