

## THERAPEUTIC EFFECT OF YOGA IN MANAGEMENT OF OBESITY

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### ABSTRACT

Obesity is a burning problem in the present era and has acquired the status of an epidemic. Sedentary lifestyle, unhealthy dietary habits, stress etc. are primary predisposing factors. Obesity increases the risk of hypertension, diabetes mellitus, cardiac diseases, arthrosclerosis etc. Lifestyle plays an vital role in the development of Obesity. Yoga offers natural and effective remedies without harmful side effects and with benefits that extend far away from the physical. This system of yoga is a natural plan involving some principals: proper diet, proper exercise, proper breathing, proper relaxation and positive thinking. Some effort should be done to control Obesity with Pranayama, Bhujangasana, Dhanurasana, Naukasana, Halasana, Surya namaskar, Shat karma etc. with proper dietary habits. It is an effective lifestyle intervention skill.

**Keywords:** Obesity, Yoga, Diet, Lifestyle.

### INTRODUCTION:

In modern era human beings are more prone to various lifestyle disorders, due to defect in food habits and sedentary lifestyle. Obesity is one such life style disease. Worldwide the prevalence of obesity has tripled since 1975. According to WHO obesity is one of the most neglected public health problems in developed and developing countries. There has been an increase in the predominance of obesity in India particularly in urban population.<sup>1</sup> In 2016, more than 1.9 billion adults aged 18 and older were overweight of which over 650 million were obese. This represents about 39% of adults with overweight and 13% of them obese.<sup>2</sup> According to National Family Health Survey-3, 15% of females and 14% males are

considered obese in India. India is the third most obese country in world. NFHS-4, highlights that urban population is more prone to obesity as compare to their rural counterpart of India.

Obesity is a medical condition in which excess body fat gets accumulated in the body. Obesity is most commonly caused by a combination of unnecessary intake of food, lack of physical movement, abnormalities in secretion of thyroid, pituitary etc which regulate the metabolism of fat and lipids and various psychological factors like depression, stress. In the present era life is being more and more sedentary. Improper food habits and unhealthy lifestyle is causing metabolic disorders like obesity. It increases other various diseases like diabetes mellitus, heart diseases, osteoarthritis, and certain types of cancer.<sup>3</sup>

Ayurveda accurately explains etiology of excess fat deposition like *avyayama* (lack of physical activity), *divaswapna* (day sleep), *atimeda bhakshana* (excess intake of fat) lead to *medovaha strotas* diseases which resembles with obesity.<sup>4</sup> *Medadhātu* plays a major role in pathogenesis of obesity. *Sthoulya* is another term used in Ayurveda which can be correlated with obesity. As per Ayurveda it is a condition where, adipose tissue and muscle tissues are excessively accumulated, the buttocks, abdomen & breast are movable and whose metabolism is impaired is called *Atisthoulya* (obese).<sup>5</sup> Obesity is an abnormal accumulation of body fat, usually 20% or more over an individual's ideal body weight or more of the standard weight for the person age, gender and height. Obesity is associated with increased risk of illness, disability, and death.<sup>6</sup> Depending on weight, obesity is classified as follow:<sup>7</sup>

