

# EFFECT OF YOGIC EXERCISES ON OBESITY

Dr. Mahender Singh\*

\*HoD, Dept of Physical Education, PG Govt. College, Sector-46, Chandigarh

## Abstract

In the present study 40 obese (Over Weight) subject were selected and was divided into the equal groups of 20 subjects each. One group was as an experimental group & other was control group. The training of yogic exercise was given to experimental group and the control group was not given any kind of yogic exercise. The yogic training program of 42 days was organized for 30 minutes daily. The study revealed that a regular practice of yogic exercises for 42 days significantly reduce the weight of female subjects and improve the performance.

**Key words: Yoga, yogasanas, sat-kriyas, obesity and weight**

## Introduction:

We all know that it is self evidence that the fit citizens are a nation's best assets and weak ones its liability. It is, therefore, a responsibility of every one country to promote physical as well as psychological wellbeing of the citizens. In general the success in the life is attributed to the degree of physical fitness, technique and tactics within the constraints of his or her ability. The nation which strives for physically and psychologically fit citizens makes high rank in the word. So it is said, a healthy mind lives in a healthy body. There are people who have all material comforts and modern amenities at their command but even than they are worried about health. Thus we find everyone is sick having mental as well as physical problems. Today the world is looking for solution of the problems like: unhappiness, restlessness, emotional imbalance, hyper tension, stress, BP etc. Obesity & over weight is one of them. Obesity is one of the most common disorders in medical practice and the most frustrating and difficult to manage.

## Concept of Yoga:

The term `Yoga` has been derived from Sanskrit root-` Ujir`, meaning yoke, to unite, to put together, to combine, to bind together in the union. Literally, it means the union of an individual soul with the universal spirit, which actually is the ultimate aim of the discipline of yoga. There are some definitions as Maharishi Patanjali has attempted to define the term clearly in his "Yoga Sutra"

“YOGASHAYA CHITTVRITI NIRODHAH”.

According to Kathopanished,

“YOGASHAYA KARMA SVA KAUSHALAM”.

Patanjali has defined, the sense of the yoga in his 'Yoga Sutra' by Eight Limbs of yoga: Yama, Niyama, Asana, Pranayama, Partayahar, Dharna, Dhayana and Samadhi

The eight accessories of yoga are known as "Ashtang Yoga", and first five are external observance and last three are as mental discipline. Yogasana are one of the important parts of yogic exercises which contribute to

physical as well as mental health. Asanas are certain special patterns of postures i.e. Cultural, Meditative and Relaxative posture that stabilize the mind and body. Suryanamaskar (Asanas) works on tone and equilibrium at physical and emotional level and one experiences stability comfort, ease and promotion of the health and fitness of human being.

Empirical studies in the field of the sports psychology clearly demonstrate that yogic exercises (Asanas) are very useful in getting maximum performance from the athlete (Connolly, 1984). Engaging in these exercises help to reduce stress before an event and appreciate subtle difference in muscle tension.

Certain other investigation, Vishal and Madhu (1985), conducted a study on “A study of the effect of yogic practices on certain Psychological and Physiological Parameters”. Subjects were given a regular training of yoga practices for the period of six months. Post-test was done after six months on the same subjects and the results was found that the yogic exercises had favorable effect on certain psychological and physiological parameters.

### **Shat Kriyas:**

Dhauti, Bashti, Neti, Trataka, Nauli and Kapalbhathi are six cleansing processes mentioned in Hatha yoga. These are the techniques of purification. The specific organs or the parts of the body are cleaned by these practices. In short, these kriyas remove the impurities and help us to maintain the health of the body and harmony of the mind.

Literally, Kapal Bhati means an exercise that makes the forehead shining. It is one of the six cleansing processes (Shat-kriyas) described in Hathayoga. This purificatory process involves the breathing organs, nasal passages and the sinuses in the skull that are cleansed effectively. Gherand Samhita mentions three varieties of Kapal Bhati.

Kapal Bhatti is essentially a voluntary abdominal breathing Puraka and rechaka are gone through in a quick succession with the help of the abdominal muscles. There is no retention of breath in Kapal Bhatti. Rechaka is more important part of this practice. In normal breathing the process of inhalation is active and the phase of exhalation is passive but in Kapal Bhatti, puraka is passive and rechaka is active in nature.

### **Meaning of obesity:**

The world obesity is derived from the Greek words “ab” meaning excess and “edere” meaning over eating. It is a condition in which there is an imbalance between the eating of food and consumption of the food; resulting the eating in increase in weight. Strictly speaking obesity is a state in which excess fat accumulates and deposits itself in various parts of the body, thus increasing in weight. Obesity is defined as an excess of adipose tissue .It is a condition in which there is an imbalance between the eating of food and consumption of the food resulting in increase in weight. Yoga can play a very important roll if you wish to treat obesity successfully and effectively.

