

# Youth vaping in Utah

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Utah  
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Vape products (also known as e-cigarettes, vapes, vape pens, Juuls, and mods) are battery powered devices that vaporize nicotine infused liquids for inhalation. Their use by youth in Utah has grown at an alarming rate over the past 15 years. Unfortunately, youth have been attracted to vape products as a result of advertising that glamorizes their use, beliefs among youth that vape products are safe, and through the availability of flavored solutions that appeal to youth (grape, bubble gum, cherry, strawberry, etc.).

When first introduced to the U.S. market, few regulations existed regarding the sales of vape products, and the potential harmful effects of their use were largely unknown. Today, we know much more about the harms caused by vaping. Regulations on both the manufacturing and sales of vape products have also increased. Laboratory testing of vape liquids have shown they can contain a variety of harmful chemicals and ingredients (heavy metals, illicit drugs, cancer causing substances). Nicotine concentration levels across vape liquids can vary widely, increasing the risk of addiction as well as accidental nicotine overdoses and poisonings. Research has shown nicotine use during adolescence affects brain development, can negatively impact learning and attention, and increases susceptibility of addictions to nicotine and other substances[1]. However, nicotine is not the sole danger posed by vape products. Vape liquids containing cannabis extracts (THC and CBD) are widely available as a result of the legalization of cannabis across the nation (for both medical and adult or recreational use), and are finding their way into the hands of youth. In 2019, a nationwide epidemic of lung injury cases was linked to a cutting agent commonly used in THC vape liquid products. More than 130 individuals in Utah were hospitalized during this epidemic, the vast majority (90%) younger than 40 years of age.

## Use of vape products among Utah youth

The use of vape products by youth increased dramatically in Utah between 2011 and 2019 (see Figure 1). This is despite the fact that youth substance use rates in general declined over the same timeframe. According to the Utah Student Health and Risk Prevention (SHARP) survey[2], the percentage of Utah youth (in grades 6, 8, 10, and 12 combined) reporting use of vape products in the past 30 days increased more than six-fold from 2011 to 2019 (from 1.5% to 9.7%). At the peak of use in 2019, nearly 1 in every 5 youth in Utah had tried a vape product at least once in their lifetime. The rise in the use of vape products was so dramatic that vaping displaced alcohol as the most widely used substance among Utah youth in 2015, and continues to hold that distinction today. On a more positive note, it appears that the use of vapes by youth has turned a corner in recent years.

