MARIJUANA

myths & FACTS

The Truth Behind 10 Popular Misperceptions

OFFICE OF NATIONAL DRUG CONTROL POLICY

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INTRODUCTION

Marijuana is the most widely used illicit drug in the United States. According to the National Survey on Drug Use and Health (formerly called the National Household Survey on Drug Abuse), 95 million Americans age 12 and older have tried "pot" at least once, and three out of every four illicit-drug users reported using marijuana within the previous 30 days.[1]

Use of marijuana has adverse health, safety, social, academic, economic, and behavioral consequences. And yet, astonishingly, many people view the drug as "harmless." The widespread perception of marijuana as a benign natural herb seriously detracts from the most basic message our society needs to deliver: It is not OK for anyone—especially young people—to use this or any other illicit drug.

Marijuana became popular among the general youth population in the 1960s. Back then, many people who would become the parents and grandparents of teenage kids today smoked marijuana without significant adverse effects, so now they may see no harm in its use. But most of the marijuana available today is considerably more potent than the "weed" of the Woodstock era, and its users tend to be younger than those of past generations. Since the late 1960s, the average age of marijuana users has dropped from around 19 to just over 17. People are also lighting up at an earlier age. Fewer than half of those using marijuana for the first time in the late 1960s were under 18. By 2001, however, the proportion of under-18 initiates had increased to about two-thirds (67 percent).[2]

Use of marijuana and other drugs usually peaks in the late teens and early twenties, then declines in later years.[77]

Today's young people live in a world vastly different from that of their parents and grandparents. Kids these days, for instance, are bombarded constantly with pro-drug messages in print, on screen, and on CD. They also have easy access to the Internet, which abounds with sites promoting the wonders of marijuana, offering kits for beating drug tests, and, in some cases, advertising pot for sale. Meanwhile, the

prevalence of higher potency marijuana, measured by levels of the chemical delta-9-tetrahydrocannabinol (THC), is increasing. Average THC levels rose from less than 1 percent in the mid-1970s to more than 6 percent in 2002. Sinsemilla potency increased in the past two decades from 6 percent to more than 13 percent, with some samples containing THC levels of up to 33 percent.[3]

Many people who worry about the dangers of heroin or cocaine are less concerned about marijuana, or they consider experimentation with pot an adolescent rite of passage. Such attitudes have given rise to a number of myths in the popular culture. Movies, magazines, and other media commonly show glamorous images and gratuitous use of marijuana, trivializing the risks and ignoring any negative consequences. At the same time, special-interest groups proclaim that smoked marijuana is not only harmless, it's actually good medicine.

Marijuana Myths & Facts looks at 10 popular misperceptions about marijuana and, using the latest research findings and statistical information, explains why they are wrong. The booklet describes the dangers of marijuana and why it is important for society to send a clear, consistent, and credible message to young people about the seriousness of the threat.

MYTH 1

Marijuana is harmless.

Marijuana harms in many ways, and kids are the most vulnerable to its damaging effects. Use of the drug can lead to significant health, safety, social, and learning or behavioral problems, especially for young users. Making matters worse is the fact that the marijuana available today is more potent than ever.

Short-term effects of marijuana use include memory loss, distorted perception, trouble with thinking and problem-solving, and anxiety. Students who use marijuana may find it hard to learn,[4] thus jeopardizing their ability to achieve their full potential.

COGNITIVE IMPAIRMENT

That marijuana can cause problems with concentration and thinking has been shown in research funded by the National Institute on Drug Abuse (NIDA), the federal agency that brings the power of science to bear on drug abuse and addiction. A NIDA-funded study at McLean Hospital in Belmont, Massachusetts, is part of the growing body of research documenting cognitive impairment among heavy marijuana users.[5] The study found that college students who used marijuana regularly had impaired skills related to attention, memory, and learning 24 hours after they last used the drug.

Youths with an average grade of D or below were more than 4 times as likely to have used marijuana in the past year as youths who reported an average grade of A.[78]

Another study, conducted at the University of Iowa College of Medicine, found that people who used marijuana frequently (7 or more

times weekly for an extended period) showed deficits in mathematical skills and verbal expression, as well as selective impairments in memory-retrieval processes.[6] These findings clearly have significant implications for young people, since reductions in cognitive function can lead to poor performance in school.

Other impairments observed in frequent marijuana users involve sensory and time perception and coordinated movement, suggesting use of the drug can adversely affect driving and sports performance.[7] Effects such as these may be especially problematic during teens' peak learning years, when their brains are still developing.

MENTAL HEALTH PROBLEMS

Smoking marijuana leads to changes in the brain similar to those caused by cocaine, heroin, and alcohol.[8] All of these drugs disrupt the flow of chemical neurotransmitters, and all have specific receptor sites in the brain that have been linked to feelings of pleasure and, over time, addiction. Cannabinoid receptors are affected by THC, the active ingredient in marijuana, and many of these sites are found in the parts of the brain that influence pleasure, memory, thought, concentration, sensory and time perception, and coordinated movement.[9]

Particularly for young people, marijuana use can lead to increased anxiety, panic attacks, depression, and other mental health problems. One study linked social withdrawal, anxiety, depression, attention problems, and thoughts of suicide in adolescents with past-year marijuana use.[10] Other research shows that kids age 12 to 17 who smoke marijuana weekly are three times more likely than non-users to have thoughts about committing suicide.[11] A recently published longitudinal study showed that use of cannabis increased the risk of major depression fourfold, and researchers in Sweden found a link between marijuana use and an increased risk of developing schizophrenia.[12]

According to the American Society of Addiction Medicine, addiction and psychiatric disorders often occur together. The latest National Survey on Drug Use and Health reported that adults who use illicit drugs were more than twice as likely to have serious mental illness as adults who did not use an illicit drug.[13]

Researchers conducting a longitudinal study of psychiatric disorders and substance use (including alcohol, marijuana, and other illicit drugs) have suggested several possible links between the two: 1) people may use drugs to feel better and alleviate symptoms of a mental disorder; 2) the use of the drug and the disorder share certain biological, social, or other risk factors; or 3) use of the drug can lead to anxiety, depression, or other disorders.[14]

TRAFFIC SAFETY

Marijuana also harms when it contributes to auto crashes or other incidents that injure or kill, a problem that is especially prevalent among young people. In a study reported by the National Highway Traffic Safety Administration, even a moderate dose of marijuana was shown to impair driving performance. The study measured reaction time and how often drivers checked the rear-view mirror, side streets, and the relative speed of other vehicles.[15]

