

## Improvement explosive strength to youngers in long jump in athletics

<sup>1</sup>MSc. Marsida Bushati; PhD. Sead Bushati; MSc. Lorin Xhaferri

<sup>1</sup>Sports University of Tirana, Institute of Sport Research, Department of Research in Health and Recreation Activity. Tirana, Albania.

<sup>2</sup>Sports University of Tirana, Faculty of Movement Sciences, Department of Sports. Tirana, Albania.

Contact address: [mbushati@ust.edu.al](mailto:mbushati@ust.edu.al) ; [sbushati@ust.edu.al](mailto:sbushati@ust.edu.al)

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**Introduction:** Long jump is an athletic discipline where the test result comes from the correct implementation of the technical scheme. Athletic jumps are associated with high neuromuscular strains. They primarily develop explosive and maximum force, spatial and temporal orientation coordination skills, etc. (Dibra, F, 2006).

**Materials and Methods:** This study analyzed eight young male athletes from three sports clubs in different cities of Albania, who are members of national athletics competitions. Explosive force was evaluated with six tests [H. max. SJ, CMJ (cm), V. max SJ, CMJ (m / s), SJ BW (cm), CMJ 10 sec. (cm)] for the period January 2019 (T.I.) - May 2019 (T.F.) The group was trained with specific plyometric exercises twice a week for five months. To measure these important indicators were used certified Leonardo Mechanography equipment (GRFP) 2008.

**Statistics Analysis:** Collected data in the beginning and in the end of tests were under a statistical processing by IBM SPSS package, version number 22. Significance level was set at  $p < 0.05$  and  $p < 0.01$ .

**Results:** Observing the results and taking the SJ jump as an example, we notice a slight decrease in the mean velocity values  $V_{max} = VT_2 - VT_1 = 2.2540 - 2.2624 = - 0.0124$  m / s. This average value in speed is offset by the max value of high jump where, H. average =  $HT_2 - HT_1 = 0.565 - 0.53 = 0.035$ m. This impact with different senses in this case is due to the poor coordination of the push, so we have increased total max. force. Reference tests show that 5 jumpers have values at average level and 3 jumpers have lower flight values at SJ and CMJ jumps.

**Discussion:** From the tests results, it appeared that the young long jump athletes have average growth of strength in their lower limbs, which indicates that these exercises should be performed continuously to elevate the technical results to a higher level.

**Keywords:** explosive strength, long jump, athletics