



Consumer Advocates for Smoke-free Alternatives Association

8 Biggest Electronic Cigarette Myths

There are many myths and misconceptions about electronic cigarettes. Let's separate fact from fiction.

Myth #1 - Electronic cigarettes are a threat to children/teens.

FALSE.

Where it comes from:

Legislators and anti-smoking groups assume that children will be drawn to the “electronic gadgets,” the fruit/candy flavors and ease of access on the internet & mall kiosks.

Why it's a wrong:

First, they aren't easy to purchase on the internet. A credit card or bank account is required. So, unless the child steals a parent's credit card and then hides the card statement later on, the risk of being discovered is high. The majority of kiosk vendors have already implemented a policy of forbidding sales to minors. The opportunity for minors to purchase electronic cigarettes at those kiosks is no better than purchasing tobacco cigarettes at a gas station – probably less.

Second, the least expensive electronic cigarette starter kits run between \$35 - \$50 (plus shipping) online and \$90 - \$150 at mall kiosks. This price point is considerable for the average adult, let alone a child. Children would be more likely to spend that money on music, clothes or video games than an electronic cigarette – especially when they can easily get a \$7 pack of cigarettes at the corner store or from friends. Electronic cigarettes also require the additional purchases of accessories and replacement parts. A single battery costs over \$10. Heating elements, which require frequent replacement, cost over \$8 each.

Third, anecdotal accounts indicate that children/teens view electronic cigarettes as a way for adults to quit smoking. They lack the “danger factor,” which reduces appeal. Additionally, surveys of electronic cigarette owners show that the average consumer is overwhelmingly between 30-50 years old and a smoker¹, indicating that even young adults do not find them particularly appealing.

Myth #2 - Sweet flavors and flashy packaging are intended to specifically attract young people.

FALSE.

Where it comes from:

The assumption by critics that the slick advertisements and fruity flavors only appeal to children and their lack of knowledge of the target consumer and the intended purpose of the product.

Why it's wrong:

These products are not intended to be a treatment for nicotine addiction. They are intended to be a way for current smokers to "smoke" without the dangerous toxins and carcinogens. Retailers need to differentiate themselves from stop-smoking aids, to convince long-time smokers that the electronic cigarette is just as appealing as the tobacco cigarette they currently use.

Just as with marketing cars, televisions, cell phones, alcohol and other adult products, advertisers attempt to make the devices appeal to adults with a "coolness factor." Studies show that "smokers are more likely than the general population to be risk-taking, extroverted, defiant, and impulsive"⁷ - very similar to teen demographics - so the misconception is understandable, but misguided. Often overlooked by critics in these ads are the claims about the ability to "smoke anywhere" and have a safer/healthier option to smoking – a clear indication that they are targeting current smokers and smokers concerned about their health and not new/young smokers.

Regarding sweet flavors, the tobacco-flavored liquid does not have a pleasant taste for many smokers, as it is difficult to replicate the tobacco smoke taste. Adults, who make up the majority of electronic cigarette consumers, specifically requested alternative flavors that would work well with the liquid base – which were mostly sweeter fruit and candy flavors. About 50% of adult electronic cigarette owners polled (over the age of 26)¹ report that they primarily use these non-tobacco flavors and attribute them with the ability to keep them from returning to tobacco cigarettes. They also testify that the sweeter flavors make tobacco cigarettes taste particularly foul and further reduce their chances of returning to smoking cigarettes.

Myth #3 - Electronic Cigarettes all contain anti-freeze.

FALSE.

Where it comes from:

In 2009, the FDA released a press statement claiming that they tested electronic cigarettes and found diethylene glycol, an ingredient in anti freeze.²

Why it's wrong:

Independent labs extensively tested other electronic cigarettes and found no evidence of diethylene glycol, the toxic component of anti-freeze claimed to have been found in the brands the FDA tested.³

To further the confusion, electronic cigarette liquid is made of propylene glycol, an ingredient recognized as safe for human consumption by the FDA. While propylene glycol is sometimes used in anti-freeze, it is an additive intended to make it LESS harmful if accidentally swallowed.

The FDA tested just 18 cartridges, from only two companies. Out of those 18, just one tested positive for “about 1% diethylene glycol.”⁴ Because so many other tests failed to find diethylene glycol, many experts conclude that the single sample may have been contaminated in some other way. By no means is it considered a standard ingredient in electronic cigarettes.

If electronic cigarettes did contain anti-freeze, there would be news reports about the thousands of electronic cigarette owners suffering from diethylene glycol poisoning and that is not the case. To date, after five years on the market worldwide, there have been no such reports.

Myth #4 - Electronic cigarettes are just as deadly and carcinogenic as tobacco cigarettes.

FALSE.

Where it comes from:

The FDA stated they found trace amounts of carcinogens in the nicotine cartridges and the media and health organizations used that statement to claim that electronic cigarettes are just as dangerous as tobacco cigarettes.²

Why it's wrong:

The FDA found trace amounts of “tobacco-specific nitrosamines” in the samples they tested, which can cause cancer under certain conditions and in sufficient amounts.⁴ The FDA allows certain levels of nitrosamines in consumable products. For example, tests show that other nicotine products, such as nicotine gum and nicotine patches, also contain the same tobacco-specific nitrosamines. The FDA did not release any information on the levels they found, however, the scientific definition of “trace amount” means amounts that are “detectable,” but too small to even accurately measure.