Mild to moderate: 10-20% above desirable weight

Moderate to severe: 20-30% above desirable weight

Severe: 30% above the desirable weight

### **YOGIC CONCEPT OF OBESITY:**

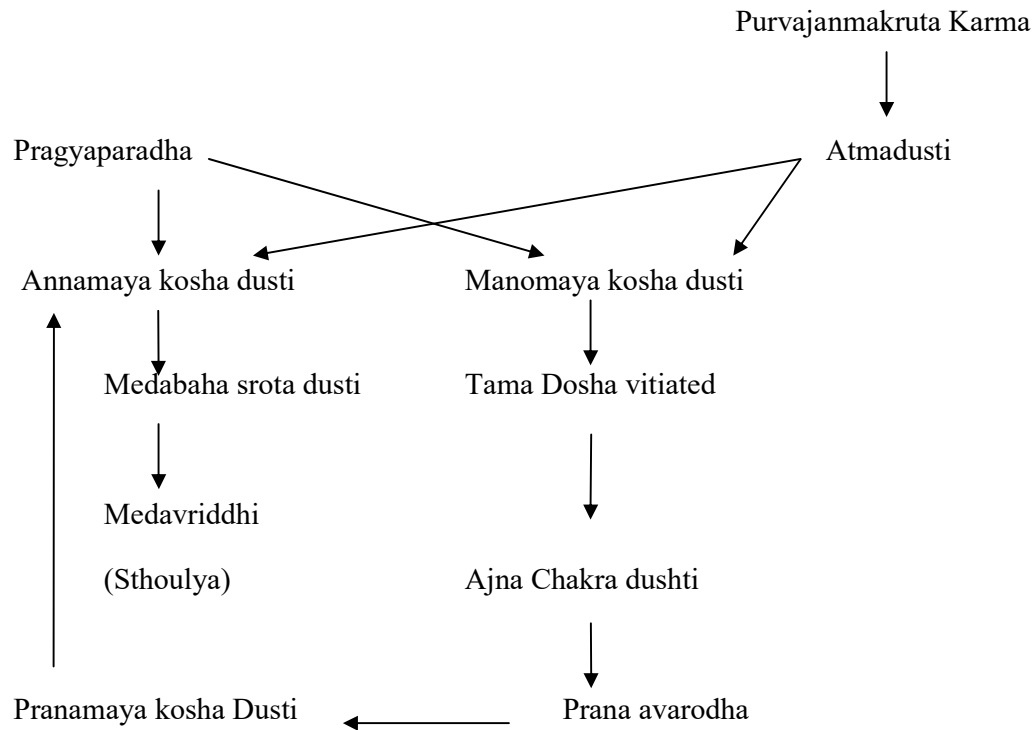
The word “yoga” is derived from ‘*yuj*’ which means to bring together, unite or join. The union of supreme consciousness with individual consciousness is known as yoga. As per *patanjali yogasutra*, yoga is the control of fluctuation of mind and mind itself.<sup>8</sup>

### **PATHOGENESIS OF DISEASE IN YOGA:**

As per *yoga shastra*, three causes for occurrence of disease:

1. *Purva janma vritti* (deeds of previous birth)
2. *Manasika karma* (psychological measures)
3. *Sharirika karma* (physical measures)

*Raga, Dwesha, Abhinivesha* etc *Kleshas* leads to *Chitta Vikshepas* and causes various *Manasika vikara* like *Krodha, Lobha, Ahankara, Moha*. These play major role for *Sharirika vyadhi*. Yogic science strictly believes in process of rebirth and *Purva janma krita karma*. Other than these cause *Mithya ahara* (improper dietary habits), *Vegadharana* (suppression of natural urges), sedentary lifestyle all lead to a progression of disease like obesity.



### IMPORTANCE OF BALANCED DIET (MITAHARA) IN YOGA:

In classical texts, the importance of balanced diet is mentioned clearly. This is the quantity sufficient to one's needs. Due to importance, Mitahara is described prior to starting yogic procedures in Gheranda samhita & Shiva samhita. In Ayurveda, Acharya Caraka also mentions "Mitahara" in soshha chapter. In obesity one should avoid guru ahara (heavy food), snigdha ahara (unctuous food), madhura ahara (sweet food), sheeta ahara (cold food), navanna (fresh grains), navamaddya (fresh alcoholic preparation), payavikara (milk & milk preparation), guda vikara (jiggery preparation), masha (black gram), godhuma (wheat) etc.

