

NO EASY OUT

Why Ventilation Is Not Enough

Secondhand Smoke is Toxic and Causes Cancer.

- Secondhand smoke is a mixture of over 4,000 chemicals, and it contaminates indoor and outdoor air.^{1,2}
- At least 250 of the chemicals in secondhand smoke are toxic or cause cancer, including formaldehyde, benzene, vinyl chloride, arsenic, ammonia and hydrogen cyanide.³
- Secondhand smoke exposure can cause harmful health effects, including:
 - Heart disease
 - Heart attacks
 - Lung cancer
 - Lower respiratory illnesses in children
 - Middle ear disease in children
 - Asthma and chronic respiratory problems in children
 - Low birth weight
 - Sudden infant death syndrome (SIDS).⁴
- The U.S. Surgeon General has declared that there is no risk-free level of secondhand smoke exposure.⁵

Ventilation Systems do NOT Provide Protection from the Toxic Effects of Secondhand Smoke.

- The U.S. Surgeon General's analysis of heating, ventilating and air-conditioning (HVAC) systems found that most systems typically remove large particles, but not the smaller particles or gases in secondhand smoke. HVAC systems alone cannot protect against exposure to secondhand smoke. In fact, the operation of **these systems can actually distribute toxic secondhand smoke throughout a building.** The report concludes that:

Establishing smoke-free workplaces is the only effective way to ensure that secondhand smoke exposure does not occur in the workplace.⁶

- Studies have also shown that high-tech displacement ventilation systems* that attempt to remove cigarette smoke from the air in restaurants and bars do not protect all workers and patrons from secondhand smoke exposure. These researchers conclude that smoking bans remain the only viable option to protect the health of non-smokers and hospitality workers.
- The American Society of Heating, Refrigerating and Air-Conditioning Engineers, the national body that sets standards for indoor air quality, also affirms:

[No] engineering approaches, including current and advanced dilution ventilation[†], "air curtains"[‡] or air cleaning technologies, have been demonstrated or should be relied upon to control health risks from (secondhand smoke) exposure in spaces where smoking occurs....The only means of eliminating health risks associated with indoor exposure is to ban all smoking activity.⁸



California's Smoke-Free Workplace Law Is Misleading About Ventilation.

- Two of the exemptions in California's Smoke-Free Workplace law (Labor Code Section 6404.5) permit smoking inside employee breakrooms and workplaces with five or fewer employees **if there is compliance with State or Federal ventilation standards**, among other requirements. However, no ventilation standards for removing secondhand smoke have been adopted by California's Occupational Safety and Health Standards Board or the federal Environmental Protection Agency.
- Unfortunately, enforcement agencies may not be aware that no standards exist. Therefore, **these exemptions should never be used to allow smoking in indoor workplaces.**

The evidence is clear that ventilation systems do NOT offer adequate protection from the dangers of exposure to secondhand smoke. All California workers deserve equal protection from secondhand smoke to prevent the serious health risks such exposure is known to cause. Exposure to secondhand smoke should not be a condition of employment.

Glossary:

* Displacement Ventilation: Cooler air is introduced at or near floor level to displace the warmer room air up towards the ceiling. This air is then drawn out by an exhaust fan.

† Dilution Ventilation: Air is supplied to a room through vents, resulting in almost complete mixing of the air before it is extracted again

‡ Air Curtain Ventilation: Air is blown in a specific direction at a specific speed, so that a kind of air screen is created.

-
1. CAL/EPA Air Resources Board. *Fact sheet: Environmental Tobacco Smoke: A Toxic Air Contaminant*, 2006. Available at: <http://www.arb.ca.gov/toxics/ets/factsheetets.pdf>
 2. United States Department of Health and Human Services. *9th Report on Carcinogens*. Research Triangle Park (NC): U.S. Department of Health and Human Services, Public Health Service, National Institute of Health, National Institute of Environmental Health Sciences, National Toxicology Program, 2000.
 3. United States Department of Health and Human Services. *9th Report on Carcinogens*. Research Triangle Park (NC): U.S. Department of Health and Human Services, Public Health Service, National Institute of Health, National Institute of Environmental Health Sciences, National Toxicology Program, 2000.
 4. U.S. Department of Health and Human Services, Office of the Surgeon General. *The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General*. 2006. Available at: http://www.cdc.gov/tobacco/data_statistics/sgr/2006/index.htm
 5. U.S. Department of Health and Human Services, Office of the Surgeon General. *The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General*. 2006. Available at: http://www.cdc.gov/tobacco/data_statistics/sgr/2006/index.htm
 6. U.S. Department of Health and Human Services, Office of the Surgeon General. *The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General*. 2006. Available at: http://www.cdc.gov/tobacco/data_statistics/sgr/2006/index.htm
 7. Repace, James and Johnson, Kenneth, "Can Displacement Ventilation Control Secondhand ETS?," *IAQ Applications*, Vol.7, No.4, Fall 2006. Available at: http://www.repace.com/pdf/Black_Dog_Pub_Study.pdf
 8. American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. *ASHRAE Position Document on Environmental Tobacco Smoke*, June 25, 2008.
 9. Available at: http://www.ashrae.org/docLib/20090120_POS_ETS.pdf
 10. Manuel, J. Secondhand Smoke: Displaced Enthusiasm? *Environmental Health Perspectives*. 115 (3), March 2007. Available at: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1849913/>
 11. de Gids, WF and Opperhuizen, A. *Reduction of exposure to environmental tobacco smoke in the Hospitality Industry by Ventilation and Air Cleaning*. RIVM, 2004. Available at: http://www.forces-nl.org/download/RIVMTNO_Eng.pdf
 12. de Gids, WF and Opperhuizen, A. *Reduction of exposure to environmental tobacco smoke in the Hospitality Industry by Ventilation and Air Cleaning*. RIVM, 2004. Available at: http://www.forces-nl.org/download/RIVMTNO_Eng.pdf