

Infections of the upper respiratory tract and counting of leukocytes in volleyball athletes #23

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Submaximal and regular exercise tends to improve the immune response. On the other hand, athletes have a higher incidence of infection of the upper respiratory tract (URTI). The objective of the present study was to correlate the total episodes of URTI with the relative count of circulating neutrophils and lymphocytes in volleyball female athletes, aged 18.92 ± 0.76 years ($n=12$), within the periods of training. The blood was collected at the end of the periods: Pre-competitive (M1), Competitive-I (M2) and Competitive-II (M3) and the URTI weekly. The athletes participated of 30 weeks of training and competitions. The Pearson correlation coefficient was used, $p \leq 0.05$. The results showed moderate to high correlations with 0.8 ($p=0.001$) and -0.76 ($p=0.004$) in M1; 0.68 ($p=0.014$) and -0.59 ($p=0.042$) in M2; followed by no significant correlations of 0.35 and -0.62 in M3, respectively for neutrophils and lymphocytes when coupled with URTI. The increased number of neutrophils and decreased number of lymphocytes were correlated to URTI and may be useful tools during long time training periods to prevent overload induced immunosuppression.

Key words: immune system; circulating leukocytes; susceptibility to infections.