



Youth Vaping Risks and Prevention



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Vaping has become a common part of adolescent life, often appearing in schools, social gatherings, and online spaces. Many teens report trying vapes because friends use them or because flavored products seem harmless. Yet vaping exposes young people to nicotine and other chemicals that affect their health during a critical period of brain development. Families, schools, and communities face rising concerns as youth report stress, anxiety, or social pressure as reasons for trying vapes. Research evidence can speak to vaping risks and highlights the benefits of prevention to support healthier futures for young people.

Vaping Terminology

Vaping refers to the [use of any device](#) that heats a liquid into an aerosol that is inhaled. Originally, vapes included flavoring with or without nicotine, but people are increasingly using vapes containing THC and CBD (ingredients in marijuana/cannabis). Vapes come in many shapes—often ones that are easy to conceal and resemble common items like pens or flash drives—and have different features (e.g., disposable or rechargeable). Vapes can be purchased at online retailers, dedicated vape shops, and conventional retailers like convenience stores.

Youth Vaping Is Common and Begins Early

- [National data](#) from 2021 showed that **36.2% of high school students had ever used a vape** and **18% currently used** them, with **5% reporting daily use**. Female students use at higher rates than males.
- [In 2024](#), 10% of 8th graders, 15% of 10th graders, and 21% of 12th graders vaped in the past year.
- Though rates of usage have decreased since the pandemic, vaping remains the [most used nicotine product](#) among adolescents, with about [1.6 million youth](#) reporting current e-cigarette use. Vaping use is only exceeded by alcohol and marijuana/cannabis use.
- Co-use of nicotine and cannabis is widespread, affecting as many as [half](#) of adolescent and young adult vapers. Youth who co-use cannabis and nicotine show lower cessation success and higher dependence. Nonetheless, [over half](#) of teens have made at least one attempt to quit.

What drives vaping?

- Many teens [report](#) first vaping **socially**, and continuing to use regularly in response to peer relationships and/or to **cope with strong emotions** like anxiety or depression.
- Perceived **availability** of vapes remains high, with many students [reporting](#) easy access. [More than half](#) (54.1%) got vapes from a friend, family member, or someone else, indicating students may be finding unregulated means to acquire vapes.
- Vape **flavoring** and “multisensory” flavor experiences (i.e., menthol-like cooling sensations) are [associated with greater use](#). Most adolescents [use flavored vapes](#) to improve the taste.
- Vaping is also strongly influenced by [marketing that works on teens](#) to make vaping seem normal, appealing, “cool”, and “safe”. Many teens are even [unaware that their device contains nicotine](#).

Vaping Carries Health Risks for Adolescents

- Many vapes contain **nicotine** equivalent of up to 30 cigarettes, and the labeling may [make it difficult](#) to compare or understand nicotine levels. Nicotine is **addictive** and may interfere with brain development [related to](#) cardiorespiratory functioning, attention, learning, memory and reward-related brain circuitry during the sensitive period of adolescence.
- Vape aerosols contain **dozens of chemical compounds** including formaldehyde and [heavy metals](#), with long-term effects still unclear. [Toxins, carcinogens and irritants](#) have also been identified in vapes.
- Vape usage is associated with higher risks of diagnosed [bronchitis, pneumonia and chronic cough](#), and these risks are amplified in youth who used both vapes and cigarettes.
- Adolescents who vape are [three times more likely](#) to start smoking **cigarettes**, and vapes have led to an [increase in dual use](#) of vapes and alcohol, cannabis, and other illicit drugs (some of which, such as cocaine, can be administered via the vape device).

Considerations for Policymakers

The policy landscape is shifting rapidly on vape regulation, and vaping technology also evolves quickly. A [combination of approaches](#) from the following strategies may be most effective.

Regulate Access and Marketing

- **Restrict access to specific vaping products.**
 - A growing number of [states are moving to ban](#) or tightly **restrict disposable vapes** that have not been authorized for sale by the US Food and Drug Administration (FDA).
 - Implement and evaluate **restrictions on flavored products**, given strong evidence that youth gravitate towards such flavored products. [California's policy](#) led to significant declines in e-cigarette sales, and [other research](#) has demonstrated that these policies prevent initiation.
- **Restrict the number, [location](#), or type of retailers (e.g., to [adult-only outlets](#))** to reduce use.
- **Pair restrictions with supports for cessation to limit unintended consequences**, as vaping can [help people quit](#) smoking, and restrictions on vaping have been associated with [increases](#) in cigarette smoking. Restrictions may have [uneven effects](#) across youth populations.
- Increase **taxes to [reduce](#) both vaping and smoking.**
 - Given the potential for unintended consequences of directing people from vaping to cigarettes, a [tiered approach](#) to taxation of nicotine products (e.g., taxing cigarettes at a higher rate than vaping products) could simultaneously reduce rates of consumption while generating revenue to fund programs to support affected populations.
- **Restricting [advertising](#) to youth (especially on social media) and requiring [accurate labeling](#) of nicotine** may reduce youth initiation.

Leverage Relationships and Evidence-Based Programs

- **Strengthen school-based prevention programs** that address peer influence, coping skills, and common misconceptions about vaping. Many, but not all, [programs](#) have been shown in rigorous evaluations to effectively reduce substance use, reduce initiation, and improve long-term outcomes.
- **Educate parents/caregivers** about how to talk with their kids about vaping. [Family-based](#) prevention works by teaching good parenting skills, promoting household rules, and improving communication.
- **Expand and support youth-focused digital cessation tools**, such as text message programs and [social media messaging](#), which have increased dual abstinence from nicotine and cannabis.
- **Engage healthcare providers** (e.g., [pediatricians](#)) to enhance prevention efforts from schools, community, and family. [Policymakers can](#) improve alignment and collaboration across these sectors, strengthen the prevention workforce, and finance family-focused prevention approaches.

For the biggest ROI, invest in primary prevention and research on vaping:

- Primary prevention, such as intervening early to promote positive development, can prevent vaping *and* reduce other problem behaviors such as delinquency and teen pregnancy. [These approaches](#) can improve behavioral health, education outcomes, and promote healthy adulthood.
- Ongoing research can help to adapt programs for tobacco prevention and evaluate their impact on vaping. Evaluating existing vape-specific cessation programs – or example, programs focused on pharmacotherapy and nicotine replacement therapy for youth – would also support community health.



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