

## **Comparison of Lower Body Strength Endurance between Sports Person and Non Sports Person**

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### **Abstract**

The purpose of the present study was to compare the lower body Strength Endurance between sports person and non sports person. Eighty (80) 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 eighty (80) subjects, forty subjects were university team players for the year 2013-2014 i.e. 15 from Cricket, 10 from Basketball, and 15 from Hockey, were considered as sportsperson. Remaining forty 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- lower body Strength Endurance and lower body Strength Endurance was measured by wall squat.

To Compare the lower body Strength 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 lower body Strength Endurance between sports person and non sports person.

**Key words-** Strength Endurance, sports person and non sports person.

### **INTRODUCTION**

Strength endurance is the muscle ability to produce strength or resistance over and extended period of time

Strength endurance is the specific form of strength displayed in activities which require a relatively long duration of muscle tension with minimal decrease in efficiency (stiff 2000)<sup>1</sup>

Sports that involve strength endurance are numerous from the rower to the swimmer to the wrestler on the mat. Even these examples are differentiated by the abilities expressed, dynamic or static, general or local strength endurance.

All forms of completion, however, necessitate maximal output for the event. It is not always the strongest athlete who wins in all cases, the one that can sustain the most power over the full term of the activity. Therefore, the development of all the various types of muscle fibres benefits the athlete.

The fast twitch muscle fibres create maximum power output in explosive sports such as sprinting and weightlifting. Slow-twitch fibres are the prime fibres cells used in long-distance aerobic events. Combining, and training, these two types of fibres at all speeds and angles produces strength endurance.

There are muscle fibres that are not what you would call exclusively fast-twitch or exclusively slow-twitch (brunner and tabachnik 1990) 2 . they are a combination of the two not fully fast- twitch or fully slow-twitch. But, strengthening these muscle fibres will enable a greater expression of strength endurance to occur.

### **MATERIAL AND METHOD**

The purpose of the present study was to compare the lower body strength endurance between sports person and non sports person. Eighty (80) 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 eighty (80) subjects, forty subjects were university team players for the year 2013-2014 i.e. 15 from cricket, 10 from basketball, and 15 from hockey, were considered as sportsperson. Remaining forty 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**

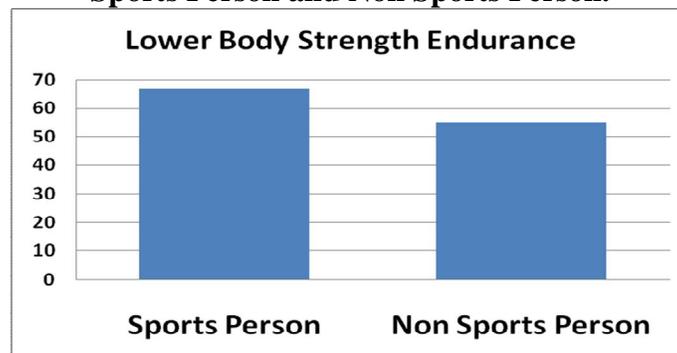
The variable for study was- lower body strength endurance and lower body strength endurance was measured by wall squat. Record the total time in seconds that the position was held

#### **Statistical Analysis**

To Compare the lower body strength 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 Lower Body Strength Endurance between Sports Person and Non Sports Person.**



**Table-1: Mean comparison of Lower Body Strength Endurance between Sports Person and Non Sports Person.**

	Sports Person	Non Sports Person	“t” ratio
<b>Mean</b>	<b>66.6500</b>	<b>54.6500</b>	<b>8.947</b>
<b>SD</b>	<b>4.92794</b>	<b>6.35912</b>	

Significant  $t_{0.05}(78) = 1.98$

The above table-1 reveals that significant difference was found in lower body strength endurance between sports person and non sports person, as the calculated value of ‘t’= 8.947 was greater than the tabulated  $t_{0.05}(78) = 1.98$

**Conclusion**

The findings of the study revealed that there was statistically significant difference in lower body strength 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 male team players of cricket, basketball, and hockey for the year 2013-2014 of G.B.Pant University of Agriculture and Technology, Pantnagar, U.S.Nagar, Uttarakhand were having more lower body strength endurance than non sports person of G.B.Pant University of Agriculture and Technology, Pantnagar, U.S.Nagar, Uttarakhand.

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