

## Marijuana: Know the Facts

Marijuana is a common drug made from the dried, shredded leaves, flowers, and other parts of a plant in the genus *Cannabis*. The term cannabis generally refers to marijuana and other drugs made from the same plant, including sinsemilla, hashish, and hash oil.

Marijuana is the most commonly used illicit drug. Although marijuana is sometimes characterized as a “harmless herb,” the cultivation, trafficking, and use of the drug have a negative impact on many aspects of our lives, from public health to national security, transportation, the environment, and educational attainment.

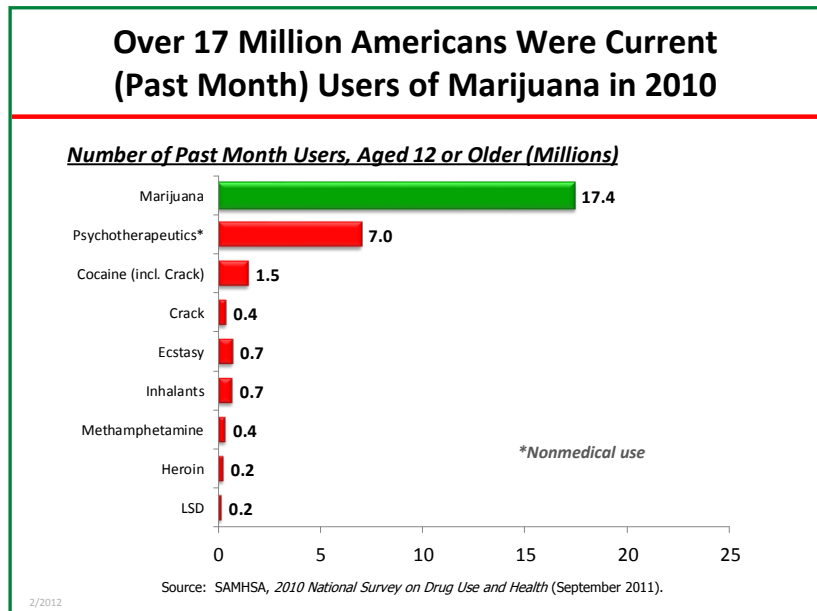
The Obama Administration is working with Federal partners and state and local officials to reduce the use of marijuana and other illicit drugs through development of strategies that more fully integrate the principles of prevention, treatment, and recovery.

### National Trends

- ◆ Rates of marijuana use among 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> graders are higher than rates for any other illicit drug.<sup>1</sup>
- ◆ According to the 2010 National Survey on Drug Use and Health (NSDUH), 17.4 million people age 12 or older were current marijuana users, meaning they used the drug during the month prior to taking the survey (see chart, above).<sup>2</sup>
- ◆ NSDUH also shows that from 2008 to 2010, the rate of current illicit drug use among young adults aged 18 to 25 climbed 10 percent (from 19.6% to 21.5%), driven largely by a 12 percent rise in marijuana use (from 16.5% to 18.5%).<sup>3</sup>
- ◆ In 2010, there were 2.4 million new past-year users of marijuana. The average age of initiation increased from 17.0 in 2009 to 19.3 in 2010.<sup>4</sup>
- ◆ The average potency of marijuana has more than doubled since 1998.<sup>5</sup>

