

# E-Cigarettes and Vaping: What Clinicians Need to Know

## **Facts about E-Cigarettes:**

- E-cigarettes produce an aerosolized mixture containing flavored solution and nicotine that is inhaled by the user. The solution can contain 0-59 mg/mL of nicotine
- E-cigarettes have many names, including e-cigs, vape pens, e-hookah, e-cigars, mechanical mods, and pod systems
- E-cigarettes are battery-powered. They can be disposable or rechargeable via a USB port
- E-cigarettes come in many forms. They can resemble combustible cigarettes, cigars, pipes, flash drives or pens
- E-cigarettes contain a liquid nicotine solution that is often flavored. Flavors are designed to appeal to children, and may make them more likely to begin using e-cigarettes



Common types of e-cigarettes

## **Health Harms:**

- E-cigarette solutions contain harmful chemicals and carcinogens
- The nicotine in e-cigarettes is addictive and has neurotoxic effects on developing brains
- Animal data shows that exposure to secondhand e-cigarette vapor harms lung growth and function
- Long-term health effects on users and bystanders are still unknown
- These products can also be used to vape marijuana, herbs, waxes, and oils

## **Danger to Youth:**

- E-cigarettes are the most common tobacco product among teens: in 2019, over 25% of high school students reported having used e-cigarettes in the last 30 days
- Youth who use e-cigarettes are at increased risk of smoking traditional cigarettes
- Children are exposed to e-cigarette marketing in media, magazines, billboards and online
- E-cigarettes mimic combustible cigarette use and help re-normalize smoking behaviors
- E-cigarettes have been marketed as a way to quit smoking, however, there is no conclusive data to support this claim. Many studies have found that smokers are less likely to quit if they are using e-cigarettes.

## **How to Talk about E-Cigarette Use with Patients and Families:**

- E-cigarette use is often not considered smoking. Asking “Do you smoke?” may not help you identify patients and families who use e-cigarettes
- Instead, combine broad screening questions with specific examples, such as: “In the past year, have you used a tobacco product, like cigarettes, e-cigarettes (vaping devices such as tanks, mods or JUUL) or cigarillos/little cigars?”
- Talk to families about the health harms of these products, especially for youth
- Do not recommend e-cigarettes for smoking cessation. If a patient is using e-cigarettes to try to quit smoking, suggest proven smoking cessation techniques, including Nicotine Replacement Therapy and refer to national quitline or online help (call 1-800-QUIT NOW or go online to [www.smokefree.gov](http://www.smokefree.gov))

**Regulatory Issues:**

- In 2016, the Food & Drug Administration (FDA) expanded its regulatory authority to include the manufacture, import, packaging, labeling, advertising, promotion, sale and distribution of all tobacco products, including e-cigarettes
- Under this new law, often called "Deeming," the FDA:
  - Requires health warnings on e-cigarettes and other tobacco products
  - Prohibits the sales of e-cigarettes to underage youth
  - Bans free samples and prohibits the sale of e-cigarettes in vending machines
  - Requires that e-cigarette manufacturers receive marketing authorization from FDA
  - Requires vape shops that mix e-liquids to comply with legal requirements for tobacco manufacturers
- If you suspect a retailer is violating the FDA rules, you can report them to FDA: <http://bit.ly/2bewrVh>
- In 2020, the federal age to purchase tobacco products, including e-cigarettes was raised to 21 years.
- AAP Policy recommends banning e-cigarette use in workplaces and public spaces, prohibiting flavors in e-cigarette liquids, and banning advertising of e-cigarettes where youth may see it. The AAP Division of State Government Affairs has created a resource to help you understand and track e-cigarette legislation in your state: <http://bit.ly/2bevPPA>

**Risk of Poisoning:**

- E-liquid nicotine solutions can poison children and adults through ingestion or skin absorption
- Calls to poison control centers related to e-cigarettes skyrocketed from 1 per month in 2010 to 215 per month in 2015: half of these calls involve children under 5 years old
- Less than half a teaspoon of liquid nicotine can be fatal to a toddler
- The Child Nicotine Poisoning Prevention Act was signed into law in 2016, requiring that liquid nicotine used for e-cigarettes refills be sold in childproof packaging

**What to Watch For: Nicotine Poisoning**

- Initial symptoms of nicotine poisoning include emesis, sweating, and dizziness
- Can progress to tachycardia, hypertension, lethargy, seizures, and respiratory muscle weakness

**Recommendations for E-Cigarette Users** (Courtesy of American Association of Poison Control Centers)

- Protect your skin when handling the products
- Always keep e-cigarettes and liquid nicotine locked up and out of the reach of children
- Follow the specific disposal instructions on the label
- If exposure to liquid nicotine occurs, call the local poison center at 1-800-222-1222

For more information about these devices, including statistics and citations, please visit

<http://www2.aap.org/richmondcenter/ENDS.html>

Visit the AAP Richmond Center online at: [www.richmondcenter.org](http://www.richmondcenter.org)