

عنوان مقاله:

The Effect of Vitamin D³ Supplementation on Delayed Onset of Muscle Soreness of Active Boys with Vitamin D Deficiency

محل انتشار:

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خلاصه مقاله:

Aim: This study aimed to investigate the effect of two weeks of vitamin D³ supplementation on some indices of Delayed Onset of Muscle Soreness (DOMS) after eccentric exercise. **Method and Materials:** In this semi experimental study, 20 nonathletic male collegiate students (19.75 ± 1.29 years) participated in the study voluntarily and were divided randomly into two groups of experimental ($n=11$) and placebo ($n=9$). The experimental group consumed vitamin D³ (Cholecalciferol) containing 50000 IU while the placebo group took apparently similar capsules containing starch like, two capsules for two weeks. To induce DOMS, participants performed a step protocol that included four sets (5 minutes for each set), with a 1-minute of rest interval between each set using a 46 cm-step. Range of Motion (ROM) of low extremity joints and circumferences, and Visual Analog Scale (VAS) were measured before, immediately after (Time 0), and 24 hours (Time 1) and 48 hours (Time 2) after eccentric exercises. **Findings:** This study showed that thigh circumference increased following eccentric exercise in the placebo group, while it did not change significantly in the experimental group ($p > 0.05$). There was no significant difference between the two study groups regarding other variables ($P > 0.05$). Vitamin D³ supplementation with the dosage and duration used in the present study reduced the limited symptoms of DOMS. Future studies of longer duration or higher dosage of vitamin D supplementation are recommended. **Conclusions:** According to the finding of this study, vitamin D³ supplementation could not reduce the limited symptoms significantly. However, future studies are suggested to evaluate the effect of higher dose or longer duration of vitamin D supplementation on DOMS.

کلمات کلیدی:

.Delayed Onset of Muscle Soreness, Step Test, Vitamin D³

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