

"Adverse Health Effects of Marijuana Use"

On June 4, 2014, the New England Journal of Medicine published a report entitled "Adverse Health Effects of Marijuana Use" from the National Institute on Drug Abuse (NIDA), which summarizes the latest research into marijuana use:

Marijuana is particularly harmful to children and youths under 21 years of age.

A study of people who began using marijuana in adolescence revealed substantially-reduced connectivity among brain areas responsible for learning and memory; these effects can last for months, years or even be permanent. The diminishing perception of the drug's risks caused by the increased public debate over the drug's legal status, could cause marijuana to become an even more dangerous drug as many of America's 12th graders think it is safe, versus the perception of risk you can see in the early 90s.

It should also be noted that many more young people start their drug abuse using marijuana versus other illegal drugs as shown in the 2013 Monitoring the Future (MTF) survey of American 8th, 10th and 12th graders. This study shows the following trends in the "30-Day Prevalence of Use of Various Drugs" comparison chart:

8th graders - in the month prior to the study, 7% used marijuana while 3.3% used other illicit drugs

10th graders - in the month prior to the study, 18% used marijuana while 5.1% used other illicit drugs

12th graders - in the month prior to the study, 22.7% used marijuana while 8.4% used other illicit drugs

Marijuana is associated with "significant declines in IQ".

Marijuana is associated with "significant declines in IQ", if used frequently when one is an adolescent or a young adult. The brain continues developing until the age of 21, and studies have shown that those who began smoking marijuana heavily in their teens lost an average of eight IQ points between ages 13 and 38 and the lost cognitive abilities were not fully restored in those who quit smoking marijuana as adults. Marijuana can affect short-term memory "making it difficult to learn and to retain information".

In his article, "Frequently Asked Questions About Marijuana", Thomas McLellan, Ph.D., the former US Deputy Drug Czar, confirms that this is one of the side effects of marijuana. As with any other drug, the number, intensity and duration of side effects are directly related to the amount, frequency and duration of the drug use. **Because marijuana is smoked, it increases the speed at which the drug is absorbed into the bloodstream and into the brain -- even faster than IV injection.** The after-effects of smoking marijuana, even for infrequent users, last from 18-24 hours and include increased appetite, lethargy, lack of concentration and reduction of anxiety. Like every other drug, the positive effects become harder and harder to experience without using

more of it, while the negative effects are prolonged when usage stops. Two to five years of heavy use has been shown to produce the following changes in the brain for up to one year: lack of concentration, impaired short-term memory, risky behavior, poor decision-making and/or inability to sustain motivation.

Marijuana impairs "motor skills".

Marijuana impairs a person's "motor coordination, interfering with driving skills and increasing the risk of injuries" while operating a vehicle. 30% of drivers who have been killed in car crashes have evidence of marijuana in their bloodstream. No matter how the marijuana is ingested, the psychoactive chemical, delta-9-tetrahydrocannabinol (THC), acts on the brain cells that influence pleasure, memory, thinking, concentration, sensory and time perception, and coordinated movement. Therefore when the THC over-activates this brain system, it causes the "high" and some of the resulting effects are altered perceptions and mood, impaired coordination, difficulty with thinking and problem-solving -- all of which inhibit the ability to safely drive a vehicle.

Marijuana is addictive.

Marijuana is addictive. About **9 percent of users overall** become addicted, but that number rises to **17 percent of those who start as adolescents** and shoots up to as much as **50 percent among those who use pot daily**.

Dr. McLellan is in agreement. "If you measure degree of addiction as the proportion of those who become addicted among those **who ever used** the substance, marijuana is **lower** than cocaine and most opiates (heroin, pharmaceutical opiates), methamphetamine and even nicotine. **But when you add in the factors of adolescence and daily use it is second only to alcohol.**

And there is no doubt that marijuana is addictive by **any** definition. Marijuana produces tolerance to usage and withdrawal like most other substances of abuse, though typically not to the same degree. Among young people, marijuana has long been the major drug problem leading to addiction treatment."

Marijuana is related to social ills.

According to the **NIDA** article, "Adverse Health Effects of Marijuana Use", published this month, "Heavy marijuana use has been linked to lower income, greater need for socio-economic assistance, unemployment, criminal behavior and lower satisfaction with life." It concludes, saying that evidence exists that marijuana is a "gateway drug" to other, more powerful drugs like alcohol and nicotine. Also marijuana addiction **"predicts an increased risk of the use of other illicit drugs"**.

Marijuana and cardiopulmonary health.

Concerns over possible physical harm from marijuana should be taken seriously. Marijuana has a wide range of effects, particularly on cardiopulmonary health. Its smoke

is an irritant to the lungs and frequent marijuana smokers can have many of the same respiratory problems experienced by tobacco smokers, such as daily cough and phlegm production, more frequent acute chest illness and a heightened risk of lung infections, but it is not yet known whether marijuana smoking contributes to the risk for lung cancer. Marijuana also causes rapid heartbeat, increased blood pressure and rate of respiration which is a concern because of hidden health risks to those who might not know they have a heart condition.

Mental health issues may be accelerated by use of marijuana and it may cause increased stressors in daily life, depression or make a person's existing problems worse. Heavy users generally report lower life satisfaction, more relationship problems and less academic and career success compared to non-marijuana-using peers. It is also associated with a higher likelihood of dropping out of school and several studies associate marijuana smoking with higher instances of job tardiness, accidents, workers' compensation claims and job turnover.

Remember, the damaging effects of marijuana include, but are not limited to:

- 1) Impaired thinking that can impact academic, work performance and public safety
- 2) Decreased productivity associated with absences, tardiness, on-the-job accidents, etc.
- 3) Chronic health issues impacting the brain, central nervous system, major organs (heart and lungs), and the reproductive system
- 4) Increased health care costs to manage the rise in the number of people becoming addicted