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## Effects of yogic exercise on health-related fitness variables of women

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### Abstract

The aim of the study is to determine the effects of yogic exercise on health related physical fitness variables including muscular Strength, muscular endurance and flexibility. 50 healthy women's within the age group of 17-21 years were selected randomly from the Anand city of Gujarat to participate in the study. Subjects were assigned into two groups: (A) Yoga Group (n = 25) and (B) Control Group (n = 25). In experimental group, Yogic exercise group was performed 60 min per day, 6 days per week for 8-week. The subjects were evaluated pre and post the 8-week training program. The paired sample t-test was used to assess the between-group differences for dependent data to assess the Post-Pre differences. Results indicated that the health related physical fitness variables including muscular Strength, muscular endurance and flexibility ( $p < 0.05$ ) significantly improved in yogic exercise group compared with the control one. These findings indicate that regular yogic exercise can elicit improvements in the health-related aspects.

**Keywords:** Health, physical fitness, yoga

### Introduction

Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity (WHO, 1948). The inappropriate lifestyle, diet and stress of today's age are the main cause of inadequate health of people who lead to obesity and diabetes. A healthy person is not only physical fitness but also more decisive, it is also mentally healthy. Yoga is a practice that connects the body, breath, and mind. It uses physical postures, breathing exercises, and meditation to improve overall health. Yoga is a great way to work on your flexibility and strength. Yoga is a spiritual, mental and physical practice that has been around since ages. With time, people have discovered a number of health benefits associated with yoga. Yoga does more than burning calories and strengthening muscles, it is a workout which involves both body and mind (TNN, 2016). Physical exercise in any organised activity that involves continuous participation and effects on whole body. Exercise occupies a leading role in keeping a person fit. It will be quite difficult to adjunct one's life in terms on stress, diet, and sleep and so on without proper exercise. Regular yoga practice helps to maintain normal healthy lifestyle and physical fitness (Indranil, 2017), Yoga training significant improvement in respect to Cardio respiratory endurance, Body Composition, flexibility and muscular strength (Bedekar and Hande, 2017) <sup>[1]</sup> and as a result this study was undertaken to find out the effect of yogic exercise on health-related fitness variables of Anand city women.

### Materials and Method

#### Selection of subject

For the present study, 50 healthy women's within the age group of 17-21 years were selected randomly from the Anand city of Gujarat. All the subjects went through a medical examination performed by Physicians.

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**Table 1:** Selection of variables and criterion measures.

No	Variable	Test Items	Mea. Unit
1	Muscular Strength	One Minute Push Up Test	Nos.
2	Muscular Endurance	One Minute Bent Knee Sit Ups Test	Nos.
3	Flexibility	Sit and Reach Test	Centimeter

### Experimental Design

The remaining fifty ( $n = 50$ ) subjects were randomly divided into two groups: (A) Yoga Group ( $n = 25$ ) and (B) Control Group ( $n = 25$ ). In experimental group, Yogic exercise was performed 60 min per day, 6 days per week for 8-week under the direct supervision of a trained yoga expert. This practical session utilized a standard sequence of selected Asanas, Pranayamas and Relaxation Techniques. Subjects in the control group did not participate in any physical

training program.

### Statistical Analysis

The data were analyzed by applying descriptive statistics. The paired sample t-test was used for baseline group comparisons and changes in differences before and after in the control and yoga groups. The level of significance was set at 0.05.

### Results and Discussion

**Table 2:** Descriptive analysis of pre and post test mean of yogic exercise group and control group on selected health-related fitness variables

Variable	Group	Pre Test		Post Test		'T' Value	Sig. (2-tailed)
		Mean	S.D	Mean	S.D		
Muscular Strength	YEG	10.16	1.86	11.72	1.46	10.16*	0.00
	CG	10.00	1.58	10.28	1.24	1.77	0.09
Muscular Endurance	YEG	21.80	4.60	24.16	4.70	11.86*	0.00
	CG	21.60	3.51	21.92	3.32	1.55	0.13
Flexibility	YEG	17.74	1.41	20.82	1.38	20.66*	0.00
	CG	17.70	1.50	18.04	1.66	1.58	0.12

\*Significant at .05 level. YEG-Yogic Exercise Group and CG-Control Group.

The changes in variables before and after the study in both groups are shown in Table 2. Muscular Strength, muscular endurance and flexibility were significantly increased in the yogic exercise group ( $p < 0.05$ ). No significant changes were found in muscular Strength, muscular endurance and flexibility in control group ( $p > 0.05$ ).

### Conclusion

The findings revealed that yogic exercises had an impact on some of the parameters measured in this research and helped them improve.

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