

## **The Assessmentchandrayana Vrata And Yogic Practicess On Obese Women**

**K. Krishna Sharma<sup>1</sup> & Rangappa<sup>2</sup>**

1. Professor and Chairman, Dept. of Human consciousness and yogic sciences, Mangalore University, Mangalagangothri
2. Research Scholar, Dept. of Human consciousness and yogic sciences,
3. Mangalore University, Mangalagangothri

### **Abstract**

The effect of yoga therapy to control body weight and Body Mass Index of the obese women” has been conducted under the guidance of Prof. K. Krishna Sharma. The aim of this study is to evaluate the effects of yoga therapy on Obesity in Women. 20 obese females, aged 25 to 48 years were randomly selected. 30 days practical sessions were conducted for a total of 10 subjects who are treated as Group I i.e, Experimental group. Another 10 subjects were selected for control group. The group I was given Chandrayana diet plan and selected yogic practices for one hour daily from 5.00 p.m to 6.00p.m the class were conducted In the Dept. of Human Consciousness and Yogic Sciences, Mangalore University. The session included a series of Asanas, Pranayamas and relaxation techniques. The control group was not exposed to any yoga practices. Body weight and Body Mass Index (BMI) were used as parameters. The parameters were measured both at the beginning and at the end of the study for both groups.

The results of various tests have been compared for the two groups through student’s paired “t” test. After Yoga therapy, the experimental group showed a significant result in all the parameters. Similarly significant results observed in the case of BMI ( $t=6.053897, p= 9.48E-04$ ), Weight( $t=6.021631, p=9.86E-04$ ) But there were no significant change in Control group. This depicts that the regular practice of the selected yogic techniques helped to bring down Weight and improve the activity level in the experimental subjects.

**Key Words:** Yoga Therapy, Obesity, Weight, BMI (Body Mass Index)

### **Introduction**

In many countries nowadays women are gradually becoming obese than men. Irregular food habits, stress, sleeplessness, hormonal imbalance and sedentary lifestyle are some of the factors which affect directly to the obesity in women. Rise in the prevalence of obesity is one of the alarming public health issues facing the world. It is the main underlying cause of life threatening disorders like coronary heart disease, diabetes mellitus, atherosclerosis, hypertension, asthma, stroke, arthritis, cancer and also menstrual disorders. Obesity affects the women’s overall physical, psychological health and diminishes quality of life.

Obesity is the most hazardous factor found in modern sedentary society. The modern era of science and technology featured by increased standards of living with large number of luxuries, lack of physical activity with stressful living has created psychosomatic disorders in women<sup>2</sup>.

Obese women suffer emotionally and show withdrawal symptoms such as, they are usually shy to show themselves up. They also suffer abnormal hunger pangs and seem to be consumed with thoughts of food. Laziness and indolence becomes their second nature. In most cases, it is easy to ignore obesity in its early stage, especially when one is asymptomatic<sup>10</sup>. Regular practices of yoga prevent and

reduce body weight, stress levels, blood pressure, rate of progression of complications and severity as well.

In the present era, we are under threat from so many chronic diseases, life style disorders and non-communicable diseases etc. A major cause of all these diseases is improper lifestyle and stress. According to the Indian concept the root cause of all the diseases is accumulated impurities in the body<sup>1</sup>. The impurity causes the imbalance in tridosas. When the tridosas are in an imbalanced state, especially kaphadosa is aggravated, one has to practice kriyas. They are necessary to maintain tridoshas in a balanced state. Increased kaphadosa in the body leads to increased mass in the body. When the mass increases in our body it is the indication of imbalance in triguna too i.e. the grossness increases the tamoguna. It causes “avidya” in our mind. Avidya causes adhi and it further develops as vyadhi. Therefore the primary aim of all the yogic practice is to overcome the mental fluctuation (uncontrolled cittavrtti) which is the main cause of all type of stress.

When the imbalance occurs in the equilibrium of tridosas, it causes various diseased conditions<sup>6</sup>. The kaphadosha has nature of accumulation and medass stores in all over the body. The condition in which medass accumulated is excessive in the body is called obesity or “atisthaulya”. Hathayoga and Gherandasamhita emphasize the importance of purification of the body<sup>5</sup>. The root cause for most of the diseases is uncontrolled cittavrttis. In the yogic concept uncontrolled cittavrttis are the direct indication of the imbalance in trigunas (subtle level). Then gradually it manifests in physical level too.

**Patanjali yoga sutra explains:**  
*yoganganunsthana siddhiksayejnanade  
eptiravivekakhyateh”*

(Patanjala yoga sutra, II chapter, 28 Sutra)

By practicing the limbs of yoga one can be purified and he will accomplish the absolute truth<sup>7</sup>.

