

## عنوان مقاله:

Ameliorative Effects of Melatonin on Exercise-induced Oxidative Stress and Haematological Response of Untrained Arabian Stallions Following a Race Of ۲۰۰۰ m

## محل انتشار:

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## خلاصه مقاله:

We performed this study to evaluate the effects of melatonin on oxidative stress and haematological responses following an exercise of ۲۰۰۰ m at maximum speed. Eighteen untrained, clinically healthy stallions of the Arabian breed with a mean body weight of  $401 \pm 32.11$  kg (۳۹۵-۴۰۴ kg) and an age range of ۵.۷-۰.۵۴ years (۵-۶ years) were used in this research. The subjects were divided into three groups of six stallions each. Group I (MTEX) was treated with melatonin at a dose rate of ۰.۰۳ mg/kg orally once daily for one month. Group II (NMTX) was not administered melatonin but exercised, while the last group (OMTX) was neither administered melatonin nor exercised. The results obtained show that post-exercise, the biomarkers of oxidative stress evaluated were significantly lower ( $p < 0.05$ ) in the MTEX group than in the NMTX group. The leucocyte count, neutrophil counts, and the ratio of neutrophil to lymphocyte were higher ( $p < 0.05$ ) in the NMTX group than in the MTEX group. Furthermore, it was recorded that packed cell volume and the total erythrocyte count were statistically higher ( $p < 0.05$ ) in the MTEX group than in the NMTX group. Therefore, we concluded that melatonin ameliorated oxidative stress and some haematological parameters will be beneficial to horses subjected to the stress of exercise.

## کلمات کلیدی:

Arabian stallion, haematological parameters, Melatonin, oxidative stress

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