

# Effect of Walking and Suryanamaskar on Body Mass Index of Obese Men

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## Abstract

The purpose of the present study was to analyze the effect of Walking and Suryanamaskar on Body Mass Index of obese men. Forty five (N=45) obese men were selected at Pondicherry region. Their age ranged from 40 to 55 years. The subjects were randomly divided into three equal groups, Group I Walking, Group II Suryanamaskar and Group III Control each consisting of 15 subjects. Two experimental groups were participated in two different training programmes i.e. Walking and Suryanamaskar for the duration of six weeks for five days in a week in the morning hours between 6.00 am to 7.00 am and control group did not participated in any training except their daily routine works. The data collected before and after the training programme. Analysis of co-variance (ANCOVA) and Scheffe's Post Hoc test were applied to find out the significance of mean difference among the three groups. The results show that the obtained 'F' ratio value of Body Mass Index 4.116 was significantly higher than the table value 3.23 ( $p < 0.05$ ). there was a statically significant decrease in body mass index for both the groups. The findings of the study indicated that the significant reduction on Body Mass Index for the walking group is better than the Suryanamaskar group. But both the groups have shown beneficial effects when compared to the control group.

**Keywords:** Body Mass Index, Suryanamaskar, Walking.

## Introduction

The researcher has taken interest on the isolated and combined effect of yogic practices on selected Body Mass index obese men are needed to analyze the various changes takes place in their physical level before and after the training period.

The researcher took this topic because there are lack of literature and studies in the same fields, and especially on for Obese men. Hence Researcher wants to find out the effect of each practice separately to Obese Men.

Obesity among men is increasing day by day because of current life style and food habits and lack of exercises. Obesity men have high cholesterol deposit, more sweating, increased blood pressure, etc., as well as psychological like stress and aggression etc. as well as bio-chemical problems like cholesterol level etc., Thus the investigator has chosen these variables for the present study. Body Mass index as a dependent variables and yogic practices and walking as a independent variables.

Walking is one of the easiest, and cheapest, ways to improve your fitness. It is a light cardiovascular exercise, which means it improves the condition of your heart and lungs. It is also a weight bearing activity, meaning that it will help to improve your bone density. Walking works the muscles of your lower body while being low impact, which means it, does not put stress on your joints.

Suryanamaskar is the complete sadhana, spiritual practice; in itself for it includes asana, pranayama mantra and meditation techniques. It is an excellent group of asanas with which to start morning practice. However, it is an effective way of loosening up, stretching, massaging and toning all the joints, muscles and internal organs of the body. Its versatility and application make it one of the most useful methods of inducting a healthy, vigorous and active life, while at the same time preparing for spiritual awakening and the resulting expansion of awareness.

Obesity is a medical condition in which excess body fat has accumulated to the extent that it may have an adverse effect on health, leading to reduced life expectancy and/or increased health problems. The obesity in general, it is a chronic condition defined by an excess amount body fat. A certain amount of body fat is necessary for storing energy, heat insulation, shock absorption, and other functions. The normal amount of body fat (expressed as percentage of body fat) is between 25%-30% in women and 18%-23% in men. Women with over 30% body fat and men with over 25% body fat are considered obese.

### **Statement of the Problem**

The purpose of the study was to investigate the effect of walking and Suryanamaskar on Body Mass Index of obese men.

### **Objective of the Study**

The objective of the study was to find out the effect of walking and Suryanamaskar on Body Mass Index of obese men.

It was hypothesized that the effect of walking and Suryanamaskar on Body Mass Index of obese men during pre and post tests would differ significantly.

### **Methodology**

The purpose of the study was to find out the effect of walking and Suryanamaskar on Body Mass Index of obese men. To achieve this purpose of the study, forty five obese men from Pondicherry were selected as subjects at random. The age of the subjects were ranged from 40 to 55 years. The selected subjects were divided into equal groups of fifteen subjects each. Such as Group I acted as walking, Group II acted as Suryanamaskar and Group III acted as control. Group I was administered the walking practice. Group II underwent Suryanamaskar practice for five days per week for six weeks. Group III acted as control in which did not undergo any special training programme. The training program was scheduled as 6.00 am to 7.00 am for five days in a week. All the subjects of three groups were tested on Body Mass Index at prior to and immediately after the training programme. The analysis of covariance (ANCOVA) was used to analysis the significant difference, if any in between the groups. The level of significance to test the 'F' ratio obtained by the analysis of covariance was tested at 0.05 level of confidence, which was considered as an appropriate.