***kayendriyasuddhisiddhiksayattapasah***

(Patanjala yoga sutra, II chapter, 43 Sutra)  
By doing tapas one can accomplish the purification of the body and sense, also all kinds of asuddhi (including karma bondage) become decayed. Therefore the aim of yoga can be achieved through the purification of the body and mind<sup>8</sup>. Maharshi Patanjali tells “Kayendriyasiddhih Ashuddhikshayat Tapa sah” [II 43], the purification of body along with sensory organs which are the parts of mind can be achieved by adopting proper Tapas – Austerity. There are many ancient, traditional forms of tapas. One of the most ancient one known as Chandrayana Vrata.

Chandrayanavrata is mentioned in the book ‘Madana Maharnava Karma Vipaka Grantha’ to purify oneself. The Vrata dictates the food system as follows: 15 units (grasa) of food on the full moon day, gradually decreasing the units to zero. Thus fasting on the 15<sup>th</sup> day. From the next day onwards the units ascend gradually and the 15 units of food is to be taken on the full moon day.

Performing this Vrata will purify the person from all his sins. Doing it second time releases the sin of the past ten births. The sacrifice for various Gods during this vrata is equally important. Chandra is the preceding diety of this Vrata and so it is called CV.

With this idea present study has been introduced to see the therapeutic values. By reviewing the previous research works on the effects of yogic practices on fat accumulating Parameters by measuring body weight and Body Mass Index in a group of women, the present study is done to assess the effect of yoga therapy on controlling the body weight and BMI of obese women.

### **Review of literature:**

Yoga produces many physical and mental changes through its beneficial effects on endocrine, metabolic and neurohumoral processes. A review of index medicus, covering the last few years does show significant literature on the effects of yoga on obesity. The study was done by Dr Annapoorna K. & Dr Vasantalaxmi. K, 'Effects of Yoga therapy on Obesity and Quality of life In Women: A Longitudinal study' was shows significant result in the BMI, Waist- hip Ratio. Yoga training for 3 months on 25 obese females aged between 20 to 50 years, resulted in a significant reductions in all body weight measures such as decrease in Body Mass Index (0.001), Waist hip ratio (0.001), and in physiological measures such as Systolic Blood Pressure (0.01), Diastolic Blood Pressure (0.038), Pulse Rate (0.001) (P values < 0.05) all of which were statistically significant<sup>9</sup>.

Researchers from Hampton University in Virginia presented findings on the benefits of yoga and pranayama for teenagers at the American Heart Association's annual conference on Cardiovascular Disease Epidemiology and Prevention. Their study compared weight loss/gain in two groups of overweight high school students: 30 students who were taught 40 minutes of yoga and pranayama four times a week for 12 weeks, and 30 students who received no instruction. Neither group was instructed to diet or change food intake. Students in the yoga group showed a 5.7 percent decrease in average body mass index and weight loss of six pounds, whereas students in the control showed a non-significant increase in average body mass index<sup>3</sup>.

Shenoy Ramachandra K et al (2009) studied "The effect of selected yogic practices with chandrayanavrata on the body parameters". In this study an effort has been made to gauge the effect of Chandrayanavrata on the body parameters of the individuals who were randomly assigned two groups viz. experimental and

control group. as compare to the experimental group proves that chandrayanavrata works positively on the body parameters<sup>12</sup>.

### **Inclusion criteria:**

Age between 25-48 years  
BMI above 30%

### **Exclusion criteria:**

Women with pregnancy are excluded.  
The subject who undergone any Surgery within 6 months.

### **Materials and Methods:**

The present study was conducted to assess the effect of yoga therapy to control body weight and BMI in obese women. For the present study, 20 obese women with the age group 25 to 48 years were selected and divided into two groups, each containing 10. The first group of 10 subjects named 'Experimental group' was exposed to the Chandrayana diet plan and Yoga therapy session for 60 minutes once a day for 30 days. The yogic practices were conducted evening 5p.m to 6 p.m. The study was carried out at the department of Human Consciousness and Yogic Sciences, Mangalore University. In this practical session, Asanas, Pranayama and Relaxation Techniques were taught systematically by giving importance to each subject. Second group of 10 subjects, named 'control group' was allowed to live their routine life. Detailed case histories of the subjects were taken before starting the yoga therapy. Parameters were selected to know the prognosis of Obesity. Weight and BMI of all the subjects of both the groups were recorded before and after the yoga therapy.

