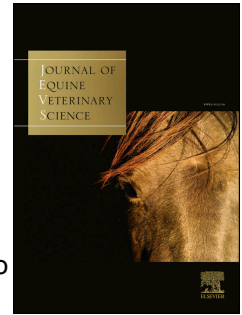


Accepted Manuscript

Changes In Blood Parameters In Healthy Horses And Horses With Upper And Lower Respiratory Tract Diseases Undergoing Treadmill Exercise Tests

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PII: S0737-0806(18)30402-7

DOI: [10.1016/j.jevs.2018.09.002](https://doi.org/10.1016/j.jevs.2018.09.002)

Reference: YJEVS 2584

To appear in: *Journal of Equine Veterinary Science*

Received Date: 9 May 2018

Revised Date: 27 August 2018

Accepted Date: 8 September 2018

Please cite this article as: Busechian S, Marchesi MC, Pieramati C, Forte C, Zappulla F, Conti MB, Buttarelli D, Rueca F, Changes In Blood Parameters In Healthy Horses And Horses With Upper And Lower Respiratory Tract Diseases Undergoing Treadmill Exercise Tests, *Journal of Equine Veterinary Science* (2018), doi: <https://doi.org/10.1016/j.jevs.2018.09.002>.

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1 CHANGES IN BLOOD PARAMETERS IN HEALTHY HORSES AND HORSES WITH UPPER AND
2 LOWER RESPIRATORY TRACT DISEASES UNDERGOING TREADMILL EXERCISE TESTS

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11 Abstract

12 Exercise tests are useful tools to evaluate the fitness level of horses in training or with a history of poor
13 performance. The aim of this study was to evaluate the differences in blood parameters in three groups of
14 horses undergoing treadmill exercise tests, either to detect the cause of exercise intolerance or to evaluate the
15 level of fitness before a competition. Blood samples were taken from 30 horses before, at the end of, and two
16 hours after a standardized treadmill exercise test, to detect differences in haematological parameters between
17 healthy horses (10, Group N), horses with upper (10, Group U) and lower airway diseases (10, Group L).

18 Packed cell volume (PCV), erythrocyte number, haemoglobin, glucose, and total and unconjugated bilirubin
19 concentration were statistically different between the groups, because of increased oxygen demands in
20 respiratory diseases and intravascular haemolysis that could occur during exercise, and that is worsened by
21 the increased breakdown of erythrocytes secondary to EIPH, diagnosed in horses in Group L.

22 Keywords: Horse, treadmill exercise test, airway disease, blood sample

23 1. Introduction

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