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DISTRIBUTION OF SUBCUTANEOUS ADIPOSE TISSUE AMONG GIRLS  
IN RELATION TO PRE-COMPETITION BODY MASS REDUCTION

Summary

Body weight reduction among taekwondo athletes is focused on classification in a lower weight division in order to obtain a competitive advantage over lighter opponent. Inappropriate methods of weight reduction can lead to numerous health complications. The aim of this study was to analyze the difference in distribution of subcutaneous adipose tissue and body fat content between girls who reduced and who didn't reduce the body weight prior to the taekwondo tournament. The study sample consisted of 48 girls 15-17 years old. Girls who reduced the body weight prior to the tournament (RMC) and the girls who did not reduce the body weight (non-RMC) were included. Weight, height and subcutaneous fat distribution in the body of players were measured. Body fat distribution was assessed by measuring the selected skinfolds (FST) thickness using the Sieber Hegner & Co caliper. To compare the body composition of both groups the sum of all FST thickness and body fat content determined on the basis of the Slaughter et al. algorithm for children and adolescents were used. The average body mass of RMC athletes group was about 6.5 kg less than non-RMC athletes. The average thickness of all FST were lower among RMC girls than among non-RMC girls, but the differences between the sums of all FST thickness and body fat content did not obtain statistical power. In our sample, between women reducing and not reducing body weight, only three significant differences in the skinfolds thickness were recorded. The remaining twelve skinfolds thicknesses did not differ significantly between the groups of girls studied.

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