### **Parameters:**

#### **1. Body Mass Index**

The body mass index (BMI) will be calculated as the body weight (in kg), in light clothing and without shoes, divided by height (in m) square. Body weight will be measured to 0.05 kg using an electronic balance (GTEP Precision Electronic

Instruments Model No.11, New Delhi, India). Height will be measured to the nearest 0.1 cm (Gulick Anthropometric tape, model J00305, Lafayette Instrument, U.S.A.)

According to WHO, BMI less than 18.5 considered Underweight. BMI between 18.5 and 25 means Healthy weight. BMI between 25 and 30 considered overweight. BMI between 30 and 35 means they are Obese. People are defined as being ‘morbidly obese’ if they have BMI >40<sup>11</sup>.

**Yogic interventions:**

Following yogic techniques will be administered slowly and with proper care. Yogic technique will be taught gradually according to the condition of the subjects.

Swastikasana, Vajrasana, Suptavajrasana, Simhasana, Tadasana I, Katiparivartasana, Trikonasana, Parshvakonasana, Purvottanasana, Pavnarmuktasana, Bhujangasana, Shalabasana, Dhanurasana, Vakrasana, Marichasana, Janushirshasana, Baddhakonasana, Upavistakonasana, Bharadwajasana, Jatharaparivartasana, Uttanapadasana, Ujjayi, Anuloma-viloma, Bhastrika, BahyaKumbhaka, Shavasana I, Shavasana II.

**Diet plan:**

Considering the sedentary life style of the subjects a diet providing 1900 calories approximately was taken as a standard. Care was taken to include all the necessary ingredients required by the body in adequate to maintain health. The diet was planned considering the tastes and eating habits of the subjects.

The diet consisted of strictly vegetarian food stuff naturally low in calories, very low in fat and high in nutrition and Fiber.

These are a high volume food that fill the stomach and gives one the feeling of satiety. Protein depletion was avoided the green gram juice regularly.

The intake of food was reduced by approximately 126 calories each day for the next 15 days. On the 15<sup>th</sup> day, all subjects observed complete fast. Some of them who felt weakness were allowed to drink tender coconut water; very minimum yogic practices were done on that day. The diet was then increased by 126 calories each day to reach the normal diet of 1900 calories a day. The daily diet regimen was given to the subjects one day earlier.

**Results**

All the subjects under study were tested before and after 30 days of yoga training which consisted of 60 minutes of practice in a day. The readings were compared with the reading of control group. The reading of experimental group showed significant variation and that of control group does not shows any improvement. The final result shows an overall reduction in Body Weight and BMI considerably in the Experimental group. Therefore, in general we can analyze the result as follows:

Weight & BMI is reduced in all the subjects of experimental group.

**Statistical analysis**

A Paired “t” test was applied for each parameter and found out the value for each group viz, Experimental and Control. The result of “t” test is as follows.

**Result of Statistical Analysis of Experimental Group:**

Sl. No	Parameter	Mean		SD		t value	P value	Result
		Before	After	Before	After			
1	Weight	74.46	72.04	7.0971	7.4393	6.021631	9.86E-04	HS
2	BMI	32.219	31.053	1.7333	1.9779	6.053897	9.48E-04	HS

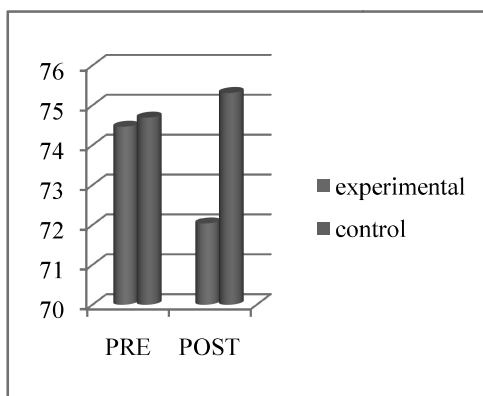
**HS - Highly Significant.**

**Result of Statistical Analysis of Control Group:**

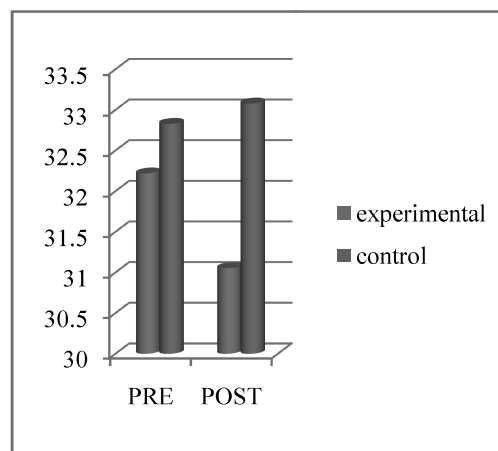
Sl. No	Parameter	Mean		SD		t value	P value	Result
		Before	After	Before	After			
1	Weight	74.69	75.31	5.4486	5.2781	3.50507	0.0033	NS
2	BMI	32.83	33.08	2.9356	2.7999	-3.40557	0.0039	NS

