



FACT SHEET

KEY FACTS

- Tobacco products are the most littered item nationwide, accounting for nearly 40% of all littered items.¹
- A non-user exposed to secondhand aerosol smoke produced by the exhaled particles from electronic cigarettes could be exposed to particles similar in size to tobacco smoke and diesel engine smoke.²
- Taking steps to eliminate outdoor tobacco and e-cigarette use promotes health equity for all by de-normalizing unhealthy behaviors and establishing community norms that tobacco and e-cigarette use is not accepted behavior.³
- Tobacco smoke is one of the most common asthma triggers. Children with asthma who are exposed to secondhand smoke are at risk for more severe and frequent asthma attacks, which can be fatal.⁴

WHY IT MATTERS

- Heavy nicotine use can prime adolescent brains for future substance use.¹¹
- One in 15 Virginians currently have asthma, and that number is increasing.¹⁰
- Over 125,000 youth in VA currently have asthma.
 - Nearly 1 in 5 students went to the emergency room or urgent care center last year because of their asthma.¹⁰
- Litter from cigarettes and nicotine vapor products liquid poses an ingestion risk for young children. Ingesting discarded cigarettes or cigarette butts can cause vomiting, tremors, weakness, unresponsiveness, and may lead to respiratory arrest and death.⁵
 - Ingesting discarded nicotine liquid used for e-cigarettes can cause vomiting, a racing heart, difficulty breathing, and even death—a teaspoon of concentrated liquid nicotine can be fatal for toddlers 26 pounds and under.⁶
- People exposed to second-hand aerosol smoke produced by e-cigarettes have shown similar nicotine absorption levels similar to passive smokers.⁷
- E-cigarettes do not produce just water vapor. [e-cigs emit] “harmful chemicals like diacetyl, heavy metals like nickel and lead, and even benzene, the stuff that comes out of your exhaust pipe.”^{8,9}
 - Dangerous metal particles such as chromium are found in vape clouds and the toxic metal can build in your lungs over time.¹²

1. Keep America Beautiful, Inc. 2009 National Visible Litter Survey and Litter Cost Study. https://www.kab.org/sites/default/files/News%20%26%20Info_Research_2009_NationalVisibleLitterSurveyandCostStudy_Final.pdf
2. Thornburg, J., Malloy, Q., Cho, S-H., Studabaker, W., & Lee, Y. (2015). Exhaled electronic cigarette emissions: What's your secondhand exposure? (RTI Press Publication No. RB-0008-1503). Research Triangle Park, NC: RTI Press. <https://doi.org/10.3768/rtipress.2015.rb.0008.1503>
3. Lowrie, C., Pearson, A. L., & Thomson, G. (2018). Inequities in coverage of smokefree outdoor space policies within the United States: school grounds and playgrounds. *BMC public health*, 18(1), 736.
4. Centers for Disease Control and Prevention. Health Effects of Secondhand Smoke, 2018. https://www.cdc.gov/tobacco/data_statistics/fact_sheets/secondhand_smoke/health_effects/index.htm
5. Aleguas A, Alpert HR, Connolly GN, et al. Unintentional Child Poisonings Through Ingestion of Conventional and Novel Tobacco Products. *Pediatrics*. 2010; 125(5):896-899. <https://pediatrics.aappublications.org/content/125/5/896>
6. American Academy of Pediatrics. (2018). Liquid Nicotine Used in E-Cigarettes Can Kill Children. Retrieved from <https://www.healthychildren.org/English/safety-prevention/at-home/Pages/Liquid-Nicotine-Used-in-E-Cigarettes-Can-Kill-Children.aspx>
7. Flouris, A. D., Chorti, M. S., Poulianiti, K. P., Jamurtas, A. Z., Kostikas, K., Tzatzarakis, M. N., ... & Koutedakis, Y. (2013). Acute impact of active and passive electronic cigarette smoking on serum cotinine and lung function. *Inhalation toxicology*, 25(2), 91-101. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/23363041>
8. Jensen, R. P., Luo, W., Pankow, J. F., Strongin, R. M., & Peyton, D. H. (2015). Hidden formaldehyde in e-cigarette aerosols. *New England Journal of Medicine*, 372(4), 392-394.
9. Reilly, S. M., Bitzer, Z. T., Goel, R., Trushin, N., & Richie Jr, J. P. (2018). Free Radical, Carbonyl, and Nicotine Levels Produced by Juul Electronic Cigarettes. *Nicotine & tobacco research: official journal of the Society for Research on Nicotine and Tobacco*.
10. Virginia Department of Health, Virginia 2018 Asthma Burden Report (2018). http://www.vdh.virginia.gov/content/uploads/sites/94/2018/11/Asthma-Burden-Report_Final_10232018-1.pdf
11. Cold Spring Harbor Perspectives in Medicine 2012 Dec; 2(12): a012120. Short- and Long-Term Consequences of Nicotine Exposure during Adolescence for Prefrontal Cortex Neuronal Network Function. Natalia A. Goriounova and Huibert D. Mansvelter. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3543069/>
12. Olmedo, P., Goessler, W., Tanda, S., Grau-Perez, M., Jarmul, S., Aherrera, A., ... & Rule, A. M. (2018). Metal concentrations in e-cigarette liquid and aerosol samples: the contribution of metallic coils. *Environmental Health Perspectives (Online)*, 126(2). Agency for Toxic Substances and Disease Registry (ATSDR). 2012. Toxicological Profile for Chromium. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Services.