

عنوان مقاله:

The Impact of oral CoQ10 supplementation on peripheral blood lipid profiles and muscular damage indices following two weeks intense aerobic training in elite cyclists

محل انتشار:

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خلاصه مقاله:

The regular exercise training is so effective for improving of health. However, there is evidence that intense aerobic training may cause damage to the tissues with different ways. Scientists of sport science are used various supplements for prevention this deleterious effects which CoQ10 (coenzymeQ10) is one of these supplements. This study was designed to investigate the effects of short-term CoQ10 supplementation on serum lipid profile and indirect muscle damage indices levels subsequence of one session intense aerobic training in cyclists. The research studied on healthy elite men cyclists to assess the efficacy of short-term CoQ10 supplementation. Cyclists were divided into 2 groups (each group 7; age range 19- 25 years) to receive CoQ10 and dextrose. Blood samples were collected during 2 weeks of prepare camp, 2 d before the training camp (baseline), 18-24 hrs after supplementation and training session of the first and last training session and in order to assess serum levels of triglycerides high-density lipoprotein has been used autoanalyzer. Also, aforementioned method was used to calculate Creatine kinase and lactate dehydrogenase activity. Fourteen cyclists completed the course of the study. Serum lipid levels in the consumer CoQ10 compare placebo group decreased following one session aerobic training ($P<.05$). However, baseline lipid levels were unchanged ($P>.05$) except triglyceride which had descending procedure (from 72.7 ± 17.9 to 51.9 ± 11.9) in CoQ10 group ($P<.001$). Ascending response of indirect muscle damage indices (Creatine kinase and lactate dehydrogenase) and capillary lactate decreased in the CoQ10 group compare to placebo group (301 ± 45.11 versus 340.42 ± 36.41 , 362.71 ± 32.58 versus 407.14 ± 60.9 and 1.04 ± 0.24 versus 1.24 ± 0.19 for every index, respectively) in subsequent last session of aerobic training ($P<.05$). The present study showed that short-term supplementation with CoQ10 could insignificantly reduce serum levels of some lipid profiles and significantly reduce muscle damage in healthy elite cyclists.

کلمات کلیدی:

Cyclists, Muscle, Lipid, Blood, Damage

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