

## Effect of Six Week Ladder Skill Training on Vital Capacity of Football Players

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### Abstract

The purpose of the study was to know the effect of Effect of Six Week Ladder Skill Training on Vital Capacity of Football Players. To achieve this purpose forty ( $n = 40$ ) male Football players were randomly selected from Kolhapur who regularly practice in various academy. The criterion variable of vital capacity was measured by using the equipment of Peak Flow Meter. Pre-Test was taken after that players were divided into two groups: experimental group 20 players and control group 20 players. Only experimental group were underwent 6 weeks ladder skill training and the training was planned with the consultation of the experts and the training was conducted for six weeks duration. The experimental group underwent ladder drills training sessions of 20-minute duration on 10-minute recess period, administered in 6 weeks with three days per week, whereas the control group adhered to their normal daily activities during recess time. After six week training Post Test were administered and data were collected, the collected data were analyzed by using 't' test. The level of confidence was fixed at 0.05 levels in all cases. The above table shows that on the basis of mean difference there was difference between the means of pre and post test of control and experimental group of Fencing Players in reference to vital capacity. To see this difference is significant or not at 0.05 level of significance. Researcher further calculated 't' test & above table shows that there is significant difference between pre and post test of experimental group of Fencing Players as the calculated 't' value 4.19 is greater than tabulated 't' value 1.686. But there is insignificant difference found between pre and post test of control group of Fencing Players, as the calculated 't' value 1.256 is lesser than the tabulated 't' value 2.101. From the above result we found that there is significant difference between pre and post test of experimental group of Fencing players compared to control group. Which means that ladder skill training effect on vital capacity of Fencing players as well as it may affect ones health and fitness also? So it can be conclude that ladder skill training is much better as it can be programmed within a small area. It burn calories much faster than normal training.

**Keyword:** Ladder skill training, Vital capacity, Football players, etc.

### Introduction

An individual who experiences physical health, perform their work at peak performance, they are free from disease and infirmity. Physical health and wellbeing involves pursuing a healthful lifestyle to decrease the risk of disease. Maintaining one's physical fitness, regular exercise, balanced nutrition, and

adequate rest, can protect and develop the endurance of a person's breathing and heart function, muscular strength, flexibility, and body composition and also help to reduce the risk of an injury or health issue.

The training is a process of preparing an individual for any event or an activity or job. Usually in sports we use the term sports training which denote the sense of preparing sportspersons for the highest level of performance. But now-a-days sports training is not just a term but it is very important subject that affects each and every individual who takes up physical activity or sports either for health and fitness or for competition at different level. Hence we can say that sports training are the physical, technical, intellectual, psychological and moral preparation of an athlete or a player by means of physical exercises.

Ladder drills are used to improve foot work in maximizing athletic performance. It is the multi-directional training, which helps to improve strength, power, balance, agility, co-ordination, core and joint stability, foot speed, hand eye coordination, reaction time and mobility. It is very much enjoyable to perform the task on ladder. The training session with ladder drills will helps an individual to achieve various fitness of an individual by performing drills in a rhythm and teaching the body and mind various foot combinations. Ladder is made up of 2 nylon straps with plastic rungs 15-18 inches apart depends on the training purpose. It can also be used by simply taping on the floor same like as agility ladder. To improve the performance level it is necessary to go from easy to hard drills to develop better footwork and coordination. Different moves according to the game which is necessary and regular in the game can also be added up in the drills. Ladder drills will help the player to catch, strike, and to block or tackle the component. Coaches of different sports used ladder drills to improve agility of the athlete.

The physiological parameters seems to play a very important role in the modern life in production of more excellent performance in daily activities, moreover because of fluctuation of physiological parameters and difference in time the capacity of doing of women may varies. It is well known that the individual performance in any activities follows diurnal physiological parameters. Pattern method may be derived to condition an individual to produce peak performance with change in diurnal physiological parameters. Unfortunately little research literature is available on these aspects. Therefore, physiological parameters such as cardio-vascular endurance, vital capacity, heart rate and haemoglobin receive a special consideration and it is an important requisite for outstanding performance in any activity.

Vital capacity is the total amounts of air that can be forcibly expire after a complete inspiration has been used frequently as a measure of adequacy of the respiratory system. Although it measures the approximately capacity of the lungs, recent information indicates it is of little use in predicting ability to perform tasks of endurance. Obviously other factors are more important. For example, any limitations of the oxygen delivery system to the cells will reduce the effectiveness of the delivery; regardless of vital capacity is the ability to take in more air per unit of time with fewer, but deeper inspiration, thus prolonging the onset of fatigue in the respiratory muscle.

