58th INTERNATIONAL CONGRESS OF ANTHROPOLOGICAL SOCIETY OF SERBIA

29–31. 5. 2025. Novi Sad

58. MEĐUNARODNI KONGRES ANTROPOLOŠKOG DRUŠTVA SRBIJE

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ABSTRACT BOOK

IZVODI SAOPŠTENJA

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ANALYSIS OF TOTAL BODY COMPOSITION WITH BIOELECTRICAL IMPEDANCE IN ATHLETES BETWEEN THE AGES OF 15 AND 18

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Introduction. Athletes between the ages of 15 and 18 belong to a very vulnerable group in sports medicine. Total body composition analysis in these athletes is of particular importance.

Materials and Methods. The aim of this study was to evaluate the age differences of total body composition with multi-frequency bioelectrical impedance (BMI) in male athletes between the ages of 15 and 18. The analysis was done with In Body 720 analyzer in 140 athletes included in competitive sports. We analysed body weight (BW), body height (BH), body mass index (BMI), body fat mass (BFM and %BFM), skeletal muscle mass (SMM and %SMM) and bone mineral mass (BMM and %BMM).

Results. SMM significantly increased ($F = 2.83637$, $p < 0.05$) from 33.83 ± 6.4 kg in 15 years old to 38.25 ± 8.1 kg in 18 years old athletes. The increase of BMM and %BMM is not significant. BFM and %BFM show elevation over the age of 17.

Conclusion. In athletes from NM the skeletal muscle mass and bone mineral mass increase, while the body fat mass stagnates during the age period between 15 and 18.

Keywords: Body Composition, Athletes, Age from 15 to 18 years, Multi-frequency Bioelectrical Impedance