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Effect of plyometric exercises on physical fitness component speed in cricket players

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Abstract

For this investigation, twenty Man Cricket players were chosen as subjects. They were chosen from Lucknow University, Lucknow, India. The age of the subjects went from 18 to 25 years. The investigation was planned as a genuine irregular gathering outline. The subjects (n=20) were arbitrarily allocated into two equivalent gathering of ten (men) Cricket players each to be specific, the test bunch I and Control aggregate II. Exploratory gathering experienced plyometric practices week by week four days and for a time of 10 weeks. The information was gathered previously, then after the fact the preparation time frame; t-test were utilized. The level of essentialness for the examination was picked as 0.05. The primary discoveries uncovered that a 10 weeks plyometric program has enhanced speed execution of test assemble when contrasted and control gathering.

Keywords: Plyometric exercise, physical fitness, speed, cricket players

Introduction

The word Plyometrics begins from the Greek word Plio which intends to increment, and metric significance estimation. This type of energy preparing developed back in the mid 1960's, the point at which one of its pioneers Yuri Vershanski from Russia started to explore different avenues regarding systems for receptive capacity. After broad research it was discovered that not exclusively did plyometrics create remarkable contractile quality and power in the muscle tissue, however it additionally affected the entire neuromuscular framework similarly. Consequently, making ready for another idea of molding competitors in many games, particularly in eastern square nations at the time.

Plyometric preparing includes and utilizes rehearsing plyometric developments to improve tissues capacities and prepare nerve cells to animate a particular example of [muscle contraction] so the muscle produces as solid a constriction as conceivable in the most limited sum o time. A plyometric compression includes initial a quick muscle stretching development (flighty stage), trailed by a short resting stage (amortization stage), at that point an unstable muscle shortening development (concentric stage), which empowers muscles to cooperate in doing the specific movement.

Plyometric preparing draws in the myotatic reflex, which is the programmed withdrawal of muscles when their extend tactile receptors are invigorated. Strong power and solid quality are two unique things. Strong quality alludes to how much power can be connected (The capacity to lift a heavier one).Strength alone is great characteristic of speed. In spite of the fact that muscle quality is associated to dash execution, inquire about has demonstrated that joining both protection preparing and polymeric preparing will effectly affect preparing. While plyometrics aids quick power improvement (control), weight preparing aids adage al compel yield (quality).

Power alludes to the joined components of speed and quality. Execution in many games depends on various sorts of energy. In American Cricket a lineman and a recipient may have a similar power, yet they have diverse confinements in how their energy is conveyed. The lineman would be speed-constrained, though the recipient would be quality restricted. The motivation behind plyometric s is to stress speed-based power. One action that requires speed-favored power is high bouncing: eventually, hop tallness is resolved not have remarkable leg quality, but rather they can create it at outstanding rates. Studies have demonstrated that

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preparation a plyometric movement, for example, drop hop enables the competitor to expand the reactivation and pre-extend of the muscles and enables the mentor to survey landing strategies that are essential to the generation of power. With the expansion of power creation, a competitor progresses toward becoming in mineral intense unstable and stable when performing errands diminishing danger of damage and expanding general execution on the playing field. Speed is the execution pre essential to do engine activities under given conditions in least of time. Speed is the briskness of development of an appendage, regardless of whether this is the legs of a sprinter or the arm of the shot putter. Speed is a vital piece of each game and can be communicated as any of, or blend of, the accompanying: most extreme speed, and speed perseverance.

Methodology

The motivation behind the investigation was to decide the impact of plyometric practice on 50 yards keep running for Cricket players. The subjects of the investigation were 20 men Cricket players from University of Lucknow, Lucknow India. The subjects were arbitrarily allocated into two gatherings that is a trial assemble with 10 understudies each gathering. The exploratory experienced plyometric preparing program in a timetable of 45 minutes for four days in seven days, for a time of 10 weeks. Plyometric practice work out incorporates Lateral high expectations, Hurdle hops, Lateral obstructions bounces, Split squat hops, Split Squat hops, Bounding with Rings, Zig-Zag Hops, Depth hops. The control bunch did not include in any work out regime. 50 yards run was measured by stop watch. Every one of the subjects were tried in 50 yards pursue earlier and 10 weeks of plyometric preparing.

Result and Findings

The mean, standard deviation and t-test were employed to analyze the significantly difference in the mean value of pre and post-test of experimental and controls and are presented in tables.

Table I: Significantly difference of pre and post-test values of experimental group

Variables	Test	Mean	Standard deviation	'T' Value
50 yards run	Pre- test	7.05	0.209517	5.23527*
	Post- test	6.513	0.072	

*Significantly at 0.05 level of confidence 't' 0.05 (22) = 2.072

The experimental group pre and post-test mean, standard deviation and t-values are presented in table-1 and it reveals the significant level in the effect of plyometric exercise on experimental group. The t-value of the selected variable is above the table value of 2.072. Hence the study indicates that the plyometric exercise is useful for the significant improvement of physical fitness variable speed.

Table 2: Significant difference of pre and post-test values of control group

Variables	Test	Mean	Standard deviation	'T' Value
50 yards run	Pre- test	7.01	1.001211	0.054621
	Post- test	7.04	0.16410	

The control group pre and post-test mean, standard deviation and t-values are present in Table- 2. The result indicates that there is no significant difference in speed.

Discussion

Every one of the subjects of the trial gather were experienced normal plyometric preparing which were doled out to them. From the examination it is clear that on account of 50 yards run critical changes were seen following twelve weeks of various ployometric preparing program. Be that as it may, the control assemble did not demonstrate any adjustments in the 50 yards run timing. The planning essentially diminished due to the plyometric preparing. The investigation uncovers that the test aggregate is altogether than the control gathering. In this manner the theory has been acknowledged.

Conclusion

1. The result of the study indicates that plyometric exercise is useful to the development of speed.
2. The plyometrics exercise has the impact on the improvement in the physical fitness.
3. In control group there is no significant improvement is found out.

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