

# The Truth About Vaping

Vaping is rising in popularity as a safer alternative to cigarettes, but it still presents notable health risks.

Vaping involves inhaling and exhaling vapor produced by an e-cigarette, vape pen or similar device.

E-cigarettes contain propylene glycerol. When heated, this creates formaldehyde gas, a known carcinogen. There is controversy over the amount of heat required to form formaldehyde, as high-voltage vaping can release more formaldehyde gas,<sup>1</sup> and increased temperatures can lead to cell wall damage and a risk of cancer.<sup>2</sup> Additionally, vaping still exposes individuals to nicotine,<sup>3</sup> and it can increase the risk for gum disease<sup>4</sup> and inhalant-related emphysema.<sup>5</sup>

Vaping isn't just popular with adults; the trend is especially alarming with teenagers. The sleek design of vaping devices has encouraged teens to vape in public, including school classrooms or hallways. In 2016, more than 2 million U.S. middle and high school students used e-cigarettes in the past 30 days.<sup>6</sup>



## Did you know?

Teens who use e-cigarettes are six times more likely to try cigarettes.<sup>4</sup>



# Quick bites

Vaping isn't risk-free. Here's what you should know:

- Increased temperatures within the vape device lead to cell wall damage and cancer risk
- Vapes can still contain nicotine and other toxins
- Vaping can increase the risk of gum disease and inhalant-related emphysema
- Use of e-cigarettes can lower a person's chances of quitting cigarettes by 28 percent<sup>7</sup>
- Vaping eliminates second-hand smoke, but under heavy use, creates the risk of second-hand emissions<sup>8</sup>



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1. Medpage Today, "High-voltage Vaping May Expose Users to Formaldehyde," web. 2. Vicky Yu et al., "Electronic cigarettes induce DNA strand breaks and cell death independently of nicotine in cell lines," *Oral Oncology*, 52 (2016): 58-65. 3. American Association for Cancer Research, "AACR/ASCO Issue Joint Statement Recommending Increased Regulation of Electronic Nicotine Delivery Systems," web. 4. Nevin Zablotsky, "Electronic cigarette hazards," *The Journal of American Dental Association*, 148, no. 2 (2017): 60. 5. MLive, "E-cigarette vapor could lead to emphysema, say CMU researchers," web. 6. Centers for Disease Control and Prevention, "Electronic Cigarettes," web. 7. Reuters, "E-cigarettes Tied to Reduced Odds of Quitting Smoking," web. 8. American Chemical Society, "Exposure to toxins in e-cig vapor varies depending on scenario," *ScienceDaily*, August 2017.

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