

Comparison of Cardiovascular Endurance between Sports Person and Non Sports Person

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Abstract

The purpose of the present study was to compare the cardiovascular endurance between sports person and non sports person. Ninety (90) male students studying in G.B.Pant University of Agriculture and Technology, Pantnagar, U.S.Nagar, Uttarakhand, were selected as subjects for the present study. Out of ninety (90) subjects, forty five (45) subjects were university team players for the year 2010-2011 i.e. each 15 players from cricket, football, hockey, were considered as sportsperson. Remaining forty five (45) subjects, who were neither the players nor having any background of sports, were considered as non sportsperson. The subject's age ranged from 18 to 25 years. The variable for study was- cardiovascular endurance and cardiovascular endurance was measured by cooper's 12 minute run/walk test. The score was recorded in meters. To Compare the cardiovascular endurance between sports person and non sports person mean difference method (t ratio) 't' test was used. The level of significance was set at 0.05 levels. Results showed significant difference in cardiovascular endurance between sports person and non sports person.

Key Words- Cardiovascular endurance, sports person and non sports person.

INTRODUCTION

It is the ability of the circulatory and respiratory system to supply oxygen to skeletal muscles during sustains physical activity.

Cardiovascular fitness is the ability of the heart, respiratory system, blood and blood vessels to provide fuel in the form of oxygen throughout the muscles. The component includes the capacity of the muscles to process fuel to promote sustained physical activity.

Cardiovascular endurance (also known as cardio respiratory endurance or aerobic fitness) refers to your body's ability to efficiently and effectively intake oxygen and deliver it to your body's tissues by way of the heart, lungs, arteries, vessels, and veins. By engaging in regular exercise that challenges your heart and lungs, you can maintain or even improve the efficient delivery and uptake of oxygen to your body's systems, enhancing cellular metabolism and easing the physical challenges of everyday life.

Cardiovascular endurance is most useful for long distance sports; for marathon training, long distance running, jogging and swimming, however it will also be useful for everyone else and a lack of it will lead to individuals becoming quickly tired and out of breath. In a marathon, the person who comes first (while allowing for injury or general

poor technique) will generally be the person with the best cardiovascular fitness. To fully understand the definition of cardiovascular endurance, it's important to understand how the body utilizes energy to power its muscles.

Cardiovascular endurance consists of maintaining an increased heart rate and breathing rate for a longer period of time. Cardiovascular endurance can be accomplished through consistent exercise performed for prolonged periods of time. Cardiovascular exercise improves your body's ability to bring oxygen from the environment, into the lungs, and diffused into the bloodstream. With an increase flow of oxygen to cells in the body will help them work to their capacity. In addition, cardiovascular exercise helps the heart become bigger and stronger (it is a muscle), allowing more blood to be pumped out with each beat. If more blood is pumped out with each beat, the heart does not have to beat as fast or work as hard.

MATERIAL AND METHOD

The purpose of the present study was to compare the cardiovascular endurance between sports person and non sports person. Ninety (90) male students studying in G.B.Pant University of Agriculture and Technology, Pantnagar, U.S.Nagar, Uttarakhand, were selected as subjects for the present study.

Out of ninety (90) subjects, forty five (45) subjects were university team players for the year 2010-2011 i.e. each 15 players from cricket, football, hockey, were considered as sportsperson. Remaining forty five (45) subjects, who were neither the players nor having any background of sports, were considered as non sportsperson. The subject's age ranged from 18 to 25 years.

Variable

The variable for study was- cardiovascular endurance and cardiovascular endurance was measured by cooper's 12 minute run/walk test. The score was recorded in meters.

Statistical Analysis

To Compare the cardiovascular endurance between sports person and non sports person mean difference method (t ratio) 't' test was used. The level of significance was set at 0.05 levels.

RESULTS AND DISCUSSION

Fig. 1: Graphical Representation of Cardiovascular Endurance between Sports Person and Non Sports Person.

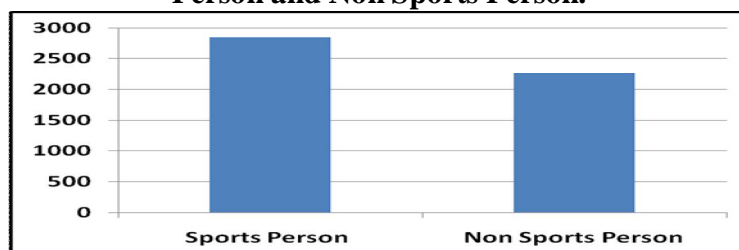


Table-1: Mean Comparison of Cardiovascular Endurance between Sports Person and Non Sports Person.

	Sports Person	Non Sports Person	“t” ratio
Mean	2850.000	2246.666	15.55
SD	122.4744	169.6514	

Significant $t_{0.05}(88) = 1.98$

The above table-1 reveals that significant difference was found in cardiovascular endurance between sports person and non sports person, as the calculated value of ‘t’= 15.55 was greater than the tabulated $t_{.05}(88) = 1.98$

CONCLUSION

The findings of the study revealed that there was statistically significant difference in cardiovascular endurance between sports person and non sports person of G.B.Pant University of Agriculture and Technology, Pantnagar, U.S.Nagar, Uttarakhand.

Sports person i.e. university team players of cricket, football, and hockey for the year 2010-2011 of G.B.Pant University of Agriculture and Technology, Pantnagar, U.S.Nagar, Uttarakhand were having more cardiovascular endurance than non sports person of G.B.Pant University of Agriculture and Technology, Pantnagar, U.S.Nagar, Uttarakhand.

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