

عنوان مقاله:

Comparing the effect of antioxidant and coenzyme ۱۰Q supplementation on some indicators of muscle injury in water polo boys

محل انتشار:

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خلاصه مقاله:

Background: Reactive oxygen species are produced in response to strenuous, prolonged exercise, such as swimming, which results in cell damage. The aim of this study was to compare the effect of antioxidant and coenzyme ۱۰Q supplementation on some indicators of muscle injury in water polo boys. Materials and Methods: The ۲۴ boy water polo players with at least ۵ years of training experience and in the age range of ۱۷ to ۲۳ years were randomly divided into three groups ۸ people (of vitamin C, coenzyme Q۱۰ and control. Subjects in the vitamin C group (۵۰۰ mg of vitamin C tablets) and subjects in the coenzyme Q۱۰ group (۳۰۰ mg of coenzyme Q۱۰ tablets) were consumed daily with food for two weeks. Trainings were performed for two weeks, ۶ sessions per week and ۹۰ minutes per session. Evaluation of CK, LDH and AST indices in the state of at least twelve hours of fasting was performed in three stages: previous, immediately and ۲۴ hours after the completion of the protocol. One-factor analysis of variance test with repeated measures was used. Results: The results showed that CPK decreased significantly after fourteen days of supplementation in coenzyme Q۱۰ group and increased significantly ۲۴ hours after the last training session and in vitamin C group after fourteen days of supplementation and ۲۴ hours after the last training session increased significantly. There was no significant difference in LDH and AST levels between the groups ($P < ۰.۰۵$). Conclusion: It seems taking coenzyme Q۱۰ supplements may possibly reduce some indicators of muscle damage after water polo training.

کلمات کلیدی:

Antioxidant supplement, Coenzyme Q۱۰, CK, LDH, AST

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