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**Faheem Faisal**  
Ph.D. Scholar S.R.T.M  
University, Nanded,  
Maharashtra, India

## Effect of aerobic training on flexibility among mesomorph students

**Faheem Faisal**

### Abstract

The purpose of study was to find out the effect of aerobic training on flexibility among mesomorph students of Bharati Vidyapeeth deemed university Pune. Data was collected on individually through 30 control and 30 experimental group of subjects of Bharati Vidyapeeth deemed university Pune. The age ranging between 18±28 years and was selected as the subject for the study. The instruction of training was given by researcher every day before starting the training in Bharati Vidyapeeth deemed university Pune gym. Simple random sampling was used for collection of data. The data were analyzed using descriptive and t test. Only one variable of Physical fitness component was selected as the independent variable i.e. flexibility and sit and reach test was used for this study. The mean value and standard deviation of control group and experimental group in relation to flexibility of mesomorph students was (1.75#4.03pre), (2.01#3.82post) and (2.21#3.53pre), (4.11#3.82post) respectively. Calculated t-ratio of control and experimental group was found 0.257 and 2.054 in relation to flexibility. The results of this study on the basis of statistical analysis states that “significant results were drawn. The experimental group have more efficient flexibility level than of the control group. Further the study reveals that aerobic training has all the essentials to improve flexibility level.

**Keywords:** Aerobic training, flexibility and mesomorph

### Introduction

Without adequate flexibility, daily activities, such as getting out of bed, lifting a child or squatting to pick something up can become more difficult to do. In addition, inadequate flexibility can affect your athletic performance by preventing you from reaching the full potential, strength and power of your muscles. Flexibility is defined as the range of motion of your joints or the ability of your joints to move freely. It also refers to the mobility of your muscles, which allows for more movement around the joints. Range of motion is the distance and direction your joints can move, while mobility is the ability to move without restriction. Aerobic exercises/training gets your heart pumping, causes you to break a sweat and allows you to burn many calories within a short time period. Running, swimming, jumping rope and cycling are examples of aerobic activities. You can also get a good aerobic workout playing a variety of sports, including tennis, volleyball and soccer. Mesomorph's tend to be natural athletes. Their broad shoulders, thick chests and well-defined muscles make them look athletic. Mesomorph's respond to exercise well. They gain strength easily, and their cardiovascular systems are generally quite efficient. Their primary weakness is a lack of flexibility. If you are a mesomorph, try to engage in a variety of exercises that allow you to use your natural gifts while improving on your weaknesses. Because the mesomorph's muscular system is so strong and sturdy, mesomorph's often lack flexibility. Incorporate stretching exercises into every workout session. Do a variety of stretches so you stretch each of your major muscle groups. For example, one day. Stretch your hip flexors, quadriceps and pectorals. The next day, stretch your calves, hamstrings and trapezius.

### Objective of the study

The main objective of this study was to find out the effect of aerobic training on flexibility among mesomorph students of Bharati Vidyapeeth Deemed University Pune.

**Correspondence**  
**Faheem Faisal**  
Ph.D. Scholar S.R.T.M  
University, Nanded,  
Maharashtra, India

**Material and methods**

Sixty mesomorph students from Bharati Vidyapeeth Deemed University Pune were randomly selected for the presented study and their age ranged from 18 to 28 years. Necessary instructions were given to the subjects. Flexibility level of the subjects was measured by sit and reach test. For the presented study, modified tools were used for data collection Sit and Reach test, Steel Scale, and wooden Table Only one variable was selected as independent variable for the presented study i, e., flexibility. The subjects were divided into two groups (30

in Experimental group and 30 in Control group). The six week training program was conducted. Some selected aerobic exercises were given to the experimental group according to the researchers training program and on the other hand control group has given no any training. The data was obtained from both the groups (Experimental and Control group) before and after the training. The subjects were under gone to a 4-week aerobic training programme. The training was consisting of a variety of aerobic exercises.

