

City Health Information

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New York City Department of Health and Mental Hygiene

Guidance on Addressing E-cigarettes with Pediatric Patients

- More than 17% of New York City high school students use e-cigarettes, exposing them to the risk of nicotine dependence and to other harmful chemicals.
- Youth who use e-cigarettes are also more likely to later try cigarettes.
- Discuss the risks of e-cigarettes with your patients and ask about use:
 - Starting at age 5 years, provide education and counseling to prevent e-cigarette and tobacco use as part of ongoing anticipatory guidance.
 - Starting at age 10 years, screen for e-cigarette and tobacco product use. Encourage disclosure by asking parents/guardians to leave the examination room when age appropriate.

Dear Colleague:

More than 17% of NYC high school students use [e-cigarettes](#), often thinking that these products are harmless. E-cigarettes, also called vapes or vape pens, are battery-operated devices that heat a liquid (e-liquid) into an inhalable aerosol that delivers nicotine and other chemicals to the lungs. E-cigarettes come in many shapes and sizes. Using an e-cigarette is often called vaping. JUUL, an e-cigarette that looks like a flash drive, is very popular; using a JUUL is often called JUUL-ing.

HEALTH EFFECTS OF E-CIGARETTES

Nicotine: Nicotine is particularly addictive for youth, who may develop symptoms of dependence even with non-daily use. One JUUL pod, or refill, can contain as much nicotine as an entire pack of cigarettes. For youth, nicotine can have short-term effects, like impaired memory and concentration, which may decrease learning ability. Youth who use e-cigarettes are also more likely to later try cigarettes.

E-liquid and aerosol: The main component of many e-liquids is propylene glycol or glycerol, and their mists can cause airway irritation and cough. The aerosol from heated e-liquids can also contain harmful chemicals like formaldehyde and benzene (carcinogens), diacetyl from flavoring (linked to lung disease), and heavy metals (nickel, tin, lead).

Currently, the formulation of e-liquids is not regulated. Given the thousands of available flavors, the additives and flavorings in each product can vary. Candy and fruit flavors often appeal to children and make the products seem harmless. Although many of the chemicals are safe to ingest, the long-term impact of inhaling them, along with any byproducts generated via heating, is unknown. Bystanders exposed to the aerosol are also exposed to these chemicals and to nicotine.

RECOMMENDATIONS

It is important to discuss these products with your young patients and their families and ask about their use. The New York City Health Department recommends that providers adopt the following recommendations:

Recommendation 1. Starting at age 5 years, provide education and counseling to prevent e-cigarette and tobacco use as part of ongoing anticipatory guidance.

- Assess the patient's knowledge. Ask "Have you heard of vaping? Tell me what you've heard or what you know."
- Give correct information about the health risks of e-cigarettes:
 - For elementary and middle school students, it may be helpful to focus on the short-term effects, including potential for addiction and personalized health risks (eg, "Trying vaping a few times can get your body hooked and make it harder to stop.").
 - You can allude to marketing manipulation (eg, "Companies make vapes in lots of fruity flavors, which makes them seem safe and cool, but they're not.").
 - For high school students, you can allude to legal and financial consequences and discuss potential long-term consequences and secondhand risks to those around them (eg, "Vaping aerosol has lots of chemicals in it, including some that can cause cancer. Each flavor and liquid can have different chemicals in it, with different risks. We still don't know what the effects are from vaping and breathing in those chemicals over time.").
 - If parents are present when preventive counseling and education is provided, they can reiterate this messaging at home.
 - This is also a good opportunity to remind parents about the importance of maintaining a smoke-free and vape-free home (eg, "Children are more likely to smoke when their parents, siblings, or friends smoke.").

Recommendation 2. Starting at age 10 years, screen for e-cigarette and tobacco product use. Encourage disclosure by asking parents/guardians to leave the examination room, when age appropriate.

- Asking about e-cigarette use by the patient's friends or peers can help start the conversation.
- Ask about broad categories of products, like vapes or vaping, with specific examples, like JUUL (eg, "Do any of your friends use vapes, or JUUL?").
- This is an opportunity to reiterate health risks (see Recommendation 1), advise against use, and give positive reinforcement when appropriate.

With your help, we can ensure that young New Yorkers understand the risks of e-cigarette use and avoid nicotine dependence and tobacco use.

Thank you for your efforts to improve the health of New York City's children and adolescents.



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