

Electronic Cigarettes and other Nicotine Delivery Products

In 2015, 16% of youth used e-cigarettes in the past 30 days (CDC). Though e-cigarette companies have marketed their products as cessation devices, 20% of teen e-cigarette users have never smoked cigarettes before. Almost half of teen users do not believe e-cigarettes are harmful to their health. (NIDA)



Rolo Badge and X Force by SMOK

Image from FDA features popular e-cigarettes JUUL, Bo and Phix.

What are E-Cigarettes?

E-cigarettes also referred to as “vape pens”, are devices that heat liquid into a vaporizer that is then inhaled by the user. The liquid or “e-juice” commonly contains nicotine, solvents and flavoring. Nicotine is not the only harmful chemical found in e-cigarettes. Other harmful additives include:

- Diacetyl (flavoring linked to lung disease)
- Metal particles like nickel and lead
- Volatile Organic Compounds
- Other cancer-causing compounds

Flavored liquid can be purchased without nicotine. However, some products marketed as containing zero nicotine do in fact contain nicotine. (CDC)

Health Effects:

Although e-cigarettes do not burn tobacco, the harmful chemicals in e-cigarettes may cause short-term and long-term health effects, like cancer and lung disease (NIDA). Nicotine has the following health effects:

- Highly addictive
- Harmful to developing brains (children into their mid-20s)
- Abdominal pain, vomiting and diarrhea
- Increased heart rate and blood pressure



Available in both 3% and 5% nicotine. The 5% nicotine Juulpods are approximately equivalent to 20 cigarettes, or 200 puffs.

Where do teens get e-cigarettes?

Though the legal age to purchase devices is 18, teens are finding ways to use e-cigarettes. E-cigarettes can be purchased online, at vape shops or where tobacco products are sold. E-cigarettes can be purchased for as low as \$6 for a rechargeable e-cigarette or a disposable e-cigarette. The liquid used in e-cigarettes can be purchased with or without nicotine and at varying strengths of nicotine for as low as \$1. Similar to other substances, teens may gain access to e-cigarettes from friends, peers and even family members.



E-liquid come in hundreds of different flavors, like cotton candy, cinnamon and watermelon. These flavors cause the vapors to have fragrant smell, making it easy to disguise. Several devices used look like everyday objects, like flash drives or pens. Brands of products are now available to help disguise e-cigarettes.

Educational Resources and Videos:

30 second PSA: <https://youtu.be/zYuyS1Oq8gY>

JUUL PSA produced by teens: <https://youtu.be/7EsNG7RcStQ>

PBS Video on Vaping:

<https://www.pbs.org/video/teen-vaping-1531870790/>

<https://www.cdc.gov/tobacco/infographics/youth/pdfs/e-cigarettes-usb-flash-508.pdf>

http://dhhs.ne.gov/publichealth/Pages/tfn_yop.aspx



VapRwear allows users to discreetly smoke through drawstring.

Alternative Ways Youth Use E-Cigarettes

Aside from the use of e-cigarettes to vape nicotine and other flavorings, there has also been an increasing trend amongst youth to use e-cigarette vaporizers for other substances including liquid THC (the main psychoactive substance found in marijuana) and marijuana wax. Because of the highly concentrated levels of THC in both the liquid and wax form of marijuana, the substances produce a more powerful high while giving the appearance of inhaling legal, nicotine vapors. Likewise, vaporized marijuana doesn't have as strong a smell as smoked pot. Such substances not only offer a more powerful high but also a more dangerous high. While a pot cigarette can contain up to 18% THC, the liquid or wax form can contain up to 80% THC. This higher potency high can leave damaging effects on teen brain development.



Nicotine Toothpicks

Flavored nicotine toothpicks are designed for oral absorption of nicotine. Fifteen toothpicks contain the same amount of nicotine as one pack of cigarettes. Nicotine toothpicks are marketed as an easy and discreet way to use nicotine.

References:

Centers for Disease Control and Prevention, National Institute on Drug Abuse, USA Today (October 2017), The New York Times (February 2018), The Boston Globe (November 2017), SAMHSA and Journal of Pediatrics

Mishra A, Chaturvedi P, Datta S, Sinukumar S, Joshi P, Garg A. Harmful effects of nicotine. Indian J Med Paediatr Oncol. 2015;36((1)):24-31. <http://dx.doi.org/http://dx.doi.org/10.4103/0971-5851.151771> [PMC free article] [PubMed]

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