

Case Report

Effect of Yoga and Naturopathy on an Obese Male Patient: A Case Report

Jyoti Nair¹, Sathya Joicy.M², Logeshwaran.S³

From, ¹Principal and Medical Superintendent, ²Associate Professor and Medical officer, ³Assistant Professor and Medical officer, Swamy Vivekanandha Naturopathy and Yoga Medical college and Hospital, Sankagiri, Salem, Tamilnadu, India.

ABSTRACT

Globally, the incidence of overweight and obesity continues to rise, raising concern about the health hazards that come with this growing issue. An increased number of chronic illnesses are associated with high Body Mass Index (BMI). The percentage of overweight or obese men and women was found to be 38.4% and 36.2%, respectively. A middle-aged man came to our hospital with the complaint of increase in weight and Blood pressure, showing altered in serum lipid profile. He underwent Yoga and Naturopathy treatments which include massage therapy, fasting and diet therapy, yoga therapy, and few more treatments. There was a considerable reduction in his weight in which pre -110 kg and post- 102.5 kg (loss of about 8 Kgs), BMI pre -39 Kg/ m², post – 36.3 Kg/m², Blood pressure pre 160/120, post 118/84 and further BP maintained without medication. In the Lipid profile LDL pre -138 mg/dl, post - 116 mg/dl, Total cholesterol pre- 203 mg/dl, post- 186 mg/dl and the associated symptoms of obesity like breathing difficulty, heaviness of body and difficulty in walking also improved. This case report recommends that Naturopathy and Yoga were found to be effective in managing obesity.

Key words: Obesity, Weight Loss, Naturopathy and Yoga, Lipid profile

An excess of adipose tissue that poses a health risk is called obesity; body weight that is 20% higher than the optimal weight for a person's age, sex, and height is regarded as unhealthy. BMI, which is calculated as weight in kilograms divided by height in square meters, is the most often used metric to measure obesity [1]. Globally, the incidence of overweight and obesity continues to rise, [2] affecting both men and women equally with the percentage of overweight in men and women was found to be 38.4% and 36.2%, respectively. Significant differences in occurrence were noted amongst India's regions, and the people residing in an urban location, being older, being in a union, and having a higher level of education were the biggest predictors of being overweight or obese [3].

By 2040, it is expected that the incidence of overweight and obesity in India will significantly increase [4]. Obesity-related consequences might include cancer, alteration in pulmonary function causing obstructive lung disease, and increased stress on weight-bearing joints causing Arthritis. Excess stress on the heart causes harmful cardiovascular health effects, causing Myocardial Infarction and Atrial Fibrillation and Obesity is said to be a significant independent risk factor in the development of heart failure. It is also known to contribute to Metabolic abnormalities, such as type 2 Diabetes Mellitus and Metabolic syndrome [5].

Non-drug lifestyle changes are frequently suggested for addressing Obesity [6]. The Obese individuals are turning to the alternative system of healthcare to lose weight, while the mainstream medicine's long-term success rate with treatment is low [7]. Among the studied population, Siddha stands 1st as the most well-known medical system in both the community and the hospital, followed by Naturopathy and Yoga stands 2nd [8]. Naturopathy is a simple, efficient medical approach that has developed into a science, has treatments based on exposure to natural factors like Mud, water, sunlight, fresh air, heat, or cold. Diet in Naturopathy includes fasting, avoiding sweets and alcohol, and eating a vegetarian and whole food diet. The Practitioners of yoga and naturopathy have a significant role to play in the "maintenance of general well-being" and "prevention of NCDs" among people in the community [9].

An earlier research has demonstrated the notable effects of particular elements of naturopathy, include reducing caloric intake and therapeutic fasting, on the health results of people with Obesity. Yoga, considered a powerful non-drug lifestyle change, has surfaced as a promising complementary method for managing Obesity [6, 10, 11, 12]. Many patients have been successfully treated in many Naturopathy and Yoga clinics and Hospitals, through which obese individuals not only reduced their weight but also got further good prognosis in

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Correspondence to: Dr. Sathya Joicy.M, Swamy Vivekanandha Naturopathy and Yoga Medical college and Hospital, Sankagiri, Salem, Tamilnadu.

