

## DIFFERENCES IN TIME OF START REACTION IN THE SPRINT DISCIPLINES IN THE FINALS OF THE OLYMPIC GAMES (ATHENS, 2004 - LONDON, 2012)

### **Abstract**

*In the sprint events a very important place take the start and start acceleration which is largely generated by the final score. Depending on the appropriate individual morphological dimension, especially motor and functional abilities of competitors, good possibility to implement these parameters is certain. However, despite the excellent results they achieve, differences in these two parameters are evident, which in terms of the final result has a certain effect. The aim of this study was to determine the differences in the starting reaction of the finalists at the Olympic Games in Athena, 2004., Beijing, 2008., and London, 2012. The results from the finalists 144 (72 male and 72 women) participants were analysed that participated in the final races in the 100m, 200m and 400m. The evaluation of starting reaction time (ms) and results in a sprint (s) based on the reports that were officially published by the International Association of Athletics Federations (IAAF). In accordance with the results it can be concluded that no statistically significant differences in the time of start of the reaction between male and female finalists at the Beijing Olympics in the discipline of running 100m ( $t = -2.926^*$ ) in the discipline of running 400m at the Olympic Games in London ( $t = -2.728^*$ ). Between male finalists at the Olympics were also identified differences in the 100m and 400m events ( $p < 0.01$  and  $p < 0.05$ ), while the 200 is not. In the women's finalists were statistically significant differences in any discipline at the Olympics, at the level ( $p < 0.01$  and  $p < 0.05$ ).*

**Key words:** *the Olympic Games, sprint, reaction time, the differences, male and female athletics*

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