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## Therapeutic intervention of yogic training on modulation of testosterone hormone

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### Abstract

In the present study it was planned to scrutinize the therapeutic intervention of yogic training on modulation of Testosterone hormone. One – Group Pretest - Posttest Design was used as experimental design in present study. All subjects were selected in terms of purposive samples under the sampling method of non-probability sampling. To achieve purpose of present study total ten (N=10) male students between age group of 23- 28 years, from Department of Physical Education, Punjabi University Patiala was selected as subjects. The investigator has selected twelve weeks yogic training as independent variable and Testosterone Hormone as dependent variable of the study. After the collection of relevant data, to know the therapeutic intervention of yogic training on hormonal modulation, paired t-test was employed on mean values of pre and post-tests with the help of Statistical Package by Graph Pad Software. The level of significance was set at 0.05 percent. After the analysis of data it was concluded that after the application of twelve – weeks yogic training protocol the Testosterone Hormone level increased significantly in male students.

**Keywords:** Therapeutic intervention, testosterone hormone

### Introduction

Who are we? We can learn the answer to this question by observing, hypothesizing, experimenting, and analyzing. We are complex living beings in a complex, contradictory, ever-changing world. We know that we do not understand everything about ourselves, but by using modern scientific and ancient philosophical methods we can keep learning more and more.

Testosterone collectively called androgen is the primary male sex hormone of an anabolic steroid class hormone. In humans testosterone is secreted primarily by the gonads (testicles) of males and, to a lesser extent, the ovaries of females. On average, in adult males, levels of testosterone are about 7 to 8 times as great as in adult females. In male humans, testosterone plays a key role in the development of male reproductive tissues such as testes and prostate, as well as promoting secondary sexual characteristics such as increased muscle and bone mass, and the growth of body hair. In addition, testosterone is involved in health and well-being, and the prevention of osteoporosis. Insufficient levels of testosterone in men may lead to abnormalities including frailty and bone loss. (Bassil, 2009) Total level of testosterone in the males is 264 to 916 ng/dL (nano grams per deciliter) of age 19 to 39 years, while mean testosterone level in adult men have been reported as 630 ng/dL. Level of testosterone in men decline with age (Thyrocare Tech. Lim., 2016) [5].

Origin of yoga in India is a giant leap in Indian history, which is not fully understood by us. Our scientists have penetrated the heart of an atom and even they have successfully landed on the Mars but we are unable to find out the scientific facts behind yoga. During the scanning of relevant literature for the proposed topic, only few studies were found, revealing the effect of yoga on hormone secretion in human body. The scholar, being ardent lover of yoga and has experienced the great benefits of such exercises. Hence, in the present study it was planned to scrutinize the effect of yogic therapy on Testosterone Hormone of human body.

### Methodology and Procedure

In the present study it was planned to scrutinize the therapeutic intervention of yogic training

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on modulation of Testosterone hormone. One – Group Pretest - Posttest Design was used as experimental design in present study. All subjects were selected in terms of purposive samples under the sampling method of non-probability sampling. To achieve purpose of present study total ten (N=10) male students between age group of 23- 28 years, from Department of Physical Education, Punjabi University Patiala was selected as subjects. The investigator has selected

twelve weeks yogic training as independent variable and Testosterone Hormone as dependent variable of the study. After the collection of relevant data, to know the therapeutic intervention of yogic training on Testosterone hormone modulation, paired t-test was employed on mean values of pre and post-tests with the help of Statistical Package by GraphPad Software. The level of significance was set at 0.05 percent.

## Results of the Study

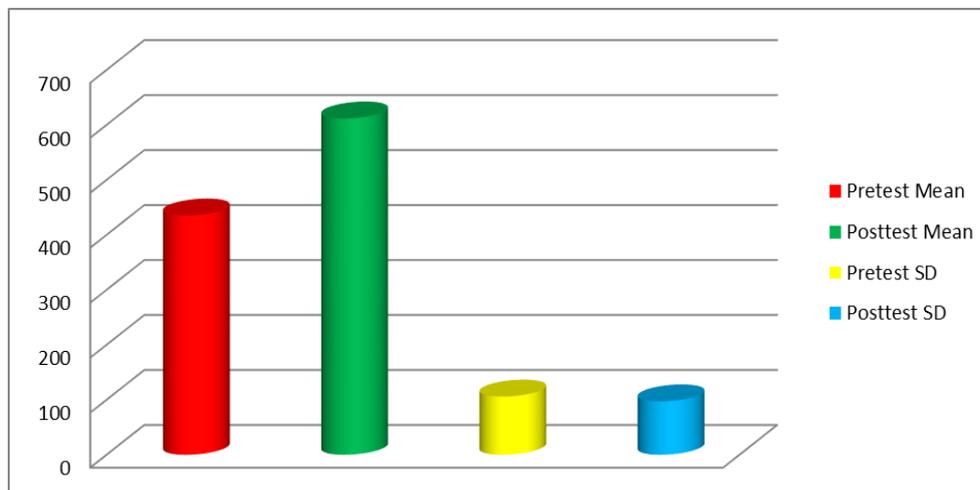
**Table 1:** Comparison of Mean and SD values of Pretest and Posttest of Testosterone Hormone level in Male Students

Testosterone Hormone	Mean	SD	t
Pre-test	435.1	105.8	4.74*
Post-test	611.6	97.1	

$t_{.05(9)} = 2.26$

The results of pretest and posttest namely Mean, SD, and t values of Testosterone Hormone level in male students are given in above table. This table depicts that the pretest Mean of Testosterone Hormone level in male students is 435.0 and posttest Mean is 611.6. Further the table statistically reveals that the calculated t value 4.74 for Testosterone Hormone

level in male students is greater than table value that is 2.26. Therefore the values of above table confirms that, after the application of twelve – weeks yogic training protocol the Testosterone Hormone level increased significantly in male students. The results of this table are also illustrated in following figure.



**Fig 1:** Comparison of Mean and SD values of Pretest and Posttest of Testosterone Hormone level in Male Students

## Conclusions

After the analysis of data it was concluded that after the application of twelve – weeks yogic training protocol the Testosterone Hormone level increased significantly in male students.

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