
CANNABIS USE IS ASSOCIATED WITH BIOLOGICAL MARKERS OF AGEING IN HEALTHY VOLUNTEERS

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Introduction: Cannabis is a widely used drug, which effects on human health remain controversial. Recent studies have found correlations between cannabis use and brain structural changes that may be related to ageing processes. Eotaxin-1 is a chemokine described as a marker of ageing, which also appear to increase with cognitive deficits and neurogenesis. Here, we aimed at characterising the effect of cannabis in accelerating normal ageing processes, by studying eotaxin-1 plasma levels in people who currently use cannabis, have used cannabis in the past, or have never used cannabis.

Methods: A total of 87 healthy volunteers participated in the study. Participants completed the Cannabis Experience Questionnaire, the General Practice Physical Activity Questionnaire, the Sociodemographic, Morphometric, Alcohol and Tobacco Questionnaire, and provided a blood sample. Eotaxin-1 was assessed by ELISA. The three groups were compared using one-way ANOVA to assess levels of eotaxin-1, and non-paired Student t-tests to assess other factors effects.

Results: Current users of cannabis (n=18) had significantly higher eotaxin-1 plasma levels compared to past users of cannabis (n=33) and individuals who never used cannabis (n=36). The latter two groups had similar eotaxin-1 levels. Higher eotaxin-1 plasma levels were not attributed to gender, age, body mass index, physical activity or use of other legal/illegal drugs.

Conclusion: These results suggest that cannabis use increases eotaxin-1 plasma levels and could result in accelerated brain ageing. However, the effects appear to be reversible when cannabis use ceases. These findings have important implications for treatment and care of mental health disorders, such as schizophrenia.