

# Secondhand E-cigarette Aerosol and Children

E-cigarettes are electronic, handheld devices that heat e-liquid (a fluid that often contains water, nicotine, and flavorings). When heated, e-liquid turns into an aerosol (vapor) that users inhale. Secondhand aerosol can be harmful to non-users, like children.

## What's in Secondhand Aerosol?<sup>1,2</sup>

E-liquid aerosol is not just water vapor. It may contain:

- Nicotine, the addictive drug in regular cigarettes
- Propylene glycol, often used in food products and medicines
- Vegetable glycerin, often used in food products and cosmetics
- Flavorings, like menthol and diacetyl

## What are the Risks?

Secondhand aerosol can expose non-users, like children, to harmful things such as:<sup>3</sup>

- Cancer-causing toxins:<sup>3</sup>
  - Formaldehyde: Used in embalming fluid
  - Benzene: Found in rubber cement
- Metals and chemicals:<sup>3</sup>
  - Cadmium: Used to make batteries
  - Lead: Once used in paint
  - Toluene: Found in paint thinners
- Heated propylene glycol
  - Short-term exposure may cause eye, throat, and airway irritation.<sup>4</sup>
  - Long-term exposure can result in children getting asthma.<sup>5</sup>



## How to Keep Children Safe

- If you use e-cigarettes, stop. Californians can get free help with quitting at 1-800-NO-BUTTS.
- Keep your personal space aerosol-free.
  - Ask people not to use e-cigarettes in your home or car. Going to another room, or opening windows, is not enough.
  - Insist that no one use e-cigarettes around your children. Be firm. Your children's health is important.
- In California, it is illegal to use e-cigarettes where tobacco use is not allowed.<sup>6</sup>
  - For example, it is against the law to use e-cigarettes in cars if anyone is under 18 years old.
- Take a pledge to protect yourself and your home from the dangers of secondhand e-cigarette aerosol.

<sup>1</sup> U.S. Food & Drug Administration. Vapes, E-Cigs, Hookah Pens, and other Electronic Nicotine Delivery Systems (ENDS). (2017, Nov). Retrieved 11/27/17 from <https://www.fda.gov/TobaccoProducts/Labeling/ProductsIngredientsComponents/ucm456610.htm>

<sup>2</sup> GoSmokeFree. Propylene Glycol (PG) vs Vegetable Glycerin (VG) E Liquid. Retrieved 11/27/17 from <https://www.gosmokefree.co.uk/propylene-glycol-pg-vs-vegetable-glycerin-vg-e-liquid/>

<sup>3</sup> U.S. Department of Health and Human Services. E-cigarette Use Among Youth and Young Adults. A Report of the Surgeon General (2016). Retrieved 11/27/17 from [https://e-cigarettes.surgeongeneral.gov/documents/2016\\_sgr\\_full\\_report\\_non-508.pdf](https://e-cigarettes.surgeongeneral.gov/documents/2016_sgr_full_report_non-508.pdf)

<sup>4</sup> Wieslander, G; Norbäck, D; Lindgren, T. "Experimental exposure to propylene glycol mist in aviation emergency training: acute ocular and respiratory effects." *Occupational and Environmental Medicine* 58:10 649-655, 2001

<sup>5</sup> Choi, H; Schmidbauer, N; Spengler, J; Bornehag, C., "Sources of Propylene Glycol and Glycol Ethers in Air at Home," *International Journal of Environmental Research and Public Health* 7(12): 4213-4237, December 2010.

<sup>6</sup> Public Health Law Center. E-cigarette Regulations – California (2017). Retrieved on 11/29/17 from <http://www.publichealthlawcenter.org/resources/us-e-cigarette-regulations-50-state-review/ca>