

Marijuana

Get the FACTS!

The purpose of this document is to examine the potential consequences that marijuana use has on an individual and the community. The following outline highlights outcomes supported by the medical literature.

Marijuana Facts

- Marijuana more than doubles a driver's risk of being in an accident. ¹
- 15% of trauma patients who were injured while driving their vehicle had been smoking marijuana. ²
- Marijuana leads to dependence and is associated with the criteria for substance dependence established by the American Psychiatric Association in the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV). ³
- In a 2002 National Survey on Drug Use and Health, 4.3 million Americans were classified with dependence on or abuse of marijuana. ⁴
- More teens enter treatment each year with a primary diagnosis of marijuana dependence than for all other illicit drugs combined. ⁵
- Marijuana contains many of the same cancer-causing chemicals found in tobacco.
- The amount of tar inhaled and the amount of carbon monoxide absorbed by those who smoke marijuana is nearly three to five times greater than among tobacco smokers. ⁶
- Teens who report current and regular marijuana use are nine times more likely than non-users to experiment with other illegal drugs or alcohol, and five times more likely to steal. ⁷

Effects on Health

RESPIRATORY

- Frequent marijuana smokers can have many of the same respiratory problems experienced by tobacco smokers, such as daily cough and phlegm production, more frequent acute chest illness, and a heightened risk of lung infections.
 - People who smoke marijuana frequently but do not smoke tobacco have more health conditions, are more likely to have had a serious illness in the past year, and spend more days on average ill with a cold, flu, or sore throat. ⁸
- The daily smoking of relatively small amounts of marijuana (3 to 4 joints) has at least a comparable, if not greater effect on the respiratory system than the smoking of more than 20 tobacco cigarettes. ⁹

BIRTH EFFECTS

- The consumption of marijuana by women during pregnancy has negative consequences on the cognitive functions of their children. ¹⁰
 - Marijuana use by pregnant mothers may hinder the long-term cognitive development of the fetus. Children of women who smoked marijuana during pregnancy displayed deficits in school achievement, such as in reading and spelling. ¹¹ Pre-natal marijuana exposure has a consistent, negative affect on higher-order thinking including problem solving, memory, planning, impulsivity, and attention in addition to having long-term emotional and behavioral consequences. ^{12, 13, 14, 15}

CARDIOVASCULAR

- Marijuana use increases heart rate and elevates the risk of heart attack by 4.8-fold in the 60 minutes after marijuana use. ¹⁶

This information is provided by the Greater Flint Health Coalition's Mental Health & Substance Use Task Force, a collaborative activity of the following partner organizations:



CANCER

- Marijuana use has the potential to promote cancer of the lungs and other parts of the respiratory tract because it contains many of the same irritants and carcinogens found in tobacco. In fact, marijuana smoke contains 50 to 70 percent more carcinogenic hydrocarbons than does tobacco smoke.¹⁷
- Marijuana use has been linked in a few recent studies to an increased risk of an aggressive type of testicular cancer in young men.¹⁸

MENTAL ILLNESS

- A number of studies have shown an association between chronic marijuana use and mental illness.
 - Researchers in Sweden found a link between marijuana use and an increased risk of developing schizophrenia.¹⁹
 - Those who used marijuana at least once a month in the past year were nearly 3 times as likely as non-users to say they think about killing themselves.⁷
 - Those who use marijuana regularly are 4 times more likely than non-users to display depressive symptoms.²⁰

Effects on Life

- Regular marijuana users report significantly lower income and education attainment.²¹
- Workers who smoke marijuana are more likely than their coworkers to have problems on the job. Several studies associate workers' marijuana smoking with increased absences, tardiness, accidents, workers' compensation claims, and job turnover. A study of municipal workers found that those who used marijuana on or off the job reported more "withdrawal behaviors" - such as leaving work without permission, daydreaming, spending work time on personal matters, and shirking tasks - that adversely affect productivity and morale.²²
- Marijuana users reported that use of the drug impaired several important measures of life achievement including cognitive abilities, career status, social life, and physical and mental health.²¹