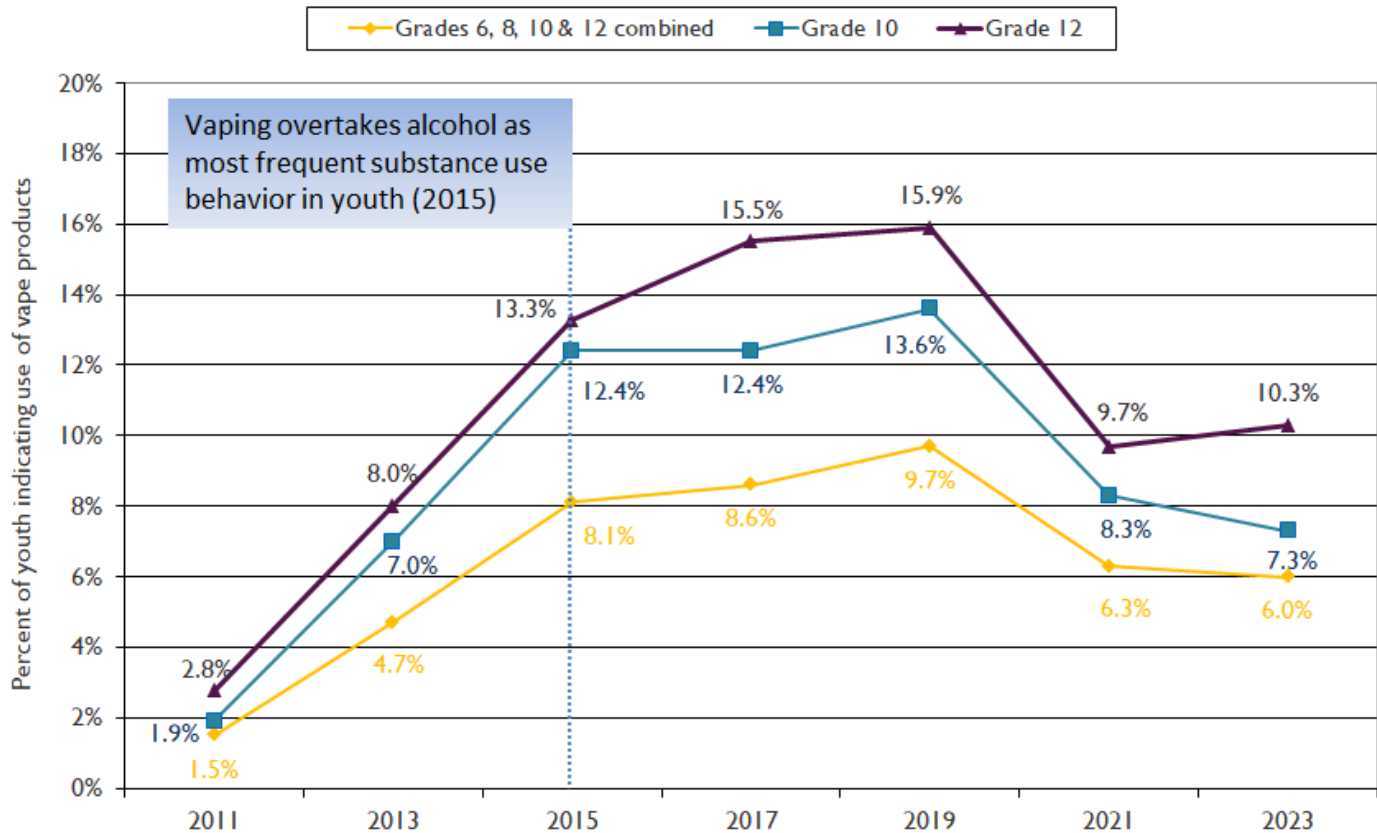
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[1] Castro, E.M., Lotfipour, S., & Leslie, F.M. (2023). Nicotine on the developing brain. *Pharmacological Research*, 190, <https://doi.org/10.1016/j.phrs.2023.106716>

[2] The SHARP survey is a survey that measures the health of Utah youth and the risk and protective factors