Is cannabis safe to use?
Facts for youth
aged 13–17 years.

CANNABIS EVIDENCE BRIEF

Gouvernement du Canada





BRIEFS AVAILABLE IN THIS SERIES:

- ▶ Is cannabis safe to use? Facts for youth aged 13–17 years.
- ▶ Is cannabis safe to use? Facts for young adults aged 18–25 years.
- ▶ Does cannabis use increase the risk of developing psychosis or schizophrenia?
- ▶ Is cannabis safe during preconception, pregnancy and breastfeeding?
- ▶ Is cannabis addictive?

PURPOSE:

This document provides key messages and information about the risks and health effects of cannabis use for youth aged 13–17. It is intended to provide source material for public education and awareness activities undertaken by medical and public health professionals, parents, educators and other adult influencers. Information and key messages can be re-purposed as appropriate into materials, including videos, brochures, etc.

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Key messages for youth—13-17 years

In order to protect youth from the health effects of cannabis use, the Cannabis Act restricts access to cannabis. Therefore, there will be no legal means for a young person to obtain cannabis, and possessing it may result in legal consequences, such as a fine or a ticket. These are a few key facts that young people should be aware of:

- ▶ The best way to protect your health is to not use cannabis.¹
- ▶ You are more likely to experience harms from cannabis because your brain is still developing until around the age of 25.2 The earlier you start using cannabis the more harm it can do. 1-3 For example:
 - Starting to use cannabis as a teen and using it regularly (weekly or more frequently) and over a long time (several months or years) make you more likely to become addicted and to harm your mental health. 1, 3
 - · Using cannabis can affect important aspects of your thinking, like learning and memory. 1, 4 Some of these harms may never fully go away. 5-7
- Studies have found that teens and young adults who start using early and use often have more difficulty studying and are more likely to drop out of high school or university. 1, 8-14
- ▶ Higher-strength products (e.g. "skunk", dabs, waxes, shatter) carry greater risks of harms. 15-20
- ▶ After alcohol, cannabis is the drug most often linked to car accidents.²¹ Cannabis can affect concentration, coordination and slow reaction time. 4 Using it and driving increases the risk of having a car accident which can result in serious injuries or death.^{22, 23}
- ▶ How long the impairing effects of cannabis last depends on how (smoked, vapourized, ingested) and how much was taken, but the effects can last for at least six (6) hours or longer after use.1, 24, 25
- ▶ Using cannabis at the same time as drinking alcohol and/or using other drugs, such as pain medications (opioids) and tranquilizers (benzodiazepines), further lowers your ability to concentrate and react quickly to emergencies. 21, 26-29
- If you need more information or support, talk to your parent/quardian, teacher, coach or other trusted adult.

Supporting information

For: Medical and public health professionals, parents, educators and other adult influencers

What are the other names for cannabis?

Cannabis is also called marijuana, weed, skunk, pot, herb, ganja, grass, Mary Jane, wax, shatter budder, dabs, and reefer.

What do we know about cannabis use in youth?

In Canada, about one in six (1/6) students in grades 7 to 12 (secondary I to V in Quebec) have reported using cannabis in 2014-2015.30

It is estimated that Canadian adolescents have among the highest rates of cannabis use compared to their peers in other developed countries.31

Why do youth use cannabis?

Youth use cannabis for a number of reasons:32

- ▶ To improve or intensify mood: "It's exciting."
- ▶ To be social: "It helps me enjoy a party."
- ▶ To cope with stress: "It helps me forget about my problems."
- ▶ To expand their views: "It helps me understand things differently."
- ▶ To fit in: "So I won't feel left out."
- ▶ To break with routine: "I use it because I feel bored."

How does cannabis use affect the health of teens?

