

# insights

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## Teens and Marijuana Use

**The month of April is typically associated with several major holidays that celebrate the beginning of spring. But few people are aware that April 20 has become a counterculture holiday in North America, observed by people gathering to celebrate and consume marijuana.**

**420, 4:20, or 4/20** (pronounced four-twenty) is a code-term that refers to the consumption of marijuana, and as a way to identify oneself with the cannabis culture. Observances include smoking cannabis at 4:20 in the afternoon, as well as gathering to smoke on April 20th.

The increased use of medical marijuana, along with efforts to legalize recreational use of the drug, have both heightened and complicated the debate about marijuana's safety. While overall the research about whether marijuana use permanently alters the brain has yielded mixed results, Susan Weiss, PhD, a research director at the National Institute on Drug Abuse (NIDA), emphasizes the growing evidence that early and frequent use may disrupt brain development. Since brain development continues through the teenage years and into the early 20s, children and adolescents are particularly vulnerable to damage from drug exposure.

Most of the cannabinoid receptors are found in parts of the brain that affect mood regulation, memory, thinking, attention, sensory and time perception, balance, and coordinated movement. As such, there are many ways that marijuana use might interfere with normal development. Effects on the hippocampus can disrupt studying, learning, and memory, while effects on the frontal cortex interfere with judgment, planning, and decision making. Sports and other physical activities such as driving, dancing and playing video games are impacted by the drug's effects on the cerebellum and basal ganglia.

A longitudinal study of 1000 subjects in New Zealand found that marijuana use during the teen years can permanently lower a person's IQ, with the heaviest users dropping the equivalent of up to 8 IQ points. Other research suggests that approximately 9% of those who use marijuana will become dependent, and that those who begin using before age 18 are 4-7 times more likely to become addicted as adults.

At the same time that concerns about the permanent effects of teenage marijuana use are growing, the number of teens who think marijuana use is harmful is declining. Teachers can play an important role in educating both students and parents about the risks involved:

- Alert parents, and pay particular attention to signs of marijuana use on April 20th.
- Educate parents and students about the effects of marijuana on the brain, and the evidence that these may cause permanent changes. Highlight areas of particular interest and value to each student – e.g. effects on coordination for athletes, musicians, and dancers; on impairing judgment and coordination while driving a vehicle; on studying and learning for students invested in their academic success.
- Remind parents who may be reluctant to speak to their teens because of their own histories of smoking pot that pregnant women routinely drank alcohol, and many more people smoked cigarettes, before data emerged about the risks of these behaviors.
- Challenge the belief that pot is safer than alcohol, especially since marijuana potency has steadily increased over the past few decades.
- Refer students and families to available student assistance resources. ■

### Reference:

Weir, K. (2015). *Marijuana and the Developing Brain*. Monitor on Psychology, p. 49-52, APA Publication.

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