## Results and Statistical Analysis

The analysis of covariance on Body Mass Index of the pre and post test scores of walking group, Suryanamaskar group and control group have been analyzed and presented in table.

**Table-I**  
**Analysis of Covariance of the Data on Body Mass Index of Pre and Post Test Scores of Walking, Suryanamaskar and Control Groups**

Test	Walking Group	Suryanamaskar Group	Control Group	Source of Variance	Sum of Squares	df	Mean Square	'F' ratio
<b>Pre Test</b>								1.102
Mean	31.88	32.58	32.63	Between	5.25	2	2.264	
SD	1.52	1.29	1.78	Within	100.04	42	2.382	
<b>Post Test</b>								4.116*
Mean	30.57	31.55	32.28	Between	21.99	2	10.99	
SD	1.70	1.32	1.85	Within	112.19	42	2.67	
<b>Adjusted Post Test</b>								5.426*
Mean	31.02	31.35	32.04	Between	7.81	2	3.906	
				Within	28.8	41	0.720	

\*Significant at 0.05 level of confidence

The table value required for significance at 0.05 level of confidence with 2 and 42 were 3.23 respectively.

Table-I shows that the pre-test mean of walking group, suryanamaskar group and control group are 31.88, 32.58 and 32.63 respectively. The obtained 'F' ratio of 1.102 for pre- test score was less than the table value of 3.23 for df 2 and 41 required for significance at 0.05 level of confidence on body mass index.

The post-test mean of walking group, suryanamaskar group and control group are 30.57, 31.55 and 32.28 respectively. The obtained 'F' ratio of 4.116 for post- test score was greater than the table value of 3.23 for df 2 and 42 required for significance at 0.05 level of confidence on body mass index.

The adjusted post-test mean of walking group, suryanamaskar group and control group are 31.02, 31.35 and 32.04 respectively. The obtained 'F' ratio of 5.426 for adjusted post- test score was greater than the table value Of 3.23 for df 2 and 41 required for significance at 0.05 level of confidence on body mass index.

**Table-II**  
**Scheffe's Test for the Difference between the Adjusted Post**  
**Test Paired Means of Body Mass Index**

<b>Control Group</b>	<b>Suryanamaskar Group</b>	<b>Walking Group</b>	<b>Mean Difference</b>	<b>Confidence Interval</b>
32.04	31.35	-	0.69	0.96
32.04	-	31.02	1.02*	0.96
-	31.35	31.02	0.33	0.96

\*Significant at 0.05 level of confidence

### **Discussion on Findings**

The study was framed to analyze and compare the effect of walking and Suryanamaskar on Body Mass Index of obese men (aged 40 to 55 years). The subjects were undergone the training on walking and Suryanamaskar continuously for a period of twelve weeks for five days in a week. The selected variable is Body Mass Index. The main aim of the study was to maintain and enhance the efficiency of physical fitness.

The result of the study is in consonance with the findings of the following studies by B.Gutin.et.al. (May 2002), P.Poirier. J. P. Despres (August 2001) and E. S. Engelson, et.al. (October 2006).

### **Conclusion**

It was observed that the pre-test results, it was noticed that there was no significant differences between control and experimental groups. While the post test results of control and experimental groups had been analyzed statistically and revealed that, there was a significant mean difference in favor of experimental groups.

In the analysis of co-variance the Body mass index among control and experimental groups, a significant difference was seen and which source light on the applicable effect of six weeks of walking and Suryanamaskar. From the statistical analysis it is clear that both training programmes had its own effects. Walking showed more effects in decreasing the Body Mass Index when compared to Suryanamaskar and control groups.

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