

# The speed force of track and field athletes in the 400 m hurdles

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## **Abstract**

The research is based on the premise that the speed force is the most important factor who set the augmentation of the contact time with earth in sprint. The study presents the role of the speed force to obtain and maintain the maximum speed from track at a hurdler in the 400 m hurdles, aiming to identify the optimum scale of speed force in the precompetitive period. The maximum speed for running of top sprinters is influenced by the level of manifestation of the best speed on the earth, more exactly by the minimizing of contact times with the earth in the running period. The research is based on a transversal experiment, being a case study for an athlete in 400 m hurdles. The correlation between the unitary power and 100 m and the results obtained at four jump in staying position has no significance ( $p > 0, 05$ ). The unitary anaerobic power was situated at a negative value, because the volume used components (the volume of tones) was excessive.

**Keywords:** athlete, hurdles, speed force track and field.