

## Effect of isotonic and isometric trainings on leg strength of male volleyball players

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Received : 06.10.2012; Revised : 06.03.2013; Accepted : 05.04.2013

### ■ ABSTRACT

The purpose of the study was to find out the effect of six weeks isotonic and isometric training on leg strength of male volleyball players. To achieve this purpose, 60 male volleyball players of Kottayam district were selected from the total strength of 150 at random as subjects for this study. They were randomly divided into three groups and each group consisted of twenty subjects. Group I under went isotonic training, group II under went isometric training, group III was the control group. Maximum strength (leg strength-Leg dynamometer) was measured as pre-test results and after six weeks training same was measured as post results. It was concluded that the isometric training produced significant increase in leg strength as compared to isotonic training.

■ **Key Words** : Leg strength, Isotonic training, Isometric training, Volleyball players

■ **How to cite this paper** : Zacharia, Sunny V. and Shelvam, P.V. (2013). Effect of isotonic and isometric trainings on leg strength of male volleyball players. *Internat. J. Phy. Edu.*, 6 (1) : 46-48.

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Resistance training is a form of strength training in which effort is performed against a specific opposing force generated by resistance (*i.e.* resistance to being pushed, squeezed, stretched or bent). Exercise is isotonic if a body is moving against a force Edmonds (1984) and Edward O'Relly (1987). Exercises are isometric if a body part is holding still against the force. Resistance exercise is used to develop the strength and size of skeletal muscles. Properly performed, resistance training can provide significant functional benefits and improvement in overall health and well-being.

### Statement of the problem:

Determining the effect of different methods of strength training on different strength related variables are useful research objectives and that have drawn the attention of the investigators. The present scientific study is an effort to explore and suggest the best scientific method for the development of leg strength. The investigation was conducted to explore the effect of isotonic and isometric training on leg strength among male volleyball players.

### ■ METHODOLOGY

#### Selection of variables:

The researchers had gone through the available literature and had discussions with various experts before selecting variables. The availability of technique for the purpose of analysis, feasibility, reliability of the procedure and the outcome were excessively taken care before finalizing the variables. After analyzing the various factors associated with the present study, criterion variable leg strength was selected.

#### Experimental variables:

The experimental variables used in the present study were isotonic strength training and isometric strength training.

Though many methods prevail to develop the strength, the role of progressive strength training is an undisputed one. A lot of researchers had been carried out on the effects of progressive strength training, but still the bone of condition is about the different strength and duration to get the maximum benefit. Experts differ in their views based on their studies;