Another study looked at data concerning shock-trauma patients who had been involved in traffic crashes. The researchers found that 15 percent of the trauma patients who were injured while driving a car or motorcycle had been smoking marijuana, and another 17 percent had both THC and alcohol in their blood.[16] Statistics such as these are particularly troubling in light of recent survey results indicating that almost 36 million people age 12 or older drove under the influence of alcohol, marijuana, or another illicit drug in the past year.[17]

LONG-TERM CONSEQUENCES

The consequences of marijuana use can last long after the drug's effects have worn off. Studies show that early use of marijuana is strongly associated with later use of other illicit drugs and with a greater risk of illicit drug dependence or abuse.[18] In fact, an analysis of data from the National Household Survey on Drug Abuse showed that the age of initiation for marijuana use was the most important predictor of later need for drug treatment.[19]

Regular marijuana use has been shown to be associated with other long-term problems, including poor academic performance,[20] poor job performance and increased absences from work,[21] cognitive deficits,[22] and lung damage.[23] Marijuana use is also associated with a number of risky sexual behaviors, including having multiple sex partners,[24] initiating sex at an early age,[25] and failing to use condoms consistently.[26]

MYTH 2

Marijuana is not addictive.

It was once believed that marijuana was not addictive; many people still believe this to be the case. But recent research shows that use of the drug can indeed lead to dependence. Some heavy users of marijuana develop withdrawal symptoms when they have not used the drug for a period of time.

Marijuana use, in fact, is often associated with behavior that meets the criteria for substance dependence established by the American Psychiatric Association in the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV). Considered the standard reference for health professionals who make psychiatric diagnoses, the DSM contains information about all mental disorders for children and adults. As described in the DSM, the criteria for substance dependence include tolerance (needing more of the substance to achieve the same effects, or diminished effect with the same amount of the substance); withdrawal symptoms; using a drug even in the presence of adverse effects; and giving up social, occupational, or recreational activities because of substance use.[27] According to the 2002 National Survey on Drug Use and Health, 4.3 million Americans were classified with dependence on or abuse of marijuana. That figure represents 1.8 percent of the total U.S. population and 60.3 percent of those classified as individuals who abuse or are dependent on illicit drugs.[28]

The desire for marijuana exerts a powerful pull on those who use it, and this desire, coupled with withdrawal symptoms, can make it hard for long-term smokers to stop using the drug. Users trying to quit often report irritability, anxiety, and difficulty sleeping.[29] On psychological tests they also display increased aggression, which peaks approximately one week after they last used the drug.[30]

Many people use marijuana compulsively even though it interferes with family, school, work, and recreational activities. What makes this all the more disturbing is that marijuana use has been shown to be

three times more likely to lead to dependence among adolescents than among adults.[31] Research indicates that the earlier kids start using marijuana, the more likely they are to become dependent on this or other illicit drugs later in life.[32]

TREATMENT ADMISSIONS

More teens enter treatment each year with a primary diagnosis of marijuana dependence than for all other illicit drugs combined.[33] Currently, 62 percent of teens in drug treatment are dependent on marijuana.[34]

The proportion of admissions for primary marijuana abuse increased from 6 percent in 1992 to 15 percent of admissions to treatment in 2000.[35] Almost half (47 percent) of the people admitted for marijuana were under 20 years old, and many of them started smoking pot at a very early age. Of those admitted for treatment for primary marijuana dependence, 56 percent had first used the drug by age 14, and 26 percent had begun by age 12.[36]

The earlier kids start using marijuana, the more likely they are to become dependent on this or other illicit drugs later in life.[79]

MYTH 3

Marijuana is not as harmful to your health as tobacco.

Although some people think of marijuana as a benign natural herb, the drug actually contains many of the same cancer-causing chemicals found in tobacco. Puff for puff, the amount of tar inhaled and the level of carbon monoxide absorbed by those who smoke marijuana, regardless of THC content, are three to five times greater than among tobacco smokers.[37]

Regular use of marijuana appears to be at least as damaging as regular use of tobacco.[80]

Consequently, people who use marijuana on a regular basis often have the same breathing problems as tobacco users, such as chronic coughing and wheezing, more frequent acute chest illnesses, and a tendency toward obstructed airways. And because respiratory problems can affect athletic performance, smoking marijuana may be particularly harmful to kids involved in sports.

Researchers at the University of California, Los Angeles, have determined that marijuana smoking can cause potentially serious damage to the respiratory system at a relatively early age. Moreover, in a review of research on the health effects of marijuana use, the researchers cited findings that show "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.[38]

Recently, scientists in England produced further evidence linking marijuana use to respiratory problems in young people. A research team at the University of Birmingham found that regular use of marijuana, even for less than six years, causes a marked deterioration in lung function. These findings, the study concludes, "may have serious long-term implications for what is currently regarded as a relatively 'harmless' recreational habit."[39]

MYTH 4

Marijuana makes you mellow.

Not always. Research shows that kids who use marijuana weekly are nearly four times more likely than non-users to report they engage in violent behavior. One study found that young people who had used marijuana in the past year were more likely than non-users to report aggressive behavior. According to that study, incidences of physically attacking people, stealing, and destroying property increased in proportion to the number of days marijuana was smoked in the past year. Users were also twice as likely as non-users to report they disobey at school and destroy their own things.[40]

One study found that people who had used marijuana in the past year were more likely than non-users to report aggressive behavior.[81]

In another study, researchers looking into the relationship between ten illicit drugs and eight criminal offenses found that a greater frequency of marijuana use was associated with a greater likelihood to commit weapons offenses; except for alcohol, none of the other drugs showed such a connection. That study, published in the *Journal of Addictive Diseases* in 2001, also found a link between marijuana use and the commission of attempted homicide and reckless endangerment offenses.[41]

MYTH 5

Marijuana is used to treat cancer and other diseases.

Under the Comprehensive Drug Abuse Prevention and Control Act of 1970, marijuana was established as a Schedule I controlled substance. In other words, it is a dangerous drug that has no recognized medical value.

Whether marijuana can provide relief for people with certain medical conditions, including cancer, is a subject of intense national debate. It is true that THC, the primary active chemical in marijuana, can be useful for treating some medical problems. Synthetic THC is the main ingredient in Marinol®, an FDA-approved medication used to control nausea in cancer chemotherapy patients and to stimulate appetite in people with AIDS. Marinol, a legal and safe version of medical marijuana, has been available by prescription since 1985.

