

Abstract

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Antifatigue effects of coenzyme Q10 during physical fatigue.

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OBJECTIVE: This study examined the effects of coenzyme Q10 administration on physical fatigue.

METHODS: In a double-blinded, placebo-controlled, three crossover design, 17 healthy volunteers were randomized to oral coenzyme Q10 (100 or 300 mg/d) or placebo administration for 8 d. As a fatigue-inducing physical task, subjects performed workload trials on a bicycle ergometer at fixed workloads twice for 2 h and then rested for 4 h. During the physical tasks, subjects performed non-workload trials with maximum velocity for 10 s at 30 min (30-min trial) after the start of physical tasks and 30 min before the end of the tasks (210-min trial).

RESULTS: The change in maximum velocity from the 30- to the 210-min trial in the 300-mg coenzyme Q10-administered group was higher than that in the placebo group. In addition, subjective fatigue sensation measured on a visual analog scale in the 300-mg coenzyme Q10-administered group after the fatigue-inducing physical task and recovery period was alleviated when compared with that in the placebo group.

CONCLUSION: Oral administration of coenzyme Q10 improved subjective fatigue sensation and physical performance during fatigue-inducing workload trials and might prevent unfavorable conditions as a result of physical fatigue.

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