Iron status in cyclists by NAA

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The physical activity can provide benefits to the body, but the competitive sport is not always synonymous with balance to the body. Physiological changes as well as nutritional imbalance generated by physical effort can lead the athlete to the threshold between health and disease if there is no appropriate compensation for these events. Considering that the blood flow can increase up to 30 times during the aerobic activity, the suitability of the levels of metals and ions in blood is essential for maintaining the health and performance of athletes. Several studies have shown changes in Fe status in blood, in athletes with a daily program of intense exercise, resulting (in most cases) in a deficiency state with possible consequences that may impair athletic performance. The aim of this study was to investigate the iron level in blood of cyclist. Blood iron levels were measured using Neutron Activation Analysis technique (NAA). Six male athletes, age 18 to 36 years, and 65 healthy individuals (control group) of the same age but not involved with physical activities, participated of this study. The blood samples were irradiated in the nuclear reactor (IEA-R1, 3-4.5MW, pool type) at IPEN/São Paulo - Brazil. These data can be useful to a well-planned nutritional proposition that could contribute to performance of these athletes.