

Impact of Nutritional Diet and Yoga in the Management of Obesity

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Abstract

Siddha is an ancient system of Indian medicine. Saint Thirumoolar's Astangayogam, plays a vital role in the management of lifestyle disorder. Obesity is termed as "Athithoolam" in Siddha aspect. Physical inactivity and unhealthy diet are major contributors for obesity. Obesity has reached epidemic proportions globally with more than one million adults overweight and at least 300 million of them are clinically obese. Reduction of fat is a prime concern in today's world as obesity is carrier of life style disorder such as diabetes mellitus, hypertension, cancer, stroke and postural deformity. A large number of people consult with doctor or refer the kind of practices like dieting, weight loss and improving physical look. Yoga is a tool of holistic health, acquiring great posture and controlling eating habit. Hence, the aim of this study is to outline the role of diet, yogasanas and pranayama in reducing the obesity.

Key words: Obesity, Athithoolam, yogam, Siddha medicine, Diet.

1. Introduction

Obesity is the excessive or abnormal accumulation of fat or adipose tissue in the body that impairs health via its association to the risk of development of diabetes mellitus, cardiovascular disease, hypertension, and hyperlipidemia[1]. Obesity is a complex disease and has multifactorial etiology. It is the second most common cause of preventable death after smoking[2]. Obesity needs multiprong treatment strategies and may require lifelong treatment. A 5% to 10% weight loss can significantly improve health, quality of life, and economic burden of an individual and a country as a whole.[3][4][5]. Siddha system of medicine (traditional Tamil system of medicine) which has been prevalent in the ancient Tamil land is the foremost system of medicine among medical systems in the world. It is believed that the origin of Siddha system of medicine dates back to B.C 10,000 - B.C 4,000. According to the origin of the medical systems, it is very clear that, the Siddha system of medicine was prime medical system in the world [6].

In Siddha system of medicine, Obesity is termed as "Athithoolam. Physical inactivity and unhealthy diet are major contributors for obesity. Obesity has reached epidemic proportions globally with more than one million adults overweight and at least 300 million of them are clinically obese. Athithoolarogam is included one among 4448 diseases in Siddha system. Even though this disease is not included in Yugi's classification, there are evidences of usage of the term —Athithoolarogam by other names of the disease such as —Parunthoolarogam. Reduction of fat is a prime concern in today's world as obesity is carrier of life style disorder such as diabetes mellitus, hypertension, cancer, stroke and postural deformity. Yoga is a tool of holistic health, acquiring great posture and controlling eating habit. Hence, the purpose of this study is to outline the role of diet, yogasanas and pranayama in reducing the obesity.

2. Causes of Obesity

Obesity as a complex disorder has multiple etiological factors. The primary factor which is considered as a driver of obesity is obesogenic environment and unhealthy eating behaviour. Secondary factors such as genetic and neuroendocrine factors, and diseases such as hypothyroidism and polycystic ovary syndrome are also related to excessive weight [8]. Obesity is a complex disease that involves an excessive amount of body fat. It is a medical problem that increases your risk of other diseases and health problems, such as heart disease, diabetes, high blood pressure and certain cancers.

Although there are genetic, behavioural, metabolic and hormonal influences on body weight, obesity occurs when you take in more calories than you burn through exercise and normal daily activities that is when energy intake exceeds energy expenditure [9].

3. Impact of Diet in Obesity

Diet is the chief cause of obesity most often over eating that is the intake of calories beyond the body's energy requirements. Dietary fat and obesity Fat are of various types, some are more beneficial to health than others. Those found in foods are known as dietary fats, the body needs fat to function fully as it has a lot of functions in the body and is essential to health [10]. For instance, fat soluble vitamins (Vitamins A, D, E and K) cannot be transported in the absence of fat. However, a diet with too much fat can increase body weight and also increase the risk of cardiovascular disease. Dietary fats are believed to play an important role in the development of heart disease. The National health institutions have recommended reducing the intake of dietary fat to prevent CVDs [11].

4. Management of Obesity Through Diet

Recommendations for weight management emphasize the importance of healthy eating patterns which include consumption of nutrient-dense foods, limiting portion size of energy-dense foods, and reduce overall energy density. A unifying factor for weight loss across dietary patterns is energy density, when a diet's energy density is reduced; individuals consume satisfying amounts of food for fewer calories. The goal of dietary therapy is to reduce the total number of calories consumed [12].

The optimal diet for prevention of weight gain, obesity, metabolic syndrome, and type 2 diabetes is fat-reduced, fiber-rich and high in low-energy density carbohydrates (fruit, vegetables, and whole grain products). The Mediterranean eating pattern that emphasizes intake of low-energy dense fruits, vegetables, legumes, seafood, and dairy foods has proved effective in the management of obesity. However, higher amounts of fat (30–40% of total energy), especially from olive oil, are recommended with the Mediterranean diet. Even with this level of healthy fats, the Mediterranean diet recommends high proportion of fruit and vegetable which can help to keep the overall diet relatively low in energy density [13].

5. Weight Loss Diet Recipes

Some healthy herbal diet recipes to reduce the obesity mentioned below,

- Poosanikai adai
- Mullangithayirpachadi
- Kovaikkai rasam
- Kollukodampulirasam
- Kolluthuvaial/Dosa/
- Vazhathanduporiyal
- Kambu dosai
- Siruthaniyaadai
- Ragi koozh
- Puthina,ingi,lemon juice

- Vellaipoosani kootu
- Sombuneer

6. Effect of Yoga on Obesity

Yoga is a technique to bring a balanced approach in our life. It helps to control overunnecessary 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. 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.

Yoga is a technique to bring a balanced approach in our life. It helps to control over unnecessary patterns of sedentary lifestyle and diet. Asanas gives steadiness and comfortness to the body and mind. It helps to stimulate the body metabolism. 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. Various Asanas may stimulate the specific organs, endocrine glands to regulate the metabolic functions. This review highlights their specific effects in the management of obesity [13].

6.1. 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.

6.2. 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.

6.3 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 [14].

6.4 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.

6.5 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 strengths the rectus abdominus muscle of abdomen, muscles of thigh and pelvic region [15].

6.6 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 [16].

6.7 Shat Kriyas

- These are hatha yogic practices and are quite helpful in obesity. They are mean to purify body.
- These helps to balance our emotions and produce a feeling of lightness. It includes

- Jala neti,
- Kapalabhati
- Kunjal kriya (cleansing practice for stomach).

6.8 Pranayama

Pranayama or breath regulation has been greatly emphasized in Yoga and has drawn special attention from the scientific community. Breath regulation includes modulation of the pace of breathing, viz. slowing down or pacing the breath, manipulation of nostrils, chanting of humming sounds, retention of breath etc.

- The pranayama practices recommended for obesity to cleans the body.
- Thus helps in reducing weight.
- Pranayama can regulate the motion of the lungs, which controls the heart and vagus nerve.
- Regular practice of pranayam may have beneficial effects on nasobronchial disorders like chronic bronchitis, asthma, rhinitis, and common cold, pharyngitis, obesity, diabetes, hypertension, vascular variability disorders, insulin resistance, heart attacks, allergies, memory dysfunction, and aging.

7. Conclusion

Sedentary lifestyle and faulty dietary habits are the most important causative factors in pathogenesis of obesity. The prevalence of obesity is increasing among all ages, including elderly. Hence, diet and yoga appears to be an appropriate and potentially successful intervention for weight maintenance, prevention of obesity, and risk reduction for diseases in which obesity plays a significant causal role.

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