

# Teen Substance Use

## Insights From the ABCD Study®



Most youth practice safe and healthy behaviors. However, some young people are at an increased risk of using substances and other behaviors that can lead to poor health outcomes. The Adolescent Brain Cognitive Development<sup>SM</sup> (ABCD) Study is the largest long-term study of brain development and child health in the United States. Expert researchers in these fields have studied the factors that may increase or decrease risk for substance use among teens. They've also studied the impact of youth substance use on future physical, mental, and emotional health. Here's what the ABCD Study has learned about youth substance use so far.



### Substance Use Quick Stats

Although substance use among youth is a significant public health problem, **most youth don't use substances**.

**Percent of Youth Ages 12 to 17 Using Any Substance in the Past Month, 2024**

**13.3%**



According to the Substance Abuse and Mental Health Services Administration (SAMHSA), among U.S. youth ages 12 to 17 in 2024:

An estimated

**6.6% (1.7 million)**

consumed **alcohol** in the previous month.



**6.6% (1.7 million)**

used a **tobacco product or nicotine vape** in the previous month.



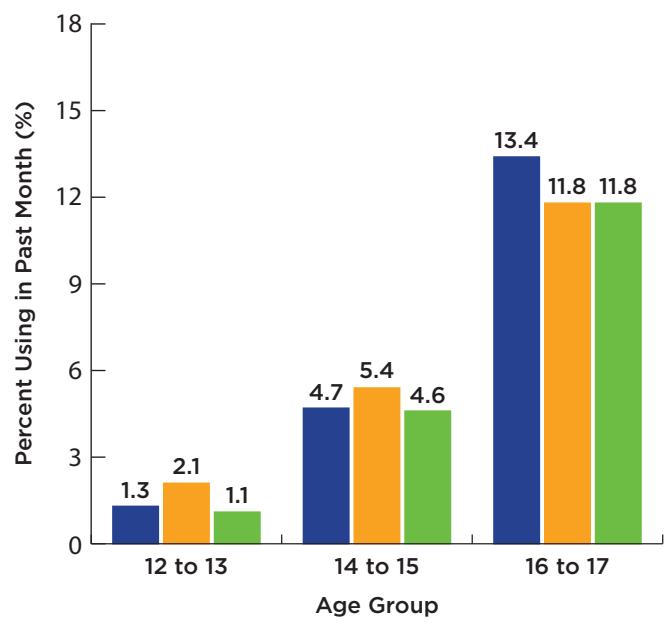
**6.0% (1.6 million)**

used **cannabis** in the previous month.



**Teen substance use increases with age.**

**Percent of Youth Using Substances in the Past Month, by Age, 2024**



## Alcohol



About 17% of participants in the ABCD Study reported drinking alcohol outside of a religious event at least once by age 9 or 10. The average age at first sip was between 7 and 8 years old. In many cases, alcohol was provided by a parent or a guardian.

So far, youth in the ABCD Study were more likely to try alcohol if they:

- ▶ Believe that trying alcohol once or twice isn't harmful.
- ▶ Have peers who drink alcohol or are curious about it.
- ▶ Act on sudden urges (impulsivity).
- ▶ Often experience feelings such as sadness, fear, or shyness.

Youth who think that drinking alcohol will lead to positive experiences, like feeling happy or having a fun time, are more likely to drink it. But those who think that alcohol will lead to negative outcomes, like tripping and falling, are less likely to drink it. At age 13, more youth believed alcohol would lead to positive experiences than when those same youth were 11 years old.

### What are the impacts of underage drinking?

#### Increased risk of:



Poor perception of movement, depth, and distance, which are important for tasks such as driving

Depression

Memory problems

Thoughts of suicide

Violence

Unplanned pregnancy

Sexually transmitted infections

Inability to control emotions

Challenges with problem solving, planning, and multitasking



## Caffeine



**Did you know that caffeine is the most widely used psychoactive (mind-altering) substance in the world?**

Caffeine is a central nervous system stimulant found in products such as coffee, some sodas and teas, and energy drinks. It increases the levels of certain chemicals in the brain and can increase alertness and attention.

A study of 9- to 10-year-old youth from the ABCD Study showed that caffeine consumption in childhood **may negatively affect:**

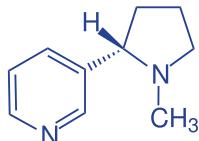
- ▶ Memory
- ▶ Sleep
- ▶ The tendency to act on sudden urges (impulsivity)
- ▶ How quickly the brain can take in information and respond to it

Youth who consume caffeine may be more likely to try other substances.



## Nicotine

Nicotine is the highly addictive chemical found in tobacco. Most nicotine use starts before age 18.



About **10.1%**  
(1.58 million)  
of high school  
students currently  
use products that  
contain nicotine.



