

Cannabis use and budding brains: Three reasons why cannabis is a concern for young people



September 2019

The beginning of a new school year presents an opportunity to explore reasons why cannabis use among young people is a concern.

#1: Young people are more likely to use cannabis

In Canada, 30 percent of people aged 15 to 24 reported using cannabis in the past three months, compared to 16 percent of people aged 25 and older.¹ Locally, 29 percent of university students used cannabis in the past month, while 23 percent of grade 10 students used cannabis in the past year.^{2,3}

#2: Young people are more likely to experience harm from using cannabis

Not only are young people more likely to use cannabis, they are more vulnerable to the harms associated with using cannabis. A person's brain develops until about the age of 25, and the active ingredient in cannabis (THC) can cause disruptions to the endocannabinoid system that plays a big role in brain wiring.⁴

Youth who begin using cannabis at an early age have a much higher risk of addiction. Approximately one out of every 11 people who use cannabis will develop an addiction, compared to one out of every six who begin using in adolescence.⁴ Early and regular cannabis use also increases the risk of developing psychosis and schizophrenia, especially among individuals with a personal or family history of these conditions.⁵

Early cannabis use is a strong predictor of cognitive impairment even if the mechanism for that impairment remains unclear.⁶ Similarly, evidence is mixed about whether early and prolonged cannabis use can cause permanent changes to brain structure and function.⁷ Regardless, there is evidence that cannabis use can interfere with optimal school performance through short term cognitive impairments on learning, memory and attention.⁷ A recent 10-year study found that youth who used cannabis early and persistently, or who increased use into young adulthood, had reduced educational and occupational success.⁸

It is important to note that early and regular cannabis use, especially prior to age 16, increases a person's risk of experiencing harm. Other factors such as genetics, family history, early life experiences, and the social determinants of health (e.g., income) can also play an important role.^{5,6,9}

#3: Young people may be more at risk for car crashes involving cannabis

Vehicles driven by someone impaired by cannabis are twice as likely to be involved in a crash.¹⁰ In Canada, 12 percent of young adults under the age of 25 reported being a passenger in a vehicle driven by someone who had consumed cannabis within two hours, in the past three months.¹ An examination of fatally injured drivers in Canada who had used cannabis prior to a crash found that 40 percent were between the ages of 16 and 24 years.¹⁰

Actions that WDGPH is taking

In 2018, youth actively participated in identifying the key messages of WDGPH's "Talking About Weed" campaign and developing video concepts to share information in a way that resonates with young people. The campaign and accompanying website provide evidence-based information about the health effects of cannabis and ways to reduce harm so that young people can make informed decisions

about cannabis use. We will continue to update our website regularly to reflect new evidence and resources. WDGPH is currently working with community partners to create additional youth-friendly resources around cannabis edibles.

References

1. Statistics Canada. National Cannabis Survey, first quarter 2019 [Internet]. 2019 May 2 [cited 2019 Sept 13]. Available from: <https://www150.statcan.gc.ca/n1/daily-quotidien/190502/dq190502a-eng.htm>
2. University of Guelph. National College Health Assessment Results 2019 [Internet]. 2019 [cited 2019 Sept 13]. Available from: <https://wellness.uoguelph.ca/system/files/University%20of%20Guelph%202019%20NCHA%20Report%20%281%29.pdf>
3. Wellington-Dufferin-Guelph Report Card Coalition. WDG Youth Survey 2017-2018 [Internet]. 2018 Aug 2 [cited 2019 Sept 13]. Available from: <http://www.wdgreportcard.com/en/data-portal/illegal-drug-use.aspx>
4. Canadian Centre on Substance Use and Addiction (CCSA). Substance abuse in Canada: The effects of cannabis use during adolescence [Internet]. 2015 [cited 2019 Sept 13]. Available from: <https://www.ccsa.ca/sites/default/files/2019-04/CCSA-Effects-of-Cannabis-Use-during-Adolescence-Report-2015-en.pdf>
5. Canadian Centre on Substance Use and Addiction (CCSA). Clearing the smoke on cannabis: Regular use and mental health [Internet]. 2019 [cited 2019 Sept 13]. Available from: https://www.ccsa.ca/sites/default/files/2019-08/CCSA-Cannabis-Use-Mental-Health-Report-2019-en_0.pdf
6. Canadian Centre on Substance Use and Addiction (CCSA). Clearing the smoke on cannabis: Regular use and cognitive functioning [Internet]. 2019 [cited 2019 Sept 13]. Available from: <https://www.ccsa.ca/sites/default/files/2019-08/CCSA-Cannabis-Use-Cognitive-Effects-Report-2019-en.pdf>
7. National Academies of Sciences, Engineering, and Medicine. (2017). The health effects of cannabis and cannabinoids: The current state of evidence and recommendations for research [Internet]. 2017 [cited 2019 Sept 13]. Available from: <https://www.nap.edu/catalog/24625/the-health-effects-of-cannabis-and-cannabinoids-the-current-state>
8. Thompson K, Leadbeater B, Ames M, Merrin GJ. Associations between marijuana use trajectories and educational and occupational success in young adulthood. *Prevention Science*, 2019; 20:257-269. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6414467/>
9. Government of Canada. Cannabis Resource Series: Is Cannabis Addictive? [Internet]. 2018 Aug [cited 2019 Sept 13]. Available from: <https://www.canada.ca/content/dam/hc-sc/documents/services/publications/drugs-health-products/cannabis-addictive/cannabis-addictive-eng.pdf>
10. Canadian Centre on Substance Use and Addiction (CCSA). Clearing the smoke on cannabis: Cannabis use and driving. An update [Internet]. 2017 [cited 2019 Sept 13]. Available from: <https://www.ccsa.ca/sites/default/files/2019-04/CCSA-Cannabis-Use-Driving-Report-2017-en.pdf>