However, marijuana as a smoked product has never proven to be medically beneficial and, in fact, is much more likely to harm one's health; marijuana smoke is a crude THC delivery system that also sends many harmful substances into the body. In 1999, the Institute of Medicine (IOM) published a review of the available scientific evidence in an effort to assess the potential health benefits of marijuana and its constituent cannabinoids. The review concluded that smoking marijuana is not recommended for any long-term medical use, and a subsequent IOM report declared, "marijuana is not a modern medicine."[42]

Clinical trials of smoked marijuana for therapy are underway through the National Institutes of Health, a major provider of funding for research on the potential medical uses of marijuana. Meanwhile, the best available evidence points to the conclusion that the adverse effects of marijuana smoke on the respiratory system would almost certainly offset any possible benefit.

Some states have removed criminal penalties for possessing marijuana for "medical" use, adding fuel to the debate about using smoked marijuana to reduce suffering. Residents in those states have voted to change the marijuana policy in the mistaken belief that the benefits of smoked marijuana exceed those provided by THC alone. A number of organizations are pushing to make marijuana available for medicinal purposes,[43] but this campaign is regarded by many public-health experts as a veiled effort to legalize the drug.

Marijuana as a smoked product has never proven to be medically beneficial and, in reality, is much more likely to harm one's health.

Moreover, medicines are not approved in this country by popular vote. Before any drugs can be released for public use they must undergo rigorous clinical trials to demonstrate they are both safe and effective, and then be approved by the Food and Drug Administration. Our investment and confidence in medical science will be seriously undermined if we do not defend the proven process by which medicines are brought to market.

MYTH 6

Marijuana is not as popular as MDMA (Ecstasy) or other drugs among teens today.

Recent survey data show that about 15 million people—6.2 percent of the U.S. population—are current marijuana users,[44] and that nearly a third of them (4.8 million people) used the drug on 20 or more days in the past month.[45] Among kids age 12 to 17, more than two million (8.2 percent) reported past-month marijuana use. By contrast, fewer than 250,000 young people (1 percent) reported past-month use of hallucinogens, and of that number, only half (124,000) had used MDMA.[46]

In a recent survey, more than two million kids age 12 to 17 reported past-month marijuana use.[82]

The 2003 Monitoring the Future Study showed that marijuana is not only popular today, it has been the most widely used illicit drug among high school seniors for the entire 29 years of the study.[47] Meanwhile, Ecstasy use among American teens appears to be declining after record increases. Between 2001 and 2003, past-month use of MDMA among students in the three grades surveyed dropped by more than half, from 1.8 percent to 0.7 percent (8th grade), 2.6 percent to 1.1 percent (10th grade), and 2.8 percent to 1.3 percent (12th grade).[48]

Lifetime prevalence (ever used) rates for students in the 8th, 10th, and 12th grades in 2003:[49]

	Marijuana/ Hashish	Amphetamines	Ecstasy	Hallucinogens
8th Grade	17.5%	8.4%	3.2%	4.0%
10th Grade	36.4%	13.1%	5.4%	6.9%
12th Grade	46.1%	14.4%	8.3%	10.6%

MYTH 7

If I buy marijuana, I'm not hurting anyone else.

Think again. Despite its reputation as the herb of peace and love—and despite claims that smoking pot is a victimless crime—marijuana and violence go hand in hand. Marijuana trafficking is a big, violent business, whether the plants are grown on foreign soil or cultivated in basements, backyards, and farms in the United States.[50]

VIOLENCE AT HOME

The trade in domestically grown marijuana often turns violent when dealers have conflicts or when growers feel their crops are threatened. But drug criminals are not the only ones threatened by the violence of the marijuana trade.

Much of the marijuana produced in America is grown on public lands, including our national forests and parks—areas set aside to preserve wildlife habitats, provide playgrounds for our children, and serve as natural refuges for recreation.[51] Traffickers grow their crops in these areas because the land is free and accessible, crop ownership is hard to document, and because growers are immune to asset forfeiture laws. Law enforcement officials report that many marijuana growers, seeking to protect their crops from busybodies and rival "pot pirates," surround their plots with crude booby traps, including fishhooks dangling at eye level, bear traps, punji sticks, and rat traps rigged with shotgun shells.[52]

Even supporters of the legalization and medical marijuana movements agree that kids should not be using the drug.[83]

Most of the marijuana on America's public lands is grown in the vast national forests of California, where more than 540,000 plants

were seized or eradicated on land managed by the U.S. Forest Service in 2003 alone. This figure does not include the 309,000 marijuana plants taken from Forest Service land in other states,[53] nor does it take into account the hundreds of thousands of plants removed from land managed by other government agencies. For example, in 2003 more than 134,000 marijuana plants were seized or eradicated from areas in California administered by the U.S. Department of the Interior's Bureau of Land Management.[54]

According to officers with the Forest Service and other agencies, many of California's illegal marijuana fields are controlled not by peace-loving flower children but by employees of Mexican drug-trafficking organizations carrying high-powered assault weapons. During the growing season, the officers say, the cartels smuggle hundreds of undocumented Mexican nationals into the U.S. to work the fields, bringing with them pesticides, equipment, and guns. Hunters, campers, and others have been threatened at gunpoint or fired upon after stumbling into these illegal gardens.[55]

A DANGEROUS IMPORT

It is commonly believed that most marijuana smoked in the United States is also grown in this country. In truth, smuggled marijuana—whether brought in from Mexico, other Latin America source areas, or from Canada—accounts for most of the pot available in America.[56]

Drug traffickers often use violence in the effort to get their product to the U.S. market. Criminal groups operating from Mexico, many of them linked to torture, executions, and other acts of violence, have transported and distributed thousands of tons of marijuana and other drugs throughout the United States since the 1970s.[57]

While some would argue that problems such as these would be solved by simply legalizing marijuana, it's important to remember that the drug is illegal because it causes harm—physical, social, behavioral, and academic—especially to young users. Even most people who support legalization agree that kids should not be using marijuana.[58]

MARIJUANA HURTS FAMILIES AND COMMUNITIES

Marijuana harms more than just those who use the drug. It also hurts the babies born to users. It hurts teen users who betray the trust of their parents, and it hurts the parents who are confused and dismayed by their kids' use.

Marijuana also hurts communities when users commit crimes or cause crashes on the highway. A roadside study of reckless drivers in Tennessee found that 33 percent of all subjects who were not under the influence of alcohol, and who were tested for drugs at the scene of their arrest, tested positive for marijuana.[59] In a 2003 Canadian study, one in five students admitted to driving within an hour of using marijuana.[60]

Marijuana also harms society by causing lost productivity in business, limiting educational attainment, and by contributing to illnesses and injuries that put further strain on the health care system.

