

## Overview

Cannabis use, like alcohol, opioids, stimulants, and tobacco, can develop into a substance use disorder or addiction.<sup>1,2</sup> A 2017 report from the National Academies of Science, Engineering, and Medicine found substantial evidence that earlier use of cannabis is a risk factor for developing problem cannabis use and that cannabis use is associated with the risk of schizophrenia, lower birth weight of offspring, and motor vehicle crashes.<sup>2</sup> This brief report examines knowledge and beliefs about cannabis use among Vermont’s teens and young adults as they relate to current scientific evidence.

## Findings

Most teens and young adults are aware that **being under the influence of cannabis while driving or operating machinery is dangerous** (93.8%), in line with the scientific evidence. However, only 55.5% of teens and 67.3% of young adults believe **cannabis smoke to be harmful** and only 63.3% believe **cannabis to be addictive**. Approximately half of teens and young adults (52.5%) believe **that frequent use of cannabis can cause long-term mental health conditions like psychosis and schizophrenia**.

## Methods

550 Vermont teens and young adults responded to questions about cannabis knowledge and beliefs in Winter 2021. 155 Vermont teens (aged 12-17) and 395 young adults (aged 18-25) participated in the Wave 9 survey (Winter 2021) of the PACE Vermont. The survey items presented in this data brief use the term “marijuana” to refer to cannabis. We have used “cannabis” in this data brief to reflect updated terminology.

Table 1. Cannabis Knowledge and Beliefs Among Teens and Young Adults in Wave 9 <sup>a</sup>				
	Teens aged 12-17 (n=155)	Young Adults aged 18-25 (n=395)	Total (n=550)	Level of scientific evidence
Can cannabis <u>smoke</u> be harmful?	55.5% (86/155)	67.3% (266/395)	64% (352/550)	<b>Substantial</b> - Cannabis smoking is associated with development of respiratory disease. <sup>2</sup>
Can cannabis be addictive?	67.7% (105/155)	61.5% (243/395)	63.3% (348/550)	<b>Substantial</b> – Greater frequency of cannabis use increases the likelihood of developing problem cannabis use (addiction). <sup>2</sup>
Are teenagers at greater risk of harm from using cannabis than adults?	74.8% (116/155)	76.7% (303/395)	76.2% (419/550)	<b>Substantial</b> - Initiating cannabis use at a younger age increases the likelihood of developing problem cannabis use. <sup>2</sup> There is also moderate evidence of increased risk of overdose injuries, including respiratory distress, among pediatric populations in U.S. states where cannabis is legal. <sup>2</sup>
Can it be dangerous to drive or operate machinery after using cannabis?	91.6% (142/155)	94.7% (374/395)	93.8% (516/550)	<b>Substantial</b> - Cannabis use is associated with increased risk of motor vehicle crashes. <sup>2</sup>
Can regular use of cannabis increase the risk of psychosis and schizophrenia?	47.7% (74/155)	54.4% (215/395)	52.5% (289/550)	<b>Substantial</b> - Cannabis use is associated with development of schizophrenia or other psychoses, with the highest risk among the most frequent users. <sup>2</sup>
Can it be harmful to use cannabis when pregnant or breastfeeding?	82.6% (128/155)	79.5% (314/395)	80.4% (442/550)	<b>Substantial</b> - Maternal cannabis smoking is associated with lower birth weight of the offspring. <sup>2</sup>
Can high-THC cannabis products negatively affect memory and concentration?	68.4% (106/155)	80% (316/395)	76.7% (422/550)	<b>Moderate</b> - Cannabis use is associated with impairment in the cognitive domains of learning, memory, and attention. <sup>2</sup>
Can using cannabis cause cancer?	21.9% (34/155)	16.2% (64/395)	17.8% (98/550)	<b>Mixed</b> - A few studies have shown an association between cannabis use in adolescence and increased risk for an aggressive form of testicular cancer. <sup>2,3</sup> However, there is moderate evidence that cannabis use is not associated with incidence of lung, head, or neck cancers. <sup>2</sup>
Can cannabis or CBD help cure or prevent cancer?	19.4% (30/155)	21% (83/395)	20.5% (113/550)	<b>Insufficient</b> - Evidence does not support that cannabis is effective in treating cancer. <sup>2</sup>

<sup>a</sup> Proportion responding “yes” to each item

## Beliefs about cannabis use:

- Among participants aged 12-25 years old in Wave 9 (n=550), 1 in 4 (24.7%) believed that **vaping cannabis/THC was more harmful** than smoking marijuana/THC (14.7% “less harmful” and 60.4% “about the same”).
- Approximately 80% of teens (12-17 years old) and young adults (18-25 years old) believed that **THC is the substance in cannabis that makes a person high** (0.9% “CBD,” 0.9% “Neither THC or CBD,” 9.3% “Both THC and CBD,” and 8.2% “I don’t know”).

## Conclusions

Cannabis use is most prevalent among young people ages 18 to 25 and teens are an at-risk population since cannabis use during the teenage years has greater interference in neural, social and academic functioning compared with adulthood.<sup>2</sup> In 2021, 11% of Vermont teens and 35% of Vermont young adults used cannabis in the past month, with nearly 8% of teens and 16% of young adults reporting first trying cannabis in the past year.<sup>4</sup> These estimates of past month use and first use among Vermonters aged 12-25 exceed national estimates, highlighting potential risks associated with early use in young Vermonters. **While a large proportion of PACE Vermont participants aged 12-25 identified that it can be dangerous to drive or operate machinery after using cannabis, fewer Vermont teens and young adults believed that cannabis smoke can be harmful and that cannabis can be addictive, counter to the existing scientific evidence. While high cannabis risk perceptions may protect against youth cannabis use,<sup>5</sup> low perceptions of cannabis harm and addictiveness are associated with cannabis use in young people,<sup>6-8</sup> including in our PACE Vermont participants.<sup>9,10</sup> Additionally, despite substantial evidence that cannabis increases risk of psychosis and schizophrenia, only half of PACE Vermont participants of Winter 2021 reported this belief.**

In October 2022, Vermont implemented a retail cannabis market for adult use. In other states implementing adult-use cannabis policies, young adult perceptions of cannabis risks have decreased<sup>11</sup> and the correlation between low-risk perceptions and cannabis use has increased over time.<sup>12</sup> A comprehensive and robust set of prevention efforts are needed to raise awareness of the health risks and effects of cannabis use in teens and young adults.

## Resources

### Science-based information about cannabis from the Vermont Department of Health:

- [Let's Talk Cannabis](#)



### Online Tobacco/Vaping Cessation Support & Tools:

- [VT Helplink](#)
- [My Life My Quit](#)
- [802Quits](#)



- [This is Quitting](#)
- [Teen Smokefree.gov](#)

### Community Partners:

<https://www.healthvermont.gov/wellness/tobacco/state-and-communitypartners>

### American Academy of Pediatrics (AAP) Resources:

<https://www.aap.org/en/patient-care/tobacco-control-and-prevention/>

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