

Suzaynn Schick, Ph.D., University of California San Francisco



Dr. Suzaynn Schick is an environmental scientist who studies the health effects of air pollutants. She received her Ph.D. in Biomedical Sciences from the University of California, San Francisco in 2001. As a postdoctoral fellow with Dr. Stan Glantz, she published some of the first data showing that the respiratory toxicity of secondhand smoke is greater than that of the smoke that smoker inhale and that the chemical compounds in secondhand smoke can react to create new, potentially more carcinogenic compounds. She created a state-of-the-art secondhand and thirdhand smoke exposure system that reproduces the physical and chemical changes that occur after smoke is released into indoor environments. Using this system, she has shown that the majority of the particulate material, nicotine, tobacco-specific nitrosamines and polycyclic aromatic hydrocarbons in secondhand smoke deposit on indoor surfaces before they can be removed by ventilation. Her lab is a Core for the California Thirdhand Smoke Consortium and produces standardized thirdhand smoke samples for research in laboratories around the world. She studies the cardiovascular and respiratory effects of exposure to secondhand cigarette smoke, thirdhand cigarette smoke and wood smoke in human subjects. She also studies the cardiovascular effects of electronic cigarette use. Her clinical research has shown that very short exposures to secondhand smoke cause vascular dysfunction and nasal congestion.

Articles:

[Thirdhand cigarette smoke in an experimental chamber: evidence of surface deposition of nicotine, nitrosamines and polycyclic aromatic hydrocarbons and de novo formation of NNK](#)

Schick SF, Farraro KF, Perrino C, Sleiman M, van de Vossenberg G, Trinh MP, Hammond SK, Jenkins BM, Balmes J. Tob Control. 2014 Mar; 23(2):152-9. doi: 10.1136/tobaccocontrol-2012-050915. Epub 2013 May 28

Our data suggest that the majority of the PAHs, nicotine, cotinine and tobacco-specific nitrosamines that are released during smoking in homes and public places deposit on room surfaces. These data give an estimate of the potential for accumulation of carcinogens in thirdhand cigarette smoke. Exposure to PAHs and tobacco-specific nitrosamines, through dermal absorption and inhalation of contaminated dust, may contribute to smoking-attributable morbidity and mortality.