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Mineral status in cyclists

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Cycling is a form of physical activity, excellent aerobic activity that helps cardiovascular and metabolic functions of the human body. The health benefits of cycling include increased muscle strength and flexibility, strengthened bones, reduced anxiety and depression. On the other hand, regular intense exercise may result in marked changes in mineral metabolism by increasing losses through sweat and urine. Some minerals are required in only trace amounts, but others must be supplied in greater quantities. Considering that minerals are essential for metabolic and physiologic processes in the human body, the aim of this study was to determine the inorganic elements concentration in blood of cyclists. Participated in this study five male athletes, ages 26 to 38 years, weight 76.6 ± 4.4 kg and 65 healthy individuals (control group) of same age but not involved with physical activities. The samples were collected before and after the physical training and they were analyzed by neutron activation analysis. The results of cyclists at rest were compared with the control group and showed an appreciable decrease in the levels of Br, Ca, Cl, K, Mg, Na and increase of Fe, S and Zn. These data can be useful for evaluating the performance of endurance athletes during the period of competition preparation as well as to propose new protocols of clinical evaluation.