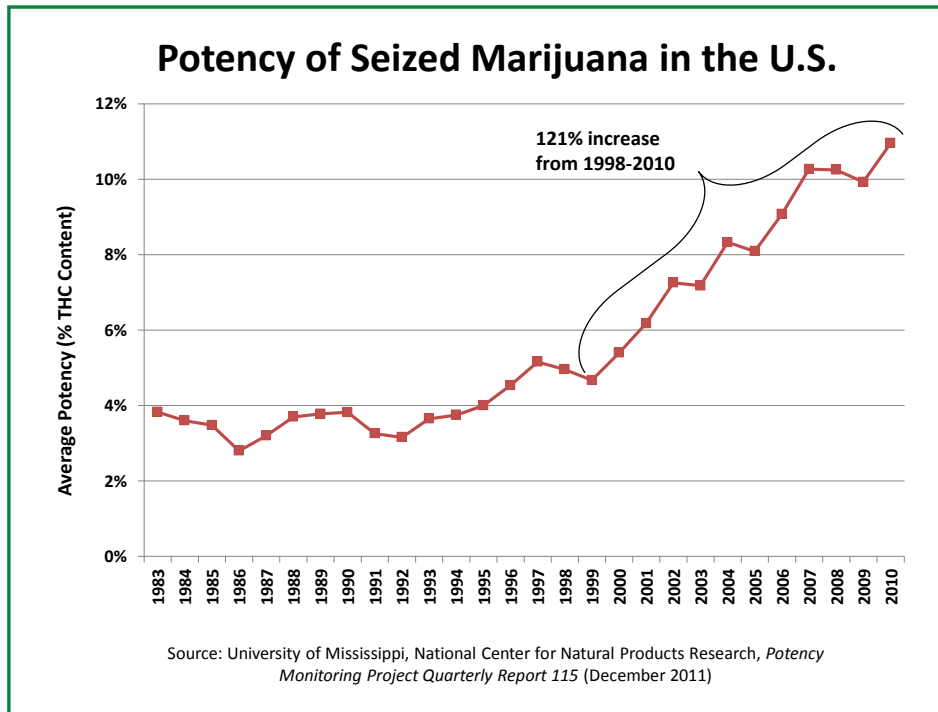
### Health Effects

Marijuana is classified as a Schedule I drug, meaning it has a high potential for abuse and no currently accepted medical use in treatment in the United States.<sup>6</sup> In recent decades, marijuana growers have been genetically altering their plants to increase the percentage of delta-9-tetrahydrocannabinol (THC),



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the main active ingredient in marijuana. The average potency of tested marijuana from Federal seizures more than doubled from 1998 to 2010,<sup>7</sup> as shown below.



THC acts upon specific sites in the brain called cannabinoid receptors, triggering a series of cellular reactions that ultimately lead to the “high” users experience when they smoke the drug.<sup>8</sup>

Marijuana intoxication can cause distorted perceptions, impaired coordination, difficulty in thinking and problem solving, and problems with learning and memory.<sup>9</sup> Studies

have shown an association between chronic marijuana use and increased rates of anxiety, depression, suicidal thoughts, and schizophrenia.<sup>10</sup> Research also indicates that marijuana smoke contains carcinogens and irritates the lungs. In fact, marijuana smoke contains 50-70 percent more carcinogenic hydrocarbons than does tobacco smoke.<sup>11</sup>

## Prevention

To reduce the prevalence of marijuana, particularly among youth, the Federal Government is implementing multi-sector, community-based methods of prevention and intervention, such as the Drug Free Communities (DFC) program, the Screening, Brief Intervention, and Referral to Treatment (SBIRT) model, and the National Youth Anti-Drug Media Campaign.

The DFC program strengthens collaboration efforts among prevention organizations to develop evidence- and community-based prevention strategies.<sup>12</sup> The SBIRT model also uses a community-based approach to deliver individualized intervention materials for non-dependent marijuana users.<sup>13</sup> SBIRT programs, which have screened more than 536,000 individuals for marijuana and other drug use, can operate in a variety of locations, such as trauma centers and schools.<sup>14</sup> The ability to develop prevention materials that are community-based and individually tailored is one of the most important characteristics of the DFC and SBIRT models.

The National Youth Anti-Drug Media Campaign increases teen exposure to anti-drug messages through its *Above the Influence* program, which delivers prevention messaging at the national level and through more targeted efforts at the local community level.

Also vital to the success of prevention programs are grants, such as the Strategic Prevention Framework State Incentive Grant, which provides funds to State, local, and tribal organizations.<sup>15</sup>