## What factors and behaviors may increase the risk of starting nicotine use?

- Difficulty controlling actions and reactions, such as angry outbursts, fighting, or stealing
- The tendency to search for thrilling or dangerous activities (sensation seeking)
- Peers who use tobacco
- The belief that there is little or no harm to nicotine use

Youth who use tobacco products during middle childhood (ages 9 to 10) tend to have worse reading and listening comprehension than youth who don't use tobacco. However, why or how these skills are connected to tobacco use isn't clear, as several factors play a role in developing these skills. Other factors linked with tobacco use are also connected to challenges with reading and listening comprehension.



## E-cigarettes and Vapes



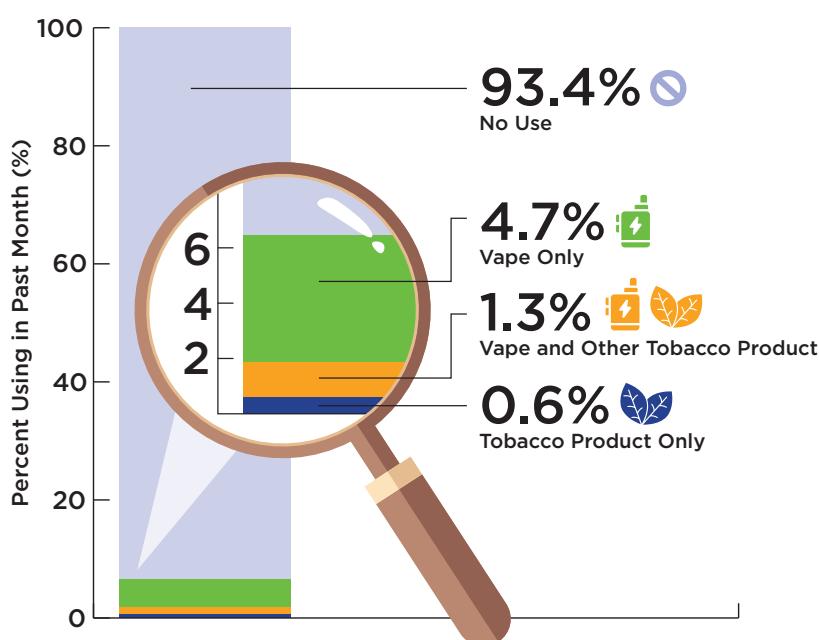
E-cigarettes, which are also known as vapes, use battery power to heat a liquid solution into vapor. People inhale the vapor, which usually contains nicotine, flavorings, and other potentially harmful chemicals. Some vape products contain cannabis.

There are many types of e-cigarettes. Some look like cigars or pipes while others look like USB flash drives, pens, or highlighters.

**According to SAMHSA, 75%  
of adolescents (ages 12 to 17)  
who consume nicotine only use  
e-cigarette products.**



Since 2014, adolescents in the United States have used e-cigarettes more than any other nicotine product. **However, the same report showed that 93.4% of adolescents don't use nicotine at all!**



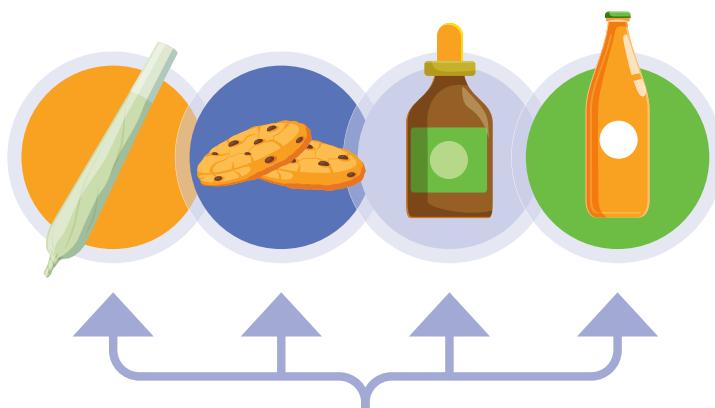
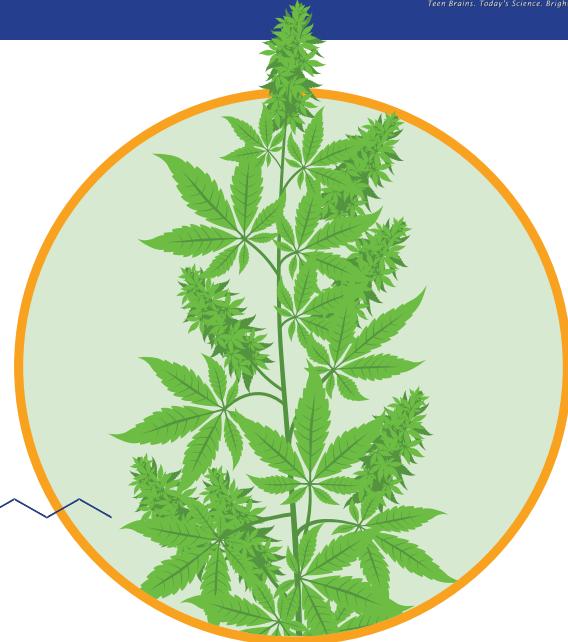
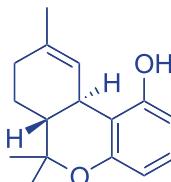
**Percent of Youth Ages 12 to 17 Using Tobacco Products in the Past Month, 2024**

