

## **Examining the Effect of Anaerobic Exercises on Respiratory Rate among Sedentary Students**

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### **Abstract**

The purpose of the research was to study the effect of anaerobic exercise On Respiratory rate. Total 20 sedentary students were Target. The mean age of the student was 22.25; Height was 169.6 and weight were 60.05kg. The Anaerobic Training was planned for six week and four days a week. Study was conducted at S.R.T.M .University Nanded. Mean scores and standard deviation were taken and paired t-test was applied. There was significant effect on Respiratory rate ( $t=5.19$ ,  $p<.05$ ). It was found that there was significant decrease in Respiratory rate.

**Key words:** - Anaerobic exercise, Respiratory rate, sedentary students.

### **Introduction**

Anaerobic exercise denotes a particular activity whereby energetic movements increase the Respiratory rate and consequently the speed at which blood is pumped around the body. Moreover, it is associated with activities which involve the concentrated expansion and contraction of various muscles in order to maintain or to change bodily shape. However, this does not necessarily mean that exercise incorporates only activities that are strenuous or over-exertive. Indeed, a brisk fifteen minute walk to the shops or the office constitutes cardiovascular activity and therefore may be regarded as part of an exercise regime. (Lamb et.al, 1998). Nowadays, with the ever-increasing importance of physical appearance, the external benefits of internal health are often overlooked and exercise is avoided in favor of more effortless ways to alter the physical shape. (Berggren et.al, 2005) However, physical exercise serves not only as an aid to esthetical enhancement, but rather as a maintenance programme for the entire body.

The importance of maintaining a healthy heart should not be underestimated at any age, but especially by those of advancing years. Healthy cardio-vascular and pulmonary systems can prevent serious illness and prolong life expectancy and furthermore, aid recovery after surgical procedures. (Angilley and haggas et.al, 2009).

### **Materials and Methods**

**Subjects:** Twenty sedentary students residing in new Nanded, Maharashtra voluntary participated in the Anaerobic Training program. Exclusion criteria were the presence of chronic medical conditions such as heart disease or any other condition which may put the subject at risk while conducting the experimental tests. The subjects were free from the habits of smoking or any other antioxidant supplementation during training. The entire experimental tests were conducted at S. R. T. M. University sport complex, Nanded. The entire subject who participated in the study were experimental there was no control group.

### **Applied Training**

Anaerobic exercise 4 days a week & training period was 6 weeks. Intensity of training –64/70-94% of maximum Respiratory rate (HR max). Duration of training-Continuous or intermittent anaerobic activity for 10-40 minutes. Duration is dependent on the intensity of the activity; thus, lower-intensity activity should train at least 40 minutes.

### **Parameters measurements**

#### **Respiratory rate:**

The number of breaths per minute or more formally, the number of movements indicative of inspiration and expiration per unit time. In practice, the respiratory rate is usually determined by counting the number of times the chest rises or falls per minute. The aim of measuring

respiratory rate is to determine whether the respiration is normal, abnormally fast (tachypnea), abnormally slow (bradypnea), or nonexistent (apnea).

### Statistical analysis

To analyse the data mean, S.D., & t-ratio was utilized the level of significant set up at 0.5 level of confidence.

### Results

The entire subjects were tested for Respiratory rate. The data collected was analyzed by t-ratio with the level of significances set at 0.05.

The mean standard deviation and t value analyzed this variable separately.

#### Mean score standard deviation and t-ratio of select physiological

#### Variable with respect to Respiratory rate in pre and post-test of Experimental group

Variable	Test	Number	Mean	S.D.	t-ratio
Respiratory rate	Pre Test	20	15.78	1.29	5.19*
	Post Test	20	16.98	1.25	

#### \*Significant

As per Table - Shows that Statically Significant difference of mean scores, standard deviation and t-ratio of Respiratory rate of pre and post-test of Experimental group.

With regards to Respiratory rate of pre and post-test of Experimental group they have obtain the mean value of 15.78 and 16.98 respectively which are given in the Table - reveals that there was significant effects of anaerobic exercise was found in ( $t=5.19, p<.05$ ) with respect to Respiratory rate of Experimental group. That means anaerobic exercise is beneficial for reducing the Respiratory rate among sedentary students.

#### Discussion of findings:

It had been hypothesised that there would be significant effect of anaerobic exercise on Respiratory rate among sedentary students significant effects of anaerobic exercise was found in physiological variable with respect to Respiratory rate of Experimental group. Thus the hypothesis was accepted. Significant effects of anaerobic exercise were found in physiological variable with respect to Respiratory rate of Experimental group.

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