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The Connection between Body Composition and Blood Samples Results in Aesthetic Sports

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Abstract : Introduction: Aim of the Study: Low body fat percentage frequently occurs in aesthetic sports. Because of the unrealistic expectations, their quantity and quality of nutrition intake are inadequate. This can be linked to several health issues which appear in blood samples (iron, ferritin, creatine kinase, etc.). Our retrospective study aimed to investigate the connection between body composition (InBody 770 monitor) and blood samples test results among elite adolescent (14-18 years) and adult (19-28 years) aesthetic athletes. Methods: Data collection happened between 01.08.2022. and 15.08.2022 in National Institute for Sports Medicine, Budapest. The final group consisted of 111 athletes (n=111; adolescents: n=68, adults: n=43). We used descriptive statistics, a two-sample t-test, and correlation analysis with Microsoft Office Excel 2007 software. Our results were considered significant if $p<0,05$. Results: In 33,3% (37/111) we found low body fat percentage (girls and women: <12%, boys and men: <8%) and in 64% (71/111) high creatine kinase levels. Differences were found mainly in the adolescent group. We found a correlation between body weight and total cholesterol, visceral fat and triglyceride, hematocrit and iron-linking capacity, moreover body fat percentage and ferritin levels. Discussion: It is important to start education about sports nutrition at an early age. The connection between low body fat percentage, serum iron, triglyceride, and ferritin levels refers to the fact that the nutrition intake of the athletes is inadequate. High blood concentrations of creatine kinase may show a lack of proper recovery, which is essential to improve health and performance.

Keywords : body fat percentage, creatine kinase, recovery, sports nutrition
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