MYTH 8

My kids won't be exposed to marijuana.

It's an unfortunate fact: If kids want marijuana, they can find it. More than half (55 percent) of youths age 12 to 17 responding to the National Survey on Drug Use and Health in 2002 reported that marijuana would be easy to obtain. The survey indicated that most marijuana users got the drug from a friend, and that almost nine percent of youths who bought marijuana did so inside a school building.[61] Moreover, nearly 17 percent of the young people surveyed said they had been approached by someone selling drugs in the past month.[62] In the 2000 survey, more than a quarter of 12- to 17-year-olds (26.6 percent) reported that drug-selling occurs frequently in their neighborhoods.[63]

More often than not, the culture glamorizes or trivializes marijuana use and fails to portray the harm it can cause.

Kids are also exposed to a relentless barrage of marijuana messages in the popular culture—in the music they listen to, the movies they watch, and the magazines they read. And then there's the Internet, a crowded landscape of pro-marijuana and drug legalization Web sites. More often than not, the culture glamorizes or trivializes marijuana use and fails to show the serious harm it can cause.

The easy availability of marijuana has been a concern for years. Since the Monitoring the Future Survey began in 1975, most high school seniors said they could obtain the drug fairly easily or very easily.[64] Fortunately, non-use remains the norm, but an alarming number of young people have at least experimented with marijuana. The 2001 Youth Risk Behavior Surveillance System survey found that 42 percent of all high school students nationwide had used marijuana at some time in their lives.[65] A report based on that survey revealed

that from 1990 to 2001, the number of 9th graders reporting current marijuana use more than doubled, increasing from 9.5 percent to 19.4 percent.[66]

Marijuana use is in some ways like a contagious disease, spreading from "infected" individuals to others around them. And those most susceptible to its harmful influence are young people. Analysis of data from the National Household Survey on Drug Abuse reveals that kids with friends who used marijuana were themselves more than 30 times as likely to have used marijuana in the past month. Kids were also nine times more likely to have used marijuana in the past month if they knew adults who used the drug.[67]

NOT JUST AN INNER-CITY PROBLEM

Some people have the impression that kids in the inner city are those most likely to get involved with drugs. Research shows, however, that marijuana use among youth in cities, rural areas, and the suburbs is roughly the same, and that use rates are similar regardless of population density. For example, annual prevalence rates of marijuana use among 10th graders are 28 percent in non-urban areas, 29 percent in large metropolitan statistical areas, and 32 percent in other metropolitan areas.[68]

MYTH 9

There's not much parents can do to stop their kids from experimenting with marijuana.

Many people are surprised to learn that parents are the most powerful influence on their children when it comes to drugs. By staying involved, knowing what their kids are doing, and setting limits with clear rules and consequences, parents can increase the chances their kids will stay drug free. Research shows that appropriate parental monitoring can reduce future drug use even among adolescents who may be prone to marijuana use, such as those who are rebellious, cannot control their emotions, and experience internal distress.[69]

By staying involved, knowing what their kids are doing, and setting limits with clear rules and consequences, parents can increase the chances their kids will stay drug free.

In a government survey of youth ages 12 to 17, almost 90 percent of the respondents thought their parents would strongly disapprove of their trying marijuana once or twice. The report, from the National Household Survey on Drug Abuse, also showed that the rate of past-month marijuana use was lower among kids who believed their parents would disapprove. In 2000, for example, 27 percent of young people who believed that their parents did not strongly disapprove of marijuana use reported past-month use of an illicit drug. For kids who thought their parents did disapprove, the use rate was only 4.9 percent.[70] As these numbers make clear, parents' attitudes and actions have a profound influence on their children's drug-using behavior.

PARENTAL INVOLVEMENT

Kids who learn about the risks of drugs from their parents or caregivers are less likely to use drugs than kids who do not.[71] Parents can create situations that help them connect with their children and stay involved in their lives. Experts suggest that parents try to be home with their kids after school, if possible, because evidence indicates that the riskiest time for kids with regard to drug involvement is between the hours of 3 p.m. and 6 p.m. Parents who can't be home with their children should consider enrolling them in after-school programs, sports, or other activities, or arrange for a trusted adult to oversee them.

It's also important for families to participate in activities such as eating meals together; holding meetings in which each person gets a chance to talk; and establishing regular routines of doing something special (like taking a walk) that allow parents to talk to their kids. Opening channels of communication between parents and children, as well as between families and the greater community, gives young people greater confidence and helps them make healthy choices.

MYTH 10

The government sends otherwise innocent people to prison for casual marijuana use.

On the contrary, it is extremely rare for anyone, particularly first-time offenders, to get sent to prison just for possessing a small amount of marijuana. In most states, possession of an ounce or less of pot is a misdemeanor offense, and some states have gone so far as to downgrade simple possession of marijuana to a civil offense akin to a traffic violation.

Many inmates ultimately sentenced for marijuana possession were initially charged with more serious crimes but were able to negotiate reduced charges or lighter sentences through plea agreements with prosecutors.

The numbers speak for themselves. In 1997, according to the U.S. Department of Justice's Bureau of Justice Statistics (BJS), only 1.6 percent of the state inmate population had been convicted of a marijuana-only crime, including trafficking. An even smaller percentage of state inmates were imprisoned with marijuana *possession* as the only charge (0.7 percent). And only 0.3 percent of those imprisoned just for marijuana possession were first-time offenders.[72]

More recent estimates from the BJS show that at midyear 2002, approximately 8,400 state prisoners were serving time for possessing marijuana in any amount. Fewer than half of that group, or about 3,600 inmates, were incarcerated on a first offense.[73] In other words, of the more than 1.2 million people doing time in state prisons across America,[74] only a small fraction were first-time offenders sentenced just for marijuana possession. And again, this figure includes possession of *any* amount.

On the federal level, prosecutors focus largely on traffickers, kingpins, and other major drug criminals, so federal marijuana cases often involve hundreds of pounds of the drug. Cases involving smaller amounts are typically handled on the state level. This is part of the reason why hardly anyone ends up in federal prison for simple possession of marijuana. The fact is, of all drug defendants sentenced in federal court for marijuana offenses in 2001, the vast majority were convicted of trafficking. Only 2.3 percent—186 people—were sentenced for simple possession, and of the 174 for whom sentencing information is known, just 63 actually served time behind bars.[75]

It's important to point out that many inmates ultimately sentenced for marijuana possession were initially charged with more serious crimes but were able to negotiate reduced charges or lighter sentences through plea agreements with prosecutors. Therefore, the 2.3 percent figure for simple-possession defendants may give an inflated impression of the true number, since it also includes those inmates who pled down from more serious charges.

