



## A COMPARISON OF PHYSICAL CHARACTERISTICS AND ABILITIES BETWEEN SERBIAN PROFESSIONAL VOLLEYBALL PLAYERS AND YOUNG PLAYERS (AGE 16-18 YEARS OLD) AT AN INTERNATIONAL VOLLEYBALL CAMP

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### INTRODUCTION

The purpose of this study was to investigate physical characteristics of professional Serbian players and young players and compare these two groups. The evaluation of present practices through research conduction can be used to develop better training programs suited to the needs of the competitive player (1).

### METHODS

Fifty young players, (N = 50 males, between 16 to 18 years old) as group 1 (G1), and 16 professional volleyball players (N = 16 male, between 18 to 36 years old) as group 2 (G2) participated in this study. The test battery was designed to measure maximal muscular functional performance in this discipline. It consists of the following measurements: weight, height, standing reach for smash and block, flexibility, long jump, jump reach in smash, reach in block without arm swing, reach in block with arm swing, number of sit-up repetitions in 30 sec., agility (5m), 10m sprint. (2)

### RESULTS

Weight (G1=70.0  $\pm$  9.7 kg; G2=88.6  $\pm$  7.8 kg) BMI (G1=21.5  $\pm$  2.2 kg/m<sup>2</sup>; G2=23.9  $\pm$  1.0 kg/m<sup>2</sup>). Height (G1=180.1  $\pm$  8.2 cm; G2=192.5  $\pm$  6.9 cm) Standing reach in smash (G1=235.6  $\pm$  11.2 cm; G2=252.9  $\pm$  9.0 cm) Standing reach in block (G1=232.3  $\pm$  10.9 cm; G2=248.3  $\pm$  8.7 cm) Reach in smash (G1=289.6  $\pm$  18.6 cm; G2=324.4  $\pm$  6.6 cm) Reach in block without arm swing (G1=272.7  $\pm$  15.2 cm; G2=302.1  $\pm$  7.6 cm), and Reach in block with arm swing (G1=276.1  $\pm$  15.1 cm; G2=304.7  $\pm$  7.4 cm) Jump height

during smash (G1=53.8  $\pm$  10.7 cm; G2=71.5  $\pm$  8.1) Jump height during block with arm swing (G1=43.7  $\pm$  7.6 cm; G2=56.4  $\pm$  7.2 cm) Jump height during block without arm swing (G1=40.4  $\pm$  7.7 cm; G2=53.9  $\pm$  6.5 cm) Long jump (G1=213.1  $\pm$  29.3 cm; G2=264.9  $\pm$  22.2 cm) Flexibility (G1=-7.5  $\pm$  9.2 cm; G2=-16.5  $\pm$  13.9 cm) Abs - (G1=29.7  $\pm$  4 reps; G2=36.7  $\pm$  2.4 reps) Agility - (G1=11.8  $\pm$  1.2 times; G2=14.0  $\pm$  0.6 times) Speed - (G1=2.3  $\pm$  0.2 sec; G2=1.8  $\pm$  0.2 sec)

### DISCUSSION

The data analysis revealed no significant difference between young players and professional players in variables like weight, BMI, standing reach in smash, standing reach in block, reach in smash, reach in block without arm swing and with arm swing, jump height during smash, long jump, flexibility, repetitive abs power and agility. Only have been found significant differences about height measurements, jump height during block with and without arm swing and sprint on 10m. We think that differences come because of selected athletes (professionals) during their growing period, better block technique, specific longer and better physical preparation and age.

### REFERENCES

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