

# Cannabis and adolescence

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Canadian teenagers are among the largest consumers of cannabis worldwide. The damaging effects of this illicit drug on young brains are worse than originally thought, according to new research by Dr. Gabriella Gobbi, a psychiatric researcher from the Research Institute of the McGill University Health Centre. The new study, published in *Neurobiology of Disease*, suggests that daily consumption of cannabis in teens can cause depression and anxiety, and have an irreversible long-term effect on the brain.

"We wanted to know what happens in the brains of teenagers when they use cannabis and whether they are more susceptible to its neurological effects than adults," explained Dr. Gobbi, who is also a professor at McGill University. Her study points to an apparent action of cannabis on two important compounds in the brain - serotonin and [norepinephrine](#) - which are involved in the regulation of neurological functions such as mood control and anxiety.

"Teenagers who are exposed to cannabis have decreased [serotonin](#) transmission, which leads to mood disorders, as well as increased norepinephrine transmission, which leads to greater long-term susceptibility to stress," Dr. Gobbi stated.

Previous epidemiological studies have shown how cannabis consumption can affect behaviour in some teenagers. "Our study is one of the first to focus on the neurobiological mechanisms at the root of this influence of cannabis on depression and anxiety in adolescents," confirmed Dr. Gobbi. It is also the first study to demonstrate that [cannabis](#) consumption

causes more serious damage during adolescence than adulthood.

Provided by McGill University Health Centre

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