The goal of drug laws is not merely to punish, but to reduce drug use and help keep people from harming themselves and others with this destructive behavior. In recent years, with the introduction of drug courts and similar programs, there has been a shift within the U.S. criminal justice system toward providing treatment rather than incarceration for drug users and non-violent offenders with addiction problems. Today, in fact, the criminal justice system is the largest source of referral to drug treatment programs.[76]

CONCLUSION

The clutter of messages about marijuana in the popular culture creates an atmosphere of confusion and sends kids mixed signals about the drug. But what should be clear is that no responsible person thinks young people should use marijuana. Kids can learn the truth about marijuana at www.freevibe.com.

Parents can help keep their children away from marijuana by letting them know its dangers, and by monitoring their activities and staying involved in their lives. For more information and useful tips about talking to kids about marijuana, visit www.theantidrug.com. Both of these Web sites are supported by the Office of National Drug Control Policy.

Schools and communities can also play an important role by providing activities that keep kids interested and involved in healthy, drug-free programs.

If you want to help dispel misperceptions and spread the truth about marijuana to help kids grow up drug-free, you can:

- Educate yourself about the dangers of marijuana and keep up with scientific research into its harmful effects. For a wealth of good information, visit the Web site for the National Institute on Drug Abuse at http://www.nida.nih.gov
- Help kids in trouble with marijuana get into drug treatment programs
- Be an advocate for better, more informed drugged-driving laws
- Support after-school programs and get involved in local anti-drug coalitions
- Stay informed about the marijuana laws in your state, and take a stand against changes in legislation that would increase the drug's availability in your community

- Support efforts to launch a student drug-testing program in your local schools
- See "What You Need to Know About Drug Testing in Schools," available by calling 800-666-3332 and online at http://www.whitehousedrugpolicy.gov/pdf/drug_testing.pdf
- To learn more about drug and alcohol abuse, visit the Substance Abuse & Mental Health Services Administration's National Clearinghouse for Alcohol and Drug Information at http://www.health.org/ or call its 24-hour hotline: 1-800-729-6686 or 1-800-788-2800

GLOSSARY

Addiction: A chronic, relapsing disease, characterized by compulsive drug-seeking and use, and by neurochemical and molecular changes in the brain.

Anxiety: Apprehension, tension, or uneasiness from anticipation of danger, the source of which is largely unknown or unrecognized.[†]

Cannabinoid receptors: Sites on nerve cells in the brain to which THC attaches, affecting the way those cells work. Cannabinoid receptors are abundant in parts of the brain that regulate movement, coordination, learning and memory, higher cognitive functions such as judgment, and pleasure.

Cognitive deficits: Difficulties in reasoning, judgment, intuition and memory, or a lack of awareness and insight.

Dependence: Often called physical dependence, an adaptive physiological state that occurs with regular drug use and results in a withdrawal syndrome when drug use is stopped.

Depression: A psychiatric disorder characterized by feelings of sadness, hopelessness, guilt, changes in appetite, low energy, and difficulty concentrating.

Longitudinal study: A study in which the same group of individuals is interviewed at intervals over a period of time.

Neurotransmitter: A chemical produced by specialized cells called neurons in the brain and body to transmit messages to other neurons.

[†] Shahrokh, NC, and Hales, RE. American Psychiatric Glossary, Eighth Edition. Washington, DC. American Psychiatric Publishing Inc., 2003.

Schizophrenia: A chronic, severe, and disabling brain disease characterized by illogical patterns of thinking, delusions, and hallucinations.

Sinsemilla: From the Spanish for "seedless." Sinsemilla, a higher potency marijuana, contains only the leaves and buds of the unpollinated female cannabis plant, where THC is most concentrated.

THC: Delta-9-tetrahydrocannabinol, the main active ingredient in marijuana and the chemical that acts on the brain to produce the drug's effects.

Withdrawal: Symptoms that occur after use of a drug is reduced or stopped.

REFERENCES

[1] National Survey on Drug Use and Health 2002: National Findings. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration (SAMHSA), 2003.

[2] Trends in Initiation of Substance Use, Substance Abuse and Mental Health Services Administration, based on the 2002 National Survey on Drug Use and Health. SAMHSA, 2003.

[3] Marijuana Potency Monitoring Project, report No. 83. University of Mississippi, 2003.

[4] Pope, HG and Yurelun-Todd, D. The residual cognitive effects of heavy marijuana use in college students. *Journal of the American Medical Association*. 275(7): 521-527, 1996.

[5] Pope, HG and Yurelun-Todd, D. The residual cognitive effects of heavy marijuana use in college students. *Journal of the American Medical Association.* 275(7): 521-527, 1996.

[6] Block, RI and Ghoneim, MM. Effects of chronic marijuana use on human cognition. *Psychopharmacology.* 110(1-2):219-228, 1993.

[7] Herkenham, M et al. Cannabinoid receptor localization in the brain. Proceedings of the *National Academy of Sciences of the United States of America.* 87: 1932-1936, 1990.

Mathew, RJ; Wilson, WH; Turkington, TG; and Coleman, RE. Cerebellar activity and disturbed time sense after THC. *Brain Research*. 797(2): 183-189, 1998.

[8] Rodriguez de Fonseca, F et al. Activation of corticotrophin-releasing factor in the limbic system during cannabinoid withdrawal. *Science.* 276(5321): 2050-2064, 1997.

Diana, M et al. Mesolimbic dopaminergic decline after cannabinoid withdrawal. *Proceedings of the National Academy of Sciences of the United States of America.* 95 (17): 10269-10273, 1998.

[9] Herkenham, M et al. Cannabinoid receptor localization in the brain. *Proceedings of the National Academy of Sciences of the United States of America.* 87:1932-1936, 1990.

[10] Brook, JS et al. The effect of early marijuana use on later anxiety and depressive symptoms. *NYS Psychologist.* 35-39, 2001.

Green, BE and Ritter, C. Marijuana use and depression. *Journal of Health and Social Behavior*. 41(1):40-49, 2000.

Brook, JS et al. Longitudinal study of co-occurring psychiatric disorders and substance use. *Journal of the Academy of Child and Adolescent Psychiatry*. 37:322-330, 1998.

