

# UNDERSTAND THE BIG DEAL

## HOW MARIJUANA HARMS YOUTH

Children and adolescents are in stages of brain growth and development that leave them especially vulnerable to problems caused by drug use, abuse and addiction, which are risk factors for poor school performance and dropout.

Know how marijuana negatively affects kids and undermines their ability to learn.

## First, how big is the problem?

### Rates of marijuana abuse and dependence in the United States

1.7 percent of Americans older than 12 struggle with marijuana abuse and/or dependence, according to the the 2010 National Survey on Drug Use and Health. Marijuana dependence is the No. 1 reason why adolescents throughout the United States and in Colorado seek substance-abuse treatment.

Adolescents are more likely than adults to develop problems with marijuana abuse and addiction: 9 percent of people who try marijuana abuse and/or become dependent on the drug; 17 percent of people develop those problems if they try the drug before the age of 18. *(Source: Hall and Degenhardt, 2009)*

### Colorado schools report alarming growth in drug-related problems

During the 2009-10 academic year, Colorado schools recorded 5,048 disciplinary reports for drug offenses — a concerning increase of 33.5 percent over the previous year. In the same period, expulsions for drug offenses shot up 40 percent, and out-of-school suspensions were up 32.5 percent. The data include, but are not limited to, marijuana-related offenses. These spikes happened in the same year that hundreds of marijuana dispensaries opened in Colorado, and federal Safe and Drug-Free Schools funds made available to school districts for drug-prevention programs were eliminated. Fewer resources are available to address changing social norms.

### Monitoring The Future - Key Study Findings About Students

The 2010 study reported data collected from 46,500 students in grades 8, 10 and 12. Among its findings:

#### Marijuana use is rising

In 2010, 8 percent of 8th graders, 16.7 percent of 10th graders and 21.4 percent of 12th graders reported using marijuana in the previous month. Use increased in all three grades over the 2009 study. In 2010, there was also a significant increase in daily use in all three grades, reaching 1.2 percent, 3.3 percent and 6.1 percent in grades 8, 10 and 12, respectively.

#### Perception of marijuana's harmfulness is decreasing

Students surveyed in 2010 reported that occasional and regular marijuana use were less harmful than did students surveyed the previous year.

#### Fewer students disapprove of marijuana use

In 2010, students were less likely to disapprove of peers who occasionally and regularly use marijuana.

#### Marijuana is easier to get

In 2010, more students reported that marijuana was fairly easy to very easy to get.

# Marijuana compromises learning and education

Long-term, regular users who started smoking the drug before the age of 18 often cause changes in their brain's structure and functioning that result in permanent cognitive deficits. Essentially, they can create for themselves a level of "normal" performance that is lower functioning than the level of normal performance they may have achieved had they not used marijuana.

The primary area of the brain that is harmed is the hippocampus, which is important for learning and memory. Research shows adolescent marijuana use before the age of 17 may lead to impairments in verbal intelligence even long after someone stops using the drug. Verbal intelligence measures the ability to analyze information and solve problems using language. (Sources: Jacobsen et al., 2004; Padula et al., 2007; Pope et al., 2003; Schweinsburg et al., 2008 and 2010)

Studies show that when marijuana users are intoxicated, their working memory is impaired, and they are more impulsive, less attentive, less motivated and slower to make decisions.

(Source: Jager and Ramsey, 2008)

Marijuana users withdrawing from the drug are often aggressive and irritable — which can contribute to bad decision-making.

(Source: Hoaken and Stewart, 2003)

For adolescents, the poor performance and decision-making that stem from marijuana use increase the risk of school dropout. A study published in 2010 that followed more than 6,300 New Zealand children to adulthood found that a person who never smoked marijuana before the age of 18 was nearly four times more likely to earn a high school degree and graduate from college than a person who started smoking before the age of 15. (Source: Fergusson et al., 2010)

## Rates of use and addiction among adolescents

There are three big ways to deter adolescent substance abuse and dependence:

- Limit accessibility to a drug
- Discourage the drug from becoming socially acceptable, and remind teens that not all kids use drugs
- Frequently remind people that it is unwise and unhealthy to do drugs; explain the risks.

# Other consequences of adolescent marijuana use

## Marijuana use is a risk factor for many problems, including:

### Psychosis

At least eight studies show that teens who use marijuana at least double — and up to quadruple — their chances of developing psychosis in young adulthood. It is important to note that this risk is dose-dependent — meaning that the more adolescents use marijuana, the more they increase their risk. This finding stands firm even after controlling for many possibly confounding variables. While it would be unethical for researchers to conduct the definitive study that establishes a causal link between teen marijuana use and subsequent psychosis, researchers are concerned about the links that have been established, and they want parents and children to be aware of them.

(Sources: Fergusson, 2010; Hall and Degenhardt, 2009; Minozzi et al., 2010)

### Risky sex leading to HIV, STDs and teen pregnancy

Research comparing adolescents seeking treatment for marijuana abuse and addiction and their peers not reporting problems with the substance found that those in treatment started having sex at an earlier age, had more sexual partners and were significantly less likely to use protection. They were also significantly more likely to become injection-drug users — a risk that dropped by 19 percent for each year that onset of marijuana was delayed. (Source: Thurstone et al, 2011)

### Accidents

Accidents are the leading cause of death for adolescents — and marijuana use can lead to accidents. One study in France found that of drivers younger than 30 who were killed in a traffic accident, 30 percent were acutely intoxicated by marijuana at the time of their deaths.

## Go Online for More Information

Find an overview brochure and slide show about marijuana's effects on adolescents at:

[www.cde.state.co.us/DropoutPrevention/Resources.htm](http://www.cde.state.co.us/DropoutPrevention/Resources.htm)

## CREDITS



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