Email: sathyajoicy@gmail.com

later months and years. This case highlights the possible advantages of incorporating naturopathy and yoga into the management of obesity. Many obese people who don't adhere to conventional fitness regimens may find that attempting complementary therapies like yoga and naturopathy helps them lose weight. The patient's health showed a synergistic effect from the integrated approach of naturopathy and yoga. The therapy plan offered a thorough and complete answer by attending to both the mental and physical facets of his wellbeing. The mind-body connection was utilized to highlight the significance of mental health for general wellbeing through the fusion of yoga and naturopathy. To this quote here is a patient's case report to prove the effects of Naturopathy and Yoga for obesity.

Patient Information

A patient aged 54 from Namakkal district, Tamilnadu came with complaints of Obesity, Hypothyroidism, Peptic Ulcer, Hypertension, and Dyslipidemia. He was also suffering with the symptoms of obesity like Heaviness, Difficulty in walking, Breathing difficulty. So, he came to our Swamy Vivekanandha Naturopathy and Yoga Hospital, stayed for 20 days, and took Naturopathy and Yoga treatment. On the first day, the Patient looked obese and had Central obesity, was taking medication for High BP and Hypothyroidism. He had a sedentary lifestyle with a lack of physical activity, not following diet at home.

Intervention details

After taking the detailed case history, a basic counselling about Naturopathy and Yoga principles was explained, followed by Informed consent was taken. Naturopathy and

Yoga intervention was planned by an expert Naturopathy and Yoga physician. As an integrated approach, the treatment protocol included Diet therapy, Yoga therapy, Mud therapy, and Massage therapy which are given at our Swamy Vivekanandha Naturopathy Hospital, Salem, Tamil Nadu, India. The patient stayed as an Inpatient for 20 days. The details of treatment are described in **Table 1** and the diet plan in **Table 2**.

Assessments and Monitoring

Based on the case sheet and History taking, the patient was considered under Obesity grade- II, with BMI 39 kg/m², central obesity, and further blood tests Lipid profile showed dyslipidemia, TSH – 2.61 µ IU/mL and elevated Blood pressure.

The Blood pressure of the patient was monitored daily morning and evening using DIAMOND BPDF-237 Aneroid BP Apparatus. The Body weight was monitored using Omron Digital Body Weight machine HN 286. The pre and post blood tests were taken in a lab nearby our hospital.

RESULTS

On the day of discharge, the patient showed a weight loss of about 8 Kgs and the associated symptoms of Obesity like Breathing difficulty, Heaviness, and Difficulty in walking. BP came to a control compared to the previous data. As a result, the patient stopped antihypertensive medication with the guidance from an expert, and the further BP was monitored accordingly. Changes in Lipid profile were also noted; after 20 days of treatment, the details are given in **Table 3**.

Table 1: Intervention Details

Therapy		No. of session	Duration
Hydrotherapy (Afternoon)	Cold neck pack	15 days	20 mins
	Neutral spinal spray	7 times (alternate days)	20 mins
	Neutral Full immersion Bath	10 times (alternate days)	30 mins
Massage therapy (Morning)	Partial massage – Abdomen	8 days	20 mins
	Partial massage - Back	4 days	20 mins
	Partial massage & Legs	1 day	20 mins
	Massage to Head & Neck	1 day	20 mins
	Full body massage	1 time	50 mins
Steam bath (Morning)	Full body steam bath	6 days	15 mins per time
	Oil application with steam bath	4 days	25 mins per time
Yoga therapy Morning	Loosening Exercises	Once per day	45 mins per day
	Pranayama		15 mins per day
Evening	Relaxation technique	Once daily	30 mins daily
	Meditation		
Heliotherapy (Morning)	Plantain leaf bath	3 times	45 mins
Mud therapy (Morning)	Full mud bath	2 times	60 mins per time

