

Adverse Effects of Marijuana

Significant marijuana usage lowers dopamine levels in the brain which impacts neurochemical levels in the brain and reduces motivation.

Christopher Bergland, "Does Long-Term Cannabis Use Stifle Motivation?," *Psychology Today*, July 2, 2013.

Using marijuana causes impaired thinking and interferes with a person's ability to learn and perform complicated tasks.

Marijuana, National Institute on Drug Abuse (NIDA), February 12, 2018, 8.

Persistent marijuana use disorder was found to occur among individuals who used pot frequently starting in adolescence. Their average loss was six to eight IQ points as measured in mid-adulthood. *Marijuana*, NIDA, 17.

Those who used marijuana early showed a decline in verbal ability (equivalent to four IQ points) and in general knowledge between preteen and early adulthood.

Marijuana, NIDA, 17.

A permanent decline in IQ among persistent users has been demonstrated.

Madeline H. Meier, Avshalom Caspi, Antony Ambler, et. al., "Persistent cannabis users show neuropsychological decline from childhood to midlife," *Proceedings of the National Academy of Sciences of the United States of America* 109. no. 40 (October 2, 2012): E2657-E2664.

"Cannabis-use disorder" can lead to an addiction in which the individual user finds it frequently interfering with aspects of day-to-day life. Studies suggest that about 17 percent of those who start using the drug in their teens will become dependent.

J.C. Anthony, "The epidemiology of cannabis dependence," *Cannabis Dependence: Its Nature, Consequences and Treatment*, ed. R.A. Roffman, R.S. Stephens (Cambridge, UK: Cambridge University Press, 2006), 58-105.

Exposure to THC (tetrahydrocannabinol) prior to maturity increased the likelihood that the individual would self-administer other drugs to acquire the same or greater effect.

Susan F. Tapert, Alecia D. Schweinsburg, Sandra A. Brown, "The Influence of Marijuana Use on Neurocognitive Functioning in Adolescents," *Current Drug Abuse Reviews* 1, no. 1 (2008): 99-111.

Marijuana smoke contains carcinogenic combustion products, including about 50 percent more benzoprene and 75 percent more benzanthracene (and more phenols, vinyl chlorides, nitrosamines, reactive oxygen species) than cigarette smoke.

Marijuana, NIDA, 29.

Several studies done in the United States and Canada have shown that because legalization has happened or is impending, people believe that it is a signal from their governments that cannabis is a safe and benign substance. Meanwhile, users are frequently unaware that the potency level of marijuana-the concentration of the hallucinogenic ingredient THC-is now up to five times higher than it was in the 1960s.

Marijuana, NIDA, 15.