that predict these health and problem behaviors in adolescents. The survey is administered across the state every other year to Utah students in grades 6 through 12.

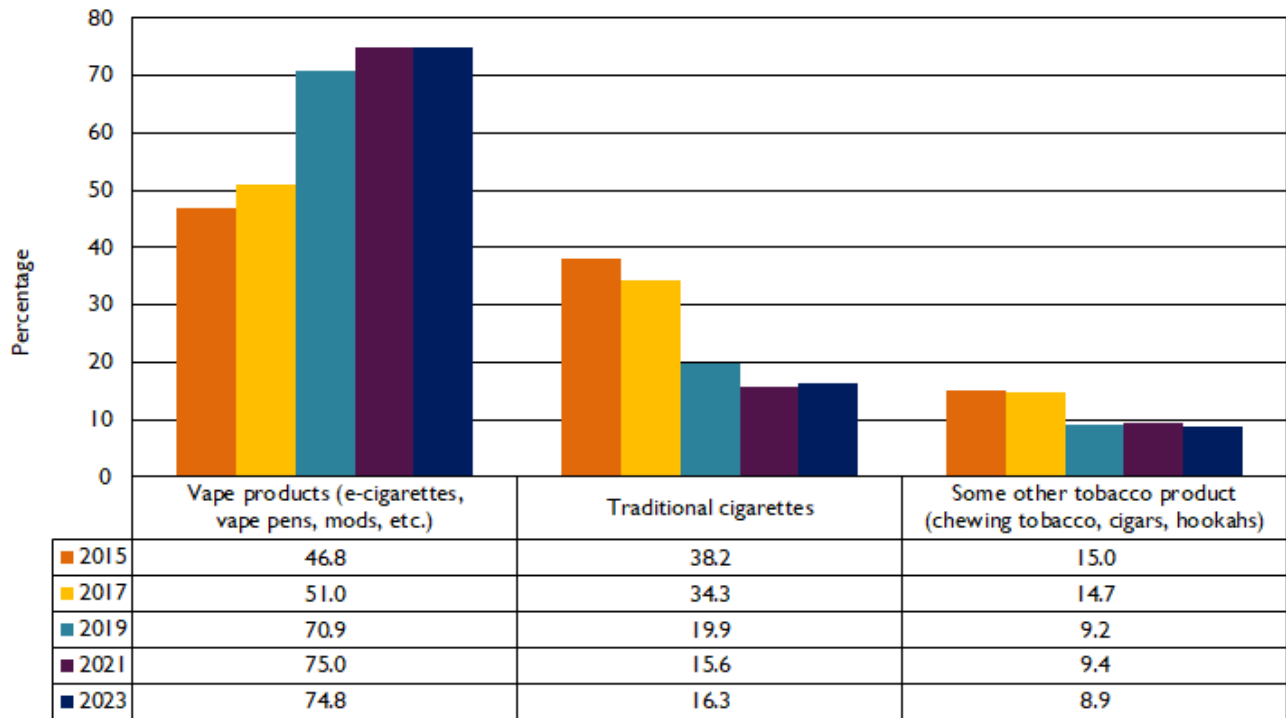
A substantial decrease in vaping among youth was observed from 2019 to 2021, and a further, more modest decrease occurred in 2023 (for all grades except grade 12).

