

Comparative Effect of Different Heights of Depth Jump On the Vertical Jumping Ability of Basket Ball Players

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Abstract

Plyometric test was administered on 28 male basketball players of G.K.U and H.N.B Garhwal University. The subjects were randomly selected and divided into four groups. Three groups (A,B,C) acted as experimental groups and the fourth group (D) served as the control group. The average age of the selected subjects was 18 – 25 years. The plyometric test was used with three heights 20, 25, 30. It clearly shows that the effect of depth jump training from the height of 30 inches on the performance of vertical jump is more than other heights of depth jump.

KEYWORDS: Plyometrics, Basketball Players, Depth Jump.

INTRODUCTION

Plyometric exercise is a system of exercise to develop the athletes for various athletic specialties developed by coaches in U.S.S.R Verkhoshanski has described a plyometric technique called depth jumping. The procedure required athletes to drop from height and upon landing, immediately perform a jumping movement. He suggested that depth jumps like other plyometric exercises increase strength and nerve – reactive ability. He believes that these increases will improve vertical jumping ability.

Origin of the term's "Plyometrics" is derived from word "Plethyein" which means "to increase" or from the Greek word "Pillo and Metric" which means "More and Measures" other terms used in conjunction with plyometrics and depth jumping, box jumping training.

Plyometric training may be viewed as an extension of the "Shock" method of strength in muscular for athletic performance recommended by Verkhoshanski of Russia. Plyometric are drill or exercises aimed at linking strength and speed of movement to produce an explosive reaction type of movement. The term is often used to refer to jumping drills and depth jumps.

The reactive neuromuscular apparatus of the athlete's explosive strength is always dynamic and is an important ability in almost all sports.

STATEMENT OF THE PROBLEM: - The purpose of the study was to find out the effect of different heights of depth jump on vertical jumping ability of Basketball players.

SAMPLE: - A total No. of 28 male were selected who were students of G.K.U and H.N.B Garhwal University. The subjects were selected randomly and divided into four groups.

METHODOLOGY: - Three group (A,B,C) acted as experimental group and fourth group (D) served as the control group. The average age of the selected subjects was 18 – 25 years. The plyometric test was used with three height 20, 25, 30 inches as the box.

DATA ANALYSIS

To determine the effectiveness of different heights of depth jump i.e 20, 25 and 30 inches in improving vertical jumping performance of subjects an analysis of co – variance was done and data relating to this is presented in table.

Table shows the pre – test means of four groups (20 inches – 45.57), (25 inches – 44.43), (30 inches – 47.00) and control group (46.143)

The post test means of three experimental and one control group are 47.57, 46.85 and 47.00) respectively. The adjusted post – test means are (47.77, 48.15, 49.68 and 46.656) respectively.

Table also reveals the existence of significance difference between the experimental and control group.

TAB F 0.05 LEVEL (3,22)= 3.03

TABLE Clearly shows that the effect of depth jump training from the height of 30

	DEPTH JUMP				SUM OF SQUARES		DF	MEAN SQUARES	F-RATIO
	20 INCHES BOX(A)	25 INCHES BOX(B)	30 INCHES BOX (C)	CONTROL GROUP (D)					
PRE-TEST MEANS	45.57	44.53	47.00	46.153	A	24.49	3	8.143	0.243
					W	84.285	24	33.51	
POST-TEST MEANS	47.57	46.85	50.85	47.00	A	74.428	3	24.80	0.79
					W	77.428	24	32.39	
ADJUSTED POST-TEST MEANS	47.77	48.153	49.682	46.656	A	32.880	3	10.984	7.36
					W	34.22	23	1.487	

inches of 30 inches on the performance of vertical jump is more than other heights of depth jump.

DISCUSSION FINDING AND CONCLUSIONS:-

1. Depth jump on 30 inches heights of box is an effective training mean for improving vertical jump ability.

2. Basketball players gain more benefits of this depth jump training .
3. 20 inches box is least effective means of training for improving vertical jump ability.
4. All the coaches & trainers should be used at least 30 inches heights of the box for improving vertical jump ability of the sportsman.

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