Press Release

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SAFE Glen Cove Coalition: New Study Says Marijuana Produces Persistent Cognitive Impairments

A recent study published in the research journal Addiction has found that cannabis use leads to acute cognitive impairments that may continue beyond the period of intoxication. This Canadian-led meta-review (review of reviews) merged the findings of 10 meta-analyses representing more than 43,000 participants.

The study found that cannabis intoxication leads to small to moderate cognitive impairments in areas including

- making decisions,
- suppressing inappropriate responses,
- learning through reading and listening,
- the ability to remember what one reads or hears, and
- the time needed to complete a mental task.

These and other acute impairments mirror the residual effects documented for cannabis use, suggesting that the damaging effects of cannabis begin while it is being consumed and persist beyond that period.

The study enabled researchers to highlight several areas of cognition impaired by cannabis use, including problems concentrating and difficulties remembering and learning, which may have considerable impact on users' daily lives. Cannabis use in youth may consequently lead to reduced educational attainment, and, in adults, to poor work performance and dangerous driving. These consequences may be worse in regular and heavy users.

Cannabis is the third most consumed psychoactive substance in the world (after alcohol and nicotine) and adolescents as well as young adults have the highest rates of cannabis use. Recent global changes in the legalization of cannabis suggest that public perceptions of its safety and acceptability are on the rise. It is therefore important to understand the cognitive risks involved in using cannabis, especially to young people, whose brains are undergoing

significant developmental changes. Researchers also note that vaping in teens has nearly doubled in the last seven years, posing more challenges as marijuana's impact on the brain can be particularly detrimental to cognitive development for youth, whose brains are still developing.

This study provides strong evidence for negative cognitive effects of cannabis use. The ability to recover from those deficits remains unclear.

Research has revealed that THC is a fat-soluble compound that may be stored in body fat and, thus, gradually released into the bloodstream for months, hence the need for more research-based longitudinal work. Some studies say the negative effects on the brain may ease after marijuana is discontinued, but that may also depend on the amount, frequency and years of marijuana use. The age in which use began may also play a role, if it falls within the crucial developmental period of the youthful brain. To date, the most consistent alterations produced by marijuana use, mostly its chronic use, during youth have been observed in the prefrontal cortex. Such alterations may potentially lead to a long-term disruption of cognitive and executive functions. In addition, some studies have shown that early and frequent cannabis use in adolescence predicts poor cognition in adulthood.

While science based research continues to address the long-term negative effects of marijuana, preventive and interventional measures to educate youths on cannabis use and discourage them from using the substance in a chronic manner should be promoted since youths remain particularly susceptible to the effects of cannabis.

Addiction is the official journal of the Society for the Study of Addiction. It is a peer reviewed journal that covers research relating to the abuse of alcohol, illicit drugs, and tobacco, as well as behavioral addictions. For more information, please visit www.addictionjournal.org.

The SAFE Glen Cove Coalition is concerned about marijuana use and its negative consequences on the health and development of youth and provides evidence-based alcohol and substance use prevention, intervention and education for youth and adults. To learn more about the SAFE Glen Cove Coalition please follow us on www.facebook.com/safeglencovecoalition or visit SAFE's website to learn more about marijuana use at www.safeglencove.org.