

# VAPING 101

with a data dump

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THE STALL SEAT JOURNAL

## E-CIG QUESTIONS

Will e-cigs help smokers quit and reduce harm?

Or will smokers yo-yo between cigarettes and e-cigs and delay quitting?

What effect will years of daily e-puffing on vapors containing flavoring, chemicals, nicotine and ultrafine particles have on the user — and on the environment?

Will some people who otherwise never would have smoked cigarettes start with e-cigs and become addicted?

**E**lectronic cigarettes, also known as e-cigs, vape pens or e-hookahs, come in more than 460 brands with various shapes, sizes and more than 7,700 flavors.

In general, e-cigs are defined by the use of a battery and heating element to deliver an aerosol to the user, containing products including nicotine, flavorings, and other chemicals.

Although available in the United States only since 2007, there are already at least three generations of e-cigs. Health risks will vary based on a legion of factors such as e-cig brand, generation of e-cig, voltage, wick materials, contents of the heated liquid, and the amount of use or exposure.

### What's in the vapor?

While vapor doesn't have carbon monoxide or tar, it certainly isn't "just water." A review of 29 articles found contents

vary within and between products. Contents often do not match the label. The main propellants that make vapor are propylene glycol (PG) and vegetable glycerin (VG). Other chemicals found in the vapor include various flavorings, nicotine, aldehydes, metals, volatile organic compounds and tobacco-specific nitrosamines. As voltage increases, toxins increase. Aerosol generated from a leading e-cigarette manufacturer contained nanoparticles including metals (copper, silver, nickel) and silicate particles (from fiberglass wicks).

### What about the nicotine?

There is no standard quality control. Products are labeled in

milligrams, percentages or using descriptors (eg, low, medium, high). Research in 2014 shows little correspondence between descriptors and milligrams or percentage of nicotine across brands. If swallowed, nicotine liquid can be lethal in adults, but children are most at risk.

WAIT & SEE

### Is vaping safe?

No one knows. The final say on the safety of vaping is still up in the air along with the health of users as they exhale several types of chemicals into the atmosphere with each pull. One thing is clear however: there is a risk of nicotine addiction. Recent data confirm that some e-cigs are capable of delivering nicotine doses as high as a cigarette (the most addictive tobacco product marketed to date).

You can bet all those new vape shops are counting on repeat customers.

Currently there are no federal regulations on the manufacture, use, or sale of e-cigs although the Food and Drug Administration is in the process of passing policies related to these products.

Some suggest that e-cig advertising attempts to re-normalize smoking behavior through the use of e-cigs. More recently, traditional tobacco companies (e.g., Philip Morris) have begun to market their own e-cig brands in what may be an attempt to maintain incoming revenue from dropping cigarette sales.

### If you want to quit tobacco or e-cigs....

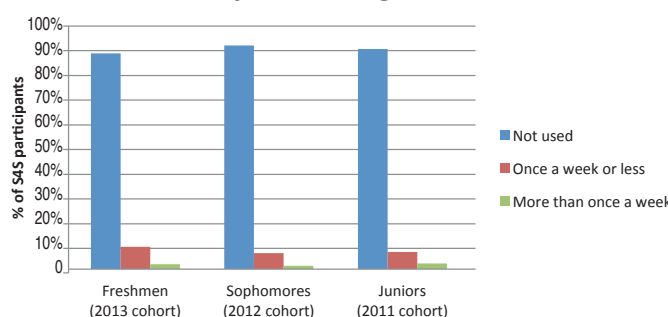
Well researched help exists. There are also FDA-approved medications including two prescription cessation pills (Chantix and Bupropion) and five nicotine replacement products. Email [quit@vcu.edu](mailto:quit@vcu.edu) for info and support.

## FYI

**VCU's Smokefree Workplace Policy:** All university buildings are designated "no smoking," which includes the use of oral electronic devices that produce vapor containing nicotine and/or other substances." The 25-foot rule from doors and windows applies.



During the last 30 days, on how many days did you use e-cigarettes?



Among all S4S participants who took surveys in Spring 2014. Freshmen (n=1714). Sophomores (n=1198). Juniors (n=975).

### E-cig development since 2007

**First generation:** Called "cigalikes" because they often look like a cigarette. They are usually disposable but may have a rechargeable lower voltage battery and replaceable cartridge.

**Second generation:** Called "eGos," often larger and don't look like a cigarette. They utilize cartomizers or tanks to be refilled with e-cig liquid and batteries with higher capacity.

**Third generation:** Called "Mods" because they include mechanical modifications and variable voltage devices. Mods are designed with a re-buildable atomizer and allow users to choose "wicking material" and handmade metal coils.



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