**Figure 1. Utah past 30-day use youth vaping trends 2011-2023 (Utah SHARP)**



While the recent decreases in vaping are encouraging, strong concern remains among prevention and health promotion professionals that the popularity of vaping will usher in a new generation of nicotine users in Utah. Historically, the majority of tobacco users were introduced to tobacco products through the use of traditional cigarettes, but this is no longer the case. An item was added to the SHARP survey in 2015 asking youth, "If you have ever tried a tobacco product, which one did you try first?" The data reveal that vape products have become the first type of tobacco product tried among youth who reported the use of tobacco products (see Figure 2). In 2015, less than 50% of youth who said they had tried a tobacco product said their first time was with a vape product, but this percentage has increased steadily, reaching a high of 75% in 2021 and 2023. It is clear that vape products are now the first means of exposure to tobacco and nicotine products for most youth in our state.

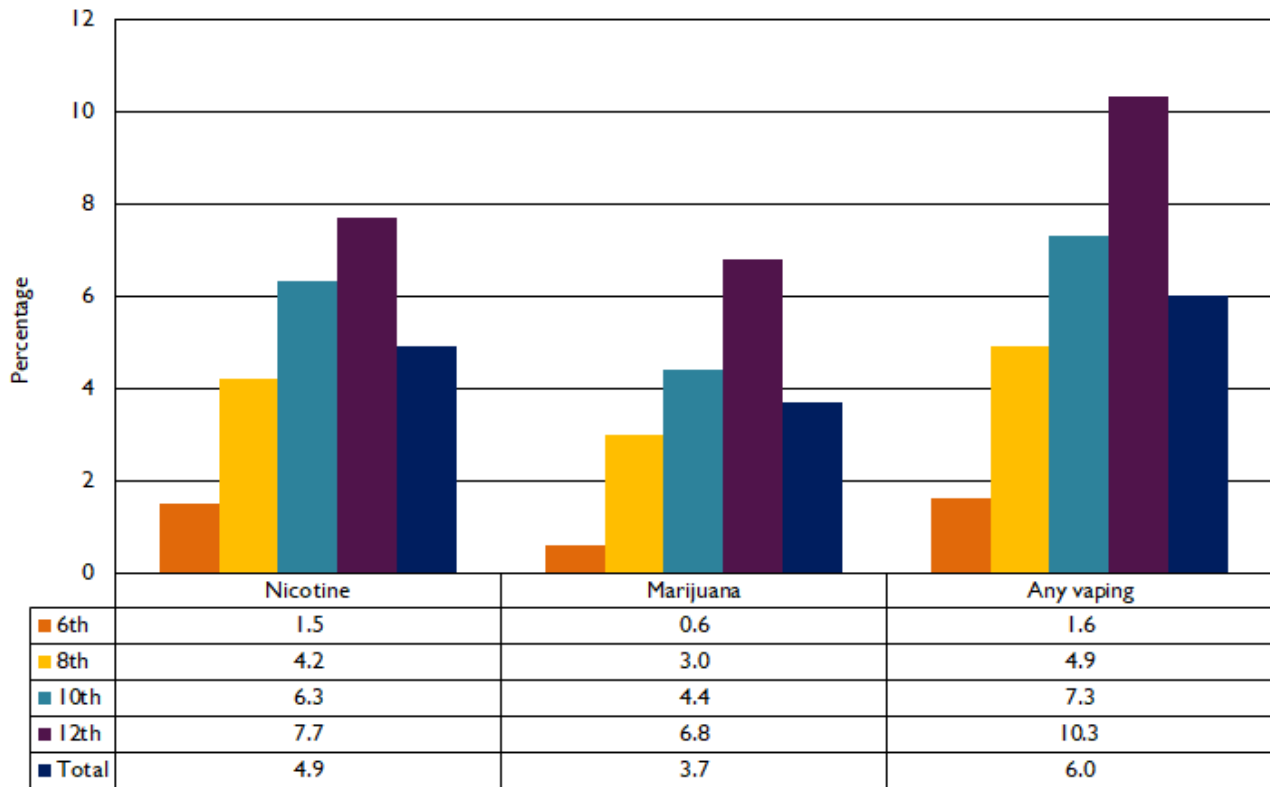
**Figure 2: If you have ever tried a tobacco product, which one did you try first? (Among participants who used a tobacco product) 2015-2023 (Utah SHARP)**



