

THE EFFECTS OF AMINO-ACIDS AND CARNITINE SUPPLEMENTATION ON EFFORT CAPACITY

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Abstract

During exercise, proteins metabolism is complex. There is a 20-50% decrease in their synthesis rated during endurance exercise. Also carnitine plays a very important role in the skeletal muscle metabolism during physical effort. Oxidative stress is also to be observed, and leads to tissue damages. On three groups of white male Wistar rats (control groups, amino acids supplementation groups and carnitine supplementation groups) we studied the effects of amino acids and carnitine supplementation. All the rats have been trained for effort during one month. We assess the ergotropic and trophotropic effects of the supplements as well as the oxidative stress and antioxidant defence markers. The results indicate that amino acids have a trophotropic and ergotropic effect after the effort, while carnitine has ergotropic but antitrophotropic effects.

Keywords: amino-acids, carnitine, effort capacity, oxidative stress.