



# REGULAR AND SYSTEMATIC YOGIC PRACTICES REDUCES BODY WEIGHT IN OBESE WOMEN

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**Abstract:** The significance of Yoga is well recognized in contemporary society. Yogic techniques promote a healthy lifestyle. The objective of this study was to evaluate and compare the body weight of individuals who regularly practice yoga with a control group. A total of 30 ladies were selected at random. Among a group of 30 women, half of them (15) regularly practiced yoga while the other half served as control subjects. The individuals' ages ranged from 30 to 45 years. Information was collected using a weighing apparatus. The data was analyzed using Analysis of Covariance (ANCOVA). The findings demonstrated substantial impacts of Yoga on body weight. Ultimately, the present investigation determined that Yoga yielded positive results.

**Key words:** body weight, yoga, pranayama, combined effect, obese women, house wives

**Index Terms** - Component, formatting, style, styling, insert.

## I. INTRODUCTION

Obesity, a widespread health issue that impacts millions of people worldwide, presents substantial dangers to both physical and mental health. Within the female population, the occurrence of obesity is particularly concerning, resulting in a heightened vulnerability to chronic ailments such as diabetes, cardiovascular disorders, and specific types of cancer (Fruh, 2017). Conventional weight loss methods, such as changing one's diet and engaging in regular exercise, frequently encounter difficulties in maintaining adherence and achieving long-term success (Hall and Kahan, 2018). Yogic practices have garnered popularity in recent years for their comprehensive advantages. Yoga, a time-honored practice that combines physical postures, breathing techniques, and meditation, provides a distinctive combination of physical exertion and mental tranquility. Recent studies suggest that consistent and structured yoga practices can have a substantial impact on weight loss and general health enhancement in women who are obese (Woodyard, 2011). This introduction establishes the context for investigating the capacity of yoga as a sustainable and efficient approach for managing obesity in this specific population. Yoga treatment, which includes asana, pranayama, and dhyana, is a cost-effective and non-intrusive method that is considered safe. It is gaining popularity in contemporary society as a viable method for reducing stress, promoting health, enhancing fitness, and treating symptoms related to chronic illnesses. Significant research indicates that practicing yoga can decrease the likelihood of developing chronic disorders, alleviate symptoms, minimize complications, and improve the prognosis, ultimately leading to an overall improvement in quality of life (Chandler, 2001; Gimbel, 1998; Yogendra et al., 2004; Innes et al., 2012). The long-term impact of yogic activities, including pranayama, asana, and meditation, was disregarded. Various techniques employed in yoga have either stimulating or inhibiting impacts on the basal metabolic rate when examined in a short-term manner. However, in everyday life, these treatments are typically performed in conjunction. The objective of this study is to examine the overall change

in body weight of persons who participate in a combination of yoga practices (such as asana or yogic postures, meditation, and pranayama or breathing techniques) for at least six weeks in Nagpur, Maharashtra, India.

