

## Effect of series and parallel aerobic and anaerobic training on physical fitness variables of Hockey players

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### ■ ABSTRACT

The purpose of this study was to examine the effect of series and parallel aerobic and anaerobic training on physical fitness variables of men Hockey players. For these purpose, forty five men Hockey players, aged eighteen to twenty one years took part in the study. Subjects were randomly, equally assigned to group – I series of aerobic and anaerobic training (n=15), group – II parallel aerobic and anaerobic training (n=15), group – III acted as control (n=15). Both training groups went for their respective training about twelve weeks. The selected physical fitness variables were assessed by using standard tests and procedures, before and after the training. Analysis of covariance was used to determine the significant difference existing between the groups. The analysis of data revealed that twelve weeks of series and parallel aerobic and anaerobic training had an impact on strength and cardio-respiratory endurance of series of aerobic and anaerobic training group and parallel aerobic and anaerobic training group of Hockey players.

■ Key Words : Series, Parallel, Aerobic and anaerobic trainings

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A good aerobic exercise programme can help one live a longer, healthier life and enhance one's well being. Aerobic exercise has been shown to benefit the cardiovascular system and especially the processes in the body that are affected by aging. Aerobic training targets the cardiovascular system and muscular adaptations. Furthermore, the physiological benefits of aerobic training can improve wellness in adults who just want to live a healthier life. One gets a multitude of benefits if one does one's aerobic workout on a regular basis even if the intensity is low or short in duration. Aerobic activities help make one's heart stronger and more efficient. During the early part of exercise, one's body uses stored carbohydrate and circulating fatty acids (the building blocks of fat molecules) for energy (Sinderman *et al.*, 1997).

More recently, anaerobic training has become an exercise for more than body builders and football players Tesch *et al.* (1984). From adolescents to senior citizens, many have taken up anaerobic exercise and reaped its physiological benefits.

Anaerobic exercise is the opposite of aerobic exercise in the sense that it does not need or use oxygen to restore energy levels. Anaerobic exercises focus attention on one specific muscle at a time. The large amount of energy that the body needs to complete anaerobic exercise cannot be provided by oxygen. Energy, instead, is replenished by the natural chemistry of the body. Anaerobic exercises do not usually cause the heart to beat particularly fast and do not leave people gasping for air. The benefits of anaerobic exercise include increased muscle mass.

### ■ METHODOLOGY

#### Subjects and variables :

For the purpose of the study, forty five men students (Hockey player) were selected from Department of Physical Education, Annamalai University, Annamalaiagar with their consent. The selected subjects were healthy and normal to undergo the series of parallel aerobic and anaerobic training