

What effect does marijuana really have on weight gain?

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While cannabis alters the functions of neurobiological circuits controlling appetite, its effect on weight gain is complex since several factors appear to be involved, says Didier Jutras-Aswad, University of Montreal professor and researcher at the CHUM Research Centre. "It is known -- and often reported by users -- that cannabis causes temporary increase in appetite. As to whether it actually causes weight gain in the long term, the available data is limited. The question is all the more difficult to answer since many other factors can influence weight. For instance, cannabis use may be associated with cigarette

smoking, which also alters appetite, and many effects of cannabis vary by gender and level of use. For this study, we wanted to better understand the association between cannabis and weight gain by paying particular attention to these factors. The main finding of our study shows that long-term cannabis use indeed influences weight gain. But above all, we noted that certain factors drastically modify this effect, including gender, level of use, and concomitant cigarette smoking." Credit: N.ico CC BY 2.0. flic.kr/p/5QR4nd

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"What was surprising in this study was the complexity of interacting factors," said Dr. Jutras-Aswad. We were able to group participants according to various levels of use to conduct our analyses. Specifically, in male non-cigarette smokers, greater cannabis use led to greater weight gain. And significantly, in male cigarette smokers, the effect was almost the opposite."

The researcher and his colleagues reached their conclusions using data from the Nicotine Dependence in Teens (NDIT) study, led by Jennifer O'Loughlin. From the age of 12 or 13, 1294 young people agreed to share information each year about, amongst other things, their diet, overall mental and physical health (including weight and height), physical activities, and frequency and levels of their cannabis, alcohol, and/or nicotine use. The highly detailed nature of the NDIT study allowed the researchers to rule out other factors likely to influence weight gain in their analysis. "The effects of these substances observed in highly controlled laboratory settings are more complex than anticipated in real-world settings," explained Jutras-Aswad. "The NDIT study provided us with the opportunity to have detailed longitudinal data to better respond to a research question requiring consideration of several factors simultaneously."

For the moment, the researchers are unable to explain the difference between males and females, although they have some hypotheses. "THC and nicotine do not affect the neurobiological circuits controlling hunger in the same way in men and women," explained Jutras-Aswad. "We also know that these targets in the brain are modified by hormonal factors that can fluctuate, in particular, during menstrual cycles. There are also possible psychological differences in men and women in their perception of and preoccupation with weight gain and diet, which could hypothetically explain why men seem specifically sensitive to the complex interaction between cannabis use, cigarette smoking, and weight gain."

Finally, the study equips scientists and health practitioners in improving knowledge and combating cigarette smoking, cannabis abuse, and obesity. "One of the great strengths of our study is that it is highly instructive about how to study the effects of cannabis use on [weight gain](#), but also the risk of developing other health problems. Our data indicate that concomitant cigarette smoking and gender must also be taken into

account in the individuals concerned," said Jutras-Aswad. "Regarding interventions with the population, one of the findings to keep in mind is that when a person uses cannabis they also often report using tobacco. When one substance is used, another one is often consumed. We must therefore be able to prevent, detect, and intervene in the problematic use of several substances simultaneously," concluded Dr. Jutras-Awad.

Provided by University of Montreal

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