

Influence of body mass index on leukocytes count in women #25

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The nutritional status of an individual can directly interfere in the immune system. The aim of the present study was to analyze the influence of body mass index (BMI) on the total and differential circulating leukocytes count in women. 112 women aged 32.55±7.48 years, divided into 6 groups: G1 - low weight (n=8), G2 - eutrophic (n=26), G3 - overweight (n=20), G4 - obesity I (n=16), G5 - obesity II (n=19) and G6 - obesity III (n=23) were selected. Regular physical activity practitioners, diabetic, hypertensive and/or individuals with thyroid gland alterations were excluded. The blood samples were collected from the antecubital vein and the circulating leukocytes, lymphocytes, monocytes, neutrophils, eosinophils and basophils count were analyzed by blood smears in a Neubauer chamber. The statistical analysis used was ANOVA followed by Tukey's for multiple comparisons of parametric data, and when the data were non-parametric, Kruskal-Wallis test was used followed by Dunn's test ($p \leq 0.05$). G6 group presented a lower relative and absolute count of lymphocytes and higher count of relative neutrophils as compared with G2. In comparison with the G2, the G5 group presented higher total number of monocytes. In absolute number of eosinophils, G5 and G6 showed higher levels as compared with G4. G6 also presented lower absolute basophils count when compared with G5. It is possible that the higher number of neutrophils in G6 and eosinophils in G5 and G6 indicate a more inflammatory and allergic profile, which is related to excess of body mass.

Key words: leukocytes count; sedentary women; body mass excess.