

THIRDHAND SMOKE

WHAT IS THIRDHAND SMOKE (THS)?

- ❖ Pollutants from tobacco smoke that:¹
 - ✓ Remain on surfaces long after tobacco smoke has cleared.
 - ✓ Re-emit back into the air.
 - ✓ React with other chemicals in the environment to create more pollutants.

WHERE IS THIRDHAND SMOKE FOUND?

- ❖ In vehicles and homes where smoking has occurred.¹
- ❖ In homes where people have smoked, even after cleaning, painting, and carpeting.^{1,2}

HOW DOES THIRDHAND SMOKE AFFECT HEALTH?

- ❖ THS contains cancer-causing agents.³
- ❖ THS can cause learning problems in children, affecting reading and math.⁴

WHO IS MOST AT RISK FROM THIRDHAND SMOKE?

- ❖ Small children are exposed when they play on carpets, where THS accumulates.²
- ❖ Because infants often put objects in their mouths, they consume twice as much dust as adults, increasing THS exposure.⁴

HOW CAN THIRDHAND SMOKE BE PREVENTED?

- ❖ Make your car and home 100% smoke-free.
- ❖ Ask about the smoke-free policy before you rent and past smoking in the property before you buy.
- ❖ Avoid housing, motel rooms, cars, and other spaces used by smokers.



CAN THIRDHAND SMOKE BE REMOVED?

- ❖ THS can be removed from hard surfaces by washing with an acidic solution such as vinegar.⁵
- ❖ It is virtually impossible to remove THS from carpets, walls, upholstery, and other porous surfaces.⁵

¹ Burton, A. (2011). Does the smoke ever really clear? Thirdhand smoke exposure raises new concerns. *Environmental Health Perspectives*, 119, 71-74.

² Matt GE, Quintana PJ, Zakarian JM, et al. (2011). When smokers move out and non-smokers move in: residential thirdhand smoke pollution and exposure. *Tobacco Control*, 20(1):e1.

³ Sleiman M, Gundel LA, Pankow JF, Jacob P, 3rd, Singer BC, Destailats H. (2010). Formation of carcinogens indoors by surface-mediated reactions of nicotine with nitrous acid, leading to potential thirdhand smoke hazards. *Proceedings of the National Academy of Sciences*, 107(15):6576-6581.

⁴ Yolton K, Dietrich K, Auinger P, Lanphear B, Hornung R. (2005). Exposure to environmental tobacco smoke and cognitive abilities among U.S. children and adolescents. *Environmental Health Perspectives*, 113(1), 98-103.

⁵ Dreyfuss, J. H. (2010). Thirdhand smoke identified as a potent, enduring carcinogen. *CA: A Cancer Journal for Clinicians*, 60(4), 203-204.

For more information, contact the Kentucky Center for Smoke-free Policy
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