### BENEFICIAL YOGIC PROCEDURES FOR OBESITY:

- **According to Patanjali Yoga Sutra:**  
Chittavritti nirodha – behavioural adaptation ie. Self control

**Preventive aspects:** Yama, Niyama, Asana & Pranayama

**Curative aspects:** Asana & Pranayama

- **According to Gheranda samhita:**  
**Shatkarma** – Shodhana  
**Asana** – Dridhata  
**Pranayama** – Laghava

- Dhyana** – Pratyaksha  
**Samadhi** – Nirlepana
- **Shatkarma** : **Neti**: kaphadosha vinasha  
**Kapalabhati**: kaphadosha nivarana
  - **According to Hathayoga pradipika**:  
**Asana**: sthairyam , arogyam, angalaghavam  
**Pranayama**: nadisuddhi  
**Shatkarma**: medasleshmahara  
**Kapalabhati**: kaphadosha vishoshi

Yoga is a technique to bring a balanced approach in our life. It helps to control over unnecessary patterns of sedentary lifestyle and diet. Various Asanas may stimulate the specific organs, endocrine glands to regulate the metabolic functions. This review article highlights their specific effects in the management of obesity.

#### **MODE OF ACTION OF YOGA ON OBESITY:**

**Prayer:** It plays a vital role for relaxation of mind .Predominance of Alpha rhythm is present during prayer and its gives general effects all over the body. It's useful in physical, mental and spiritual aspects. It gives anxiolytic and stress relives effects to the body.<sup>9</sup>

#### **Sukshma vyayama (loosing exercise):**

Sukshma vyayama was performed on a regular basis before starting of any asana. It includes stretching of various muscles of our body, rotation of big and small joints and bending of different body parts. It reduces muscle tension and joint stiffness, increases blood circulation all over the body and gives warming up effect.

#### **Surya namaskara:**

It includes twelve asanas named as Pranamasana, Hasta uttanasana, Pada hastasana, Ashwa Sanchalana , Parvatasana, Ashtanga namashkara, Bhujangasana. These asana awakens the chakras in human body and release vital energy for improvement of superior consciousness.

#### **Relation of Chakras and Suryanamaskara:**

<b>Posture of Suryanamaskara</b>	<b>Related chakras</b>
1. Pranamasana	Anahata chakra
2. Hasta uttanasana	Visuddha chakra
3. Pada hastasana	Swadhisthana chakra
4. Ashwa sanchalana	Ajna chakra
5. Parvatasana	Visuddha chakra

6. Ashtanga namaskara	Manipura chakra
7. Bhujangasana	Swadhistana chakra
8. Parvatasana	Visuddha chakra
9. Ashwa sanchalana	Ajna chakra
10. Pada hastasana	Swadhistana chakra
11. Hasta uttanasana	Visuddha chakra
12. Pramanasana	Anahata chakra

Suryanamaskara generates heat rather than thermal axis of the body. Its increases basal metabolic rate and gives massage to the major groups of muscles. It reduces fat in all parts of the body.<sup>10</sup> As it combines the body, breathing, mind and devotion it is a holistic therapy for prevention and treatment of obesity.

### **ASANAS:**

These are specific postures that stabilize the mind and body through static stretching. Asanas make the body relaxed, strong and light, free from pains and this in turn brings about emotional and mental calmness.

### **Tadasana:**

It is also known as palm tree posture. In this asana one should stand straight and erect. Obese person complains pain in back and visceroptosis which are removed by this asana.

### **Ardha chakrasana:**

In this posture the whole body is given a figure of half wheel. The word 'Chakra' means 'wheel'. It creates pressure on abdomen and reduces belly fat. It minimizes the stiffness of spine.

### **Trikonasana:**

This asana gives a triangle posture to the body. It makes the spine flexible and reduces the stiffness of hip joint, stretches thighs, hamstring muscles.<sup>11</sup>

### **Vajrasana:**

This is the only asana which can be performed soon after having meal and improving the digestion. It increases the blood flow to lower pelvic region. This asana strengthens the thigh and calf muscles.

### **Uttanapadasana:**

It is a supine series of asanas which can be viewed as primary stage of Halasana, vipariya karni, Sarvangasana. Its creates pressure on the lower abdominal muscles, which stretches the abdominal muscles so regulates normal bowel habit, increase digestion power and decreases the excess fat from abdomen. It strengthens the rectus abdominus muscles of abdomen, muscles of thigh and pelvic region.<sup>12</sup>

**Pavanamuktasana:**

The Sanskrit word 'Pavan' means 'wind' and the word 'mukta' means 'free' or 'release'. This is a wind releasing posture because its useful in removing flatulence from the intestine and stomach. It gives excellent massage to the abdominal muscles. In this posture the muscles are tensed and at the same time the internal organs are compressed by the folded legs. This asana is mainly useful for removing constipation and flatulence. It also tones up the muscles of back.<sup>13</sup>

**Naukasana:**

In this posture body resembles like boat shaped. This asana creates pressure in the middle abdomen, so it is useful in diabetes and dyspepsia.