[11] Greenblatt, J. Adolescent self-reported behaviors and their association with marijuana use. Based on data from the National Household Survey on Drug Abuse, 1994-1996 SAMHSA, 1998.

[12] Bovasso, GB. Cannabis abuse as a risk factor for depressive symptoms. *American Journal of Psychiatry.* 158:2033-2037, 2001.

Rey, J and Tennant, C. Cannabis and Mental Health (letter). *British Medical Journal* 325:1183-1184; 1212-1213, 2002.

Zammit, S et al. Self reported cannabis use as a risk factor for schizophrenia in Swedish conscripts of 1969: historical cohort study. *British Medical Journal* 325:1199-1201, 2002.

[13] National Survey on Drug Use and Health 2002. SAMHSA, 2003.

[14] Brook, JS et al. Logitudinal study of co-occurring psychiatric disorders and substance use. *Journal of the American Academy of Child and Adolescent Psychiatry.* 37:322-330, 1998.

[15] National Highway Traffic Safety Administration (NHTSA) Notes. Marijuana and alcohol combined severely impede driving performance. *Annals of Emergency Medicine.* 35:398-400, 2000.

[16] Soderstrom, CA et al. Marijuana and other drug use among automobile and motorcycle drivers treated at a trauma center. *Accident Analysis and Prevention.* 25: 131-135, 1995.

[17] Substance Abuse and Mental Health Services Administration, Office of Applied Studies, National Survey on Drug Use and Health, 2002.

[18] Gfroerer, JC and Wu, LT. Initiation of marijuana use: trends, patterns and implications. Analytic Series: A-17, DHHS Publication No. SMA 02-3711. Rockville, MD: Substance Abuse and Mental Health Services Administration, 2002.

[19] Gfroerer, JC and Epstein, JF. Marijuana initiates and their impact on future drug abuse treatment need. *Drug and Alcohol Dependence.* 54(3): 229-237, 1999.

[20] The National Household Survey on Drug Abuse (NHSDA) Report: Marijuana use among youths. Based on data from the 2000 NHSDA SAMHSA, 2002.

[21] Lehman, WE and Simpson, DD. Employee substance use and on-the-job behaviors. *Journal of Applied Psychology.* 77(3):309-321, 1992.

[22] Bolla, KI; Brown, K; Eldreth, D; Tate, K; and Cadet, JL. Dose-related neurocognitive effects of marijuana use. *Neurology.* 59(9):1337-1343, 2002.

[23] A Smoking Gun: The Impact of Cannabis Smoking on Respiratory Health. The British Lung Foundation, 2002.

[24] Valois, RF et al. Relationship between number of sexual intercourse partners and selected health risk behaviors among public high school adolescents. *Journal of Adolescent Health.* 25(5): 328-335, 1999.

Guo, J; Chung, IJ; Hill, KG; Hawkins, JD; Catalano, RF; and Abbott, RD. Developmental relationships between adolescent substance use and risky sexual behavior in young adulthood. *Journal of Adolescent Health*. 31(4): 354-362, 2002.

Graves, KL and Leigh, BC. The relationship of substance use to sexual activity among young adults in the United States. *Family Planning Perspectives*. 27:18-22, 1995.

Staton, M et al. Risky sex behavior and substance use among young adults. *Health and Social Work*. 24(2): 147-154, 1999.

Whitaker, DJ; Miller, KS; and Clark, LF. Reconceptualizing adolescent sexual behavior: Beyond did they or didn't they? *Family Planning Perspectives*. 32(3): 111-117, 2000.

Brook, JS; Balka, EB; and Whiteman, M. The risks for late adolescence of early adolescent marijuana use. *American Journal of Public Health*. 89(10): 1549-1554, 1999.

[25] Rosembaum, E and Kandel, DB. Early onset of adolescent sexual behavior and drug involvement. *Journal of Marriage and the Family*. 52: 783-798, 1990.

[26] Guo, J; Chung, IJ; Hill, KG; Hawkins, JD; Catalano, RF; and Abbott, RD. Developmental relationships between adolescent substance use and risky sexual behavior in young adulthood. *Journal of Adolescent Health*. 31(4): 354-362,2002.

Brook, JS; Balka, EB; and Whiteman, M. The risks for late adolescence of early adolescent marijuana use. *American Journal of Public Health.* 89(10): 1549-1554, 1999.

Hingson, RW et al. Beliefs about AIDS, use of alcohol and drugs, and unprotected sex among Massachusetts adolescents. *American Journal of Public Health.* 80(3):295-299, 1990.

[27] DSM-IV-TR. American Psychiatric Association, 2000.

[28] National Survey of Drug Use and Health 2002. SAMHSA, 2003.

[29] Haney, M et al. Abstinence symptoms following smoked marijuana in humans. *Psychopharmacology.* 141:395-404, 1999.

[30] Kouri, EM; Pope, HG; and Lukas, SE. Changes in aggressive behavior during withdrawal from long-term marijuana use. *Psychopharmacology.* 143: 302-308, 1999.

[31] Cannabis Youth Treatment Randomized Field Experiment, preliminary report. U.S. Department of Health and Human Services, 2002.

[32] Gfroerer, JC and Epstein, JF. Marijuana initiates and their impact on future drug abuse treatment need. *Drug and Alcohol Dependence.* 54(3):229-237, 1999.

Anthony, JC and Petronis, KR. Early-onset drug use and risk of later drug problems. *Drug and Alcohol Dependence*, 40: 9-15, 1995.

Grant, BF and Dawson, DA, Age of onset of drug use and its association with DSM-IV drug abuse and dependence: Results from the National Longitudinal Alcohol Epidemiologic Survey. *Journal of Substance Abuse*, 10: 163-173, 1998.

[33] Substance Abuse and Mental Health Services Administration, Office of Applied Studies. Treatment Episode Data Set 1992-2000; National Admissions to Substance Abuse Treatment Services. DASIS Series: S-17, DHHS Pub. No. (SMA) 02-3727, 2002.

[34] Substance Abuse and Mental Health Services Administration, Office of Applied Studies. Treatment Episode Data Set 1992-2000; National Admissions to Substance Abuse Treatment Services. DASIS Series: S-17, DHHS Pub. No. (SMA) 02-3727, 2002.

[35] Substance Abuse and Mental Health Services Administration, Office of Applied Studies. Treatment Episode Data Set 1992-2000; National Admissions to Substance Abuse Treatment Services. DASIS Series: S-17, DHHS Pub. No. (SMA) 02-3727, 2002.

