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**BODY COMPOSITION AND PHYSIOLOGICAL PROFILE OF ELITE ALGERIAN  
JUDO PLAYERS**

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**Summary**

The purpose of this research was to establish a body composition and physiological profile of male and female elite Algerian judoists. Thirteen members of the Algerian team judo, seven males aged  $27.14 \pm 3.02$  and six females aged of  $24 \pm 4.14$  years. They were Africa champion on team at May 2008. All subjects took part at of Beijing Olympic Games (2008)

The anthropometrical measurements were carried out: body mass, height point and skinfold thickness (triceps, biceps, subscapular, abdominal). Body fat was estimated by Womersley and Durnin (1977) method. The body composition (BC) chart (Hattori et. al., 1997) was used for representation of individual percent fat (PF %), fat free mass index (FFMI), fat mass index (FMI) and body mass index (BMI). In physiological testing were used: Ruffier-Dickson test (R-D), Power output (PWC<sub>170</sub> cycle test). Results in Sargent jump (VJ) was also used for counting Power (P) according to Lewis formula (Fox & Mathews, 1974).

There were significant differences (t-test,  $p < 0.05$ ) between males and females in body mass ( $91.85 \pm 25.06$  vs.  $65.5 \pm 10.59$  kg), PF% ( $12.28 \pm 4.16$  vs.  $19.52 \pm 3.88$ ), FFM ( $79.75 \pm 17.50$  vs.  $52.51 \pm 7.18$  kg) and FFMI ( $25.51 \pm 4.01$  vs.  $19.62 \pm 1.11$  kg.m<sup>-2</sup>) and R-D ( $7.5 \pm 3.21$  vs.  $10.70 \pm 1.4$ ). However, we didn't find significant differences between two groups in: height ( $176.28 \pm 9.12$  vs.  $163.5 \pm 12.16$  cm) and BMI ( $29.32 \pm 6.30$  vs.  $24.42 \pm 1.75$  kg.m<sup>-2</sup>), PWC<sub>170</sub> ( $21.36 \pm 3.7$  vs.  $18.46 \pm 2.5$  (kgm.min<sup>-1</sup>.kg<sup>-1</sup>) and V $\dot{O}_2$ max ( $50.6 \pm 9.3$  vs.  $50.72 \pm 6$  (ml.kg<sup>-1</sup>.min<sup>-1</sup>), VJ ( $57.28 \pm 7.73$  vs.  $51.83 \pm 12.22$  cm) and Power ( $151.75 \pm 29.82$  vs.  $104.08 \pm 24.43$  (kg.m.s<sup>-1</sup>).

In conclusion. The BMI without counting FFMI and PF% is worthless for assessment in judo athletes. IJF rules extended the time of female fights, so they have to compensate their aerobic fitness.