Dhananjai, Sadashiv, Tiwari, Dutt and Kumar (2013) conducted a study on reducing psychological distress and obesity through yoga one can reduce weight with no diet restrictions. Researchers also found that yoga is an effective tool to reduce depression and obesity in obese subjects.

Shinde, Shinde, Khatri and Hande (2013) conducted a study on yoga and obesity and its effects on pulmonary function. It was determined that due to yoga mind and body becomes relaxed, and it increased flexibility and relaxation. It was also found that obese participants reached and sustained a normal weight with regular yoga and it also improved in pulmonary function.

According to Bidwell et al, 2012; Sarang and Telles (2006), Yoga was a good in resulting activation through the practice of asana and also the types of pranayam helps to reduce obesity.

In the association of American Heart annual conference (2006) disease due to obesity and prevention, researchers found that students in the yoga group showed a 5.7% decrease in average body mass index and weight loss of six pounds whereas control group showed a non significant increase in average body mass index.

Sunder and Bhanupriya (2008) found that six months of regular yoga practice was resulted in reduction in body weight, reduction in waistline and hipline participants. Udupa (1985) found that yoga therapy was very effective in the correction if body weight, reduction of abdominal girth, improvement in functions of pancreas etc.

### **Objective:-**

The main objective of the study was to find out the effect of yogic exercises on obesity.

### **Hypotheses:-**

- (i) There will be significant difference between pre and post test condition of experimental group on weight loss.
- (ii) Control and Experimental group are likely to differ on weight loss.

### **De-Limitations:-**

1. The study was conducted on a relatively sample of 40 subjects for duration of 42 days.
2. Subjects were examined two times during the study.
3. The equipments used to measure weight of subject were ordinary electronic weighting machine and measuring tape.
4. The study was limited only to the one parameters i.e. weight of the subjects.
5. The study was limited only to yogic exercises i.e. Surya Namaskar Asana and Kapal Bhatti (Shat Kriya).

### **Limitations:-**

- Only female students of Govt. College-46, Chandigarh included for the studies. Only those subjects have been selected, who were equal to or more than 5 kg over weight.
- The subjects who didn't have high B.P., Low B.P., Asthma, Giddiness, injuries or surgery were taken.
- The subjects having any cardio vascular disease were not included
- These were no control on the diet of subjects.

**Methodology: -**

In the present study 40 obese subject were selected and was divided into the equal groups of 20 subjects each. One group was as an experimental group & one was control group. The training of yogic exercise was given to experimental group and the control group was not given any kind of yogic exercise. The yogic training program of 42 days was organized for 30 minutes daily. The tests were conducted on two occasions, once before the training of yogic training & second after completion of training of yogic training. After the completion of training the weight of subjects of experimental & control groups were compared and results were statistically analyzed.

Sr. No	Name of groups	No. of subject	Exercise given
1	Experimental	20	Yogic exercises
2	Control	20	Nil
Total	-	40	-

These groups were pre and post tested for the selected variables i.e. is weight

**Sampling:-**

In the present study, a group of 40 obese/over weight female students were selected. The range of the age group was above twenty years. These 40 subjects equally divided to two groups each group consists of 20 subjects. The nature of the sample is stratified random sampling. The study was confined to obese subject who were equal to or more than 5 kg over weight.

**Research Tools:-**

- Electrical weight machine
- Measuring tape

**Results:-**

After collection of data the results obtained through the pertinent statistical analysis. Because the data has no utility unless, they are interpreted by the statistical techniques. The obtained data was analyzed by applying ANCOVA as given below:

Table – 1

Descriptive analysis of Experimental and Control Group Measured in Post testing on Weight

Groups	Observed Mean	Adjusted Mean	N
Control group	60.03	60.08	20
Experimental Group	55.98	55.94	20

Table 1 indicates that the mean value of experimental group and control group during posttest were 55.98 and 60.03 respectively. Further it shows that the adjusted mean scores of the students of Experimental Group during the post test on weight is 55.94, the adjusted mean scores of the female students of Control Group during

the post test on weight is 60.08, these values are different from that of the observed mean values, this shows that the effect of covariant (Pre Test) is eliminated in comparing the effectiveness of the treatment in the post testing.

