

## Effect Of Yoga On Anthropometrical And Physiological Variables Of College Going Students

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### Abstract

The purpose of the study was to analyze the effect of Yoga on Anthropometrical and Physiological variables of the college going male students within the age group of 18-22 years. Total 30 subjects were taken for the study from **Shree Bhikhabhai Patel Arts College Anand c/o M.B. Patel Science College**

The Anthropometrical and Physiological parameters were Weight, BMI and Fat (%) & Pulse rate, S.B.P and D.B.P which were measured by the reputed physician. They were measured for the calculation of Body Mass Index ( $BMI = \text{Weight in kg} / \text{Height in meter}^2$ ) and for measuring the percentage of Body Fat, Skin Fold Caliper was used. Similarly, the physiological parameters were assessed by recording the blood pressure (S.B.P and D.B.P) and pulse rate before and after six (6) months of regular yogic exercise or training. The subjects were randomly selected for the study as subjects. To measure the blood pressure mercury sphygmomanometer was used and pulse rate was recorded after a rest for 30 minutes in right radial artery by Palpatory method. For statistical analysis and Interpretation of data 't' test was conducted at 0.05 level of significance.

**Keywords:** Yoga, Anthropometrical and Physiological Parameters.

### Introduction

Yoga is an important role and has made unlimited Contribution in the modern age as it caters to the biological, Sociological, Spiritual and Physiological necessities of the man.

Yoga is a light, which once lit, will never dim, the better your practice, the brighter the flame'. The younger, the old, the extremely aged, even the sick and the infirm obtain perfection in yoga by constant practice. In short, yoga is a way to achieve total health, peace, bliss and wisdom. Physical, mental and spiritual aspects of yoga help to make one's life purposeful, useful and noble. Yoga is an art, science and philosophy, which influence the life of man at every level. Therefore, the influence of yoga must be felt in every movement of our day to day lives. Yoga is a scientific method of life and also integrated educational system of our body, mind and soul. This was practiced by the Indian thousands years of ago but it is one of the universal truths and rectified lot of problems today as there were in the ancient times.

The adage of healthy body, healthy mind is especially relevant to college students. Getting

good grades, focusing in class and balancing a busy schedule may be easier if they maintain a healthy lifestyle. By making small changes in the diet and activity level, they can reap big benefits in their overall health. Most college students may not achieve the nutrition and exercise guidelines designed to reduce the risk of chronic disease, typically consuming diets high in fat, sodium, and sugar and low in fruits and vegetables which resulted in imbalance in their biochemical parameters. Therefore, to attain healthy population, college campuses serve as crucial settings to overcome perceived barriers to healthy diet and exercise habits, and implement effective interventions. Ideally, if college students make positive changes in exercise and dietary habits, these changes could persist into adult years.

Asana are one of the major tools of Yoga. Asana brings steadiness, health and lightness of limb. A steady and pleasant posture produces mental equilibrium and prevents fickleness of mind. Asanas are not merely gymnastic exercises, they are postures. The limbs of the body provide the necessary weights and counter-weights. By practicing them one develops agility, of steroid hormones (Kelley

and Kelley, 2009). Elevated plasma cholesterol concentrations have been implicated in the development of coronary artery disease.

**Materials & Methods:**

Total 30 subjects were taken for the study from Shree Bhikhabhai Patel Arts College Anand c/o M.B. Patel Science College.

The Anthropometrical and Physiological parameters were Weight, BMI and Fat (%) & Pulse rate, S.B.P and D.B.P which were measured by the reputed physician. The Pre-test and Post-test were taken of all the parameters (Anthropometrical and Physiological) before and after of six (6) months of yoga training. The Weight and Height were measured by weighing Machine and Stadiometer respectively. They were measured for the calculation of Body Mass Index (BMI = Weight in kg/Height in meter<sup>2</sup>) and for measuring the percentage of Body Fat, Skin Fold Caliper was used. Similarly, the physiological parameters were assessed by recording the blood pressure (S.B.P and D.B.P) and pulse rate before and after six (6) months of regular yogic exercise or training. The subjects were randomly selected for the study as subjects. To measure the blood pressure mercury sphygmomanometer was used and pulse Rate was recorded after a rest for 30 minutes in right radial artery by Palpatory method. For statistical analysis and Interpretation of data ‘t’ test was conducted at 0.05 level of significance. The random sampling method and random group design were used for the study.