## II. METHOD

The research was carried out in Nagpur. A total of fifteen (15) women who were obese and aged between 30 and 45 years were selected for this study after obtaining their informed consent. In addition to the selected research group, a total of fifteen control individuals (non-practitioner group) were evaluated at the beginning and end of the session to observe the impact of extraneous variables. The yoga group consistently engaged in a diverse range of yoga practices on a daily basis, including asana (postures), pranayama (breathing techniques), and meditation, for a minimum duration of 6 weeks or longer. The asana sequences commenced with stretching exercises, subsequently progressing to standing, supine, prone, and sitting poses. The standing postures included the trikonasana (side bending triangle position), padahasthasana (front bending), ardha chakrasana (backward bending), and ardhakati chakrasana (side lateral bending) techniques. The supine poses included straight leg raising and shoulder stand posture (sarvangasana), while the prone postures consisted of locust (shalabhasana), serpent (bhujangasana), and bow (dhanurasana) postures. The sitting postures included the moon pose (shasankasana), the sturdy pose (vajrasana), and the half matsyendra pose (ardha matsyendra). After completing the asanas, a profound relaxation technique was practiced for a duration of 6 minutes. This technique involved closing the eyes and following particular directions to enhance awareness and relaxation of various body areas. The pranayama phase included vigorous breathing techniques such as forceful exhalation (kapalabhati), and breathing through the mouth with the tongue folded (shithali and shithkari), as well as targeted breathing exercises that focused on different sections of the lungs (vibhagiya pranayama), and a slow breathing technique known as alternate nostril breathing (nadishuddhi pranayama). After completing the pranayama, the practitioner adopted a supine posture, also known as the corpse posture or shavasana, with closed eyelids. This posture was maintained for a duration of 3-6 minutes, during which the goal was to cultivate a heightened sense of relaxation in every region of the body. The meditation practices commenced in a seated posture, commencing with the cultivation of mindfulness towards the breath and inducing a state of relaxation.

Women who were menstruating engaged only in pranayama and meditation. The non-yoga group abstained from engaging in any asana, pranayama, meditation, or specialized techniques, but otherwise led a lifestyle that closely resembled that of the yoga group. The control subjects adhered to a vegetarian diet and abstained from using alcohol or tobacco. The impact of the aforementioned intervention was observed in the body mass of the female subjects.

## III. STATISTICAL TECHNIQUES

To draw the meaningful conclusion descriptive (measure of central tendencies such as mean, and standard error) and inferential (ANCOVA) was adopted.

## Result

**Table 1: Showing the comparison (factorial design) of weight between housewives and control subjects**

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1167.394 <sup>a</sup>	3	389.131	6.846	.000
Intercept	387341.944	1	387341.944	6814.092	.000
Groups	717.852	1	717.852	12.628	.001
Treatment	215.740	1	215.740	3.795	.054
Groups *	233.802	1	233.802	4.113	.045
Treatment	6593.933	116	56.844		
Error	395103.271	120			
Total	7761.327	119			
Corrected Total					

a. R Squared = .150 (Adjusted R Squared = .128)

Table 1 presents the comparison and interaction effect of body weight in housewives (pre and post data) and control (pre and post data) individuals. The data presented in Table 1 shows a statistically significant ( $p < 0.05$ ) interaction impact between the groups being studied, namely the housewives (pre and post) and control (pre and post) groups. A comparable outcome has been observed among housewives and control subjects. A substantial difference was seen between the experimental group and the control subjects. When analyzing the impact of six weeks of Yoga training on body weight, a comparison was conducted between pre and post data for both groups. It was observed that there was a substantial difference in body weight within the experimental group.

**Table 2: Showing the comparison of body weight between housewives and control subjects.**

Housewives	Control Subjects	ANOVA
Mean $\pm$ SE	Mean $\pm$ SE	F- (Significance)
59.26 $\pm$ 0.97	54.37 $\pm$ 0.97	12.63 ( $p < 0.05$ )

Table 2 presents a comparison of body weight between housewives who practice yoga and control individuals. The average body weight for housewives was determined to be 59.26 Kg, while control subjects had an average body weight of 54.37 Kg. The inferential analysis, namely the analysis of variance (ANOVA), showed a statistically significant difference ( $p < 0.05$ ) between the groups that were analyzed. The body weight of housewives was significantly greater than that of control respondents.

**Table 3: Showing the comparison of body weight of housewives and control subjects between pre and post training.**

Pre-Training	Post-Training	ANOVA
Mean $\pm$ SE	Mean $\pm$ SE	F- (Significance)
58.16 $\pm$ 0.97	55.47 $\pm$ 0.97	3.80 (NS)

Table 3 presents a comparison of body weight between pre-training and post-training body weight of housewives and control individuals. The average body weight before training was determined to be 58.16 Kg, whereas the average body weight after training was discovered to be 55.47 Kg for the subjects under study. The inferential analysis (ANOVA) indicated that there was no statistically significant difference ( $p > 0.05$ ) between the groups being tested, specifically the body weight of housewives before and after training, as compared to the control participants. The body weight of the pre-training group was found to be higher, while the difference compared to the post-training group was not statistically significant.

