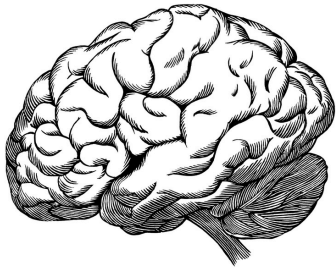


Marijuana's Effect on the Brain



Marijuana (also known as Cannabis) is a psychoactive drug obtained from the *Cannabis Sativa* plant. It contains Tetrahydrocannabinol (THC), a mind-altering compound.

Marijuana can be consumed by smoking, vaping or through food and drink infused with it, commonly referred to as edibles. Common street names include Weed, Smoke, Hash, Ganja, and Mary Jane.

The use of marijuana can affect cognitive functions including memory, learning, decision-making skills, coordination, attention, emotional regulation and reaction time. Frequent usage has been found to affect brain development and damage brain structures.

In 2021, Connecticut legalized recreational use of marijuana for adults aged 21 and older. Understanding the effects of marijuana on the brain is critical, particularly for individuals under 25 as their brains are still developing.

The Potency of Marijuana

Marijuana today is significantly stronger due to the higher levels of THC.

This is concerning because THC is the primary agent of marijuana's effect on behavior and the brain. Higher concentrations of THC result in stronger effects on the human brain.

- Marijuana use can effect movement, mental health, and thought processes in the short term.
- Long-term usage can impact and may permanently damage the brain.
- Long-term use can result in decreased academic performance, mental health issues and marijuana dependency.

The Short-Term Effects On The Brain

- Increased sensory perception and heightened imagination.
- High doses lead to excessive happiness, and exhilaration.
- Increased appetite, talkativeness, relaxation, sociability, and disinhibition.
- Problems with short-term memory and learning.
- Impaired coordination, reduced movement and delayed reaction time.
- Difficulty with thinking, and problem-solving skills, which can lead to increased risk-taking behaviors.
- Distortions in time, disorganized thinking and confusion.
- Increased restlessness, drowsiness, and a higher risk of experiencing a panic attack.



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The Long-Term Effects On The Brain

Long-term use of marijuana can impact and potentially cause permanent damage to the structures of the brain, including:

- **Hippocampus:** responsible for the storage of memories. Regular marijuana use can lead to problems with short-term memory and the formation of new memories.
- **Amygdala:** responsible for emotional regulation. Regular marijuana use can make managing anxiety, fear and stress harder leading to reduced motivation and life satisfaction.
- **Cerebellum:** responsible for the body's coordination and motor function. Regular marijuana use can impact the growth of this structure leading to coordination issues.
- **Endocannabinoid System:** regulates memory, coordination, mental stability and alertness. Regular use of marijuana can overwhelm the processes of this system.

Long-term use of marijuana can also lead to:

- **Reduced academic abilities:** Leading to poorer school performance, which can jeopardize social and professional achievements.
- **Reduced production of dopamine:** Dopamine is a chemical in the body responsible for feeling motivation, pleasure and satisfaction. When dopamine levels decrease, it can result in a lack of drive, diminished pleasure in activities and difficulty in completing school or work assignments.
- **An increased risk of mental health disorders:** Such as anxiety, psychosis, and depression.
- **An increased tolerance and dependence:** Regular use of marijuana can lead to a higher tolerance and the development of a dependence on the drug.

Connecticut Resources

CT Department of Mental Health and Addiction Services

www.ct.gov/DMHAS

Drug Free CT

www.drugfreect.org

Be In The Know CT

beintheknowct.org

National Resources

Substance Abuse and Mental Health Services Administration

www.samhsa.gov

National Institute on Drug Abuse (NIDA)

www.nida.nih.gov



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