SHORT TERM EFFECTS:

- ▶ Impairs concentration and reaction time shortly after use. Cannabis diminishes concentration and attention, impairs coordination and slows reaction time.²³ Using cannabis and driving can result in a car accident and serious injuries or death. 22, 23
- Makes it harder to learn and remember things. Youth may have problems paying attention, remembering or learning things, and making decisions after using cannabis.4
- ▶ Affects mood and feelings. Cannabis can make youth feel very anxious, panicked, sad, and fearful.4
- ▶ Affects mental health. Cannabis can trigger a psychotic episode (not knowing what is real, experiencing paranoia, having disorganized thoughts, and in some cases having hallucinations).4
- ▶ Worsens mental health effects when higher potency products are used. Using higherpotency cannabis products (such as concentrates like "shatter", dabs or wax) can worsen the mental health effects of cannabis use (such as paranoia and psychosis). 15-20

Longer term effects, i.e. regular use of cannabis (daily or almost daily) over a long time (several months or years):

- Hurts the lungs and makes it hard to breathe. Cannabis smoke contains many of the same harmful substances as tobacco smoke. 33 Also, like smoking cigarettes, smoking cannabis can damage the lungs and result in a cough or wheezing and other breathing symptoms.34
- ▶ Affects mental health. Teens that start using cannabis early, use it regularly and continuously over time ("heavy" users) are more likely to experience anxiety, depression, psychosis, and schizophrenia. 1, 3, 19, 35 Stopping use improves these symptoms.36,37
- ▶ May lead to addiction. Addiction to cannabis may have major negative impacts on everyday life and affect school, relationships with family and friends, sports, extracurricular activities and volunteer work.4

For more information on the effects of cannabis on youth, you can read the following documents:

- ▶ World Health Organization (WHO) (2016). The health and social effects of nonmedical cannabis use. www.who.int/substance abuse/publications/msbcannabis.pdf
- ▶ Canadian Centre on Substance Abuse (CCSA) (2015). The Effects of Cannabis Use during Adolescence. www.ccsa.ca/Resource%20Library/CCSA-Effects-of-Cannabis-Use-during-Adolescence-Report-2015-en.pdf
- ▶ Canadian Centre on Substance Abuse (CCSA) (2017). Canadian Youth Perceptions on Cannabis. www.ccsa.ca/Resource%20Library/CCSA-Canadian-Youth-Perceptions-on-Cannabis-Report-2017-en.pdf

References

- 1. Fischer B, Russell C, Sabioni P, van den Brink W, Le Foll B, Hall W, Rehm J, Room R. Lower-risk cannabis use quidelines: A comprehensive update of evidence and recommendations. Am J Public Health 2017 Aug; 107(8):1277.
- 2. Chadwick B, Miller ML, Hurd YL. Cannabis use during adolescent development: Susceptibility to psychiatric illness. Front Psychiatry 2013 Oct 14;4:129.
- 3. Levine A, Clemenza K, Rynn M, Lieberman J. Evidence for the risks and consequences of adolescent cannabis exposure. J Am Acad Child Adolesc Psychiatry 2017 Mar;56(3):214-25.
- 4. World Health Organization (WHO). The health and social effects of nonmedical cannabis use.
- 5. Meier MH, Caspi A, Ambler A, Harrington H, Houts R, Keefe RS, McDonald K, Ward A, Poulton R, Moffitt TE. Persistent cannabis users show neuropsychological decline from childhood to midlife. Proc Natl Acad Sci U S A 2012 Oct 2;109(40):E2657-64.
- 6. Florez-Salamanca L, Secades-Villa R, Budney AJ, Garcia-Rodriguez O, Wang S, Blanco C. Probability and predictors of cannabis use disorders relapse: Results of the national epidemiologic survey on alcohol and related conditions (NESARC). Drug Alcohol Depend 2013 Sep 1;132(1-2):127-33.

