

## عنوان مقاله:

Comparison of Eight Weeks Exposure to Sunlight and Home-Based Pilates Training on Serum Vitamin D , CCL<sub>2</sub> and Body Composition of Overweight Multiple Sclerosis Women

## محل انتشار:

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## خلاصه مقاله:

**Objective:** The purpose of this study was to compare eight weeks of exposure to sunlight and Home-Based Pilates Training serum vitamin D, CCL<sub>2</sub>, and the body composition of women with multiple sclerosis. **Materials and Methods:** This study was a quasi-experimental study. Among women with Multiple sclerosis (with  $\geq 2$ -EDSS), 44 were purposefully and voluntarily selected and randomly divided into three groups: Pilates at home (n=15), Pilates exposed to the sun (n=15) and control (n=14) were divided. The training program consisted of three sessions per week for eight weeks, consisting of two parts, Pilates training at home and Pilates training in the environment. An exercise program on the DVD was provided. The Serum vitamin D, CCL<sub>2</sub> indices, and body composition of patients with MS were measured 48 hours before and after eight Pilates exercises at home and under sunlight. To analyze the data, analysis of covariance and Bonferroni post hoc test, SPSS software, and  $P \leq 0.05$  significance level. **Results:** Comparing the results in the two stages showed that there was a significant difference between CCL<sub>2</sub> ( $P=0.001$ ), serum vitamin D ( $P=0.001$ ), BMI ( $P=0.001$ ), weight ( $P=0.001$ ) and WHR ( $P=0.001$ ) indices of women with MS in the studied groups. These differences were only between the training groups and the control group. However, there was a significant difference in the CCL<sub>2</sub> index and serum vitamin D between the two training groups (Respectively  $P=0.037$ ,  $P=0.001$ ). **Conclusion:** Patients with MS can improve their vitamin D level and weight-related and inflammatory indicators by using Pilates exercises exposed to sunlight and at home with minimal cost

## کلمات کلیدی:

Pilates training, Chemokine CCL<sub>2</sub>, Body composition, Multiple sclerosis, Sunlight, Vitamin D

