

Effect of Surya Namaskar on weight loss in obese persons

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Abstract

Surya namaskar is twelve step moderate exercise. It is always claimed that it makes the practitioner fit and proportionate. This dynamic exercise develops strong muscles and joints. Today the problem of obesity is increasing among children and mid-age people. The aim of this study was to observe the effect of Surya namaskara on obese persons towards reduction of weight. 30 persons from Srinagar, Garhwal having average age of 25-30, weight 70-82.5 kg and height 155-167 cm. participated as subjects. All of them were in normal healthy condition. The literature mentions weight loss due to regular practice of Surya namaskara and improvement in the performance. The experimental study revealed that a regular practice of Surya namaskara for 30 days significantly reduced weight of 15 obese persons of the experimental group. This research confirms that the obese persons can significantly reduce their weight with the help of Surya namaskara exercise.

Key words: *Surya Namaskara*, weight loss

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Introduction:

Yogic techniques though mild in nature, when used accurately and regularly, can keep one healthy, fit and proportionate (4, 6). Suryanamaskar can be regarded as a moderate isotonic exercise. Though it includes some postures that are similar to yogic asanas, Surya namaskara is not yoga because its nature is dynamic. It can be done by children, young and old men and women alike. The Rig Veda says:

Sun is the soul of the entire world. Sun is the only god which bestows (us) good health. Therefore we should worship the Sun for health and long life (3).

Surya namaskar provides vigour and vitality and keeps us healthy and fit. The Sun moves through 12 *Rashis* or zodiac signs and therefore it has got 12 names. One round of Surya namaskar consist of 12 steps or postures, designed in such a way that our muscles and joints become stronger and yet flexible. The respiration is also adjusted as per the posture and the movement. Therefore Surya namaskar increases blood circulation. This has an influence on the endocrine system. It makes us more alert, energetic and brightens up our intellect. It maintains the freshness of our mind.

Hypothesis:

Surya namaskar practice would significantly decrease weight in obese persons.

Objective:

To study the effect of Surya namaskar on obese persons in respect of their weight.

Twelve Mantras of Surya namaskar:

There are twelve names of Lord Sun (Surya) which are recited with or without beeja mantra, one by one before each round of Surya Namaskar. If Surya Namaskar is done with these mantras, one is greatly benefitted with Sun energy. These are:

1. *Om Mitraya namah*
2. *Om Ravaye namah*
3. *Om Suryaya namah*
4. *Om Bhanve namah*
5. *Om khagaya namah*
6. *Om pushnaye namah*
7. *Om hiranyagarbhaya namah*
8. *Om marichaye namah*
9. *Om Adityaya namah*
10. *Om Savitre namah*
11. *Om Arkaya namah*
12. *Om Bhashkaraya namah*

Technique of Surya namaskar

One round of Surya Namaskar consists of following twelve postures:

Stand upright and join both the feet. The heels should be united while the toes should be apart. Head, neck and body should be in one line. Join the hands in namaskar position. Breathe normally. This is the initial posture. When the round is over this is 12th posture. Now chant First name of the Lord Sun and start first round of Surya namaskar.

1. While inhaling, slowly lift the hands and bend backward.
2. While breathing out bend forward, keeping the knees straight, rest the hands on the ground on both sides of the feet. Try to bring the forehead in contact with the knees.
3. Rest the palms on the ground. While breathing in take the right leg back and inhale.
4. Take the left leg behind, holding the breath. Join both legs at ankles and toes. Bring the buttocks, waist and head in one line like a wooden plank. Look to the front.
5. While exhaling touch the ground with the knees, bend forward and touch the forehead to the ground. Palms are fixed at one place since the position of three.

6. While holding the breath, with the support of the arms, lie supine and touch the forehead to the ground, assuming the pose of Sashtang namaskar.
7. Now inhale and assume the pose of Sarpasana by lifting the chest above and straitening the hands.
8. Take a posture like inverted V by pulling the back up. Hold the breath.
9. Exhale, put down both the knees and come to the position five.
10. While inhaling bring the right leg in between the two palms and come to the position of three.
11. While exhaling move the left leg and join it with the right foot. Come to the position two.
12. Now inhale and stand up with palms in namaskar position like initial posture. This completes one round of Surya Namaskar.

Obesity:

When a person becomes overweight, increases in size with abnormal shape and has too much unnecessary fat deposited in his body, he is suffering from the disease of Obesity. Extra fat in his body is harmful to his other organs. Obese person is often prone to suffer from hypertension, heart trouble, constipation, diabetes, skin disease etc. Obesity can occur at any age in either sex. Its incidence is higher in persons who consume more food and lead sedentary life. Wrong food habits, faulty lifestyle, laziness, no physical work, too much sleep, disturbed digestion and disturbed function of the thyroid or pituitary glands.

Methodology:

30 obese persons with the age range of 25-30 yrs, weight 70-82.5 kg and height 155-167 cm. were selected for the study. They were divided into two equal groups of 15 subjects each. One group was treated as an experimental group and another one as control group. The training of Surya namaskar was given to only experimental group. The control group was not given any kind of yogic exercise. The training programme of 30 days was organized for 60 minutes daily practice of Surya namaskars at 6.00 to 7.00 a.m. The tests were conducted on two occasions 1.Before the training of Surya namaskar and 2. After 30 days of practise of Surya namaskar. After the completion of the practice period, the weight of subjects of experimental & control groups were measured compared and the results were statistically analyzed.