Resources

American Society of Addiction Medicine - www.asam.org

Substance Abuse and Mental Health Services Administration - www.samhsa.gov

Drug Information Online - www.drugs.com/marijuana

MedlinePlus - www.nlm.nih.gov/medlineplus/marijuana

National Institute on Drug Abuse - www.drugabuse.gov

Office of National Drug Control Policy - www.whitehouse.gov/ondcp

References

1. Li, M., Brady, J., DiMaggio, C., Lusardi, A., Tzong, K., & Li, G. (2011). Marijuana use and motor vehicle crashes. *Epidemiological Reviews*, 34(1), 65-75
2. Soderstrom, C., Dischinger, P., Kerns, T., & Trifillis, A. (1995). Marijuana and other drug use among automobile and motorcycle drivers treated at a trauma center. *Accident: Analysis & Prevention*, 27(1), 131-135
3. Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality. (2013). Results from the 2012 national survey on drug use and health: summary of national findings. *U.S. Department of Health and Human Services, NSDUH Series H-46, HHS Publication No. (SMA) 13-4795*
4. Substance Abuse and Mental Health Services Administration, Office of Applied Studies. (2010). Results from the 2009 national survey on drug use and health: volume I. Summary of national findings. *U.S. Department of Health and Human Services, NSDUH Series H-38A, HHS Publication No. (SMA) 10-4856*
5. Substance Abuse and Mental Health Services Administration, Office of Applied Studies. (2002). Treatment episode data set (TEDS): 1992-2000. *U.S. Department of Health and Human Services, DASIS Series: S-17, DHHS Publication No. (SMA) 02-3727*
6. Wu, T., Tashkin, D., Djahed, B., & Rose, J. (1988). Pulmonary hazards of smoking marijuana as compared with tobacco. *The New England Journal of Medicine*, 318(6), 347-351
7. Greenblat, J. (1998). Adolescent self-reported behaviors and their association with marijuana use. *Substance Abuse and Mental Health Services Administration*. Based on data from the National Household Survey on Drug Abuse, 1994-1996
8. Polen, M., Sidney, S., Tekawa, I., Sadler, M., & Friedman, G. (1993). Health care use by frequent marijuana smokers who do not smoke tobacco. *The Western Journal of Medicine*, 158(6), 596-601
9. Tashkin, D. (1990). Pulmonary complications of smoked substance abuse. *The Western Journal of Medicine*, 152(5), 525-530
10. Ferraro, L., Tomasini, M., Beggiato, S., Gaetani, S., Cassano, T., Cuomo, V., Amoroso, S., Tanganelli, S., & Antonelli, T. (2009). Short- and long-term consequences of prenatal exposure to the cannabinoid agonist WIN55,212-2 on rat glutamate transmission and cognitive functions. *Journal of Neural Transmission*, 116(8), 1017-1027
11. Goldschmidt, L., Richardson, G., Cornelius, M., & Day, N. (2004). Prenatal marijuana and alcohol exposure and academic achievement at age 10. *Neurotoxicology and Teratology*, 26(4), 521-532
12. Fried, P. (2002). Conceptual issues in behavioral teratology and their application in determining long-term sequelae of prenatal marijuana exposure. *Journal of Child Psychology and Psychiatry, and Allied Disciplines*, 43(1), 81-102
13. Fried, P., Watkinson, B., & Gray, R. (2003). Differential effects on cognitive functioning in 13- to 16-year-olds prenatally exposed to cigarettes and marijuana. *Neurotoxicology and Teratology*, 25(4), 427-436
14. Goldschmidt, L., Richardson, G., Willford, J., & Day, N. (2008). Prenatal marijuana exposure and intelligence test performance at age 6. *Journal of the American Academy of Adolescent Psychiatry*, 47(3), 254-263
15. Gray, K., Day, N., Leech, S., & Richardson, G. (2005). Prenatal marijuana exposure: effect on child depressive symptoms at ten years of age. *Neurotoxicology and Teratology*, 27(3), 439-448
16. Mittleman, M., Lewis, R., Maclure, M., Sherwood, J., & Muller, J. (2001). Triggering myocardial infarction by marijuana. *American Heart Association Journals*, 103, 2805-2809
17. Hoffman, D., Brunemann, K., Gori, G., & Wynder, E. (2002). On the carcinogenicity of marijuana smoke. V.C. Runeckles, ed., *Recent Advances in Phytochemistry*. New York: Plenum, 1975
18. Lacson, J., Carroll, J., Tuazon, E., Castela, E., Bernstein, L., & Cortes, V. (2012). Population-based case-control study of recreational drug use and testis cancer risk confirms an association between marijuana use and nonseminoma risk. *Cancer*, 118(21), 5374-5383
19. Zammit, S., Allebeck, P., Andreasson, S., Lundberg, I., & Lewis, G. (2002). Self reported cannabis use as a risk factor for schizophrenia in Swedish conscripts of 1969: historical cohort study. *BMJ*, 325(7374), 1199
20. Bovasso, G. (2001). Cannabis abuse as a risk factor for depressive symptoms. *American Journal of Psychiatry*, 158, 2033-2037
21. Gruber, A., Pope, H., Hudson, J., & Yurgelun-Todd, D. (2003). Attributes of long-term heavy cannabis users: a case-control study. *Psychological Medicine*, 33, 1415-1422
22. Lehman, W., & Simpson, D. (1993). Employee substance abuse and on-the-job behaviors. *Journal of Applied Psychology*, 73(3), 309-321