#### **Materials and Methods**

The purpose of this study was to see the effect of 6 week ladder skill training on vital capacity of football players of Kolhapur District. To achieve this purpose forty ( $n = 40$ ) male Football players were randomly selected from Kolhapur who regularly practice in various academy. The criterion variable of vital capacity was measured by using the equipment of Peak Flow Meter. At first information were given to players about the procedure of the test. Players were asked to attach the mouthpiece to the peak flow meter and take a deep breath, then place the peak flow meter mouthpiece in their mouth and close their



lips tightly around the outside of the mouthpiece. And they are advice to exhale out as hard and as fast as possible (using a "huff" rather than a full breath out). Three attempts were given. The highest value of all attempts was recorded. The value recorded is peak expiratory flow (PEF), is in liters per minute. Pre Test was taken after that players were divided into two groups: experimental group 20 players and control group 20 players. Only experimental group were underwent 6 weeks ladder skill training and the training was planned with the consultation of the experts and the training was conducted for six weeks duration.

The experimental group underwent ladder drills training sessions of 20-minute duration on 10-minute recess period, administered in 6 weeks with three days per week, whereas the control group adhered to their normal daily activities during recess time. Each training session consisted of a standardized 5-minute warm up and 20-minute ladder drills training and a 5-minute cool down that include static and dynamic stretches. The training program consisted of 6 exercises in the order of side jump, in and out, hopscotch, left and right leg hop, and icky shuttle, with 30 seconds rest between each set. After six week training program post test were administered on both control group and experimental group and data were collected.

#### Statistical Analysis

After six week training Post Test were administered and data were collected, the collected data were analyzed by using 't' test. The level of confidence was fixed at 0.05 levels in all cases.

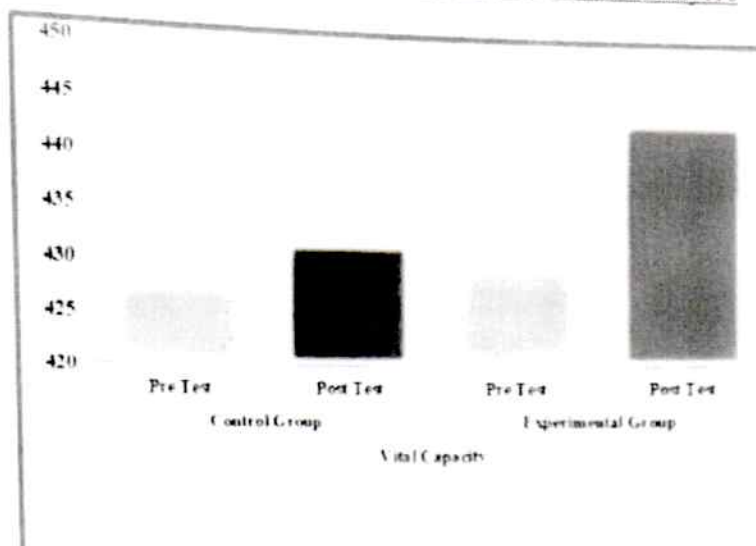
**Table: 2**  
**Comparison of Vital capacity of Fencing Players**

Variable s	Group	Test	Mean	S.D	S.E	M.D	D.F	Obt 't'	Tab 't'
Vital Capacit y	Controlled	Pre test	428	9.64	3.18 4	4	38	1.256	1.686
		Post test	432	10.4 8					
	Experiment al	Pre test	430	10.1 2	3.33 9	14		4.19*	
		Post test	444	10.9 8					

\*Significant at 0.05 Level

The above table shows that on the basis of mean difference there was difference between the means of pre and post test of control and experimental group of football Players in reference to vital capacity. To see this difference is significant or not at 0.05 level of significance. Researcher further calculated 't' test & above table shows that there is significant difference between pre and post test of experimental group of Football Players as the calculated 't' value 4.19 is greater than tabulated 't' value 1.686. But there is insignificant difference found between pre and post test of control group of football Players, as the calculated 't' value 1.256 is lesser than the tabulated 't' value 2.101.

**Graph**  
**Mean Comparison of Vital capacity of Football Players**



### Conclusion

From the above result we found that there is significant difference between pre and post test of experimental group of football players compared to control group. Which means that ladder skill training effect on vital capacity of Football players as well as it may affect ones health and fitness also? So it can be conclude that ladder skill training is much better as it can be programmed within a small area. It burn calories much faster than normal training. Ladder skill training will also boost individual from the deadly "inactive" category. Ladder skill training also develop the core ability and also promotes their participation in a variety of physical activities that involve body movement, and also helps to increase injury prevention.

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