

Drug Facts: MARIJUANA

A Library and Resource Center on Alcohol, Tobacco, Other Drugs, Mental Health and Wellness



Usually smoked as a cigarette or joint, or in a pipe or bong, marijuana has appeared in "blunts" in recent years. These are cigars that have been emptied of tobacco and re-filled with marijuana, sometimes in combination with another drug, such as crack. Some users also mix marijuana into foods or use it to brew tea.

The main active chemical in marijuana is THC (delta-9-tetrahydrocannabinol). Short-term effects of marijuana use include problems with memory and learning; distorted perception; difficulty in thinking and problem-solving; loss of coordination; and increased heart rate, anxiety, and panic attacks.

HEALTH HAZARDS

Effects of Marijuana on the Brain. Researchers have found that THC changes the way in which sensory information gets into and is acted on by the hippocampus. This is a component of the brain's limbic system that is crucial for learning, memory, and the integration of sensory experiences with emotions and motivations. Investigations have shown that THC suppresses neurons in the information-processing system of the hippocampus. In addition, researchers have discovered that learned behaviors, which depend on the hippocampus, also deteriorate.

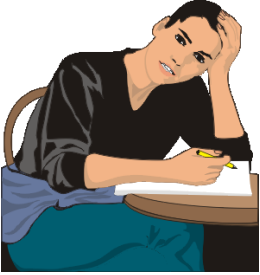
Effects on the Lungs. Someone who smokes marijuana regularly may have many of the same respiratory problems that tobacco smokers have. These individuals may have daily cough and phlegm, symptoms of chronic bronchitis, and more frequent chest colds. Continuing to smoke marijuana can lead to abnormal functioning of lung tissue injured or destroyed by marijuana smoke.

Regardless of the THC content, the amount of tar inhaled by marijuana smokers and the level of carbon monoxide absorbed are three to five times greater than among tobacco smokers. This may be due to marijuana users inhaling more deeply and holding the smoke in the lungs.

Effects of Marijuana Use during Pregnancy. Research has shown that babies born to women who used marijuana during their pregnancies display altered responses to visual stimuli, increased tremulousness, and a high-pitched cry, which may indicate problems with neurological development. During infancy and preschool years, marijuana-exposed children have been observed to have more behavioral problems and to perform tasks of visual perception, language comprehension, sustained attention, and memory more poorly than nonexposed children. In school, these children are more likely to exhibit deficits in decision-making skills, memory, and the ability to remain attentive.

(continued)

Effects of Heavy Marijuana Use on Learning and Social Behavior. A study of college students has shown that critical skills related to attention, memory, and learning are impaired among people who use marijuana heavily, even after discontinuing its use for at least 24 hours. Researchers compared 65 "heavy users," who had smoked marijuana a median of 29 of the past 30 days, and 64 "light users," who had smoked a median of 1 of the past 30 days. After a closely monitored 19- to 24-hour period of abstinence from marijuana and other illicit drugs and alcohol, the undergraduates were given several standard tests measuring aspects of attention, memory, and learning. Compared to the light users, heavy marijuana users made more errors and had more difficulty sustaining attention, shifting attention to meet the demands of changes in the environment, and in registering, processing, and using information. The findings suggest that the greater impairment among heavy users is likely due to an alteration of brain activity produced by marijuana.



Longitudinal research on marijuana use among young people below college age indicates those who used have lower achievement than the non-users, more acceptance of deviant behavior, more delinquent behavior and aggression, greater rebelliousness, poorer relationships with parents, and more associations with delinquent and drug-using friends.

*Information provided by the National Institute on Drug Abuse.
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