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The Effects of Leptin and Insulin Hormones on Health, Body Fat Percentage of the Endurance Athletes

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ABSTRACT The purpose of this study was to compare the effects of the levels of leptin and insulin hormones on body fat percentage of the endurance athletes and sedentary participants. The study was conducted on 37 professional cyclists and 45 sedentary participants aged 21-28 and 19–26 respectively. Mann-Whitney U test and t test were used for statical analyses. There was a statistically significant ($p<.05$) decrease on the body fat percentage, leptin and insulin levels of the cyclists who were endurance athletes, and a significant difference ($p<.05$) was found between the glucose and insulin values of the cyclists and the sedentary participants when the pre- and post-test results were compared. It was found that the body fat percentage and leptin values of the sedentary group were high ($p<.05$) but high density lipoprotein value was low ($p<.05$). As a result, the data showed that endurance athletes had higher level of the health promoting behavior than sedentary participants. Also, biological extreme of body fat, circulating leptin concentration is closely related to fat content.