- 7. Solowij N, Stephens RS, Roffman RA, Babor T, Kadden R, Miller M, Christiansen K, McRee B, Vendetti J. Cognitive functioning of long-term heavy cannabis users seeking treatment. JAMA 2002 03/06;287(0098-7484; 9):1123-31.
- Horwood LJ, Fergusson DM, Hayatbakhsh MR, Najman JM, Coffey C, Patton GC, Silins E, Hutchinson DM. Cannabis use and educational achievement: Findings from three australasian cohort studies. Drug Alcohol Depend 2010 Aug 1;110(3):247-53.
- 9. Fergusson DM, Boden JM. Cannabis use and later life outcomes. Addiction 2008 Jun;103(6):969,76; discussion 977-8.
- 10. Silins E, Fergusson DM, Patton GC, Horwood LJ, Olsson CA, Hutchinson DM, Degenhardt L, Tait RJ, Borschmann R, Coffey C, et al. Adolescent substance use and educational attainment: An integrative data analysis comparing cannabis and alcohol from three australasian cohorts. Drug Alcohol Depend 2015 Nov 1;156:90-6.
- 11. Stiby AI, Hickman M, Munafo MR, Heron J, Yip VL, Macleod J. Adolescent cannabis and tobacco use and educational outcomes at age 16: Birth cohort study. Addiction 2015 Apr;110(4):658-68.
- 12. Castellanos-Ryan N, Pingault JB, Parent S, Vitaro F, Tremblay RE, Sequin JR. Adolescent cannabis use, change in neurocognitive function, and high-school graduation: A longitudinal study from early adolescence to young adulthood. Dev Psychopathol 2017 Oct;29(4):1253-66.
- 13. Maggs JL, Staff J, Kloska DD, Patrick ME, O'Malley PM, Schulenberg J. Predicting young adult degree attainment by late adolescent marijuana use. J Adolesc Health 2015 Aug; 57(2):205-11.
- 14. Silins E, Horwood LJ, Patton GC, Fergusson DM, Olsson CA, Hutchinson DM, Spry E, Toumbourou JW, Degenhardt L, Swift W, et al. Young adult sequelae of adolescent cannabis use: An integrative analysis. Lancet Psychiatry 2014 Sep;1(4):286-93.
- 15. Loflin M, Earleywine M. A new method of cannabis ingestion: The dangers of dabs? Addict Behav 2014 Oct;39(10):1430-3.
- 16. Meier MH. Associations between butane hash oil use and cannabis-related problems. Drug Alcohol Depend 2017 Oct 1;179:25-31.
- 17. Chan GCK, Hall W, Freeman TP, Ferris J, Kelly AB, Winstock A. User characteristics and effect profile of butane hash oil: An extremely high-potency cannabis concentrate. Drug Alcohol Depend 2017 Sep 1;178:32-8.
- 18. Schoeler T, Petros N, Di Forti M, Klamerus E, Foglia E, Ajnakina O, Gayer-Anderson C, Colizzi M, Quattrone D, Behlke I, et al. Effects of continuation, frequency, and type of cannabis use on relapse in the first 2 years after onset of psychosis: An observational study. Lancet Psychiatry 2016 Aug 23.
- 19. Di Forti M, Sallis H, Allegri F, Trotta A, Ferraro L, Stilo SA, Marconi A, La Cascia C, Reis Margues T, Pariante C, et al. Daily use, especially of high-potency cannabis, drives the earlier onset of psychosis in cannabis users. Schizophr Bull 2014 Nov;40(6):1509-17.
- 20. Di Forti M, Marconi A, Carra E, Fraietta S, Trotta A, Bonomo M, Bianconi F, Gardner-Sood P, O'Connor J, Russo M, et al. Proportion of patients in south london with first-episode psychosis attributable to use of high potency cannabis: A case-control study. Lancet Psychiatry 2015 Mar;2(3):233-8.
- 21. Legrand SA, Isalberti C, der Linden TV, Bernhoft IM, Hels T, Simonsen KW, Favretto D, Ferrara SD, Caplinskiene M, Minkuviene Z, et al. Alcohol and drugs in seriously injured drivers in six european countries. Drug Test Anal 2013 Mar;5(3):156-65.
- 22. Wettlaufer A, Florica RO, Asbridge M, Beirness D, Brubacher J, Callaghan R, Fischer B, Gmel G, Imtiaz S, Mann RE, et al. Estimating the harms and costs of cannabis-attributable collisions in the canadian provinces. Drug Alcohol Depend 2017 Apr 1;173:185-90.
- 23. Hartman RL, Huestis MA. Cannabis effects on driving skills. Clin Chem 2013 Mar;59(3):478-92.

