

Marijuana

Marijuana is the most commonly abused illicit drug in the United States. Marijuana is a dry, shredded mix of flowering buds, stems, seeds, and leaves of the hemp plant *Cannabis Sativa*. People usually smoke marijuana as a rolled cigarette (“joint”) or in a pipe (“bong”). Marijuana is often referred to as ganja, grass, herb, pot, and weed.

Compared to other drugs, marijuana ranks low on the “drug-problem” continuum. Still, that does not mean that people do not develop problems with marijuana. Unlike other drug problems, signs of marijuana-related trouble may take time to be apparent. Other problems can result from the use of marijuana, such as an increased heart rate, slower reaction time, shortness of breath, and an increase in coughing (especially for those who have asthma).

SHORT-TERM EFFECTS

Even in low doses, short-term effects of marijuana use are apparent in a person’s coordination, response, perception, and mental status, causing difficulty in performing simple day-to-day tasks. Using marijuana is extremely dangerous when operating machinery or driving a car. The use of marijuana can subtly alter sensory perception. Effects of marijuana use may include heightened sensitivity and a distorted sense of the passage of time. Marijuana can also impair judgment and reasoning skills, especially skills that involve counting and the ability to follow complex instructions. Marijuana use also disrupts short-term memory. Using marijuana does not kill cells in the brain; however, it can prevent or impair some cells from functioning properly. This effect can lead to a reduced ability of the brain to problem solve, recall things from recent memory, and coordinate movement in the short-term.

Getting “high” or “stoned” often lasts for a few hours after smoking marijuana. Being “stoned” is a relaxed feeling caused by the use of marijuana and being “high” refers to a more stimulated state or condition. When a person smokes marijuana, protein receptors in the brain called cannabinoid receptors, combine with THC (the psychoactive drug in marijuana smoke; delta-9-tetrahydrocannabinol) and react to cause a feeling of euphoria or “high”. Cannabinoid receptors are receptor sites in the brain that influence memory, thought, concentration, sensory and time perception, and coordinated movement.

LONG-TERM EFFECTS

Not all of the effects from using marijuana will necessarily subside after being “high.” Subtle changes may continue. Since THC breakdown products (metabolites) can linger in the body for several days and even weeks after use, using marijuana is extremely risky, particularly for those who are involved in hazardous occupations and activities. When smoked, marijuana causes a residue that binds with fatty tissues within the body. THC remains in the fatty tissues of the body making it difficult for your body to get rid of the toxin. About 50% of THC remains in the body for one week. A urine test can detect THC for about 30-40 days after using marijuana. Several factors can affect these rates, such as an individual’s metabolism and quantity and frequency of marijuana use.

Smoking marijuana every day may cause long-term reduced intellectual functioning and can impair critical skills related to attention, memory, and learning. Using marijuana compromises a person’s ability to comprehend and remember new information. The more a person uses marijuana the more likely he or she is to fall behind in accumulating intellectual, job-related, or social skills. “Heavy” or chronic, marijuana users

may experience more trouble sustaining and shifting their attention and also may experience more trouble registering, organizing, and using information than those who are not “heavy” users. Researchers have found that some cognitive abilities may be restored in individuals who quit smoking marijuana, even after long-term, heavy use.

PSYCHOLOGICAL EFFECTS

Marijuana causes less of a physiological addiction (when your body depends on it to feel normal) than does nicotine and tobacco; however, you can develop a psychological dependence (cognitive dependence). Using marijuana can contribute to problems in susceptible people. Anxiety and depression are often the most serious psychological results from using marijuana. Anxiety can be triggered by stress or fatigue from using marijuana and from higher potency forms of marijuana. Such reactions tend to be more common among infrequent and inexperienced users. The use of marijuana may result in a marijuana-related panic that typically lasts less than one hour and requires some reassurance and time to run its course. Long-term psychological problems that result from using marijuana are more complicated and less-easily dismissed. Long-term marijuana use can become a difficult habit to break, causing users to be “stoned” everyday or nearly everyday.

PHYSIOLOGICAL EFFECTS

Using marijuana can impair the immune system’s ability to fight disease. Smoking one joint of marijuana exposes the body to more than 400 chemical compounds. Marijuana smoke contains five times more tar than tobacco smoke. Marijuana smoke is typically held in the lungs for a longer period of time than tobacco smoke, resulting in more access and contact with lung tissue. Irritation to the lungs and respiratory airways can be a result.

Another effect from using marijuana is a rapid heartbeat. In some users, heart rates can increase by up to as much as 50 percent of their original patterns. One study found that a user’s risk of heart attack more than quadruples in the first hour after smoking marijuana.

Marijuana affects the delicate balance of the body by triggering a short-term drop in the hormones that direct growth and development. In adults, these changes are temporary; but, researchers suspect that younger marijuana users risk possible long-range developmental problems. Marijuana does not cause sterility; however, long-term use can suppress hormones, lowering sperm production and can cause erectile problems in males. In females, long-term use of marijuana suppresses hormones and may cause irregular menstrual cycles.

STUDENT USE

According to the National College Health Assessment of the American College Health Association (ACHA-NCHA) conducted in the Spring of 2006, 65.5% of the students surveyed (n = 61,492) reported they had never used marijuana. From this same sample, 1.2% (1,112) of students reported using marijuana for all of the previous thirty days before the survey was conducted and 20.1% (18,872) of students had not used marijuana within the previous month of the survey. Of the students surveyed, 6.0% (5,638) reported using marijuana 1-2 days out of 30 days prior to being surveyed.

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GETTING HELP

If you have any concerns about your marijuana use, consider talking with a health professional to gain more insight. At the University of Rochester, all full-time students pay the mandatory health fee that covers visits to University Health Service (UHS) and the University Counseling Center (UCC). All visits are confidential.

- University Health Service: 275-2662
- UHS Health Promotion Office: 273-5772
- University Counseling Center: 275-2361

LINKS AND RESOURCES

National Institute of Drug Abuse
www.nida.nih.gov/infofacts/marijuana.html

Do It Now Foundation
www.doitnow.org/pages/pubhub.html

U.S. Drug Enforcement Administration
www.usdoj.gov/dea/concern/marijuana.html

American College Health Association
www.acha.org

[E-Toke: Marijuana Self-Assessment](#)

REFERENCE

Kuhn, Ph.D., C, Swartzwelder, Ph.D., S, & Wilson, Ph.D., W (2003). *Buzzed: The Straight Facts About the Most Used and Abused Drugs from Alcohol to Ecstasy*. New York, London: W.W. Norton & Company.