

## DIFFERENCES IN PHYSIOLOGICAL LOAD ON HANDBALL PLAYERS DURING THE STRAIGHT LINE RUNNING AND SPECIFIC HANDBALL POLYGON

### **Abstract**

*The aim of this study was to determine the differences in the physiological load of the straight line running test (400 meters) and the specific handball task. The samples of entities were 10 healthy amateur handball players. The subjects (mean aged: 22.50 ± 1.35 years; body weight 87.9 ± 4.31 kg and body height 184.00 ± 5.29 cm) ran 400 meters on athletic track as well as handball ground path in three attempts. Maximum heart rate and perception of exertion (Borg scale) were measured after every repetition, while the blood lactate concentrations were measured after the last repetition. The results showed no statistically significant difference in maximum heart rate ( $p = 0.06$ ), subjective perception of exertion ( $p = 0.90$ ) and blood lactate concentration ( $p = 0.17$ ) between 400 meters running and specific handball task. The conclusion is that there are no major differences in the physiological load of 400 meters running and specific handball task. Both activities can be used in glycolytic anaerobic endurance training of handball players, but specific task with its greater relation to the specific conditions is more appropriate.*

**Key words:** anaerobic capacity, handball task, blood lactate, Borg scale

---