An independent study by Dr. Murray Laugesen showed that, on average, the electronic cigarette contained 8.18ng nitrosamines per 1g of liquid. 8 ng in 1g = eight parts **per trillion**, an extremely tiny amount. By comparison, nicotine gum tested at 2ng, the nicotine patch tested at 8ng and Marlborough cigarettes tested at a staggering 11,190ng. That translates to electronic cigarettes containing 1,200 times LESS of these cancer-causing nitrosamines than tobacco cigarettes and about the same as the FDA-approved nicotine patch.³

Myth #5 - Electronic cigarettes may be more addictive than regular cigarettes.

FALSE.

Where it comes from:

The infamous FDA testing showed that the levels of nicotine found in the cartridges varied from the advertised amount. Also, traces of nicotine were found in cartridges labeled as “no nicotine.” Critics claim that means electronic cigarette users may be inhaling too much nicotine and causing them to become even more addicted.

Why it's wrong:

Two independent tests, the one by Dr. Laugesen and one by Dr. Thomas Eissenberg at Virginia Commonwealth University⁵, showed that electronic cigarette vapor does not deliver nicotine as “efficiently” as tobacco smoke and actually delivers nicotine in lower amounts than tobacco smoke.

Additionally, smokers tend to “self-regulate” their intake, as seen by how many cigarettes a smoker uses in a day. When the need for nicotine is met, the smoker – or in this case, the electronic cigarette user – no longer has a craving and ceases consumption. The fundamental behavior of nicotine addiction just doesn't support the claims of increasing the addiction in that manner.

Myth #6 – Second-hand “vapor” is a threat to bystanders.**FALSE.****Where it comes from:**

Anti-smoking groups claim the toxins and carcinogens in electronic cigarettes (as well as addictive nicotine) can be accidentally inhaled by bystanders, just like second-hand tobacco smoke.

Why it's wrong:

As shown previously, electronic cigarettes already contain a tiny, barely detectable fraction of the carcinogens found in tobacco cigarettes. They also have been shown not to contain any of the toxins in the amounts found in tobacco cigarettes and that they deliver very little nicotine in the vapor. So, given that the vapor already proves little, if any, danger to the actual user, any danger to bystanders by the exhaled vapor would be negligible.

Additionally, tobacco cigarettes create “side stream smoke,” which is the smoke that comes directly from the end of a lit cigarette and the smoke lingers in the air and travels a fair distance from the smoker.

Electronic cigarette vapor does not behave in the same manner as tobacco smoke. There is no vapor produced from the device, until the user activates it by inhaling, so no “side stream vapor” is created and the vapor dissipates very quickly. In the event that a bystander would pass through the vapor, since it doesn't contain the irritating toxins of tobacco smoke, it would likely be barely detectable beyond the faint scent of the flavor and only for a fleeting moment.

Myth #7 - Electronic cigarettes are a “gateway” to tobacco smoking.**FALSE.****Where it comes from:**

Critics theorize that more non-smokers will be willing to try electronic cigarettes, due to their attractive flavors and attractive styling.

Why it's wrong:

People start smoking for different reasons. Studies show that children and young adults are more influenced by their peers, parents and stress levels than advertising or flavors.⁶ The most popular tobacco flavors among youth are Camel, Marlborough and Newport – fruit and candy flavors only made up 2% of sales when they were legal – and rarely do people cite the flavor as a reason they started smoking.

Considering that the electronic cigarette is perceived as a health concession for adults, the high start-up costs and the easy accessibility of tobacco cigarettes, electronic cigarettes are unlikely to appeal to new smokers in significant numbers.

Additionally, given the fact that current users claim that electronic cigarettes make tobacco smoke taste considerably foul, in the unlikely event that a new smoker chooses electronic cigarettes over tobacco cigarettes, the chance they will find tobacco smoking appealing is even less.

Taking into account that electronic cigarettes have been shown to be both less toxic and less carcinogenic than tobacco cigarettes, if new smokers actually do choose electronic cigarettes over tobacco cigarettes, it would actually benefit their health and safety and that of those around them.

Myth #8 - If electronic cigarettes were no longer available for smokers, those smokers would simply quit smoking or use traditional stop-smoking aids.

FALSE.

Where it comes from:

Wishful thinking.

Why it's wrong:

According to the 998 poll participants, only 18% responded that they would use traditional NRTs or attempt to quit cold turkey. Nearly 20% said they would switch to other tobacco alternatives, such as snus or snuff; and a whopping 61% indicated they would most likely resume smoking cigarettes.¹

Sources:

1. Consumer Advocates for Smokefree Alternatives, [Electronic Cigarette User Poll](#), CASAA.org
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3. Health New Zealand, Dr. Murray Laugesen, [Safety report on the Ruyan e-cigarette Cartridge and inhaled Aerosol](#), HealthNZ.co.nz
4. US Food & Drug Administration, [Final Report on FDA Analyses](#), FDA.gov
5. Virginia Commonwealth University, Dr. Thomas Eissenberg, [Study Reveals a Need to Evaluate and Regulate 'Electronic Cigarettes'](#) "Electronic cigarettes" fail to deliver nicotine , News.vcu.edu
6. Journal of Consulting and Clinical Psychology, [Differentiating Stages of Smoking Intensity Among Adolescents: Stage-Specific Psychological and Social Influences](#), APA.org
7. Dr. Michael Rabinoff, "Ending the Tobacco Holocaust, How Big Tobacco affects our health, pocketbook and political freedom, and what we can do about it." Elite Books, Copyright 2006

CASAA's mission is to ensure the availability of effective, affordable and reduced harm alternatives to smoking by increasing public awareness and education; to encourage the testing and development of products to achieve acceptable safety standards and reasonable regulation; and to promote the benefits of reduced harm alternatives. CASAA is a volunteer, non-profit consumer organization and receives no compensation from any tobacco, pharmaceutical or electronic cigarette companies.