

## Comparison of Vertical Jump Performance of Male Handball & Basketball Players

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### Abstract

The present study was conducted on 30 male players (fifteen male basketball players; age:  $16.40 \pm 0.83$  years & fifteen male Handball players; age:  $15.80 \pm 0.68$  years) comprising of players training under the guidance of Punjab State coaches in Patiala (India). The experimental protocol developed by *Bosco et al., (1983)* and *Mcguigan et al., (2006)* were used to measure the vertical jump performance of male handball and basketball players. Test of significance of the differences was applied and data was judged at 0.01 and 0.05 level of significance. Results of this study show that the male basketball players performed better in vertical jump test parameters like the squat jump flight time, squat jump height, countermovement jump height, countermovement flight time, Eccentric Utilization Ratio (EUR), Elasticity Index (EI), Peak Power (0-15sec), Peak Power (45-60sec) and Mean Power (0-60sec), as compared to male handball players, which may be due to the difference in playing techniques and effect of training.

**Key Words: Vertical jump Performance, Peak Power, Muscular Power.**

### Introduction

The vertical jump is an essential skill that is utilized in most highly competitive sports. Many training regimens strive to maximize vertical jump ability to improve an athlete's performance in their respective sports; the skill used to reach a point high above the ground from a jump can often determine the difference between success and failure, wins and losses (*Reiser et al., 2006*). In sports that require jumping and quick movements, there is a need for muscular strength and power (*Semler, 2011*). During the last few years, performing plyometric exercises in general (*Wilt, 1978*) and drop jumps (*Komi and Bosco, 1978*), also called depth jumps (*Wilt, 1978*), in particular, has become very popular in training. Improvements in vertical jumping

performance after drop jump programmes have been reported in several studies (*Blattner and Noble, 1979; Steben and Steben, 1981; Clutch et al, 1983*). In order to increase vertical jumping, one needs to pay special attention to the factor of power which is one of the factors of physical fitness. Power is the product of muscular force and velocity or as an instantaneous value during a given movement. The latter, often referred to as peak power (PP), is typically associated with explosive movements such as sprinting, jumping and throwing and may be an important variable associated with success in a given discipline. The measurement of Peak Power by strength and conditioning-coaches is an important consideration in the training process.