Table 2: Diet chart given to patient

Early Morning 6.00 AM	Morning 8.00 AM	Breakfast 9.00 AM	Lunch 12.30 PM	Evening 4.30 PM	Dinner 7.00 PM
Cooked diet (3 days)					
Fenugreek water	Juice (Ash gourd/ Bottle gourd)	Pouridge (Ragi/ Blackrice/sprouts+ chutney (Mint/Groundnut)	Porridge (Kuthiraivali/ Samai) Boiled (Bottle gourd/Snake gourd) + Rasam + Green gram sprouts+ soup (tomato/Beans/cabbage	Lemon mint juice / Herbal tea	Avalupma / Green gram dosa / Millets Idly coconut chutney + soup (Chow chow/ Horse gram)
Raw diet (3 days)					
Fenugreek water	Ash gourd/ Knolkhol juice	Beetroot salad/pumpkin salad /carrot sprouts+ chutney (coriander/)	Cucumber salad/ Beetroot salad / Pumkin salad + sprouts+ soup (pumpkin/ chutney (Ridge gourd/ Mint)	Lemon mint juice/ Herbal tea	Carrot salad/ Cucumber salad / pumpkin salad + soup+chutney (coconut /
Fruit diet (2 days)					
Fenugreek water	Ash gourd juice	1 Bowl of water melon+ coconut slices + sprouts	1 Bowl of Musk melon+ coconut slices + sprouts + soup (Chow chow / Pumkin)	Lemon mint juice	1 Bowl of papaya + coconut slices + Soup (Horse gram/ Cabbage)
Juice Diet (5 days)					
Fenugreek water	Knolkhol juice / Ash gourd juice	Carrot juice/ Beetroot juice	Lemon mint juice/ Knolkhol juice	Bottle gourd juice / Amla juice / Watermelon juice/ Beetroot juice / Lemon mint juice	Lemon mint juice / Beetroot juice
Fenugreek water	Ash gourd juice	1 Bowl of water melon+ coconut slices + sprouts	1 Bowl of Musk melon+ coconut slices + sprouts + soup	Lemon mint juice	1 Bowl of papaya + coconut slices

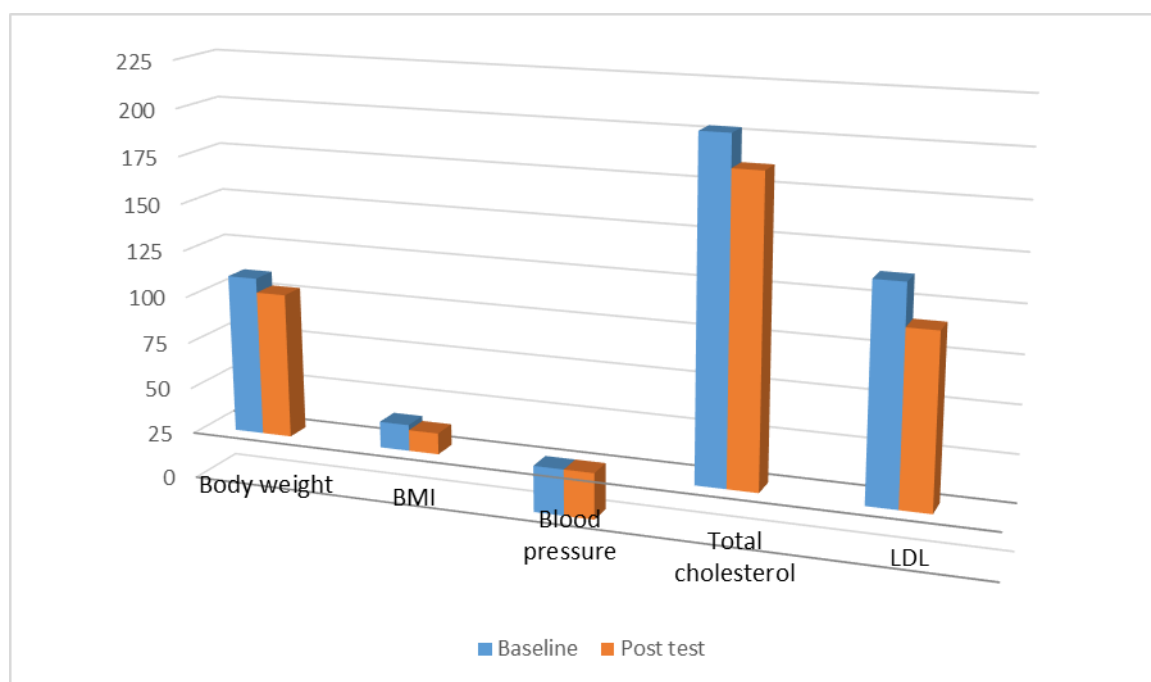


Table 3: Assessment

Variables	Baseline	Post test
Height	168 cms	168 cms
Body weight	110 kg	102.5 kg
BMI	39 kg/m ²	36.3 kg/m ²
Blood pressure	160/120 mm Hg	118/84 mm Hg
Total Cholesterol	203 mg/dl	186 mg/dl
LDL	138 mg/dl	116 mg/dl
TSH	2.61 µ IU/mL	-