NS - Non Significant

**Graphical Representation of Mean Values of Different Variables of Experimental and Control group of weight**



**Graphical Representation of Mean Values of Different Variables of Experimental and Control group of BMI**



**Discussion:**

The purpose of this study was to determine the role of yoga therapy on obesity in women in terms of reduction in body weight. Yoga training for 30 days resulted in a significant reductions in all body weight measures such as decrease in Weight and Body Mass Index which was statistically significant. Every member felt improvement after the yoga therapy programme. But there was no significant improvement among control group.

Effects of yoga practices which have been documented include improving digestion, excretion and immune function. It wards off fatigue, increase mental repose, tones up nervous system and highly beneficial for those who suffer from sleeplessness and head ache.

It is evident from the above result that all the patients responded to the treatment positively. But the variation of the rate of success could be depended on the regularity of the practice. Thus we can say that Yoga therapy is fully fruitful for those who adhere to the regular practice. The disease responds to the therapy with encouraging results. Who are attended the yoga practice regularly, attained good result.

The Yoga training for 30 days resulted in a significant reductions in all parameters such as body weight (t=6.021631, p=9.86E-04), Body Mass Index (t=6.053897, p=9.48E-04) are showed significant result. Practice of yoga showed reduction in over weight there by controlling obesity.

In the present study, yoga practices helped in energizing the body, which has been in an inactive mode due to obesity in women.

Importantly, yoga helped in cleansing the body off toxins and reduced fatigue. Asanas helped to burn up excess fat, by improving metabolism, toning up muscles. Practice of pranayamas calming the mind, promoting mental alertness helped to enjoy a healthy life style. When pranayamas are practiced, craving for food stopped and they began to enjoy a normal appetite. Additionally, they developed a positive mental attitude, with ability to face life with renewed hope and confidence. Relaxation techniques helped in achieving inner balance and tranquility in women by reducing stress levels.

#### **Conclusion:**

The present study reveals that yoga therapy helps efficiently in reducing

Obesity. Of the treatment modalities for obese females yoga therapy may be a preferable alternative therapy easily incorporated in their day to day life. A larger sample size with a long term follow up is suggested to prove the efficacy of yoga therapy in persons who are at risk for various physical illnesses with obesity. There was no much control over the diet, the results are encouraging.

Thus from the significant changes observed using different parameters in this study found that yoga therapy has several beneficial effects, in the form of improvement in quality of life by reducing stress levels and reduction in body weight in women.

#### **References:**

- AnandaBalayogi, Yoga and ModernMedicine, possible meeting points.ICYER.Pondichery.(2001)
- Udupa KN. Stress disorders their management by yoga-Yoga for health. Mangalore University; (1986) Page No 7-13.
- AHA Yoga & pranayama help overweight teens lose weight.46th annual conference,poenix, 8CDC.March (2006) 2-5.
- Gharote, M.L., "Evaluation of effects of yogic treatment on obesity", A paper read at the WestZone Scientific Seminar on Indigenous Systems of Medicine, held on 11th and 12th August,1973, at the Haffkins Institute, Mumbai.
- Digambaraji Swami, GherandaSamhita,Kaivalyadhama S.M.Y.M. SamitiLonavala-410403, 1997.
- Swatmarama, "Hatha Pradipka", Kaivalyadhama, S.M.Y.M. Samithi, Lonavala; 2nd Edition, 1998.
- Vivekananda Swami.:Raja Yoga, Patanjala Yoga Sutra; AdvaitaAshrama publications, August 2011, 39 Edition, page no. 212
- Vivekananda Swami.:Raja Yoga, Patanjala Yoga Sutra; AdvaitaAshrama publications, August 2011, 39 Edition, page no. 212
- Annapoorna, K and Vasanthaxmi, K *Effects of yoga therapy on obesity and quality of life in women: A longitudinal study*. International Journal of Yoga and Allied Sciences, 2 (1). pp. 17-23. ISSN 2278 – 5159
- <http://obesityfoundationindia.com/about.htm>
- <https://www.cancer.org/cancer/cancer-causes/diet-physical-activity/body-weight-and-cancer-risk/adult-bmi.html>
- ShenoyRamachandra K et al "The effect of selected yogic practices with chandrayanavrata on the body parameters", 2009.

\*\*\* \*\*