



Youth and Cannabis

Cannabis (marijuana, weed, pot, etc.) may affect your educational and professional goals and how successful you are in life. Because your health and future are important to you, here are some things you should learn about how cannabis use influences your body and brain.



Cannabis Affects Your Health

- Like cigarettes, smoking cannabis is harmful to your lungs. The smoke from cannabis has many of the same toxins and chemicals found in cigarette smoke, and when inhaled it can increase your risk of developing lung problems.^{1,2}
- The way cannabis is grown has changed and some plants now have higher levels of THC. High levels of THC can lead to poisoning, especially with edibles like cookies.^{3,4,5}
- Regular cannabis use has been linked to anxiety, depression, and suicide, especially for teens with a family history of mental illness.^{6,7,8}
- Cannabis use increases the risk of schizophrenia, although it is not common. The more cannabis you use, the higher the risk.⁹
- Using cannabis as a teen can lead to cannabis dependence and increase your risk for using or abusing other substances and illegal drugs.^{10,11}

Cannabis Affects Your Brain

- Your brain is still developing. Using cannabis regularly in your teens and early 20s may lead to physical changes in your brain.¹²
- Research shows that when you use cannabis your memory, learning, and attention are harmed. Some studies suggest a permanent impact as well.¹³

Most Teens Are Not Using Cannabis

- In 2016, most high school students in California reported they were not using cannabis. Only about 15 percent (less than 1 in 5) reported using cannabis in the past 30 days.¹⁴

Cannabis Impacts Your Goals

- The harmful effects of cannabis on your brain may impact your educational and professional goals and how successful you are in life.¹⁵ Research shows that if you start using cannabis before you are 18 or use cannabis regularly you may be at higher risk for:
 - Skipping classes¹⁶
 - Getting lower grades¹¹
 - Dropping out of school¹⁷
 - Unemployment or not getting the job that you'd like to have^{17,18}

Cannabis Affects Your Driving

- Cannabis can negatively affect the skills you need to drive safely, including reaction time,

Under California law, adults 21 or older can use, carry, and grow cannabis (marijuana, weed, pot, etc.). Buying cannabis (without a valid physician's recommendation or a county-issued medical marijuana identification card) will become legal under California law for adults 21 or older on January 1, 2018. Use of medicinal cannabis is legal under California law if you have a valid physician's recommendation or a valid county-issued medical marijuana identification card. To buy medicinal cannabis, you must be 18 or older and have either a valid physician's recommendation, a valid county-issued medical marijuana identification card, or be a Primary Caregiver as defined in Health and Safety Code Section 11362.7(d) or 11362.5(e), with a valid physician's recommendation for the patient. In addition, consistent with the Compassionate Use Act, you may possess or cultivate any amount that is reasonably related to your current medical needs. The new California law, known as the Medicinal and Adult-Use Cannabis Regulation and Safety Act²¹, includes information about where you can use cannabis, how much you can possess, and the penalties for illegal use. For more information, visit: https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=20170180SB94.

coordination, and concentration.¹⁹

- Driving under the influence of cannabis increases your risk of getting into a car crash.²⁰

If You Break the Law

- If you are under 21 and caught in possession of cannabis you will be required to complete

drug education or counseling and community service (unless you have a valid physician's recommendation or a valid county-issued medical marijuana identification card).²¹