**Table 1:** Experimental group perform selected aerobic exercises weekly on alternate days as per time schedule given below:

S. No.	Aerobic exercises	1st week	2nd week	3rd week	4th week
1	Push ups	3 min x2	4 min x2	4 min x2 <sup>1/2</sup>	4 min x3
2	Running on treadmill	3 min x2	4 min x2	4 min x2 <sup>1/2</sup>	4 min x3
3	Jumping jacks	3 min x2	4 min x2	4 min x2 <sup>1/2</sup>	4 min x3
4	High knees	3 min x2	4 min x2	4 min x2 <sup>1/2</sup>	4 min x3
5	Sit-ups	3 min x2	4 min x2	4 min x2 <sup>1/2</sup>	4 min x3
6	Bicycling	3 min x2	4 min x2	4 min x2 <sup>1/2</sup>	4 min x3
7	Burpees	3 min x2	4 min x2	4 min x2 <sup>1/2</sup>	4 min x3
8	pull-ups	3 min x2	4 min x2	4 min x2 <sup>1/2</sup>	4 min x3

**Results and discussion**

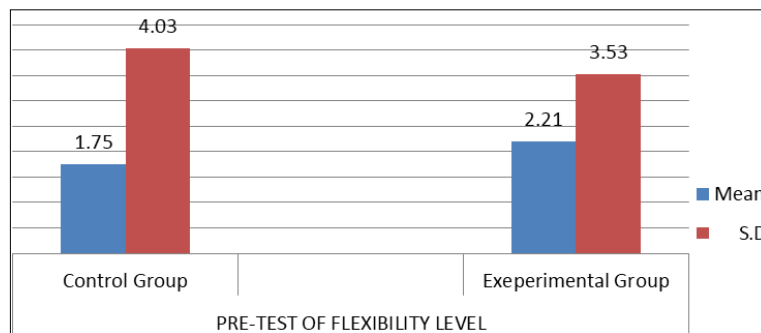
**Table 2:** Statistical Comparison of Pre and Post Test of Control and Experimental Group for Flexibility

Variable	N	Group	Test	Mean	S.D	T Ratio
Flexibility	30	Control group	Pre-test	1.75	4.03	0.257
			Post-test	2.01	3.82	
	30	Experimental group	Pre-test	2.21	3.53	2.054
			Post-test	4.11	3.82	

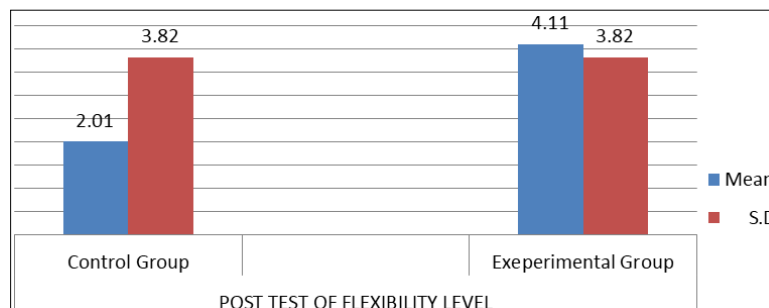
\*Significant at .05 level of significance

The above table indicates flexibility level of mesomorph persons of Bharati Vidyapeeth Deemed University Pune in which mean and standard deviation of Control and Experimental group were (1.75#4.03pre), (2.01#3.82post) and (2.21#3.53pre), (4.11#3.82post) respectively. The obtain 't' of Control group was 0.257 Whereas obtain 't' of experimental

group was 2.054 which was found to be significant at 0.05 level of confidence. This indicates that significant deference found between the control and experimental group. This shows that significant effect of aerobic training on flexibility among mesomorph students of Bharati Vidyapeeth deemed university Pune was found.



**Graph 1:** Graphical representation of mean and standard deviation of pre- test of control group and experimental group of Flexibility Level of Mesomorph Students



**Graph 2:** Graphical representation of mean and standard deviation of post test of control group and experimental group of Flexibility Level of Mesomorph Students

### **Conclusion**

On the basis of the above finding and discussions, the following conclusions were drawn.

Experimental group were significantly positive correlated with the flexibility level but negatively with control group. This indicates that significant effect of aerobic training on flexibility among mesomorph students of Bharati Vidyapeeth deemed university Pune was found.

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