TACSM Abstract

Effects of Cannabidiol Cream on Delayed Onset Muscle Soreness

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ABSTRACT

Cannabidiol is used for treating anxiety (Bertoglio, Day, Gulmaraes, Jurkus, Lee, & Stevenson, 2016), reducing epileptic seizures (FDA, 2018), as well as reducing inflammation (Zurier, 2003). Limited clinical evidence, however, has been provided to support the therapeutic use of cannabinoids in skeletal inflammation despite the promising preclinical data (Bura, Maldonado, Negrete, & La Porta, 2014). **PURPOSE**: The purpose of this study is to explore the use of Cannabidiol (CBD) cream and its effectiveness to reduce delayed onset muscle soreness (DOMS). **METHODS**: Thirteen participants (Age = 25±3.8 yrs, height = 164.3±11.0 cm, weight = 77.5±27.1 kg) performed two sets of squats to exhaustion; one with weight (5lbs for women and 8lbs for men) and one without weight in order to induce DOMS. Cannabidiol cream was then applied generously in a circular motion for 15 seconds until evenly spread on one anterior thigh (specifically the quadriceps area) and a placebo on the other. Both legs were wiped clean after 10 minutes. Participants rated their pain 24 and 48 hours after using a 0-10 pain assessment tool. Data was analyzed using a repeated measure ANOVA to assess pain differences. Alpha was set at .05. **RESULTS**: There was no significant difference in DOMS between the legs across time points, $F_{(3, 10)}$ = 2.17, p = 0.15. There was also no significant difference in DOMS after combining the time points, $t_{(12)}$ = .779, p = 0.45. **CONCLUSIONS**: No significant difference suggests that the CBD cream had no effect on delayed onset muscle soreness. Future studies should isolate muscles and have multiple cream applications to further explore its effectiveness.