## Cannabis



Cannabis comes from the dried parts of several varieties of the *Cannabis* plant. It contains many different compounds, including:

- ▶ **Tetrahydrocannabinol (THC):** Can temporarily alter a person's mood, thoughts, or perception (intoxicating).
- ▶ **Cannabidiol (CBD):** Non-intoxicating, but little is known about the impact of CBD on youth. CBD products are widely available but not well-regulated, and often contain impurities, including THC.



Cannabis comes in several forms, including cigarette-like joints, edibles (like gummies or baked goods), oils, and beverages. Some vapes contain THC or CBD.

The ABCD Study and other studies have shown connections between cannabis use and psychosis symptoms, such as delusions, suspiciousness, social withdrawal, and a decline in personal hygiene.

- ▶ Using cannabis for the first time may increase the risk of these symptoms, especially in youth with a family history of psychosis.
- ▶ Cannabis may also be a form of self-medication for those already experiencing problems with their mental health.



Factors that increase risk for cannabis use during adolescence are:

- ▶ Having peers who use cannabis
- ▶ A lack of interest in or enjoyment from life
- ▶ Believing it would be easy to obtain cannabis



U.S. youth undergo substance use disorder treatment more often for cannabis than for other substances.



## Cannabis Use Disorder

Cannabis use disorder is the inability to stop using cannabis even when it's causing health and social problems. The risk of developing cannabis use disorder is greater in people who start using the substance before adulthood, but genetics also plays a role in risk.

## Tips for Parents to Prevent Youth Substance Use



**Talk with your teens about how what they see in media or online doesn't always reflect what other teens are really doing.**

Most teens don't regularly use substances, but they may *think* that their peers do.



**Talk with your kids early and often about substance use.**

Rates of teen substance use increase with age, and it's important to talk with youth *before* they consider trying substances.



**Ask your children about where they are going, whom they hang out with, and what they are doing.**

Teens who believe that their parents are paying attention to them are less likely to use substances.



**Teach your children how to manage stress in a positive way.**

Coping strategies like writing in a journal, spending time outdoors, or exercising may be protective against substance use.



**Encourage your kids to get involved in school activities and connect with teachers or coaches.**

Teens who feel supported by their teachers and feel a sense of belonging at school are less likely to use substances.



**Set clear and thoughtful rules for your teens that prohibit substance use and enforce them with warmth and support.**

Engaged parenting styles are protective against early adolescent substance use.



**Restrict access to substances at home.**

Youth in the ABCD Study were less likely to try alcohol if they didn't have access to it at home.

These studies show youth experiences with substance use. They don't show if or how one thing causes another. These studies included data from study participants when they were 9 to 15 years old. Many things could affect these findings, which may also change over time. More research is needed to know for sure.

**This information is made possible by the Adolescent Brain Cognitive Development<sup>SM</sup> Study.** Youth participating in this study help scientists answer important questions that improve their understanding about youth experiences with substance use. These and other ABCD-supported studies let us learn more about how the brain develops, improving the health and well-being of youth now and for future generations. **Learn more:** [abcdstudy.org/families](https://abcdstudy.org/families)

## News Articles

### Brain differences in childhood predict substance use later in life, study finds

[www.psypost.org/neuroscience-brain-differences-in-childhood-predict-substance-use-in-later-life-study-finds](https://www.psypost.org/neuroscience-brain-differences-in-childhood-predict-substance-use-in-later-life-study-finds)

### Adolescent cannabis use and psychosis: Study finds shared risk factors and self-medication patterns

[www.psypost.org/adolescent-cannabis-use-and-psychosis-study-finds-shared-risk-factors-and-self-medication-patterns](https://www.psypost.org/adolescent-cannabis-use-and-psychosis-study-finds-shared-risk-factors-and-self-medication-patterns)

### Early substance use linked to brain structure differences in teens

<https://neurosciencenews.com/teen-brain-addiction-28290>

### Researchers uncover link between caffeinated soda consumption and alcohol sipping in children

[www.psypost.org/researchers-uncover-link-between-caffeinated-soda-consumption-and-alcohol-sipping-in-children](https://www.psypost.org/researchers-uncover-link-between-caffeinated-soda-consumption-and-alcohol-sipping-in-children)

### Study of pre-teens yields surprises about alcohol, tobacco, and marijuana

[www.michiganmedicine.org/health-lab/study-pre-teens-yields-surprises-about-alcohol-tobacco-and-marijuana](https://www.michiganmedicine.org/health-lab/study-pre-teens-yields-surprises-about-alcohol-tobacco-and-marijuana)

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