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INVESTIGATION OF THE EFFECT OF TAEKWONDO TRAINING ON LIPID AND HORMONE METABOLISM OF ATHLETES

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ABSTRACT

This research was carried out to determine the effect of eight-week taekwondo training and studies to improve basic motoric features on the lipid metabolism and hormonal changes of athletes. The research group consisted of 30 male athletes licensed in taekwondo and participating in national competitions. Eighty-minute taekwondo training sessions were applied to the research group for eight weeks, four days a week, four days a week, and studies aiming to improve their basic motor skills. Blood samples were taken from the athletes in the research group twice, at the beginning and at the end of the training. Insulin, growth hormone (GH), TSH, total testosterone, HDL, LDL, cholesterol and triglyceride levels were determined in the samples taken from the athletes. SPSS package program was used in the analysis of the data and the significance was accepted as $p < 0.05$. As a result of the research, it was determined that the pre-post test values of the athletes' insulin, GH, TSH, total testosterone hormone levels increased ($p < 0.05$). It was observed that the pre-post-test values of the lipid metabolism parameters of the study group increased ($p < 0.05$), and the pre-post-test values of cholesterol, LDL and triglyceride levels decreased ($p < 0.05$). As a result, studies aimed at improving basic motoric features with eight-week taekwondo training have shown that athletes have positive changes in blood fats (HDL, LDL, cholesterol, triglyceride) and hormone metabolism (insulin, GH, TSH, total testosterone). In this context, we believe that designing training programs considering the competition and competition periods of the athletes will positively affect the athletic performance of the athletes.

Keywords: Taekwondo, Training, Hormones, Lipids.