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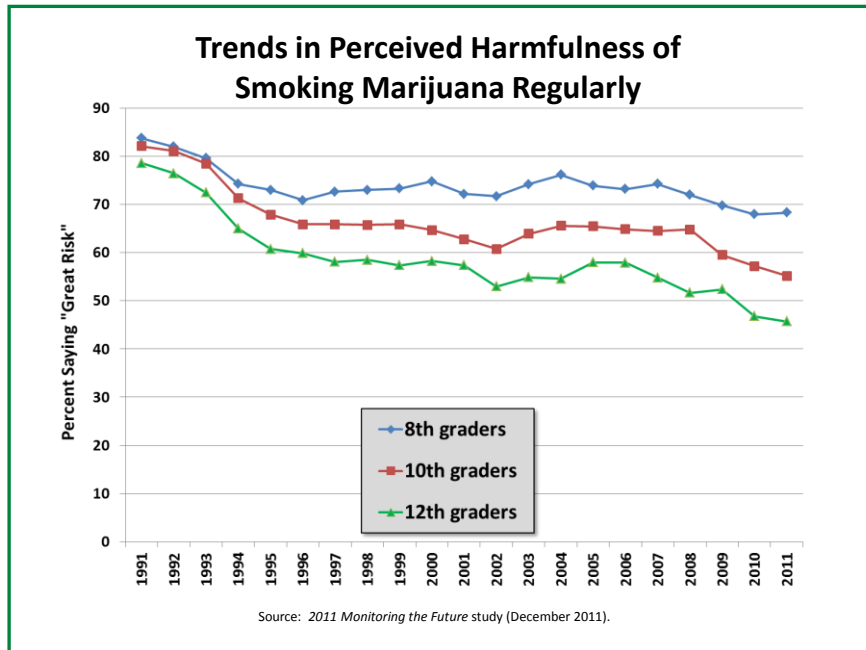
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## Youth at Risk

Marijuana use by teens has been shown to have a profoundly negative effect on their development.<sup>16</sup> Results of the 2010 NSDUH study indicate that more than 3.4 million 12- to 17-year-olds were past-year marijuana users, and that 863,000 youths in that age group displayed the characteristics of marijuana dependence or abuse in the past year.<sup>17</sup>

The downward trend in youth marijuana use during the late 1990s has ended.<sup>18</sup> In 2010, according to NSDUH, the rate of past-month marijuana use among 12- to 17-year-olds climbed to 7.4%.<sup>19</sup> This is significantly higher than the rate (6.7%) in 2006, 2007, and 2008.

A possible correlation with this phenomenon is that fewer young people today see “great risk” in using marijuana regularly (see chart, right). In 1991, approximately 80 percent of 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> graders perceived there to be “great risk” in using marijuana regularly. In 2011, those rates dropped to about 70 percent of 8<sup>th</sup> graders, 55 percent of 10<sup>th</sup> graders, and 45 percent of 12<sup>th</sup> graders.<sup>20</sup>



## Treatment

Long-term marijuana users who are trying to stop using the drug report symptoms such as irritability, sleeplessness, decreased appetite, anxiety, and drug craving, all of which make it difficult to quit.<sup>21</sup> In 2009, nearly 72 percent of primary treatment admissions for youth between the ages of 12 and 17 were for marijuana.<sup>22</sup> Although there are no medications for treating marijuana abuse, behavioral interventions, including cognitive behavioral therapy and motivational incentives (i.e., providing vouchers for goods or services to patients who abstain from drug use), have shown efficacy in treating marijuana dependence.<sup>23</sup>

## A Threat to the Environment

Outdoor marijuana cultivation sites are becoming increasingly common. These “grows” often result in the destruction of natural habitat from diesel spills, pesticide runoff, and trash from cultivators.<sup>24</sup> National parks and other public lands in the United States are used for cannabis cultivation operations, primarily by Mexican criminal groups. Data from the Department of Agriculture’s Forest Service and the Department of the Interior indicate that more than 4 million marijuana plants were eradicated from U.S. public lands in 2008 alone.<sup>25</sup>

## Marijuana Resource Center

ONDCP has created a Web-based resource center that provides the general public, community leaders, and other interested people with the facts, knowledge, and tools to better understand and address

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marijuana in their communities. This resource center will be regularly updated and expanded to address emerging issues, research, and prevention tools, and highlight successful local efforts to reduce marijuana use.

To access the resource center, visit <http://www.whitehouse.gov/ondcp/marijuanainfo>.