[36] Substance Abuse and Mental Health Services Administration, Office of Applied Studies. Treatment Episode Data Set 1992-2000; National Admissions to Substance Abuse Treatment Services. DASIS Series: S-17, DHHS Pub. No. (SMA) 02-3727, 2002.

[37] Wu, TC et al. Pulmonary hazards of smoking marijuana as compared with tobacco. *New England Journal of Medicine*. 318(6):347-351, 1988.

[38] Tashkin, DP. Pulmonary complications of smoked substance abuse. *Western Journal of Medicine.* 152(5):525-530, 1990.

Roth, MD et al. Airway inflammation in young marijuana and tobacco smokers. *American Journal of Respiratory Critical Care Medicine*. 157(3):928-937, 1998.

Wu, TC et al. Pulmonary hazards of smoking marijuana as compared with tobacco. *New England Journal of Medicine*. Vol. 318(6):347-351, 1988.

[39] Nuttall, SL; Raczi, JL; Manney, S; Thorpe, GH; Kendall, MJ. Effects of smoking and cannabis use on markers of oxidative stress in exhaled breath condensate. Division of Medical Sciences, University of Birmingham, Birmingham, UK, 2003.

[40] Greenblatt, J. Adolescent self-reported behaviors and their association with marijuana use. Substance Abuse and Mental Health Services Administration (SAMHSA). Based on data from the National Household Survey on Drug Abuse, 1994-1996, 1998.

[41] Friedman, AS; Glassman, K; Terras, A. Violent behavior as related to use of marijuana and other drugs. *Journal of Addictive Diseases.* 20:49-70, 2001.

[42] Marijuana and Medicine: Assessing the Science Base, Division of Neuroscience and Behavioral Health, Institute of Medicine, 1999.

[43] The National Organization for the Reform of Marijuana Laws
Home page: http://www.norml.org/
Medical Use: http://norml.org/index.cfm?Group_ID=5441#f4

Marijuana Policy Project
Home page: http://www.mpp.org/
Medical Marijuana Briefing Paper 2003
http://www.mpp.org/medicine.html

The Medical Marijuana Mission
http://www.themarijuanamission.com/

The American Medical Marijuana Medical Association
http://americanmarijuana.org/

Wo/Men's Alliance for Medical Marijuana
http://www.wamm.org/

[44] National Survey on Drug Use and Health 2002, Substance Abuse and Mental Health Services Administration, 2003.

[45] National Survey on Drug Use and Health 2002. Substance Abuse and Mental Health Services Administration, 2003.

[46] National Survey on Drug Use and Health 2002. Substance Abuse and Mental Health Services Administration, 2003.

[47] National Institute on Drug Abuse, 2003 Monitoring the Future Data Tables, Table 4: Long-Term Trends in Lifetime Prevalence of Use of Various Drugs for Twelfth Graders.
http://monitoringthefuture.org/data/03data/pr03t4.pdf

[48] University of Michigan, 2003 Monitoring the Future press release, December 19, 2003.
http://monitoringthefuture.org/pressreleases/03drugpr.pdf
http://monitoringthefuture.org/data/03data/pr03t2.pdf

[49] National Institute on Drug Abuse, 2003 Monitoring the Future Data Tables, Table 1: Trends in Lifetime Prevalence of Use of Various Drugs for Eighth, Tenth, and Twelfth Graders.
http://www.monitoringthefuture.org/data/ 03data/pr03t1.pdf

[50] Intelligence Brief: National Drug Threat Assessment, Marijuana Update, August 2002, Document ID: 2002-J0403-002.
http://www.usdoj.gov/ndic/pubs1/1335/

Atlanta High Intensity Drug Trafficking Area, Office of National Drug Control Policy.

National Drug Intelligence Center, Massachusetts Drug Threat Assessment (April 2001); Texas Drug Threat Assessment (October 2003); Oklahoma Drug Threat Assessment (October 2002), Washington Drug Threat Assessment (February 2003).

[51] Intelligence Brief: National Drug Threat Assessment, Marijuana Update, August 2002, Document ID: 2002-J0403-002. http://www.usdoj.gov/ndic/pubs1/1335/

[52] Intelligence Brief: National Drug Threat Assessment, Marijuana Update, August 2002, Document ID: 2002-J0403-002. http://www.usdoj.gov/ndic/pubs1/1335/

National Drug Intelligence Center, Oklahoma Drug Threat Assessment (October 2002), Washington Drug Threat Assessment (February 2003).

Marijuana Eradication, Santa Barbara County (CA) Sheriff's Department press release, August 18, 2003.

[53] Unpublished data from the U.S. Forest Service.

[54] Unpublished data from the U.S. Department of the Interior's Bureau of Land Management.

[55] National Drug Intelligence Center, Massachusetts Drug Threat Assessment April 2001.

Annex E, California State Threat Assessment FY 2004, Drug Enforcement Administration.

U.S. Forest Service and Bureau of Land Management.

[56] Drug Trafficking in the United States. U.S. Department of Justice: Drug Enforcement Administration, 2001.

Intelligence Brief: National Drug Threat Assessment, Marijuana Update, August 2002, Document ID: 2002-J0403-002. http://www.usdoj.gov/ndic/pubs1/1335/

[57] Drug Trafficking in the United States, U.S. Department of Justice, Drug Enforcement Administration, 2001.

Organized Crime and Terrorist Activity in Mexico, 1999-2002, a report prepared under an interagency agreement by the federal research division, Library of Congress, February 2003.
http://www.loc.gov/rr/frd/pdf-files/OrgCrime_Mexico.pdf

National Drug Intelligence Center, California-Southern District Drug Threat Assessment, December 2000.

Drug Intelligence Brief, Mexico: Country Brief, DEA Intelligence Division, International Strategic Support Section, Mexico/C. America Unit, DEA-02035, July 2002.

Mexican Marijuana in the United States, Drug Intelligence Brief. Drug Enforcement Administration Intelligence Division, DEA-99025, September 1999.

[58] For example: "Walters is correct in suggesting that marijuana, like other drugs, is not for kids," Keith Stroup, founder and executive director of the National Organization for the Reform of Marijuana Laws (NORML), and Paul Armentano, NORML senior policy analyst, in Letters to the Editor, *The Washington Post*, May 4, 2002, in response to "The Myth of 'Harmless' Marijuana," by ONDCP Director John Walters, *The Washington Post*, May 1, 2002.