Research Tool:

Digital weighing machine

Results:

The statistical analysis was done by using 't' test for the following comparisons.

1. Intra group comparison
2. Inter groups Comparison

1. Intra group comparison: The object of intra group comparison was to examine pre and post scores of each group. On the basis of this comparison it would help to reach the conclusion aided with the following steps:

1.1 Control group

TABLE-1

Comparison between pre & post-test mean scores of control group on weight (kg)

Variable	Conditions	Mean	SD	"T" value
Weight (kg)	Pre-test	77.62	3.59	0.041
	Post-test	78.01	3.39	

The study shows the results of the test of significance of difference in mean score of the control group between pre and post test. In control group the obese subjects did not show any change regarding weight. It may be noted

from the table no.1 of mean value that the subjects score 77.62 kg and 78.01 in pre and post conditions, respectively. The "t" value of -0.041 is not significant.

1.2 Experimental group:

TABLE-2

Comparison between pre & post-test mean scores of Experimental group on weight (kg)

Variable	Conditions	Mean	SD	"T" value
Weight(kg)	Pre-test	78.46	2.83	4.82
	Post-test	74.88	2.91	

The results show the pre and post condition of experimental group. It may be noted that mean value of the subjects are 78.46 kg and 74.88 kg

respectively. The "t" value of 4.82 at level 2.15 indicates that the practice of Surya namaskar has effect on weight loss.

2. Inter group comparison

TABLE-3

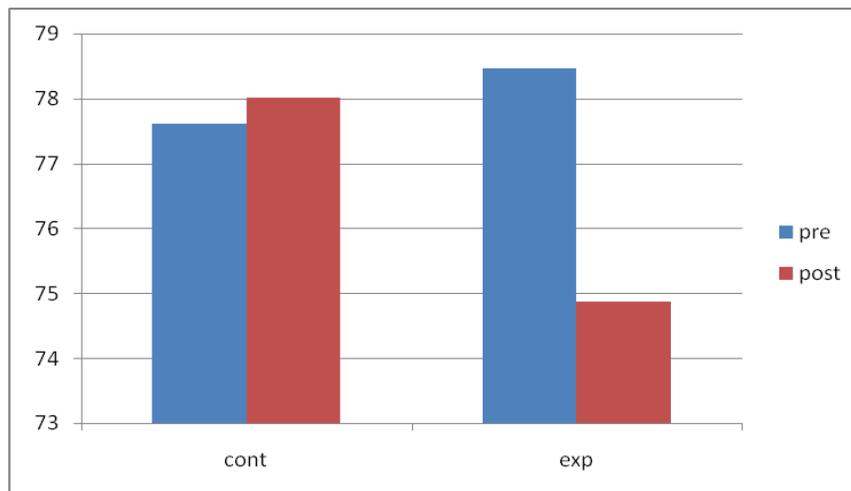
Comparison between post-test mean scores of Control and Experimental group on weight (kg)

Variable	Groups	Mean	SD	"T" value
Weight(kg)	Control group	78.01	3.39	0.02
	Experimental group	74.88	2.91	

Table no.3 presents the significance of mean difference between control and experimental group on weight and the control group has recorded higher mean score i.e. M=78.01 kg as compared to experimental group that is 74.88 kg.

Low score indicates improvement of experimental group on weight loss. The "t" value is 0.02 which is, however, insignificant at the 2.15 level.

Comparison of mean weight of control and Experimental group



Control group - Pre: 77.62, Post: 78.01
Experimental group - Pre: 78.46, Post: 74.88

Discussion:

Results of this study clearly indicate that one month regular practice of Surya namaskar causes weight loss in the obese persons. Surya

namaskar is a moderate physical exercise which is linked with the breathing. It consumes calories moderately without much fatigue or exhaustion.

Since it is an isotonic type of exercise it does not increase the tension but increases the metabolic rate. Dynamic stretches in forward and backward direction and rhythmic positive and negative pressure changes in the viscera stimulate various vicerceptors. That is why all the systems work at the optimum level. The intensity of the exercise is increased by adding one or two rounds to everyday practice. This increases the stamina and cardiovascular endurance. It mobilizes the stored or accumulated fat by increasing the blood circulation. The practitioner has little sweating but at the same time experiences refreshed feeling. It has been seen that even low activity such as 10 minutes Om recitation and kapalabhati can bring out psycho-physiological changes in the body (1, 2). Therefore it is possible that the moderate exercise of Surya namaskar would bring about physical changes. Measurement of weight is an easy way of measuring metabolic changes (5). In the present study the obese persons have lost almost 4 Kgs in one month which is considered physiologically normal. The diet of these persons was not controlled and still the weight loss effect is seen. That means obese persons will have to continue such moderate exercise of Surya namaskar for more than one month till they reach their weight loss target.

Regular practice of yoga with proper guidance has different effect on obesity, which is permanent in nature than other techniques for obesity reduction (7). The dynamic series known as *Surya namaskara* is most important for obesity management.

Conclusion:

The present study establishes that one month regular practice of Surya namaskar helped obese persons to reduce their weight.

Recommendation:

Persons having obesity should practice maximum number of Surya namaskar at a stretch regularly for a few months to shed the extra fat. After reaching the target weight loss they can reduce the intensity by decreasing number of rounds in a daily practice.

Scope for further study:

We intend to carry out further study by controlling the diet and with fixed intensity as well as regular follow ups to establish maintenance dose of Surya namaskar to keep control on weight.

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