**Table 4: Showing the multiple comparison of body weight amongst all studied groups (pre and post training) of housewives and control subjects.**

Groups	Training		ANOVA
	Pre-Training	Post-Training	F-value (Sig)
Housewives	61.99 $\pm$ 1.37	56.52 $\pm$ 1.37	9.77 ( $p < 0.05$ )
Control Subjects	54.31 $\pm$ 1.37	54.42 $\pm$ 1.37	0.003 (NS)

Table 4 illustrated the interaction effect of body weight through several comparisons. The table above examines the interaction effect of body weight on two groups (housewives and control subjects) and two treatments (before and post Yoga training). The comparative analysis using ANOVA revealed that the F-value for body weight was determined to be 4.11, indicating statistical significance ( $p < 0.05$ ). The analysis revealed a statistically significant difference in body weight between pre-training weight (61.99  $\pm$  1.37) and post-training body weight (56.52  $\pm$  1.37) among housewives. However, when comparing the body weight of control subjects before training (54.31  $\pm$  1.37) and after training (54.42  $\pm$  1.37), no significant difference was seen. When comparing the initial body weight of housewives (61.99  $\pm$  1.37) and control individuals (54.31  $\pm$  1.37) before training, a statistically significant difference ( $F = 13.73$ ,  $p < 0.05$ ) was seen between the two groups. Similarly, when comparing the body weight after exercise, there was no statistically significant difference ( $F = 1.35$ ,  $p > 0.05$ ) observed between housewives (56.52  $\pm$  1.37) and control individuals (54.31  $\pm$  1.37).



#### IV. FINDINGS

1. Statistically significant difference is witnessed between pre and post body weight of housewives.
2. Insignificance difference is witnessed between pre and post body weight of control subjects.
3. Statistically significant difference was seen between experimental group and control subjects.
4. Statistically significant interaction effect was found in the present study.

#### V. REFERENCE:

1. Chandler K. (2001) "The emerging field of yoga therapy". *Hawaii Journal of Medicine & Public Health*; 60:286–287
2. Innes KE, Selfe TK, Alexander GK. (2012) "The Effects of a Gentle Yoga Program on Sleep, Mood, and Blood Pressure in Older Women with Restless Legs Syndrome (RLS): A Preliminary Randomized Controlled Trial" *Evidence-Based Complementary and Alternative Medicine*. 2012; 2012:294058.
3. Gimbel MA. (1998): Yoga, meditation, and imagery: clinical applications. *Nurse Pract Forum* 1998 9(4):243-55.
4. Yogendra, J., Yogendra, H. J., Ambardekar, S., Lele, R. D., Shetty, S., & Dave, M., ... Husein, N. (2004). Beneficial effects of yoga lifestyle on the reversibility of ischaemic heart disease: Caring heart project of International Board of Yoga. *The Journal of the Association of Physicians of India*, 52, 283-289
5. Fruh SM. Obesity: Risk factors, complications, and strategies for sustainable long-term weight management. *J Am Assoc Nurse Pract*. 2017 Oct;29(S1):S3-S14. doi: 10.1002/2327-6924.12510.
6. Hall KD, Kahan S. Maintenance of Lost Weight and Long-Term Management of Obesity. *Med Clin North Am*. 2018 Jan;102(1):183-197. doi: 10.1016/j.mcna.2017.08.012.
7. Woodyard C. Exploring the therapeutic effects of yoga and its ability to increase quality of life. *Int J Yoga*. 2011 Jul;4(2):49-54. doi: 10.4103/0973-6131.85485.