**What are Utah youth vaping?**

To better understand youth vaping behavior, the SHARP survey asks students whether they had vaped nicotine or marijuana products (or both) in the past 30-days, as well as in their lifetime. In 2023, vaping of nicotine still outpaced marijuana (4.9% of youth indicating vaping nicotine, vs. 3.7% indicating vaping marijuana in the past 30-days for grades 6, 8, 10, and 12 combined; see Figure 3). This was true for all grades, but the difference in rates for nicotine and marijuana were relatively small for vape users in 8th through 12th grades, compared to 6th grade users. Given the similarities in the rates of nicotine, marijuana, and “any vape use,” the data also clearly illustrate that many youth who reported vaping in the past 30-days used both nicotine and marijuana e-liquids.

**Figure 3: Youth past 30-day vape use by substance type and grade 2023 (Utah SHARP)**



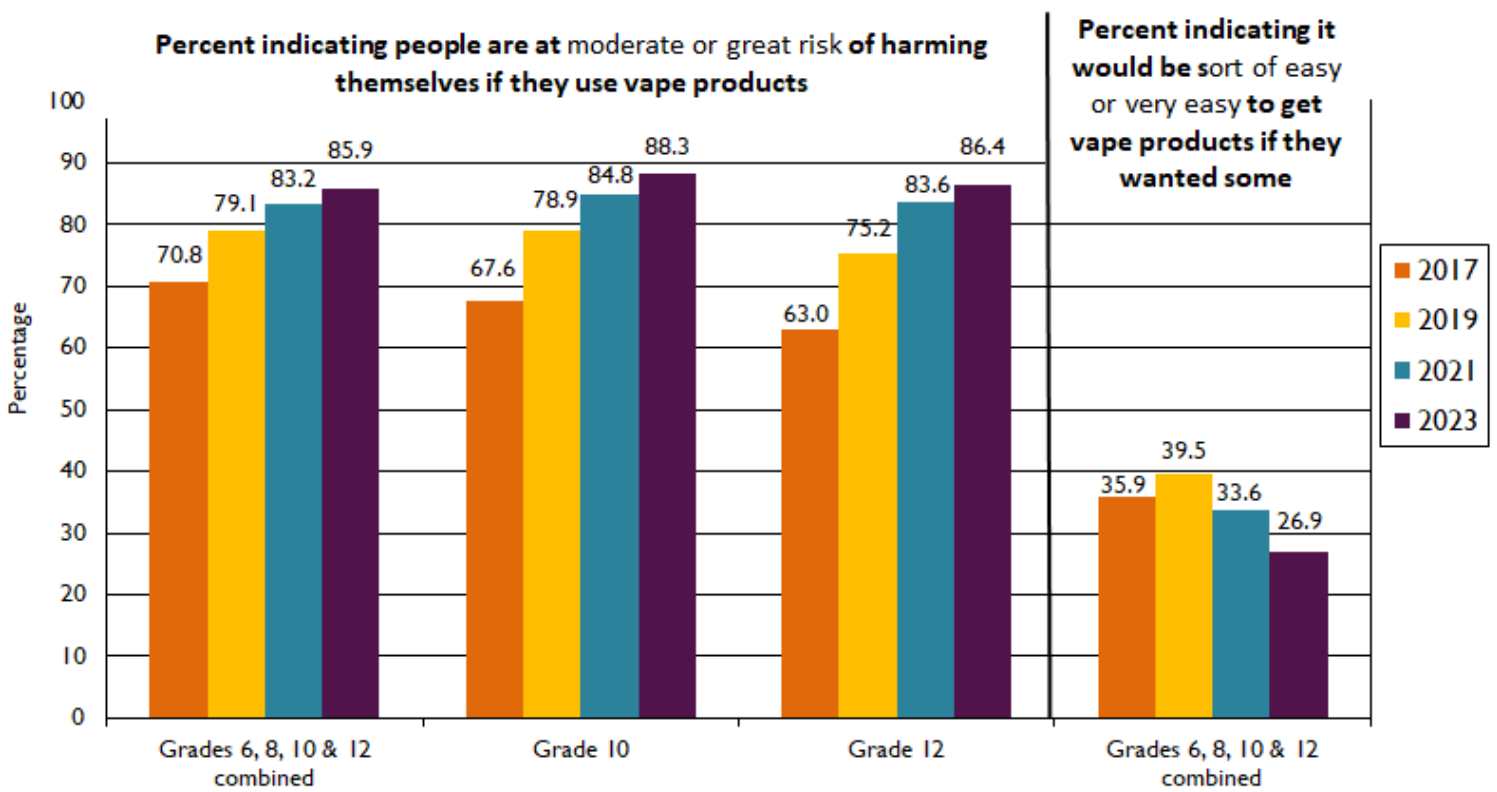
**Risk factors for vaping**

Do certain variables predict both the increase in vaping rates from 2011 to 2019, as well as the recent declines observed from 2019 to 2023? Risk factor data help tell at least part of the story. The SHARP survey measures several risk factors for vape use, including: a) perceptions of risk of using vape products, b) perceived availability of vape products, and c) perceived parental disapproval of vaping. Traditionally, Utah youth have had highly unfavorable attitudes about traditional cigarettes, and these attitudes have predicted the low cigarette use rates observed in our state. However, attitudes about vape products have not historically been as negative. This is likely a result of the lack of accurate information regarding the harmfulness of vape products as they made their way into the U.S. marketplace. Fortunately, as prevention efforts have become more focused on vaping (media campaigns, prevention programs, etc.), youth attitudes about vaping have become much more negative. There has been a marked increase in the percentage of youth who indicated that people are at moderate or great risk if they use vape products over time (see Figure 4). Importantly, the biggest changes in attitudes were seen in 10<sup>th</sup> and 12<sup>th</sup> graders, where use rates have been highest and have the most potential for change.

Data measuring the perceived availability of vape products also provides reason for optimism. From 2015 to 2019, more than one-third of Utah youth indicated that it would be easy or very easy for them to get vape products if they wanted them, and the percentage increased slightly each survey year. In 2021, this trend reversed, with the rate of youth reporting it would be easy to get vape products dropping for the first time.

Perceived availability continued to drop in 2023, reaching its lowest level to date. Retail compliance checks have been established and are helping make sure retail outlets for vape products do not sell to underage buyers. With that said, other interventions are also necessary to reduce youth access to vape products, as youth report they often obtain vape products through social means rather than retail means. In 2023, 28.5% of youth who reported vaping said they usually borrowed or “bummed” their vape products from a friend and 15.6% gave someone else money to buy them. A much smaller percentage said they purchase from a vape shop (3.5%) or from a gas station/grocery/convenience store (5.8%).

**Figure 4: Risk factors for youth vape use 2017-2023 (Utah SHARP)**



*This data brief was prepared for the Utah State Epidemiological Outcomes Workgroup by Bach Harrison, LLC. To learn more about prevention efforts to reduce substance abuse and misuse, visit <https://utahprevention.org/>.*