

## عنوان مقاله:

Effects of vitamin C and E supplementation on immune responses to a competition bout of sanda

## محل انتشار:

فصلنامه فعالیت بدنی و هورمونها، دوره 3، شماره 1 (سال: 1398)

تعداد صفحات اصل مقاله: 16

## نویسنده:

Hamid Sadeghi - MS in Exercise Physiology, Department of Exercise physiology, Marvdasht branch, Islamic Azad University, Marvdasht, Iran

## خلاصه مقاله:

**Introduction:** Sanda is a modern unarmed combat sport that developed from traditional wushu techniques, and primarily makes use of punching, kicking, throwing, wrestling and defensive techniques. The effects of antioxidant supplements on immune responses to this sport are unclear; thus the aim of present study was to investigate the effects of vitamin C and E supplementation on immune responses to a competition bout of sanda. **Material & Methods:** Eighteen elite sanda athletes were assigned either an experimental (200 mg of vitamin C and 400 IU of vitamin E; n=9) or a placebo group (Same dosage of juice powder; n=9) using a double-blind research design. Experimental group received the antioxidant supplements for a week before the competition. Thereafter, athletes in each weight categories competed together according with the rules of International Wushu Federation (IWUF) 2016. Blood samples were taken before and immediately after the competition. **Results:** The data revealed that C-reactive protein (CRP) levels were lower significantly in the experimental group than the placebo group ( $1.1 \pm 0.6$  vs.  $1.6 \pm 0.9$  pg/dl;  $P = 0.001$ ). For white blood cells (WBC,  $8777.7 \pm 100.5$  vs.  $9466.6 \pm 972.1$  n/mm<sup>3</sup>;  $P = 0.4$ ), neutrophils ( $50.7 \pm 6.4\%$  vs.  $49.0 \pm 7.8\%$ ;  $P = 0.4$ ), monocytes ( $3.2 \pm 1.6\%$  vs.  $3.6 \pm 1.6\%$ ;  $P = 0.7$ ), lymphocytes ( $43.6 \pm 7.3\%$  vs.  $44.6 \pm 7.5\%$ ;  $P = 0.6$ ) and eosinophils ( $1.4 \pm 0.5\%$  vs.  $1.6 \pm 0.7\%$ ;  $P = 0.6$ ) no significant differences were observed between the experimental and the placebo group. **Conclusions:** According to the study results, vitamin C and E supplementation may have potential to enhance immune functions in sanda athletes.

## کلمات کلیدی:

antioxidants, Wushu, Sanda, immune system, Inflammation

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