ISO 9001 - 2015

ISSN 2349 - 4891

Monthly

IJRRAS

IF
4.665

Volume 4,Issue 4, April 2017

International Journal of

# Recent Research and Applied Studies

SURRAGH PUBLICATIONS

ISSN: 2349 - 4891

International
Journal of Recent Research and Applied Studies
*(Multidisciplinary Open Access Refereed e-Journal)*

# Effect of Aerobic Training on Body Mass Index on Sedentary Obese Women

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Received 15th March 2017, Accepted 15th April 2017

**Abstract**

*The aim of this study was to investigate the effect of aerobic training on body mass index on sedentary obese women. 30 obese women were selected randomly and divided into two groups 15 subjects in each group. Group I as experimental group and Group II as control group. The experimental group had been in aerobic training programme five days in a week for a period of a period 8 weeks. The control group did not involve in any fitness programme or training programme. Once in 2 weeks the load was increased. The body mass index was selected as variable. The collected data were analyzed by using 't' ratio. From the findings it is quite interesting to know that the sedentary obese women have positive influence upon their body mass index due to the training programme given. The aerobic training helps the subjects to decrease the weight and it helps to increase the heart rate and breathing for a sustained time. The result shows that Aerobic fitness level can improve with or little as 10 minute duration as long as exercise performed often with a total of 5 days a week. Is was concluded that the participation in eight weeks of Aerobic training resulted in improvement in Body Mass Index.*

**Keywords:** Aerobic Training, BMI, Obese, Women.



## Introduction

There has been outstanding advancement in the medical field which has taken place during the last few years, in arresting and finding cures for many incurable maladies, but obesity has so far successfully eluded most of them, as has cancer. The present generation is in constant quest for a remedy for this malady. New solutions for slimming are coming up every other day, in the form of pills and potions which are gaining entrance in many physicians consulting rooms. Ultra modern drugs with tall claims of weight reducing effects are being manufactured by the dozens. Crash diets are experimented with very little effect. Stay trim devices are being manufactured and advertised in order to lure those who wish to lose weight, to go in for a trial. Health clubs that advertise fitness and weight reducing programmes are attracting young and old from all corners. Some of these programmes are no doubt effective, but they cost too much and consume a lot of energy. Sometimes except for an overall well being, they never help reduce a single pound. Reducing weight can be a natural activity and an enjoyable pastime for those who do not suffer from any other serious disease. They can reduce by adopting a method that suits their physical, mental and psychological needs. However, the proper weight reducing remedies are those which do not leave the individual with any bad or undesirable after effects and at the same time have a lasting effect.

Obese people, who lead a fairly comfortable and carefree life, may detect the very idea of having to really toil for achieving a thing like a trim figure or good health. Their mistaken conception is, that if external help is available, they can achieve better results in reducing their weight without themselves doing anything much. Through such help though some modes of treatment is available, they require the actual participation and absolute co-operation of the individual during the course of treatment. This is because unless the individual realizes that it is his responsibility to lose weight, the weight reducing program will be a total failure. Automation has modified the need for physical activities. Elevators, automobiles, two and four wheelers and the like have replace walking, cycling and other natural exercises in the lives. Competition in every field has created a tendency towards more brain work than physical work for a large group of people. They consequently take up tension ridden jobs. Physical neglect caused by this is resulting in obesity in most cases. Aerobic exercise does not mean that you should work your muscles strenuously to some tune played in a recorder as it is found in many health clubs. Aerobic is a system of exercise does not mean that you should work your muscles strenuously to some tune played in a recorder as it is found in many health clubs. Aerobic is a system of exercising by means of rhythmic activities. These include walking, swimming, cycling, rowing, skating and many such activities. Even rope, skipping is an aerobic exercise. The aim of such exercise is to improve fitness though increased oxygen consumption.

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Dancing to a time and exercising the muscles is not recommended for persons suffering from complicated health problems. One should select the type of aerobic exercise that suits his need instead of doing exercises recklessly. Waking it is the best Aerobic exercise which even a heart patient can do. Most obese people do have at least some minor heart and lung ailments.

When people exercise for fun and enjoy. What they do tit they undertake logic exercise which is more of relaxation combined with action exercise it is more ever walking and yogic exercise do not become an addition. Such exercise even helps maintain good health, especially when one leads a sedentary life. If a person wishes to lose weight, he should not do hard exercises. So mild exercises are done for longer duration, Most of these exercises need a specific time to be fixed. The best suited time for walking is early morning before sunrise because that is the time when the air is free from any sort of pollution. Walking moderately for three miles per hour is good. One should practice cycling, horse riding, playing games, swimming, skating, if possible.

