**Abstract**

This contribution deals with speed and speed-strength abilities of the pupils in short-distance runs in athletics. The main purpose of our contribution was to determine the performance and the correlations between the indicators of speed: accelerating speed, maximum running speed and the indicators of speed-strength: explosive power of lower limbs. We investigated speed abilities using the 50 m sprint with a standing start and speed-strength abilities by performing 10 repetitive squat jumps without the help of the upper limbs. The sample of subjects consisted of the pupils – competitors for Slovakia in the Youth category in athletics. Overall, physical demands of tested athletes were found to be average. Short-distance runners have better speed indicators than hurdle runners and long-distance runners; however, they achieve worse performance in speed-strength abilities. Contact time during the repetitive squat jumps is one of the decisive factors that significantly affect the level of speed and speed-strength abilities.

**Key words:** athletics, pupils, speed, speed-strength, short-distance runs