**Matsyasana:**

In this asana the shape of the body appears similar to the fish in the water. It gives an excellent massage to the abdominal organs and muscles. The pelvic region, thyroid and pituitary glands are also given good stretch. It improves the circulation in these glands and function also. Thigh and abdominal muscle are stretched.

**Bhujangasana:**

The Sanskrit word ' Bhujanga ' means 'kobra'. The final stage of this asana resembles the hooded snakes. It expands the chest and strengthens chest muscles, increases the flexibility of the back and massages the abdominal and pelvic organs. It improves digestion and breathing process, it reduces the abdominal fat. According to Yogic science, it affects Manipura chakra and Anahata chakra.<sup>14</sup>

**Ardhasalabhasana:**

This is the simple form of Shalabhasana and it is for those who are unable to perform Shalabhasana. It strengthens the extension group of muscles of thigh and tones up the lower abdominal muscles. It affects mainly Muladhara & Manipura chakra.

**Dhanurasana:**

Body should be shape of bow in this posture. This asana is mentioned in Hatha yoga pradipika and Gheranda samhita. It reduces belly fat and removes constipation. It gives flexibility to the back muscles and spine. The muscle of leg and arm becomes strong.

**Viparita karani:**

It is the further stage of Uttanapadasana. It regulates the normal function of thyroid glands, so obesity due to hypothyroidism can be treated. It is also helpful in dyspepsia, hernia, viscerotosis.

**Paschimottasana:**

This asana is mentioned in Hathayoga pradipika. It stretches the muscle of abdomen and shape up abdomen. It reduces the stiffness of hip joint, tension of thigh and calf muscles.

**PRANAYAMA:****Anulomaviloma:**

Alternate breathing through the left and right nostrils is the procedure of anuloma viloma. The Left nostril is known as Ida nadi or Chandra nadi, it has a cooling effect on the body. It represents energy conservations aspects of Pranic functions. The right nostril is having catabolic heating and destructive effect on the body. It is known as Pingala nadi or Surya nadi. Anuloma viloma pranayama is purify the Nadi (channels), removes obstruction so prana gets proper flow within the nadi. It also removes kapha dosa. This procedure is useful for obesity.

**Bhastrika:**

It normalize the vitiated kapha dosha so it beneficial for obesity.

**CHANTING OF AUM MANTRA:<sup>15</sup>**

**A :** It is connected Muladhara and Swadhisthana chakra.

**U :** It is connected to Manipura chakra.

**M :** It is connected to Anahata, Visuddhi and Anja Chakra.

Aum recited ten times, the internal attention is produced. Alpha rhythm becomes prominent and synchronized blood pressure and heart rate becomes slows down which might be high in obese. It produces parasympathetic predominance and brings about calmness and peace.<sup>16</sup> Sleep pattern is improved, anxiety and hypertension has been reduced by this Aum chanting in regular basis. All these conditions are often seen in obese patient.

**SHAT KARMA:****Kapalbhati:**

During kapalbhati the respiration becomes shallow. The tidal volume decreases and breathing rate is increased. Oxygen consumption is greater than before due to breathing pattern. Forceful contraction and relaxation of abdominal muscle will be useful to reduce fat of abdominal region. According to Gherenda samhita and Hathayoga Paradipika kapalbhati reduces Kaphadosha.

**CONCLUSION:**

Sedentary lifestyle and faulty dietary habits are the most important causative factors in pathogenesis of obesity. Several review of literature shows the impact of yoga on obesity. This review highlights the vital role of yoga in prevention of obesity and promotion of health.

Yoga also plays an important role to maintain the physical health as well as mental health. So regular practice of yoga in daily life is useful for prevention of various diseases and gives us a healthy lifestyle.

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