

A Comparative Study of Aerobic Endurance among Foot Ball Players and Hockey Players in Hyderabad

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Abstract

The aim of the present study was to study the difference in aerobic endurance among Foot Ball and Hockey Players.The 40 Male Subjects between the age group of eighteen to twenty one year's i.e. Twenty Foot Ball Players and twenty Hockey Players of Osmania University who have taken part in the O.U. Inter College sports and games during the year 2010-11 were taken for the study. The 12 Run Cooper Test were used to evaluate the aerobic endurance among Foot Ball and Hockey Players. The Study shows that the Foot ball Players are having very good aerobic endurance compare to the Hockey Players. It is recommended that Foot ball and Hockey players must be given good endurance training to play the game in efficient manner.

Key words: Aerobic Endurance, Foot Ball, Hockey etc.

Introduction:

Aerobic Endurance:

Aerobic Endurance is the amount of oxygen intake during exercise. Aerobic Endurance is the time which you can exercise, without producing lactic acid in your muscles. During aerobic (with oxygen) work, the body is working at a level that the demands for oxygen and fuel can be meet by the body's intake. The only waste products formed are carbon-dioxide and water which are removed by sweating and breathing.

Aerobic endurance can be sub-divided as follows:

- Short aerobic – 2 minutes to 8 minutes (lactic/aerobic)
- Medium aerobic – 8 minutes to 30 minutes (mainly aerobic)
- Long aerobic – 30 minutes + (aerobic)

Aerobic exercise is physical exercise of relatively low intensity and long duration, which depends primarily on the aerobic energy system. Aerobic means “with oxygen”, and refers to the use of oxygen in the body's metabolic or energy – generating process. Many types of exercise are aerobic, and by definition are performed at moderate levels of intensity for extended periods of time. Aerobic exercise comprises innumerable forms. In general, it is performed at a moderate level of intensity over a relatively long period of time. For example, running a long distance at a moderate pace is an aerobic exercise, but sprinting is not. Playing singles tennis, with near continuous motion, is generally considered aerobic activity, while golf or two person team tennis, with brief bursts of activity punctuated by more frequent breaks, may not be predominantly aerobic. Some sports are thus inherently “aerobic”, while other aerobic exercises,

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such as fartlek training or aerobic dance classes, are designed specifically to improve aerobic capacity and fitness.

Benefits of Aerobic Endurance:

- Strengthening the muscles involved in respiration, to facilitate the flow of air in and out of the lungs
- Strengthening and enlarging the heart muscle, to improve its pumping efficiency and reduce the resting heart rate, known as aerobic conditioning
- Strengthening muscles throughout the body
- Improving circulation efficiency and reducing blood pressure
- Increasing the total number of red blood cells in the body, facilitating transport of oxygen
- Improved mental health, including reducing stress and lowering the incidence of depression
- Reducing the risk for diabetes.

Foot Ball:

The game of football is any of several similar team sports of similar origins which involve advancing a ball into a goal area in an attempt to score. Many of these involve kicking a ball with the foot to score a goal, though not all codes of football using kicking as a primary means of advancing the ball or scoring. The most popular of these sports worldwide is association football, more commonly known as just "football" or "soccer". Unqualified, the word *football* applies to whichever form of football is the most popular in the regional context in which the word appears, including American football, Australian rules football etc.

Hockey:

Hockey like games involving sticks and balls have been played for thousands of years. Historical records show that a crude form of hockey was played in Egypt 4000 Years ago and in Ethiopia around 1000 B.C. Various museums offer evidence that a form of the game was played by Romans, Greeks and by the Aztec Indians of South America. Several centuries before Columbus landed in the New world. Over the last 500 Years, Soft Hockey has been played in Ancient countries under different names, especially in India and has been one of the most popular sports in the villages where there is no proper infrastructure to cope with field Hockey. This sport is very popular in rural areas and also with Urban schools Children. Earlier, Villagers used to make the Hockey Sticks with Bamboo. Soft Balls were also made of bamboo and homemade rubber and the reason it was so popular was that the game required few player, either men or women or both, with minimum equipment and a small ground. The chances of injury were less in comparison to other games. The game used to be played by pushing the ball and not hitting it as this would lead to a longer period in recovering the ball, which would probable go into ponds or bushes. The plough able field used to act as the play ground and the border of the fields acted as

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boundary. Thus the game of soft hockey came into being with speed, stamina and skill being the associated qualities.

Aim: To find out the Aerobic Endurance between Male Foot Ball and Male Hockey Players.

Sample: The sample for present study consists of 20 Male Foot Ball Players and 20 Male Foot Ball Players of Hyderabad District.

Tools: 12 Minute Cooper Test is used for collection of Data.

Procedure of Data Collection:

The **Cooper test** is a test of physical fitness. It was designed by Kenneth H. Cooper in 1968 for US military used in the original form; the point of the test is to run as far as possible within 12 minutes. 51

To undertake this test you will require:

- 400 meter track
- Stopwatch
- Whistle
- Technical Official

Methods of conducting the Test.

This test requires the foot ball and hockey player to run as far as possible in 12 minutes.

- The subjects given 10 minutes for warm up.
- The assistant gives the command “GO”, starts the stopwatch and the athlete commences the test
- The Technical Official keeps the athlete informed of the remaining time at the end of each lap (400m)
- The Technical Official blows the whistle when the 12 minutes has elapsed and records the distance the athlete covered to the nearest 10 meters

Results and Discussion:

The Table No.1 showing the Mean, S.D, Standard Error, t-ratio of Foot Ball Players and Hockey Players in Cooper Test.

Table No.1

Pre Test(Mtrs) Results of 12 min Cooper Test	N	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2- tailed)
Foot Ball Players	20	3440.00	219.71	49.13	1.69453	38.00	0.10
Hockey Players	20	3340.00	137.71	30.79			

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The Foot Ball Players Mean Performance is 3,440 Meters and the Hockey Players Mean performance is 3340 Meters. There is mean difference of 100 Meters between Foot Ball and Hockey Players. The Performance of Foot Ball Players are very good compare to Hockey Players. The S.D. of Foot Ball Players is 219.71 and Hockey Players 137.71 and standard error of Foot Ball Players is 49.13 and Hockey Players are 30.79 and t-ratio is 1.69. Hence it is concluded that Foot Ball Players are good in aerobic endurance than Hockey Players.

Recommendations:

1. It is recommended that good Aerobic Endurance must be given to Foot ball and Hockey Players.
2. It is recommended that similar studies can be conducted on female sports persons.

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