## Notes

- <sup>1</sup> University of Michigan, Institute for Social Research. "The Monitoring the Future Study: 2011 Results (November 2011)."
- <sup>2</sup> SAMHSA, 2010 National Survey on Drug Use and Health (September 2011).
- <sup>3</sup> SAMHSA, 2010 National Survey on Drug Use and Health (September 2011).
- <sup>4</sup> SAMHSA, 2010 National Survey on Drug Use and Health (September 2011).
- <sup>5</sup> National Center for Natural Products Research (NCNPR), Research Institute of Pharmaceutical Sciences. *Quarterly Report, Potency Monitoring Project, Report 115, September 16, 2011, thru December 15, 2011*. University, MS: NCNPR, Research Institute of Pharmaceutical Sciences, School of Pharmacy, University of Mississippi (December 2011).
- <sup>6</sup> Drug Enforcement Administration, "Schedules of Controlled Substances."  
<http://www.justice.gov/dea/pubs/abuse/1-csa.htm>
- <sup>7</sup> University of Mississippi, National Center for Natural Products Research, *Potency Monitoring Project Quarterly Report 115* (December 2011).
- <sup>8</sup> Herkenham M, Lynn A, Little MD, et al. Cannabinoid receptor localization in the brain. *Proc Natl Acad Sci, USA* 87(5):1932–1936, 1990.
- <sup>9</sup> Pope HG, Gruber AJ, Hudson JI, Huestis MA, Yurgelun-Todd D. Neuropsychological performance in long-term cannabis users. *Arch Gen Psychiatry* 58(10):909–915, 2001.
- <sup>10</sup> Moore TH, Zammit S, Lingford-Hughes A, et al. Cannabis use and risk of psychotic or affective mental health outcomes: A systematic review. *Lancet* 370(9584):319–328, 2007.
- <sup>11</sup> Hoffman, D.; Brunnemann, K.D.; Gori, G.B.; and Wynder, E.E.L. On the carcinogenicity of marijuana smoke. In: V.C. Runeckles, ed., *Recent Advances in Phytochemistry*. New York: Plenum, 1975.
- <sup>12</sup> Office of National Drug Control Policy, Drug Free Communities Support Program."  
<http://www.whitehouse.gov/ondcp/Drug-Free-Communities-Support-Program>
- <sup>13</sup> Substance Abuse and Mental Health Services Administration. "Screening, Brief Intervention, and Referral to Treatment" (2009).  
<http://sbirt.samhsa.gov/about.htm>
- <sup>14</sup> Substance Abuse and Mental Health Services Administration. "Screening, Brief Intervention, and Referral to Treatment" (2009).  
<http://sbirt.samhsa.gov/about.htm>
- <sup>15</sup> Substance Abuse and Mental Health Services Administration, "Strategic Prevention Framework State Incentive Grant."  
<http://prevention.samhsa.gov/grants/sig.aspx>
- <sup>16</sup> Volkow, N. Research Report: *Marijuana Abuse*, National Institute on Drug Abuse.  
<http://www.drugabuse.gov/ResearchReports/Marijuana/default.html>
- <sup>17</sup> SAMHSA, 2010 National Survey on Drug Use and Health (September 2011).
- <sup>18</sup> University of Michigan, Institute for Social Research. "The Monitoring the Future Study: 2011 Results."
- <sup>19</sup> SAMHSA, 2010 National Survey on Drug Use and Health (September 2011).
- <sup>20</sup> University of Michigan, Institute for Social Research. "The Monitoring the Future Study: 2011 Results."
- <sup>21</sup> Budney AJ, Vandrey RG, Hughes JR, Thostenson JD, Bursac Z. Comparison of cannabis and tobacco withdrawal: Severity and contribution to relapse. *J Subst Abuse Treat* 35(4):362–368, 2008.
- <sup>22</sup> Substance Abuse and Mental Health Services Administration, "Treatment Episode Data Set, 1999-2009" (April 2011).
- <sup>23</sup> Stephens, R.S.; Roffman R.A.; and Curtin, L. Comparison of extended versus brief treatments for marijuana use. *J Consult Clin Psychol* 68(5):898-908, 2000.  
Budney, A.J.; Higgins, S.T.; Radonovich, K.J.; and Novy PL. Adding voucher-based incentives to coping skills and motivational enhancement improves outcomes during treatment for marijuana dependence. *J Consult Clin Psychol* 68(6):1051-1061, 2000.
- <sup>24</sup> National Drug Intelligence Center. "Impact of Drugs on Society" (2010), available at  
<http://www.justice.gov/ndic/pubs38/38661/drugImpact.htm>
- <sup>25</sup> National Drug Intelligence Center, Domestic Cannabis Cultivation Assessment (2009), available at  
<http://www.justice.gov/ndic/pubs37/37035/public.htm#Top>

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