**Methodology**

The aim of this study was to investigate the effect of Aerobic training on Body Mass Index on sedentary obese women. The investigators randomly selected 30 obese women and divided into two groups 15 subjects were assigned to an experimental group and 15 subjects to control group. Prior to the administration of test, the investigators held a series of meeting with the subjects and were made clear about the objectives and purposes of the test. The testing procedure was explained to them in detail. They were requested to co-operate and participate actively in the training programme. Body Mass Index was selected as variable. The experimental group had been in physical training programme five days in a week for a period of 8 weeks. The control group did not involve in any fitness program or training programme. The subjects were done warming up for a period of 10 minutes before starting the training session. It includes jogging, stretching, rotation at various joints, walking on heels and toes, forward bend, backward bend, sideward stretch, rotation of shoulder joints, hip joints, stretching of calf and quadriceps muscle groups.

**Training Schedule**

| Week | Training in minutes |
|---|---|
| First and second week | 5 minutes walking and 5 minutes Jogging |
| 3-4 weeks | 10 minutes walking and 5 minutes Jogging |
| 5-6 weeks | 15 minutes walking and 10 minutes Jogging |
| 7-8 weeks | 30 minutes walking and 20 minutes jogging |
| Warm Down ( 10 minutes) | |

After the training the subjects were asked to go for limbering down exercises. It includes slow jogging, light stretching and slow rotation exercises. The Body Mass index of a subject was calculated by measuring the height in meters an used a stadiometer and body weight in kilograms used a digital weighing machine. The following equation was used to calculate the Body Mass Index. BMI Kg/M (Square) = weight in Kg/height in m.sq. A persons Body Mass Index calculation can be compared with the following ranges: 20 is underweight; 20 to 25 is desirable weight, 25 to 30 is overweight; 30 is obese and 35 is very obese. To compare the mean difference between initial and final scores of experimental and control group ‘t’ test was employed with Body Mass Index.

**Results**

Table 1
*Mean, Standard deviation, standard Error and ‘t’ ratio of Experimental and control groups in Body weight and Body Mass Index*

| Variables | Groups | No | Mean | | Mean Difference | Standard Deviation | Standard Error | ‘t’ |
|---|---|---|---|---|---|---|---|---|
| Body Weight | Group –I | 15 | Initial | 88.6533 | 1.1533 | 3.59541 | 0.92833 | 9.654* |
| | | 15 | Final | 87.5000 | | 3.56971 | 0.92170 | |
| | Group-II | 15 | Initial | 90.1867 | 0733 | 2.57734 | 0.66547 | 1.703 |
| | | 15 | Final | 90.2600 | | 2.50537 | 0.64688 | |
| Body Mass Index | Group-I | 15 | Initial | 30.7911 | 0.4665 | 0.78081 | 0.20161 | 6.826* |
| | | 15 | Final | 30.3247 | | 0.71439 | 0.18446 | |
| | Group-II | 15 | Initial | 31.0773 | 0.0260 | 0.79414 | 0.20205 | 1.696 |
| | | 15 | Final | 31.1033 | | 0.76564 | 0.19769 | |

*Significant at 0.01 level.

In Tale I the calculated 't' value for experimental group in Body weight was 9.654 which was higher than the required table value at 0.01 level. But in the case of control group the calculated 't' ratio was 1.703 which was lower than the required table value. This shows that the training program had a significant reduction on the body weight of experimental group. The calculated' value for experimental group in Body Mass Index was 6.826 which was higher than the required table value at 0.01 levels. But in the case of control group the calculated 't' ratio was 1.696 which was lower than the reduction on the Body Mass Index of the experimental group.

**Discussion of Findings**

All the subjects of the experimental group involved in this study were undergone regular Aerobic training programme for a period of eight weeks. From the table it was evident that in the case of Body Mass Index there significant changes noticed after eight weeks of regular Aerobic training programme. As regard to control group no changes were seen in the Body Mass Index.

From the findings it is quite interesting to know that the sedentary obese women have positive influence upon their Body Mass Index due to the training programme given. The Aerobic training helps the subjects to decrease the weight and it helps to increase the heart rate and breathing for a sustained time. The results show that Aerobic fitness level can improve with or little as 10 minute duration a long as exercises performed often with the total of 5 days a week.

**Conclusion**

Participation in eight weeks of Aerobic raining resulted in improved in Body Mass Index.

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