Table – 2

## Analysis of Co-variance the Post Test Data on Weight

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Pre Weight	2.51	1	2.51	2.03	.162
Group	171.12	1	171.12	134.6	.001
Error	47.04	37	1.27		
Total	218.15	38			
Corrected Total	47.04	37			

a. R Squared = .97 (Adjusted R Squared = .94)

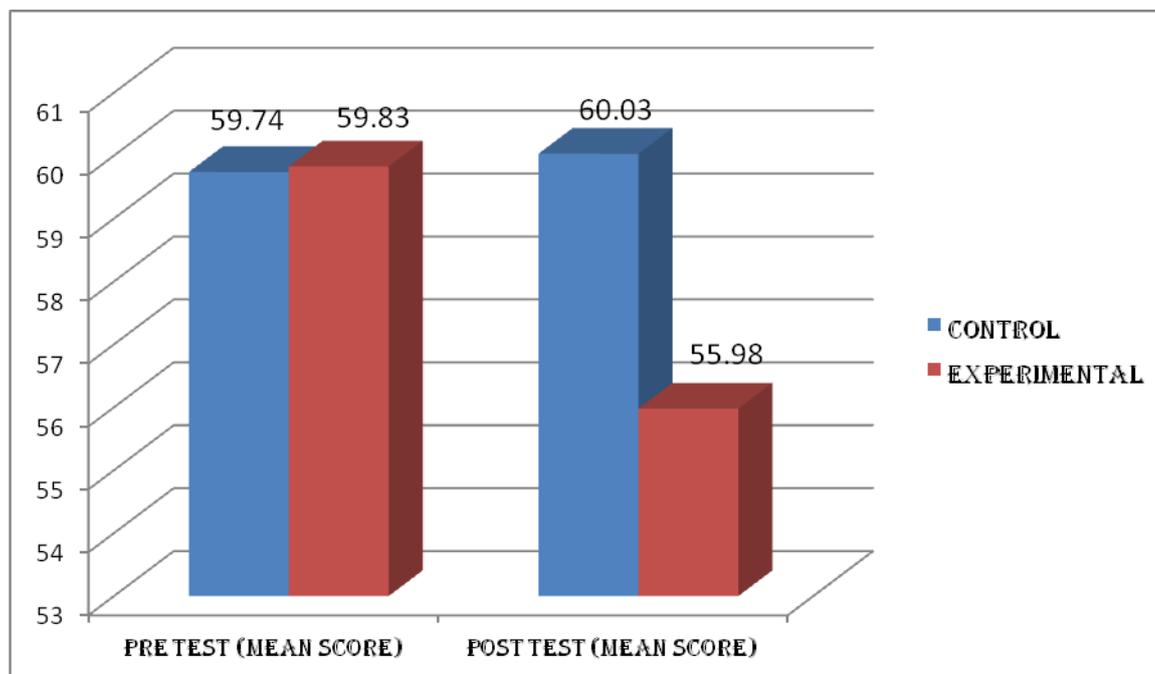
Table no 2 shows that the f - value is 134.60 after comparing the adjusted mean of both groups of the students during the post test on weight. The f-value 134.60 is significant at 0.05 level of significance, with the degree of freedom (1, 37). Hence both groups differ significantly on weight at post testing i.e., after the yogic training. Since the mean scores of the female students of experimental group is 55.94 which is lower than the mean scores of the female students of control group 60.08. It may therefore be said that the group given yogic training has significantly reduce weight as compare to reduction in weight of the group not given yogic training.

On the basis of above findings it can be concluded that yogic exercises have facilitative effect on weight loss.

**Graphic presentation: -**

Graph shows the comparison of pre and post mean scores of experimental group and control group on weight. It signifies, there is greater reduction in weight due to 42 days yogic training program. It shows a great reduction in weight of subjects of experimental group i.e. 4.05 kg, while in control group increase 0.29 kg in 20 subjects. Hence it is clear that yogic exercises are better and effective training program for reducing weight.

Graph No 1



**Comparison of Mean Scores of Control and Experimental Group on Weight (kg)**

### Discussion:

In totality the finding of present study provide ample support to the conclusion that the regular practice of yogic exercises burns more calories and also helpful in reducing the weight of obese persons.

These results can be supported by the studies e.g. Colorado State University has proved that anaerobic exercise actually burns more than five times more calories than aerobic exercise. Also aerobic exercises can typically burn 25% muscle and 75% fat for body energy but anaerobic, exercise burns 100% fat for body energy. It's also proved that one hour of anaerobic exercise i.e. yogic exercises is worth more than five hours of aerobic exercise to burn calories and fat.

### Main findings:-

The main findings of present study can be summarized as under:

- Yogic exercises significantly reduce the body weight.

### Conclusion:

So the present study shows that the regular practice of yogic exercises has reduced to a great extent the weight and improves their performance of female students. Practically speaking yoga is a science which deals with the health of the body and harmony of mind. It is right to say that yoga is a way of healthy life.

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