Effect of Plyometric Training on Long Jump Performance in Athletes

Karthikeyan Jayabalan
School of Physiotherapy, Faculty of Allied Health Sciences, AIMST University, 08100 Semeling, Kedah, Malaysia.
Corresponding author email: Karthikeyan@aimst.edu.my

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ABSTRACT

Plyometric training which initiates both eccentric / concentric contraction pattern which reported to evoke the elastic properties of the muscle fibers and connective tissue in a way that allows the muscle to store more elastic energy during the deceleration phase and release it during the acceleration period. The purpose of this study was to find out the effect of plyometric on long jump performance in athletes. **Methodology**: Study design: Experimental study design. Study population: This study consisted of 150 athletes of both gender, mean age of 15.1 year. Sampling technique: Random sampling. Study setting: Athletes were collected from G.T Sheth Vidyalaya, Rajkot. **Criteria For Selection: Inclusion criteria:** 1) Age: 14 – 18 years. 2) Both sexes were included. 3) The ability to perform number of squat that is 1.5 to 2 times of body weight. **Exclusion criteria:** 1. Any history of orthopedic, neurological or cardiovascular disorders were discarded. 2. Involved in any plyometric training program at the time of study. 3. Involved in any resistance training at the time of study. 4. Individual who not co-operative (unwillingness to participate) were excluded. The result of group-A shows no significant difference for pre and post SLJ ($z = 0.561$, $p < 0.1$) and HLJ ($z= 0.2857$, $p < 0.1$). Group-B shows significant difference for pre and post SLJ ($z = 2.8402$, $p < 0.01$) and HLJ ($z= 2.0806$, $p < 0.01$). The inter group result shows highly significant difference for SLJ ($z = 4.526$, $p < 0.0001$) and very highly significant difference for HLJ ($z = 12.04$, $p < 0.0001$) between both groups.