Obesity and its control through yogic practices

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Abstract
Life without health is sole burden. Health is treasure of life. It is defined as a state of Physical, Social and Psychological well-being (W.H.O. 1984) [1]. Physical inactivity an unhealthy diet is major contributors for Obesity. According to W.H.O India is third most obese country of the world. In India Obesity is more prominent in Children and Adolescents especially in urban areas. A study reveals that nearly 30% world’s population is Obese. Indian Government is stepping forward to control obesity. 21st June 2016 was celebrated as “INTERNATIONAL YOGA DAY” & Prime Minister Sh. Narendra Modi announced to focus on mitigating diabetes through yoga in current year. A large number of people consult with doctor or refer other kind of practices (like dieting, weight loss and improving physical look). The purpose of this paper is to outline the role of Yoga Asanas and Pranayama in reducing Obesity as Obesity is main reason of various diseases. Yoga is a tool of holistic Health, acquiring great posture, controlling eating habits. Reduction of fat is a prime concern in today's world as obesity is carrier of Diabetes, High Blood Pressure, Cancer, Osteoporosis, Gout, Postural deformities and disease related to gall Bladder, kidney and Intestines etc. Although we have now a day’s much improved scientific diagnosis and treatment techniques for treating diseases but we are experiencing a lot of difficulty to get rid of the problems. In present Paper obesity, causes, treatment of obesity through yoga are discussed.

Keywords: Yogic asanas, obesity, BMI, pranayama

Introduction
The practice of yoga has been around for thousands of years, and has done wonders for many people’s wellness. Modernized and urbanized world greatly influenced our way of living. Yoga asanas are helpful in total well-being, improve body’s strength and flexibility. Along with asanas pranayama is an important breathing practice which is helpful in fat loss. Dhananjai S, Sadashiv, Tiwari s, Kumar R (2011) [2] observed that yoga can improve health as a result of balancing Respiration rate, Heart rate, Metabolic rate, Blood Pressure etc. In medical terms Enlargement of fat cells size and numbers are called Hyper-tropic and Hyperplastic Obesity respectively. Obesity is assessed by B.M.I (Body Mass Index) = weight in kg/(Height in Meter). (Height in Meter). W.H.O. uses a B.M.I. classification system of Obesity which is given below

<table>
<thead>
<tr>
<th>Obesity Category</th>
<th>BMI</th>
</tr>
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<tbody>
<tr>
<td>Pre Obese</td>
<td>25.9</td>
</tr>
<tr>
<td>Obese class I</td>
<td>30 to 34.99</td>
</tr>
<tr>
<td>Obese class II</td>
<td>35-39.99</td>
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<tr>
<td>Obese class III</td>
<td>40.00</td>
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Jayaram Gadhram, Srikanth Sajja, V. Rooha (2015) [3] studied therapeutic regimen in preventing and treating Hypertension to cure cardiovascular diseases and diabetes. The main purpose of the study was to access the effect of Pranayama and Yogic Asanas on BP, BMI & Lipid Profile.35-55 years male Group (N=50) were selected for study and decrease in Systolic BP, Diastolic BP and BMI was significant after 3 Months of Yogic training.

Causes of Obesity
The average physically active person needs about 2500 calories per day. A yoga diet based on whole grains, fresh fruits, vegetables, nuts, beans and moderate amount of dairy products are...
necessary for ideal body weight longevity. Snacks like Burger, Pizza, samosa, Pakoda, Dahi wada etc should be ignored. These have 325 to 375 calories per piece. Calorie intake should be preferred as per requirement of proteins, carbohydrates, fat and mineral and vitamins ratio. Fruits and vegetables should be preferred; fruits like peach, orange, mangoes, apple, chikoo and bananas contain 50 to 95 calories per 100 grams. Vegetables like mushroom, carrot, cabbage, cauliflower contains 18 to 48 calories per 100 grams. Unhealthy lifestyle, social factors, biological factors, psychological factors, environmental factors are responsible for increasing Obesity percentage Helen Goncalves, David A. Gonzalez et al. (2012) conducted a qualitative research study (N=80, Adolescents) and selected at the age of 15 years on economic basis and BMI index. They classified adolescent boys and girls into four groups (1.Girls obese 2.Girls Eutrophic 3.Boys Obese 4. Boys Eutrophic). They found in their results that low income obese adolescents perceive obesity as heritage due to genetic factors and stressful life or medication use. Low income eutrophic adolescents emphasize the effect of unhealthy diet on obesity. High income adolescents considered that genetic factors and emotional factors are cause of obesity whereas eutrophic emphasizes on unhealthy diet and lack of activity as a main reason of obesity.

