

## عنوان مقاله:

Effect of Vitamin C Intake Following Exhaustive Aerobic Exercise on Serum Immunoglobulins A and G in Wushu Athletes

## محل انتشار:

مجله Medbiotech, دوره 1, شماره 4 (سال: 1396)

تعداد صفحات اصل مقاله: 6

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## خلاصه مقاله:

The present study aims to investigate the effect of vitamin C intake following exhaustive aerobic training on Immunoglobulins A (IgA) and G (IgG) in a number of 24 wushu athletes. The study adopts an experimental design and a field study approach. The population of the study consisted of 62 wushu athletes in Oshnavieh County. From among the population, a number of 24 athletes were randomly selected as the participants and assigned into an experimental group taking vitamin C (N=12) or a control group without vitamin C (N=12). The experimental subjects took 500 mg vitamin C per day for five subsequent days while the control subjects received no vitamin supplement during the same period. Blood samples were taken from each group in three stages. The first blood samples were taken before the training was started (at rest). The second blood sampling was conducted on the experimental subjects following vitamin C intake and on the control subjects following the training protocol (after the Day 5). Then the subjects in either group took Bruce test to measure their peak aerobic power, which immediately followed by the third blood sampling. In every sampling stage, serum IgA, IgG and cortisol were measured in either group. The data was collected through a few instruments including Health Status and Profile Questionnaire, a height meter device, a weight scale, a treadmill, a pulse meter as well as ELISA kit to measure cortisol concentration, serum IgA and IgG. Results showed that vitamin C intake significantly affected serum IgA, IgG and cortisol in the experimental subjects ( $P \leq 0.05$ ). Findings showed that vitamin C induced increases in IgA and IgG concentrations, which may in turn contribute to improved immune performance and decreased risk of infectious diseases. However, cortisol levels decreased in the experimental subjects considerably ( $P \leq 0.05$ ). The results also revealed that vitamin C intake following exhaustive training helped improve some of the indices in the immune system (3). It is, therefore, recommended that elite athletes use dietary supplementation and antioxidant vitamins to reduce the risk of heavy training so that they may minimize the potential disorders in their immune performance and avoid infections.

## کلمات کلیدی:

Vitamin C, Immunoglobulin, Bruce Test, cortisol

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