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## A study of anaerobic capacity of college wrestlers

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### Abstract

The purpose of the study was to investigate the anaerobic capacity profiles of total body fat percentage of inter college level wrestlers, and to compare the anaerobic capacity of the wrestlers in different weight categories. A total (N=10) weight category male wrestlers were taken for the study. They were played in inter collegiate tournaments. To find out the anaerobic capacity profiles of wrestlers, sergeant jump test was taken and their scores were considered as criterion measures for this study. The Anaerobic capacity was found low in low weight categories and high in heavy weight categories respectively.

**Keywords:** Wrestlers, anaerobic capacity, fitness, sports

### Introduction

Today the value of wrestling is universally recognized. There are several distinct styles of wrestling, including the catch-as-catch-can, the Greco-Roman, judo, and sumo. Wrestling is one of the oldest sports known. In the ancient Olympic Games, wrestling was an integral part of the pentathlon, a form of all-round athletic championship featuring running, jumping, wrestling, and throwing the discus and javelin. Although in various countries there have been minor differences in rules and objective of wrestling, making about as many systems as nations engaging in these sports, there is no basic difference in the various systems. Over the years many countries have produced great Olympic individual wrestlers and wrestling teams. Turkey, Sweden, The United States, West Germany, and the Soviet Union all were successful until around 1960. In 1972 in Munich, 15 of gold were won by Eastern bloc wrestlers. Wrestling is a battle of with in which two man of about the same weight, size, skill and same knowledge of holds fight with each others.

Wrestling requires the mastery of basic skill as well as knowledge of how the sport is played. Wrestling requires high and special kind of physical fitness. So that the body can more effectively work as opportunities of counter attack. Whenever infect a special kind of physical fitness is needed because training for no other sport prepares one for wrestling. It is the hope of the author that this dissertation will help many young men to become introduced to a sport that has brought high excitement and satisfaction to themselves as well as to other man from the time to the present day. The article of Artur Kruszewski (2003) shows the proposition of a division of sports of fight according to admissible ways of influence on the opponent's body, which classifies wrestling to the groups of discipline using the throw and holds cramping the rival's movements. So wrestling sports finds its place in the theory of sports of fight. The opportunity of using wrestling as field of self-defense shows its utilitarian's character, but we should remember the fact that it is classified as relatively gentle way of defense. The scientific research has shown that in Poland young people are interested in practicing sports of fight and material arts. For 40% practicing people the leading motive for taking up these discipline was inclination of developing their physical efficiency and for 35% of them the perspective of attainment some skills of fight, and also development of particular skills with evidently useful character (Kruszewski 2003).

### The Study

Anaerobic capacity is a vital factor influencing the athlete's performance. It is required in all types of indoor and outdoor activities, competitive sport, combat sports, aquatics etc. wrestling is also a heavy powered compact game, requires vital anaerobic capacity.

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The investigator has tried to find out the anaerobic capacity profile, body composition of ICT level Wrestlers.

### Methodology

The purpose of the study was to investigate the anaerobic capacity profiles of total body fat percentage of inter college level wrestlers, and to compare the anaerobic capacity of the wrestlers in different weight categories.

For the study wrestlers of Inter Collegiate tournament participated were selected as sample of the study. The sample of the Dr. B.A.M. University, Aurangabad was choosing randomly.

### Administration of the test

The profile inter college level wrestlers by their anaerobic capacity, the anaerobic capacity was measured by sergeant jump test, was taken and their scores were considered as criterion measures for this study. Body mass index was taken to record the weight, height and length of the male wrestlers. Mean standard deviation, analysis of variance was used to analyses the data. A total 10 weight category of wrestlers were considered for the study.

### Hypothesis

The hypothesis that there will not be significant difference between different weight categories is related to anaerobic capacity. The finding pertaining to anaerobic capacity for all weight categories have been given below:

**Table 1:** Shows Weight category below mean S.D

Weight category Below	Mean	S.D
48 kg	66.7	1.67
52 kg	12.0	1.09
57 kg	76.6	1.42
62 kg	84.7	1.04
68kg	90.0	1.18
74kg	96.8	2.44
82 kg	117.4	1.28
90 kg	116.6	2.05.
100 kg	122.2	1.98
130 kg	48.2	4.51

**Table 2:** Analysis of Variance of Anaerobic Capacity In All Weight Categories

Source of Variance	DF	Sum of Square	Mean sum of Square	F - Ratio
Between Groups	9	59067	6563	1589
Within Group	90	370.2	4.13	

■ Significant at.05 level of confidence  $F_{.05}(9,90) = 3.01$

### Findings

To observe the difference between the wrestlers of all weight categories on their anaerobic capacity, the analysis of variance was adopted for all variables and data pertaining of these have been presented in table 2.

It appears from the table 2 that there was significant difference between different weight categories related to anaerobic capacity. Since the F-ratio for these variables were significant at.05 level.

Since the one way analysis of variance was found significant in relation to anaerobic capacity, the least significant different (LSD) test was applied to find out which of the difference of the means amongst the different weight categories were statistically significant.

### Discussion of Findings

In this study it was observed, that the anaerobic capacity in the light weight groups was low and on the other hand in case of heavy weights the anaerobic capacity was high. The observed sequence of anaerobic capacity in different weight categories from high to low was over 130 kg > below 100 10 kg > below 90 kg > below 82 kg > below 74 kg > below 68 kg > below 62 kg > below 57 kg > below 52 kg > below 48 kg. So we can conclude that the anaerobic capacity have a positive relationship with the body weight.

### Discussion of Hypothesis

The hypothesis that there will not be significant difference between different weight categories is related to anaerobic capacity was rejected because the significant difference was found between different weight categories related to anaerobic capacity.

### Conclusion

The Anaerobic capacity was observed low in low weight categories and high in heavy weight categories.

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