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SHORT TERM AND LONG TERM EFFECTS OF TRAINING ON HEMATOLOGICAL PARAMETERS OF RUNNERS

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ABSTRACT The purpose of this study was to examine the effects of training phases and variations of training volume on hematological parameters of runners. The long-term effects of training during the general and specific preparatory period of 15 weeks have been studied in a sample of 13 runners, whereas the short-term effects of variations in training volume during the general preparatory period of 8 weeks have been studied in another sample of 7 runners. The results of long-term effects showed that the erythrocyte counts and the hematocrit as well as the hemoglobin were lower at the end of general preparatory period and remained low at the end of specific preparatory period. The short-term variation of training volume resulted in an increase of hematocrit and hemoglobin. The long term-effects of training on erythrocyte indices showed an increase of hemoglobin at the end of the general preparatory period and remained increased until the end of a the specific preparatory period. In the short term there was a constant increase in the indices of erythrocyte and hemoglobin. In conclusion, the increase of training load during the preparatory period appears to reduce the levels of erythrocyte counts, hematocrit and hemoglobin. However, the increase of some erythrocyte indices seems to counteract with this reduction, indicating a positive functional adaptation of the hematological mechanism. Therefore, the follow-up of the above hematological parameters may constitute an element for the adjustment of training stimuli to desirable for the organism levels.

Keywords: Preparatory period, Training volume, Erythrocyte counts, Hemoglobin, Hematocrit.

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