References

1. Moir, D., W. S. Rickert, G. Levasseur, Y. Larose, R. Maertens, P. White, and S. Desjardins. 2008. "A comparison of mainstream and sidestream marijuana and tobacco cigarette smoke produced under two machine smoking conditions." *Chem Res Toxicol* 21 (2):494-502. doi: 10.1021/tx700275p.
2. Tashkin, D. P. 2013. "Effects of marijuana smoking on the lung." *Ann Am Thorac Soc* 10 (3):239-47. doi: 10.1513/AnnalsATS.201212-127FR.
3. ElSohly, M. A., Z. Mehmedic, S. Foster, C. Gon, S. Chandra, and J. C. Church. 2016. "Changes in Cannabis Potency Over the Last 2 Decades (1995-2014): Analysis of Current Data in the United States." *Biol Psychiatry* 79 (7):613-9. doi: 10.1016/j.biopsych.2016.01.004.
4. Mehmedic, Z., S. Chandra, D. Slade, H. Denham, S. Foster, A. S. Patel, S. A. Ross, I. A. Khan, and M. A. ElSohly. 2010. "Potency trends of Delta9-THC and other cannabinoids in confiscated cannabis preparations from 1993 to 2008." *J Forensic Sci* 55 (5):1209-17. doi: 10.1111/j.1556-4029.2010.01441.x.
5. Wang, G. S., G. Roosevelt, M. C. Le Lait, E. M. Martinez, B. Bucher-Bartelson, A. C. Bronstein, and K. Heard. 2014. "Association of unintentional pediatric exposures with decriminalization of marijuana in the United States." *Ann Emerg Med* 63 (6):684-9. doi: 10.1016/j.annemergmed.2014.01.017.
6. Kedzior, K. K., and L. T. Laeber. 2014. "A positive association between anxiety disorders and cannabis use or cannabis use disorders in the general population--a meta-analysis of 31 studies." *BMC Psychiatry* 14:136. doi: 10.1186/1471-244x-14-136.
7. Lev-Ran, S., B. Le Foll, K. McKenzie, T. P. George, and J. Rehm. 2013. "Bipolar disorder and co-occurring cannabis use disorders: characteristics, co-morbidities and clinical correlates." *Psychiatry Res* 209 (3):459-65. doi: 10.1016/j.psychres.2012.12.014.
8. Borges, G., C. L. Bagge, and R. Orozco. 2016. "A literature review and meta-analyses of cannabis use and suicidality." *J Affect Disord* 195:63-74. doi: 10.1016/j.jad.2016.02.007.
9. Marconi, A., M. Di Forti, C. M. Lewis, R. M. Murray, and E. Vassos. 2016. "Meta-analysis of the Association Between the Level of Cannabis Use and Risk of Psychosis." *Schizophr Bull* 42 (5):1262-9. doi: 10.1093/schbul/sbw003.
10. Chen, C. Y., M. S. O'Brien, and J. C. Anthony. 2005. "Who becomes cannabis dependent soon after onset of use? Epidemiological evidence from the United States: 2000-2001." *Drug Alcohol Depend* 79 (1):11-22. doi: 10.1016/j.drugalcdep.2004.11.014.
11. Macleod, J., R. Oakes, A. Copello, I. Crome, M. Egger, M. Hickman, T. Oppenkowski, H. Stokes-Lampard, and G. Davey Smith. 2004. "Psychological and social sequelae of cannabis and other illicit drug use by young people: a systematic review of longitudinal, general population studies." *Lancet* 363 (9421):1579-88. doi: 10.1016/s0140-6736(04)16200-4.
12. Batalla, A., S. Bhattacharyya, M. Yucel, P. Fusar-Poli, J. A. Crippa, S. Nogue, M. Torres, J. Pujol, M. Farre, and R. Martin-Santos. 2013. "Structural and functional imaging studies in chronic cannabis users: a systematic review of adolescent and adult findings." *PLoS One* 8 (2):e55821. doi: 10.1371/journal.pone.0055821.
13. Broyd, S. J., H. H. van Hell, C. Beale, M. Yucel, and N. Solowij. 2016. "Acute and Chronic Effects of Cannabinoids on Human Cognition-A Systematic Review." *Biol Psychiatry* 79 (7):557-67. doi: 10.1016/j.biopsych.2015.12.002.
14. California Department of Public Health, Tobacco Control Program. 2016. "2016 California Student Tobacco Survey."
15. National Academies of Sciences, Engineering, and Medicine. 2017. "The Health Effects of Cannabis and Cannabinoids: The Current State of Evidence and Recommendations for Research." Washington, DC: The National Academies Press. doi: 10.17226/24625.
16. Arria, A. M., L. M. Garnier-Dykstra, E. T. Cook, K. M. Caldeira, K. B. Vincent, R. A. Baron, and K. E. O'Grady. 2013. "Drug use patterns in young adulthood and post-college employment." *Drug Alcohol Depend* 127 (1-3):23-30. doi: 10.1016/j.drugalcdep.2012.06.001.
17. Fergusson, D. M., and J. M. Boden. 2008. "Cannabis use and later life outcomes." *Addiction* 103 (6):969-76; discussion 977-8. doi: 10.1111/j.1360-0443.2008.02221.x.
18. Zhang, C., J. S. Brook, C. G. Leukefeld, and D. W. Brook. 2016. "Trajectories of marijuana use from adolescence to adulthood as predictors of unemployment status in the early forties." *Am J Addict* 25 (3):203-9. doi: 10.1111/ajad.12361.
19. Hartman, R. L., and M. A. Huestis. 2013. "Cannabis effects on driving skills." *Clin Chem* 59 (3):478-92. doi: 10.1373/clinchem.2012.194381.
20. Rogeberg, O., and R. Elvik. 2016. "The effects of cannabis intoxication on motor vehicle collision revisited and revised." *Addiction* 111 (8):1348-59. doi: 10.1111/add.13347.
21. Senate Bill No. 94, Sess. Of 2017 (Cal 2017). https://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=20170180SB94