Unhealthy Life Style
- Eating a lot of food containing excessive fat
- Eating larger portion of food than requirement as per our body composition.
- Intake of sugary drink
- Excessive Consumption of simple carbohydrates like pasta, brown rice, grains, vegetables and raw fruits
- Consumption of alcohol
- Too little sleep
- Lack of physical activity i.e. walking, regular exercises and yoga.
- People taking small meals five or six time daily with low quantity of food have less cholesterol rather than taking heavy meals two or three times daily

Biological Factors
- Offspring of obese parents have more possibility of Obesity than offspring of lean parents
- Genetic make-up as Prader Willi syndrome (Complex Genetic condition:- In infancy, it is Characterized as Hypotonia / weak Muscles; in childhood it is developed stage – Hyperphagia /Chronic overeating. This syndrome has mild to Moderate Intellectual impairment and Behavioural problems etc.)
- Hypothyroidism (lack of production of thyroid hormone by thyroid gland)
- Cushing syndrome (over production of steroid hormones which results in increased fat around neck and upper body)
- Insulin resistance
- Use of antidepressants, diabetes pills, oral contraceptives etc

Socio-Economic and Enviromental Factors
- Food availability (especially, junk food) at the place of work affects a lot
- Family and friends life style affects daily routine of eating
- In today’s modernized world all are imitating each other and consume packet food.
- Poverty may cause people to buy high calorie food rather healthier food.

Psychological Factors
Jennifer (2009) [7] examined in a research study titled “behavioural and psychological factors in obesity” that Obesity is as much psychological as Physical Problem; the etiological bases of eating disorder are due to psychological, environmental and genetic or biological attributes. In a sad, stressed, anxious, lonely and depressed situation or due to mood disturbances individual turn toward eating food to cope up with stress but it results in weight gain and dysphoric mood due to inability to control their stress.
- Stress and burden may lead people to eat more and exercise less.
- Depression and anxiety are such situation in which it’s too tough to control on eating habits and more consumption of food.

Yoga and Pranayama: Beneficial For Weight Loss
However we can’t ignore proper and healthy diet plan in reducing Obesity but various yogic asana sand pranayama can be beneficial for overall health. Yoga affects internal organs. Joshi et al. (1992) [8] have found in 6 weeks ‘Pranayama’ practice that breathing course results in betterment of ventilation process. It was found beneficial to increase vital capacity; forced expiratory volume at the end of first second. It was concluded that yoga is helpful in lowering in lowering respiratory rate. Weight loss is primary aim of obese person with help of yogic asana, pranayama, kapal bhati as Bera T K, Rajapukar M V (1993) [9] found in their study that Yoga has been helpful in Obesity management. A randomized controlled study reveals the results that yoga is a key for ideal body weight and body density. Dhananjai S, Sadashiv, Tiwari, Kumar R studied effects of yoga practice in the management of Obesity and risk factors associated with it and insisted on reduction of fat from Buttocks, Hips, Abdomen and Waist should be given utmost priorities because these are prominent areas where fat depot.

Studies given below suggest that Yoga training is better for good posture. Obese persons may need an instructor for fat reduction because of less flexibility. Many people may not Obese but have depot fat on some prominent areas of body i.e. belly, buttocks, hips and waist and they can opt specific asana like Hamsasana for swan pose, Mayurasana for peacock pose, Agnisar asana is beneficial for abdominal weight reduction.
- Bhujangasana: Beneficial for backache, slipped disk and toning of ovaries and uterus. It is useful in abdominal fat reduction
- Naukasana: Helps in reducing waist fat and tone kidney
- Dhanurasana: Effective for fat loss as it improves kidney, pancreas, liver and intestinal functioning.
- Trikonasana: Helps in reducing side waist fat
- Tadasana: Helps in increasing height and beneficial for spine and whole body massage and fat loss.
- Ustrasana: Beneficial for improving flexibility of spinal cord and beneficial for Asthma as well
- Surya namaskar: It alone can improve Flexibility, strength of Muscles, balance, fat reduction and helpful for depressed patients.
- Kapalbhati Pranayama: Beneficial yoga pose to cure stomach diseases i.e. constipation, acidity, diabetes & asthma. It is superb yoga pose to increase metabolism which reduces risk of Obesity.
**Parshwa Konasana (Side Angled Posture):** beneficial for reducing fat from hip and thigh.

**Marjariasana:** Helpful in curing menstrual cycle related problems and reproductive disorders. Lack of regular menstruation is one of the reasons of Obesity.

**Halasana:** Useful in treating diabetes, constipation as it provides massage to kidney, liver and pancreas.

Dae Yun Seo et al. (2012) studied yoga Training effect on metabolic parameters in obese boys. 8 weeks yoga training was given to (n=20) (Experimental yoga group n=10) (Control Group n=10) to assess Body Composition, Lipid Profile and Insulin Resistance (IR) in adolescent boys. All volunteer were selected having body mass index (BMI) greater than 95 Percentile. Experimental Yoga group was given exercises three times a week for 8 weeks at 40 to 60 percent heart rate reserve (HRR). There was significant decrease in Body weight, BMI, fat mass body fat percent and cholesterol level and significant increase in fat free mass and basal metabolic rate in Experimental yoga group compared to control group. Findings of the study show that 8 weeks training improves body composition and control metabolic syndrome.

**Conclusion**
The overall research studies outline the cause of obesity as Socio-Economic factors, Nutritional factors, Unhealthy lifestyle, and biological factors. Several literature reviews examined the impact of yoga on Obesity and health and associated diseases with Obesity i.e. cardiovascular diseases, Metabolic Syndrome, Diabetes, Cancer and Anxiety. These reviews have contributed a lot to form a large body of research regarding the Positive Health Benefits of Yoga. Yoga is supposed to play a vital role in promotion of physical and mental health and treating many other disorders. So, a regular practice of yoga 30 to 60 minutes daily is useful for health and altering obesity is must

**References**
1. www.W.H.O.Int