"Cannabis consumption is for adults only. It is irresponsible to provide cannabis to children," *Principles of Responsible Cannabis Use*, the National Organization for the Reform of Marijuana Laws (April 11, 2003; www.norml.org).

[59] Brookoff, D et al. Testing Reckless drivers for cocaine and marijuana. *New England Journal of Medicine*. 331:518-522, 1994.
http://content.nejm.org/cgi/content/abstract/331/8/518

[60] Adlaf, et al. Drinking, cannabis use and driving among Ontario students. *Canadian Medical Association Journal*. 168, March 2003.
http://www.cmaj.ca/cgi/content/full/168/5/565

[61] Results from the 2002 National Survey on Drug Use and Health: National Findings, Office of Applied Studies, SAMHSA DHHS, 2003.

[62] National Survey on Drug Use and Health 2002. SAMHSA, 2003. Detailed Tables: Table 3.1B, Perceived Risk and Availability of Drugs, by Age Group.

[63] The National Household Survey on Drug Abuse (NHSDA) Report: Neighborhood Characteristics and Youth Marijuana Use. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Office of Applied Studies, January 4, 2002.

[64] National Institute on Drug Abuse, 2003 Monitoring the Future Data Tables, Table 13: Long-Term Trends in Perceived Availability of Drugs by Twelfth Graders.
http://www.monitoringthefuture.org/data/03data/pr03t13.pdf

[65] Grunbaum, J et al. Youth Risk Behavior Surveillance—United States, 2001. *Surveillance Summaries*, June 28, 2002, MMWR 2002. 51(No. SS-4): 1-64.

[66] Grunbaum, J et al., Youth Risk Behavior Surveillance—United States, 2001. *Surveillance Summaries*, June 28, 2002. MMWR 2002; 51(No. SS-4): 1-64.

CDC "Tobacco, Alcohol and Other Drug Use Among High School Students—United States," MMWR 40 (45) (1990): 776-84.

[67] The National Household Survey on Drug Abuse (NHSDA) Report: Obtaining marijuana easy for youths. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Office of Applied Studies, August 31, 2001.

[68] Monitoring the Future, National Survey Results on Drug Use, 1975-2002. Department of Health and Human Services, Public Health Service, National Institutes of Health, 2002.
http://monitoringthefuture.org/pubs/monographs/vol1_2002.pdf

Pulse Check: Trends in Drug Abuse, January-June 2001 Reporting Period, Executive Office of the President, Office of National Drug Control Policy, 2001.

[69] *Marijuana: Facts Parents Need to Know*. National Institute on Drug Abuse (NIDA), revised November 1998.

[70] The National Household Survey on Drug Abuse (NHSDA) Report: Parental disapproval of youths' substance abuse. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration: Based on data from the 2000 NHSDA, 2002.

[71] National Center on Addiction and Substance Abuse at Columbia University. 1999 CASA National Survey of American Attitudes on Substance Abuse V: Back to School: Teens and Their Parents, 1999.

[72] Unpublished BJS estimates based on the 1997 Survey of Inmates in State and Federal Correctional Facilities, National Archive of Criminal Justice Data. For a public-use copy of the survey data, see
http://www.icpsr.umich.edu/NACJD/SISFCF/index.html

[73] *Ibid*.

Prison and Jail Inmates at Midyear 2002, Bureau of Justice Statistics Bulletin, April 2003, NCJ 198877.
http://www.ojp.usdoj.gov/bjs/pub/pdf/pjim02.pdf

[74] Prisoners in 2002. Bureau of Justice Statistics, July 2003, NCJ 200248.
http://www.ojp.usdoj.gov/bjs/pub/pdf/p02.pdf

[75] U.S. Sentencing Commission's 2001 Sourcebook of Federal Sentencing Statistics. Table 33: Primary Drug Type of Offenders Sentenced Under Each Drug Guideline, Fiscal Year 2001.
http://www.ussc.gov/ANNRPT/2001/SBTOC01.htm
http://www.ussc.gov/ANNRPT/2001/table33.pdf

Unpublished figures from the U.S. Sentencing Commission, 2001 Datafile, USSCFY01.

[76] Substance Abuse and Mental Health Services Administration, Office of Applied Studies. Treatment Episode Data Set 1992-2000; Table 3.4: Admissions by primary substance of abuse, according to type of service, source of referral to treatment, and planned use of methodone.
http://wwwdasis.samhsa.gov/teds00/3.4.htm

[77] *Marijuana: Facts Parents Need to Know.* NIDA, 1998.

[78] The NHSDA Report, Marijuana Use Among Youth. July 19, 2002.

[79] Gfroer, JC and Epstein, JF. Marijuana initiates and their impact on future drug abuse treatment need. *Drug and Alcohol Dependence*. 54(3):229-237, 1999.

Anthony, JC and Petronis, KR. Early-onset drug use and risk of later drug problems. *Drug and Alcohol Dependence*, 40: 9-15, 1995.

Grant, BF and Dawson, DA, Age of onset of drug use and its association with DSM-IV drug abuse and dependence: Results from the National Longitudinal Alcohol Epidemiologic Survey. *Journal of Substance Abuse*, 10: 163-173, 1998.

[80] Tashkin, DP. Pulmonary complications of smoked substance abuse. *Western Journal of Medicine*. 152(5): 525-530, 1990.

Roth, MD et al. Airway inflammation in young marijuana and tobacco smokers. *American Journal of Respiratory Critical Care Medicine*. 157(3): 928-937, 1998.

[81] Greenblatt, J. Adolescent self-reported behaviors and their association with marijuana use. Substance Abuse and Mental Health Services Administration (SAMHSA). Based on data from the National Household Survey on Drug Abuse, 1994-1996, 1998.

[82] National Survey on Drug Use and Health 2002. Substance Abuse and Mental Health Services Administration, 2003.

[83] For example: "Walters is correct in suggesting that marijuana, like other drugs, is not for kids," Keith Stroup, founder and executive director of the National Organization for the Reform of Marijuana Laws (NORML), and Paul Armentano, NORML senior policy analyst, in Letters to the Editor, *The Washington Post*, May 4, 2002, in response to "The Myth of 'Harmless' Marijuana," by ONDCP Director John Walters, *The Washington Post*, May 1, 2002.

"Cannabis consumption is for adults only. It is irresponsible to provide cannabis to children," *Principles of Responsible Cannabis Use*, the National Organization for the Reform of Marijuana Laws (April 11, 2003; www.norml.org)

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