

Effect of High Intensity and Low Intensity Plyometric on Vertical Jump Height and Maximum Voluntary Isometric Contraction in Football Players

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Abstract

The study was conducted on 24 football players ranging between 21-32 years. The subjects were randomly divided into two groups and were named as high and low intensity plyometric groups. High intensity plyometric group was given exercises comprising of double and single leg vertical jumps alongwith single leg tuck jumps while low intensity plyometric group was administered split and cycled squat jumps. Both the groups were given plyometric training for four weeks. Vertical jump and maximum voluntary isometric contraction were recorded in both the groups at the start and 2nd and 4th week of training. In the present study, high intensity plyometric and low intensity plyometric exercises for four weeks showed different magnitudes of improvement in vertical jump height and maximal voluntary isometric contraction. Results of the study further show that High Intensity Plyometric training has significant effect on Vertical Jump Height and Maximum Voluntary Isometric Contraction as compared to Low Intensity Plyometric.

Key Words: Plyometric training, Football players, Vertical Jump, Maximum voluntary isometric contraction

Introduction

Because of the many benefits associated with sports success, athletes are always trying to improve their performances, usually under the guidance of skilled trainers, coaches and sports physiotherapists (Williams, 1997). Sports performance is reported to increase by combining various training methods (Siegler et al, 2003) and is limited by various factors such as inadequate energy production, poor energy control and poor energy efficiency (Williams, 1997). Supervised and periodized training has more potential for enhancing the performance and reducing the chances of injury in comparison with unsupervised and conventional training in various sports.

One of the most popular sports, played in every nation at varying levels of competence is Football. This is a multi-factorial event which requires simultaneous attention on body size, body composition, strength, power, quickness, reaction time, speed, agility and endurance for better performance. Incorporation of strength training program has greatly improved strength and performance profiles of football players at all levels of competition (Willifor & Kirpatrik, 1994). Boisseau et al (2007) has shown that the protein requirements of 14 year old male athletes are above the RDA for non-active male adolescents.

Studies have been reported which prove the effect of various training protocols in increasing the performance.