Electronic Cigarettes

What Are E-cigarettes?

Electronic cigarettes (e-cigarettes) are battery-operated devices that heat a liquid to produce an aerosol that users inhale. While using an e-cigarette is often called “vaping,” the devices produce an aerosol, not a vapor. Unlike vapor, the aerosol from an e-cigarette can contain tiny chemical particles from both the liquid solution and the device. This aerosol typically contains nicotine, flavorings, and other additives. The term e-cigarette is often used to refer to a broad class of products also known as electronic nicotine delivery systems (ENDS), which also includes electronic cigars (e-cigars), electronic hookahs (e-hookahs), vapor (vape) pens, and other products.

Current Generation of E-cigarettes

E-cigarettes that have a high-tech, sleek design have recently entered the market. JUUL has quickly established itself as a leading e-cigarette product. There are currently several “copycat” products on the market, including Suorin Drop, EonSmoke, and myblu. These products also have a high-tech look and high nicotine delivery through the use of nicotine salts in e-liquids and pods.

Rising Usage of E-cigarettes Among Youth

Use of e-cigarettes has increased dramatically in Indiana and the U.S. in recent years.

- Similarly, in Indiana, e-cigarette use among middle school students increased from 2.8% to 5.5%, and increased from 10.5% to 18.5% among high school students.
- E-cigarettes remain the most commonly used tobacco product among youth in Indiana and the U.S.
- In 2018, e-cigarettes surpassed cigarettes as the most common first tobacco product tried among Hoosier middle and high school students.
- The U.S. Surgeon General has concluded that e-cigarette use is strongly associated with use of other tobacco products among youth. One in five Hoosier youth who used e-cigarettes also smoked cigarettes in 2018.
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Fast Facts:
- New e-cigarette brands such as JUUL and Suorin Drop have a high-tech look and high nicotine delivery through nicotine salts.
- Use of e-cigarettes has increased dramatically in Indiana and the U.S.\(^3,5\)
- 3 out of 4 Indiana youth who use e-cigarettes report seeing tobacco ads in stores.\(^3\)
- E-cigarettes are the most commonly used tobacco product among Hoosier youth.\(^3\)

E-cigarette Marketing and Flavors
- E-cigarette marketing is prevalent on social media and often includes tactics to increase the appeal of tobacco products to youth, including that resonate with youth such as rebellion and glamor.\(^2,19\)
- In 2018, about three-fourths of Indiana youth who use e-cigarettes reported exposure to tobacco ads in stores.\(^3\)
- Companies manufacture and sell e-cigarette pods and solutions in thousands of unique flavors, including candy and fruit flavors that may appeal to youth.
- 64.6% of high school e-cigarette users in Indiana used flavored e-cigarettes in 2018.\(^3\)

Harmful Effects of Nicotine
E-cigarette liquids and pods often contain nicotine. In 2015, about 99% of e-cigarettes sold from convenience stores and other retailers contained nicotine.\(^6\) Exposure to nicotine raises several health concerns, including:

- **Addiction:** Nicotine is highly addictive.\(^7\) There is also evidence that e-cigarette use results in symptoms of dependence on e-cigarettes.\(^6\)
- **Impaired youth brain development:** Nicotine use can disrupt adolescent brain development, including parts of the brain that control attention, learning, and susceptibility to addiction.\(^1,8,20\)
- **Impaired fetal development:** Nicotine use by pregnant women is toxic to fetuses and impairs fetal brain and lung development.\(^1,14,20\)
- **Poisoning:** E-cigarette solutions can have very high concentrations of nicotine, which creates a risk of overdosing or poisoning.

Public Health Response to E-cigarettes
Given concerns about the health impact of e-cigarettes, the U.S. Surgeon General has concluded that precautionary strategies to protect youth and young adults from adverse effects related to e-cigarettes are justified.\(^2\) These include strategies modeled after evidence-based tobacco control practices such as:

- Incorporating e-cigarettes into smoke-free policies, such as tobacco-free school grounds policies
- Preventing youth access to e-cigarettes
- Regulation of e-cigarette marketing that is likely to attract youth and young adults
- Educational initiatives targeting youth and young adults\(^2\)

Resources for Tobacco and Nicotine Addiction
Given the rise in e-cigarette use among youth and the higher levels of nicotine available through e-cigarette brands such as JUUL, a new generation of young people addicted to nicotine. Tobacco users of any age who want to quit should contact a healthcare provider for assistance, and tobacco users 13 years and older can call the Indiana Tobacco Quitline at 1-800-QUIT-NOW or visit [www.QuitNowIndiana.com](http://www.QuitNowIndiana.com) for free evidence-based support, advice, and resources.
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References