The selected Anthropometrical and Physiological variables and their measuring instruments and units of measurement are given

Sl. No.	Variable	Instrument	Unit
1	Height	Stadiometer	cm
2	Weight	Weighing machine	kg
3	BMI	Carat scan	Kg/m <sup>2</sup>
4	Fat (%)	Skin Fold Caliper	cm
5	Pulse Rate	Palpatory Method	Beats/min
6	S.B.P	Sphygmomanometer	Mm of Hg
7	D.B.P	Sphygmomanometer	Mm of Hg

**Table 1:** Significant difference of Pre-test and Post-test within the age group of 18-22 years male on Anthropometrical Variables.

Sl.No	Physical Characteristics	Test	Mean	SD	t-test	Significant
1	Weight (In KG)	Pre-test	50.50	2.50	2.50	
		Post-test	50.80	2.70		
2	BMI	Pre-test	25.75	2.10	2.40	
		Post-test	20.60	2.40		0.05
3	Fat (%)	Pre-test	30.40	1.75	2.30	
		Post-test	20.50	2.20		

\*Significant at 0.05 level

Results of the study have been shown in Table-1. It revealed that there were Significant difference in Weight, BMI and Fat (%) within the age group of 18-22 years male because the calculated value of ‘t’ (2.52), (2.45) & (2.35) were more than the tabulated value (2.05) at 0.05 level of significance. So the result is significant.

**Table 2:** Significant difference of Pre-test and Post-test within the age group of 18-22 years male on Physiological Variables.

Sl. No	Physiological Characteristics	Test	Mean	SD	t-test	Significant
1	Weight (In KG)	Pre-test	57.60	2.50	2.20	
		Post-test	70.50	1.70	10	
2	BMI	Pre-test	125.45	2.10	2.40	
		Post-test	115.45	2.15		0.05*
3	Fat (%)	Pre-test	85.55	1.45	2.45	
		Post-test	75.35	2.20		

\*Significant at 0.05 level

Results of the study have been shown in Table-2. It revealed that there were significant difference in Pulse Rate, Systolic Blood Pressure and Diastolic Blood Pressure of the above 45 years male because the calculated value of 't' (2.10), (2.36) & (2.45) were more than the tabulated value (2.05) at 0.05 level of significance. So the result is significant.

**Results & Discussion:-**The findings of the present study reveals that there were significant difference found in reduction in the pulse rate, Systolic Blood Pressure and diastolic Blood Pressure after Six (6) months of yoga practice. The mean pulse rate (beats/min) before yoga was 78.60 which reduced significantly to 72.50 after six months of yoga practice. The mean systolic blood pressure before yoga practice was (mm of Hg) 127.50 and after six months it was lowered to a highly significant level of 120.50. The mean diastolic blood pressure before yoga was 88.60 and it was reduced significantly to 80.50. Similarly, the result of Weight, BMI and Fat (%) were also significant at 0.05 level after the Six (6) months of yoga practice.

### Conclusion

On the basis of the results obtained from the present empirical investigation and within the limitation, the following conclusions are drawn after giving the six (6) months of yoga practice.

- 1) The Anthropometrical parameters i.e the Weight, BMI and Fat (%) were significantly reduced after giving the six (6) months of yoga practice.
- 2) The Physiological parameters i.e the Pulse Rate, Systolic Blood Pressure and Diastolic Blood Pressure were significantly reduced after giving the six (6) months of yoga practice.

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