DISCUSSION

Results indicated a reduction in weight, BMI, total cholesterol, and LDL levels. The patient also felt a reduction in the obesity-related symptoms, such as heaviness during walking and difficulty in breathing, and an overall improved quality of life. More importantly, there was a considerable reduction in systolic and diastolic blood pressure. This shows the effectiveness of 20 days of Naturopathy and Yoga

interventions in obesity. Supporting the obtained results, there are proven case studies, a middle-aged man with Metabolic Syndrome [6], a 53-year-old female patient with 45 days of Naturopathy treatments and yoga [13], Sushmitha et al. showed in a 38-year-old female patient with 10 weeks of treatments [14], showing the effectiveness of Naturopathy and Yoga for weight reduction.

Diet plays a major role in weight loss, as this patient followed a regimen that included raw diet fasting, fruit fasting i.e a low carbohydrate and Low fat diet which was supported by Foster et al to be a great reason for weight loss. [15, 16] Beet root juice given in the diet was associated with a significant increase in plasma and urine nitric acid. A study showed that Beet root also resulted in a significant increase in ultrasound flow-mediated dilatation in hypercholesterolemic patients and thereby reduce BP [17]. The consumption of Lemon juice alone has been shown to reduce body weight [18]. Integrating yogic postures and Naturopathic therapies into the treatment plans for individuals dealing with obesity can yield long-term benefits. The combination of yoga practices and Naturopathy methods in a treatment regimen improves mindfulness, increases energy expenditure, supports autonomic balance, promotes deep relaxation for both body and mind to avoid fatigue, and effectively addresses stress, thereby aiding in the commitment to a healthier lifestyle.[19, 20] According to a systematic review, physical yoga poses like bhujangasana (cobra pose) and pranayama techniques like bhastrika and kapalabhati boost oxygen intake without requiring the highest level of effort, just like other forms of physical activity [21].

The continuous Yoga practice leads to a shift in the Autonomic nervous system towards the parasympathetic nervous system [22]. Further, Yoga also proved to reduce total cholesterol, LDL and increase HDL [23]. Decrease in the energy intake, as calorie restriction has been shown to enhance a catabolic response leading to a decrease in lean muscle mass [24]. By (a) increasing energy expenditure during practice sessions; (b) elevating mindfulness, improving mood, and reducing stress, which may lead to a reduction in food intake; and (c) enabling practitioners to feel more connected to their bodies, leading to enhanced awareness of satiety and the discomfort of overeating, a regular yoga practice may help manage overweight and obesity [25]. In individuals with hyperlipidemia, massage therapy applied to the entire body has demonstrated a decrease in subcutaneous fat [26].

As a result, the body weight may have decreased. According to more studies, chronic stress that modifies the diurnal secretion of cortisol is linked to obesity and overstimulation of the hypothalamo-pituitary-adrenal axis (HPA axis). The disturbances of the endocrine axis are closely linked to abnormal HPA axis control and perceived stress-dependent cortisol levels. [27, 28]. It is well recognized that

meditation, relaxation techniques, and pranayama lower stress and alter the hypothalamo-pituitary-adrenal axis [29].

Strengths and Limitations: The constant co-operation of the patient in following Diet and Yoga, undergoing all the treatments we recommended was considered to be the strengths of this study. And the limitations are further studies in the future with randomization and larger samples may help to correlate with the results.

CONCLUSION

This case report recommends that Naturopathy and Yoga were found to be effective in managing metabolic syndrome, in which there was a significant reduction in BMI of about 2.5% reduction in Blood pressure and Total cholesterol and LDL in Lipid profile.

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