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## Effect of Trataka on pulse rate of college level male students

**Champak Bhadra and Dr. Kallol Chatterjee**

### Abstract

Tratak is a well-known Kriya or karma of the six karmas of yoga, the ‘Shatkarma’ and it also is a practice of meditation, which involves alternately gazing at an object or point or candle flame without blinking eye’s. Research study has been shown changes the pulse rate by acute effect of Trataka practice. The purpose of the study was to compare the pulse rate between pre test and post test of college levels male students. For this study total 06 college levels male students were purposively selected from Dept. of Physical Education, Vinaya-Bhavana, Visva-Bharati University, Santiniketan, Bolpur, West Bengal, India. Their age ranges from 18-22 years. For this study measured pulse rate, with the help of experts who helped to conduct the test. Before recording the parameter, the subject was asked to relax physically and mentally for few minutes. Pulse rate was recorded by Dr. Morepen BP One, Fully Automatic Blood Pressure Monitor Device (Model no: BP- 09). Using at the Brachial Artery and pulse rate was taken from device screen. For the collection of data pre and post test was taken. The selected subject underwent an acute effect of Trataka training and they carried out Trataka programmed for 15 minutes at evening sessions, under the instruction and supervision of the supervisor and others experts. In all cases ‘t’ test was applied, significant at 0.05 level of confidence. There were significant differences on pulse rate ( $MD = 5.66$ ,  $SD_D = 4.41$  and  $SEM_D = 1.80$ ) [ $t^* = 3.144 > 2.571$  (Table value of degree of freedom 5)] has been found after acute effect of Trataka practice. The pulse rate was significantly reduced after Trataka practice. The acute effect of Trataka practice also leads to reduced the pulse rate. Present study shows that there was significant difference on pulse rate to compare the Trataka practice between pre and post test of college level male students.

**Keywords:** Trataka & Pulse Rate.

### Introduction

Trataka plays an important role in yoga; it is mentioned in the Hatha Yoga Pradipika. Tratak is a well-known Kriya or karma of the six karmas of yoga, the ‘Shatkarma’ and it also is a practice of meditation, which involves alternately gazing at an object or point or candle flame without blinking eye’s. There are many different practices explained in different texts but they are all very similar. We can find the practice of Tratak with a betel leaf, a paper, a candle, a needle, darkness, open sky, a photo graph, a deity, a crystal, a stone, a flower, the moon, a star, a painting, shadow, nature, a tree, ocean waves, a flag, a bird etc. The most common and suggested one is the practice with a candle flame. Light a candle in a dark room and place it about 75 to 90 centimeters away from you at the level of eyes. Focus on the flame and continuously stare at it without blinking until tears start running down cheeks. Then close eyes but keep gazing at the same point from behind eyelids for 15 to 20 seconds. After that relax eye muscles Place palms over the eyes without any pressure on the eyeballs. Gently move the palms in circles. Practice of Trataka able to reduce stress in daily life also good for mental health and get better sleep also brings nervous system to peace.

Yoga is a system of physical and mental conditioning that originated in India thousands of years ago, which improve flexibility and strength, the other two main practices of yoga, breathing and meditation, are also important contributors to health and well being. Among the many health benefits that yoga offers is the lowering of resting heart rate. Heart rate, also known as pulse, is the number of times a person's heart beats per minute. Normal heart rate varies from person to person, but a normal range for adults is 60 to 100 beats per minute, according to the Mayo Clinic. However, a normal heart rate depends on the individual, age,

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body size, heart conditions, whether the person is sitting or moving, medication use and even air temperature. Emotions can affect heart rate; for example, getting excited or scared can increase the heart rate. Most importantly, getting fitter lowers the heart rate, by making heart muscles work more efficiently. A well-trained athlete may have a resting heart rate of 40 to 60 beats per minute, according to the American Heart Association (AHA).

The present study asses to compare acute effect of Trataka practice on pulse rate between pre and post test of college level male students.

### Purpose of the Study

The purpose of the study was to compare the acute effect of Trataka practice on pulse rate between pre and post Test College levels male students.