- 24. Hunault CC, Bocker KB, Stellato RK, Kenemans JL, de Vries I, Meulenbelt J. Acute subjective effects after smoking joints containing up to 69 mg Delta9-tetrahydrocannabinol in recreational users: A randomized, crossover clinical trial. Psychopharmacology (Berl) 2014 Dec;231(24):4723-33.
- 25. Leirer VO, Yesavage JA, Morrow DG. Marijuana carry-over effects on aircraft pilot performance. Aviat Space Environ Med 1991 03;62(0095-6562; 3):221-7.
- 26. Ramaekers JG, Berghaus G, van Laar M, Drummer OH. Dose related risk of motor vehicle crashes after cannabis use. Drug Alcohol Depend 2004 Feb 7;73(2):109-19.
- 27. Bramness JG, Khiabani HZ, Morland J. Impairment due to cannabis and ethanol: Clinical signs and additive effects. Addiction 2010 06;105(1360-0443; 0965-2140; 6):1080-7.
- 28. Ronen A, Chassidim HS, Gershon P, Parmet Y, Rabinovich A, Bar-Hamburger R, Cassuto Y, Shinar D. The effect of alcohol, THC and their combination on perceived effects, willingness to drive and performance of driving and non-driving tasks. Accid Anal Prev 2010 11;42(1879-2057; 0001-4575; 6):1855-65.
- 29. Abbott Products Inc. Marinol product monograph. 2010.
- 30. Canadian Student Tobacco, Alcohol and Drug Survey (CSTADS) [Internet]; c2014 2015. Available from: www.canada.ca/en/health-canada/services/canadian-student-tobacco-alcohol-drugs-survey/2014-2015summary.html.
- 31. UNICEF Office of Research. 'Child well-being in rich countries: A comparative overview', innocenti report card 11. Florence: UNICEF Office of Research; 2013.
- 32. Canadian Centre on Substance Abuse. The effects of cannabis use during adolescence.; 2015.
- 33. Moir D, Rickert WS, Levasseur G, Larose Y, Maertens R, White P, Desjardins S. A comparison of mainstream and sidestream marijuana and tobacco cigarette smoke produced under two smoking conditions. Chem Res Toxicol 2008;21:494-502.
- 34. Martinasek MP, McGrogan JB, Maysonet A. A systematic review of the respiratory effects of inhalational marijuana. Respir Care 2016 Nov;61(11):1543-51.
- 35. Agrawal A, Nelson EC, Bucholz KK, Tillman R, Grucza RA, Statham DJ, Madden PA, Martin NG, Heath AC, Lynskey MT. Major depressive disorder, suicidal thoughts and behaviours, and cannabis involvement in discordant twins: A retrospective cohort study. Lancet Psychiatry 2017 Sep;4(9):706-14.
- 36. Hser YI, Mooney LJ, Huang D, Zhu Y, Tomko RL, McClure E, Chou CP, Gray KM. Reductions in cannabis use are associated with improvements in anxiety, depression, and sleep quality, but not quality of life. J Subst Abuse Treat 2017 Oct;81:53-8.
- 37. Schoeler T, Monk A, Sami MB, Klamerus E, Foglia E, Brown R, Camuri G, Altamura AC, Murray R, Bhattacharyya S. Continued versus discontinued cannabis use in patients with psychosis: A systematic review and meta-analysis. Lancet Psychiatry 2016 Mar;3(3):215-25.