

## **ABSTRAKT**

**Title:** The relationship between physical activity and physical fitness of four years old children

**Objectives:** The main goal was to find out whether physical activity affects the physical fitness of four year old children. The partial goal was to find out what differences are between boys and girls in the time spent in physical activity. Whether there is a lack of exercise in early childhood. Another partial goal was to find out whether children spend more time in medium – high intensity on a working day or on a weekend.

**Methods:** The research group consisted of 6 boys and 6 girls with an average age of  $4.52 \pm 0.3$ , who attend a kindergarten in Klánovice. Weekly monitoring with ActiGraph GT9X was used to measure physical activity. Physical fitness was assessed using motor tests, consisting of 4 x 5 m shuttle run, long jump, speed throw, moving cubes, skipping barrier, flexibility and Beep test.

**Results:** The results showed no major relationship between time spent physical activity and motor test results. In all tests, the correlation coefficient was below 0.4. Between boys and girls were more active girls. And the results did not show any differences between the physical activity on working day or weekend, 5 children were more active during the working day, 5 children over the weekend, 2 children could not be included in the results because they did not wear an actigraph on the weekend.

**Key words:** preschool age, physical fitness, motor tests, accelerometer, correlation coefficient