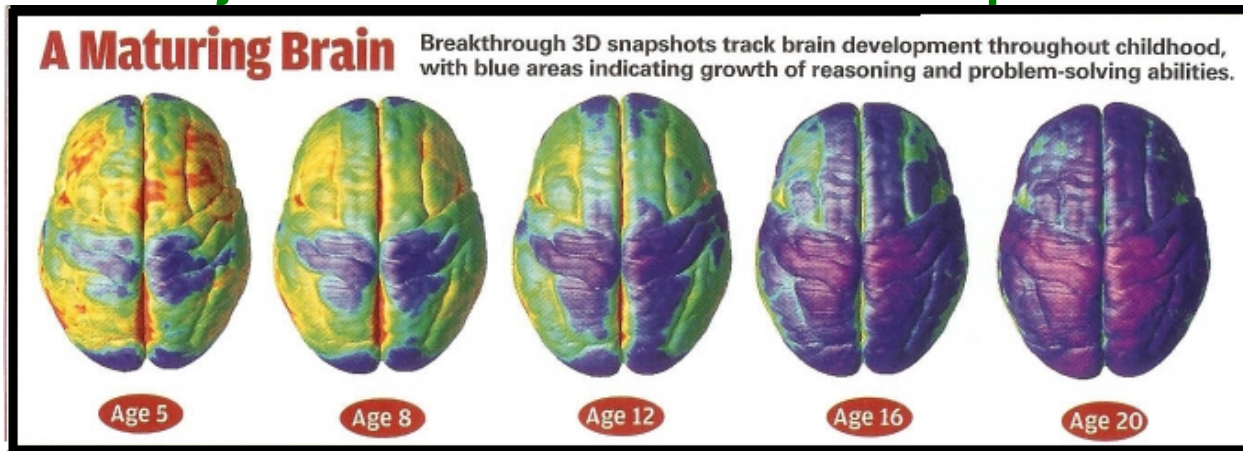


Marijuana and Maturation Development



Adolescence is a crucial period of emotional and psychological development – of maturation, building of coping skills, anger management skills, stress management skills, patience, values and character. As with any drug, when marijuana is introduced into the body and brain of a young person, serious effects can result.

Psychologists argue that when a teen starts smoking marijuana heavily, they lose the ability to consolidate the emotional and social learning necessary for a real transition out of adolescence and into adulthood. Marijuana dulls the emotional response to external stimuli, and as such when under the influence of marijuana, teens do not appropriately experience complex emotional and developmental challenges, and do not learn healthy ways to navigate the emotional and psychosocial landscape of adulthood. The earlier teens start smoking, the greater the deficit in learned social behaviors, and the greater the eventual harms.

Research by Medina et al., revealed that chronic, heavy marijuana use during adolescence is associated with poorer performance on thinking tasks, including slower psychomotor speed and poorer complex attention, verbal memory and planning ability. While findings suggest partial recovery of verbal memory functioning within the first three weeks of adolescent abstinence from marijuana, complex attention skills continue to be affected. Females may be at increased risk for the neurocognitive consequences of marijuana use

during adolescence, as studies found that teenage girls who use marijuana had marginally larger prefrontal cortex volumes, associated with poorer executive functions of the brain, i.e. planning, decision-making or staying focused on a task.

At low doses, most marijuana users report a sense of calm, well-being and relaxation—the exact opposite of anxiety. But a person under the influence of marijuana becomes more emotional and sensitive and many times it increases stress and according to research by Hyman et al., decreases the capacity to cope with stress long term. According to Patton, young people who are weekly marijuana users double their risk of depression later in life.

A study by Brooks et al., demonstrated an association between early marijuana use and outcome variables including lower educational and occupational expectations, being suspended or expelled from school, fired from jobs, getting “high” at school or work, collecting welfare, rebelliousness, not participating in productive activities, and being an unmarried parent. In an extensive study, Fergusson et al. found similar results as well as overall lower satisfaction with relationships and life satisfaction.

According to a World Health Organization Report, the effects of adolescent marijuana use upon development may cascade throughout young adult life and impact upon the quality of life of the user (as an adult) and/or their children.

RESOURCES: “Early adolescent marijuana use: risks for the transition to young adulthood”, Brook, J.S., Adams, R.E., Balka, E.B., and Johnson, E., *Psychological Medicine* (2002) • “Stress-Related Factors in Cannabis Use and Misuse: Implications for Prevention and Treatment”, Scott M. Hyman, Ph.D.* and Rajita Sinha, Ph.D., Yale University School of Medicine, Department of Psychiatry, *Journal of Substance Abuse Treatment*, June 2009 • “Neuroimaging Marijuana Use and its Effects on Cognitive Function”, Krista Lisdahl Medina and Susan Tapert, presented at the annual meeting of the American Academy of Pediatrics in Boston, Massachusetts, 2008 • Fergusson, D. M., & Boden, J. M. (2008). Cannabis use and later life outcomes. *Addiction*, 103(6), 969-976; • Patton, GC, “Cannabis use and mental health in young people: cohort study.” *British Medical Journal*, 2002. • World Health Organization Project on Health Implications of Cannabis Use, 1999.