

# EFFECT OF AEROBIC TRAINING ON PERCENT BODY FAT AMONG HIGH SCHOOL GIRLS

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**Abstract**— The purpose of the study was to investigate effect of aerobic training on percent body fat among high school girls. To achieve the purpose, thirty subjects were selected at random and their ages ranged from 14 to 16 years. The subjects were divided into two equal groups. The study was formulated as a true random group design, consisting of a pre-test and post-test. The subjects (n=30) were randomly assigned to two equal groups of fifteen subjects each. The groups were assigned as aerobic training group (ATG) and control group (CG) in an equivalent manner. The percent body fat was selected as a criterion variable. All the subjects were tested immediately prior and after the experimental programme for the period of twelve weeks. 't' ratio was applied to analyse the significant difference. To test the significance difference .05 level of confidence was fixed as the level of significance to test the 't' ratio obtained, which was considered as an appropriate. Based on the result of the study it was concluded that, the aerobic training programme produced a significant development on the reduction of the percent body fat among high school girls.

**Keywords**— Aerobic, Percent Body Fat, High School Girls

## Introduction

Training effect describes the physiological changes that occur from regular participation in a fitness program. These basic training procedures will serve better when utilized with modification suited to the individual or a group dealt with. The best training program is that which increases the desired quality at a higher rate without causing unwanted effects. The individual's physical and motor fitness qualities in which a definite improvement can be achieved through appropriate training. Although numerous types of studies exist in the field of physical education, a physical educationist is in need to find some means that tends to encourage students to try harder to increase their level of performance and their breadth and depth of knowledge.

Aerobic training (also known as cardio) is physical exercise of relatively low intensity that depends primarily on the aerobic energy-generating process. Aerobic literally means "living in

air", and refers to the use of oxygen to adequately meet energy demands during exercise via aerobic metabolism. Physical exercise is any organized activity that involves continuous participation. According to Plato "Lack of activity destroys the good condition of every human being, while movement and methodical physical use are toning the body. Exercise builds and maintains physical fitness". Physical exercise builds confidence. Physical and mental ability cultivate power of will and determination.

Body composition can be defined as the relative ratio of fat to fat free body mass. An individual's body composition is assessed and presented as percentage body fat. Body composition plays an important role in the maintenance of fitness in sports. This is proved by the fact that well-trained individuals have a better body composition than untrained ones. More appropriate evaluation of a person's weight can be made if measurements of body composition are used. The use of skinfolds and body composition techniques on athletes has been largely directed towards estimating the amount of fat in the body.

## Methodology

To achieve the purpose of the present study, thirty subjects were selected at random and their ages ranged from 14 to 16 years. The subjects were divided into two equal groups. The study was formulated as a true random group design, consisting of a pre-test and post-test. The subjects (n=30) were randomly assigned to two equal groups of fifteen subjects each. The groups were assigned as Aerobic training (ATG), and control group (CG) in an equivalent manner. The variable percent body fat was selected as a criterion variable. All the subjects were tested immediately prior and after the period of twelve weeks.

## Analysis of Data

The t - ratio on percent body fat of Aerobic training and control groups have been presented in the following tables. To test the significance difference 0.05 level of confidence was

fixed as the level of significance, which was considered as an appropriate.

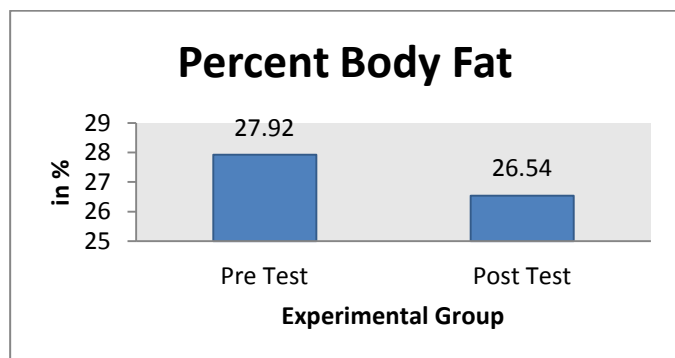
**Table – I**

**Summary of ‘T’ Ratio on Pre – Test, Post – Test of Aerobic Training Group (ATG) on Percent Body Fat**

S. No	Variable	Pre Test mean ± σ	Post test mean ± σ	MD	Σ DM	‘t’
01	Percent body fat	27.92 ± 3.17	26.54 ± 3.53	1.37	0.35	3.97*

An examination of the above table - I indicated that obtained t-ratio for the aerobic training group was 3.97\*. It was found to be greater than the required ‘t’ ratio of 3.22. The obtained ‘t’ ratios on all the selected variables were found to be greater than the required table value of 2.14 at 0.05 level of significance for 1, 14 degrees of freedom. Hence it was found to be significant. The results of this study showed that twelve weeks practice of Aerobic training group were statistically significant and explained its effects positively.

**Fig:1. Shows the mean values of percent body fat of experimental group**



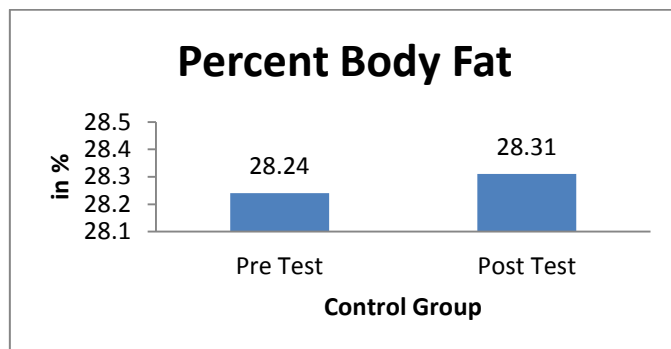
**Table - II**

**Summary of ‘t’ Ratio on Pre – Test, Post – Test of Control Group (CG) on Percent Body Fat**

S. No	Variable	Pre Test mean ± σ	Post test mean ± σ	MD	Σ DM	‘t’
01	Percent body fat	28.24 ± 3.453	28.315 ± 3.39	0.075	0.15	0.49

An examination of the above table - II indicated that the results of t – ratio for pre test and post test scores of the control group. The obtained t-ratio for the control group was 0.49. It was found to be lesser than the required ‘t’ ratio of 3.22. The obtained ‘t’ ratios on all the selected variables were found to be lesser than the required table value of 2.14 at 0.05 level of significance for 1, 14 degrees of freedom. Hence it was found to be insignificant.

**Fig:2. Shows the mean values of percent body fat of control group**



**Result and Discussions**

Aerobic training group and control group was compared; the present study demonstrated an increase in the percent body fat 4.93% respectively. Thus the aerobic training programme is superior to the control group for developing the percent body fat

**Conclusion**

The aerobic training programme produced a significant development on the percent body fat. The control group did not exhibit any significant changes in the percent body fat.

**References**

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