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## » Journal Abstract

Acute exercise induced oxidative stress is prevented in erythrocytes of male long distance athletes

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The aim of this study was to investigate the redox status in blood of long distance running athletes if it is favourably affected, and help to prevent acute exercise-induced oxidative stress. Nineteen sedentary males and 20 male long distance runners, volunteered to participate in this study. Acute exercise was applied as treadmill run, which was continued until the heart rate of the subject has reached 80-90% of the maximum and stopped after 5 min. Acute exercise increased the hematocrit percentage in sedentary males but not in male athletes. It decreased the number of erythrocytes and also Hb level in sedentary males, but not in male athletes when they were adjusted to the changes in hematocrit level. There was no difference in erythrocyte malondialdehyde levels between sedentary males and male athletes at rest. Acute treadmill run increased the erythrocyte malondialdehyde level in sedentary males, however, it did not affect it in male athletes. Erythrocyte glutathione peroxidase and superoxide dismutase activities were not affected by acute exercise in both groups. Our results show that erythrocytes in long distance male athletes are better protected against acute exercise-induced oxidative stress compared with the ones from sedentary counterparts.

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