### Methodology

For the purpose of the study total 06 college levels male students were purposively selected from Dept. of Physical Education, Vinaya-Bhavana, Visva-Bharati University, Santiniketan, Bolpur, West Bengal, India. Their age ranges from 18-22 years. The test was conducted during 2017-2018 academic sessions in the institute laboratory. For this study measured pulse rate, with the help of experts who helped to

conduct the test. Before recording the parameter, the subject was asked to relax physically and mentally for few minutes. Pulse rate was recorded by Dr. Morepen BP One, Fully Automatic Blood Pressure Monitor Device (Model no: BP-09). Using at the Brachial Artery and pulse rate was taken from device screen. For the collection of data pre and post test was taken. The selected subject underwent an acute effect of Trataka training and they carried out Trataka programmed for 15 minutes at evening sessions, under the instruction and supervision of the supervisor and others experts. In all cases 't' test was applied, significant at 0.05 level of confidence.

### Trataka Practice Protocol

Particulars	Duration
Sabasana	3 minutes
Trataka	2 minutes
Sabasana	2 minutes
Trataka	2 minutes
Sabasana	2 minutes
Trataka	2 minutes
Sabasana	2 minutes

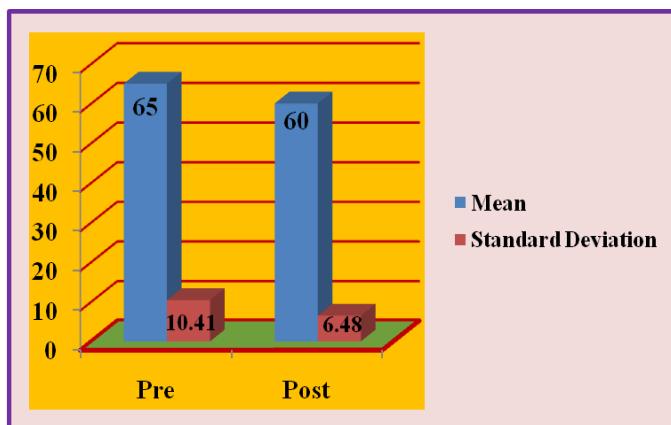
### Findings

**Table 1:** Mean and Standard Deviation of Pulse Rate between Pre test and Post test of College Level Male Students

Variables (Pulse Rate)	Mean	Standard Deviation	Mean Difference	Standard Deviation of Difference	Standard Error Mean Difference	't' Ratio
Pre	65	10.41				
Post	60	6.48	5.66	4.41	1.80	3.144*

Tab t 0.05 (05) = 2.571

\*significant at 0.05 level of confidence



**Fig:** Mean and Standard Deviation of Pulse Rate between Pre test and Post test of College Level Male Students

### Discussion

The analysis of data reveals that there was significant difference on pulse rate of college level male students. Result shows that acute effect of Trataka practice reduced pulse rate after post test. There were significant differences on pulse rate ( $MD = 5.66$ ,  $SD_D = 4.41$  and  $SEM_D = 1.80$ ) [ $t'= 3.144 > 2.571$  (Table value of degree of freedom 5)] has been found after acute effect of Trataka practice. The pulse rate was significantly reduced after Trataka practice.

Several researchers have studied effects of meditation on heart/pulse rate. A study indicates that there is highly significant decrease in pulse rate after TM session in both males and females (Mendhurwar S.S. and Gadakari J.G. – 2012) [1]. There are Prandhana and trataka treatment was

found effective for improving the resting heart rate for cricketers (Rohit Prakash Srivastava - August, 2010) [2]. The significant reduction in the heart rate occurs in the subjects practicing yoga (Devasena and Pandurang Narhare -2011) [3]. The another study also revealed that yoga therapy in addition to standard medical therapy reduces blood pressure, load on heart and improves parasympathetic activity in heart failure patients (Bandi Hari Krishna *et al* -2014) [4]. Other study also revealed that Different strategies for identifying potential outliers are associated with significant differences in HRV parameters. (Kathi J Kemper-2007) [5]. Another study also analysis of HRV mainly reflects parasympathetic outflow and frequency domain analysis reflects overall autonomic balance and is the most widely used tool to investigate HRV and Results of this study suggest that there might be a parasympathetic withdrawal during the practice of Bhramari that revert back to normal after the practice (L Nivethitha, NK Manjunath, and A Moovenththan - 2017) [6].

### Conclusion

Presently the study conducted that acute effect of Trataka practice reduced pulse rate and impact on pulse rate. Also there was a significant difference on pulse rate between pre and post test of Trataka practice of college level male students.

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