

Protective Effect of Prolonged Quercetin Supplement on Oxidative Stress and Antioxidant Enzyme Activities in Boxers

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ABSTRACT This study was planned in order to investigate the protective effect of prolonged quercetin supplement on oxidative stress and antioxidant enzyme activities in boxers. It included 20 voluntary male boxers. The athletes were separated into two groups as the control group (n = 10) and Quercetin group (n = 10). The athletes were supplemented with 500 mg quercetin for 30 days before their exercise programs. Blood samples were drawn from the athletes before and after exercising. MDA, SOD, CAT and GSH analysis were performed. According to the findings, there were an increase in the MDA levels of the control group ($P < 0.01$) and a significant decrease in the MDA levels of quercetin group ($P < 0.001$) when they were compared after being given quercetin. The levels of antioxidant enzymes SOD, CAT and GSH significantly increased in quercetin group ($P < 0.001$). As a conclusion; it can be said that quercetin supplement has protective effect against oxidative stress by decreasing the amount of MDA, which is the end-product of lipid peroxidation and increasing the activity levels of the antioxidant enzymes SOD, CAT and GSH.