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Review Article

ROLE OF *SWASTHAVRITTA* IN PREVENTING LIFE STYLE DISORDERS W.S.R. TO *STHAULYA* (OBESITY)

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ABSTRACT

As per World Health Organization (WHO) report currently half a billion people (12 % of the world total population) are considered obese. Obesity is a vexing problem in the economics. For developing countries like India obesity is becoming public health priority. India is one of the capitals of diabetes and cardiovascular disorders. A way of living in present lifestyle which includes altered food habits, sleep pattern, stress, strain, working environment, pollution leads to various life style disorders like obesity, hypertension, cardiovascular accidents (CVA- stroke), diabetes mellitus, and tobacco-alcohol-nutrition induced cancers. arthritis etc. A healthy lifestyle promotes well being, building and proper maintaining of healthy bones, muscles and joints as well as helps in controlling weight. It increases self esteem; confidence reduces stress, strain and promotes physical, mental, social and spiritual well being. The aim of *Swasthavritta* is to maintain the good health of healthy person and to get rid of the disease of diseased person. Disease is the result of disturbance in homeostasis of *Tridosha*, *Saptadhatu*, *Agni*, *Mala* according to *Swasthavritta*.

This article will deal about the role of *Swasthavritta* at different levels stated in modern preventive medicine as primordial, primary, secondary and tertiary levels of prevention of lifestyle disorders with special reference to *sthaulya* (obesity).

Keywords: *Sthaulya*, Obesity, Prevention, Lifestyle, *Swasthavritta*, Levels of prevention.

INTRODUCTION

Lifestyle diseases (also sometimes called diseases of longevity or diseases of civilization) are diseases that appear to increase in frequency as countries become more industrialized & people live longer. They can include obesity, hypertension, cardiovascular accidents (CVA- stroke), diabetes mellitus, and tobacco-alcohol-nutrition induced cancers. arthritis etc. Diet and lifestyle are major factors thought to influence susceptibility to many diseases. Drug abuse, tobacco smoking, and alcohol drinking, as well as a lack of exercise may also increase the risk of developing certain diseases, especially later in life¹⁻³. As per World Health Organization (WHO) report currently half a billion people (12 % of the world total population) are considered obese⁴. A disease associated with the way a person or group of people lives is called as lifestyle disease. Life style disorders are going to take the form of epidemic in the 21st century, if proper preventive measures are not taken. Obesity can be seen as the first wave of a defined cluster of non-communicable diseases called "New World Syndrome," creating an enormous socioeconomic and public health burden in poorer countries.

The World Health Organization has described obesity as one of today's most neglected public health problems, affecting every region of the globe⁵. According to the World Health Organization (WHO), there will be about 2.3 billion overweight people aged 15 years and above and over 700 million obese people worldwide in 2015. Overweight and obesity are the fifth leading risk of deaths, resulting in around 2.8 million deaths of adults globally every year. In addition, 44% of the diabetes burden, 23% of the ischemic heart disease, and between 7% and 41% of certain cancer burdens are attributable to overweight or obesity⁶. The causes and comorbidities of overweight or obesity are rampant and have many commonalities among populations. Although identifying firm causes of this epidemic is a difficult task, the most obvious factors leading to overweight or obesity are excessive intake of energy-dense food, sedentary lifestyle, and lack of physical activity⁷.

As far as the India is concerned many scholars explained it in the perspective of the "nutritional transition in developing countries, or the shift from traditional diets and lifestyles to Western diets" (i.e. highly-saturated fats, sugar, and refined foods) and the combination of reduced levels of physical

activity, transport facilities, better healthcare, and increased stress, particularly in the rapidly-growing urban populations⁸. Furthermore, a significant positive correlation has been observed between better economic status and composition of diet consumed. People from economically better-off families are more likely to adopt sedentary lifestyle and intake energy-dense food⁹. As in most developing nations, India is struggling to eradicate the problem of under nutrition and anemia. Meanwhile, the country already witnessed the overweight and obesity problem. India has more than 30 million obese people, and the number is increasing alarmingly¹⁰. The problem is more acute among women than men. In urban India, more than 23% of women are either overweight or obese, which is higher than the prevalence among men (20%)¹⁰. It is now of great importance to review the ancient systems of medicine in order to apply measures prevalent in these systems in preventing the coming epidemic of lifestyle disorders which are preventable with changes in diet, lifestyle, and environment.

Therefore, the present study attempts to shed light on obesity (*sthaulya*) among population and will deal about the role of *swasthavritta* at different levels stated in modern preventive medicine as primordial, primary, secondary & tertiary levels of prevention of lifestyle disorders.

Objectives of the study are to understand the preventive aspects mentioned in *Swasthavritta* and to improve health, lifestyle and to avoid the complications of *sthaulya*.

MATERIALS AND METHODS

Literature search- Review of literature regarding obesity and levels of prevention has been collected from various text books, different web sites and from modern science. Matter is also collected regarding the *Sthaulya* and *Ayurvedic* preventive methods from *Ayurvedic* text books, *Samhitas*. All Compiled matter is reorganized and critically analyzed for the discussion and attempt has been made to draw some fruitful conclusions.

LITERATURE REVIEW:

1. Modern view: obesity

Overweight and obesity are defined as abnormal or excessive fat or adipose tissue subcutaneously that may impair health.

Body mass index (BMI) is a simple index of weight-for-height that is commonly used to classify overweight and obesity in adults. It is defined as a person's weight in kilograms divided by the square of his height in meters (kg/m²).

The WHO definition is:

a. BMI greater than or equal to 25 is overweight

b. BMI greater than or equal to 30 is obesity.

BMI provides the most useful population-level measure of overweight and obesity as it is the same for both sexes and for all ages of adults. However, it should be considered a rough guide because it may not correspond to the same degree of fatness in different individuals¹¹.

Etiology:

1. Lack of neighborhood sidewalks and safe places for recreation. Not having area parks, trails, sidewalks, and affordable gyms makes it hard for people to be physically active.

2. Work schedules. People often say that they don't have time to be physically active because of long work hours and time spent commuting.
3. Oversized food portions. People are exposed to huge food portions in restaurants, fast food places, railway stations, movie theaters, supermarkets, and even at home. Some of these meals and snacks can feed two or more people. Eating large portions means too much energy intake. Over time, this will cause weight gain if it isn't balanced with physical activity.
4. Lack of access to healthy foods. Some people don't eat healthy foods, such as fresh fruits and vegetables. Or, for some people, these healthy foods are too costly.
5. Food advertising. People are surrounded by ads from food companies. Often children are the targets of advertising for high-calorie, high-fat snacks and sugary drinks. The goal of these ads is to sway people to buy these high-calorie foods, and often they do.
6. Decrease in physical activity due to the increasingly sedentary nature of many forms of work, changing modes of transportation, and increasing urbanization.
7. One reason for this is that many people spend hours in front of televisions and computers doing work, schoolwork, and leisure activities.
8. In addition, reduced physical activity at work due to mechanization, improved motorized transport, and preferences of viewing television for longer duration have resulted in positive energy balance in people of most of the Asian countries¹².
9. The prevalence of obesity and sedentary behavior was significantly greater in Trivandrum, Calcutta, and Bombay compared with Moradabad and Nagpur. Sedentary behavior was significantly associated with obesity compared with non-obese subjects in both sexes, which may be due to greater economic development in metro cities¹³.
10. The additional burden of obesity due to increasing sedentary lifestyle, junk food habits in some urban and economically sound areas is really alarming.

Common health consequences of obesity:

Obesity is a major risk factor for non-communicable diseases¹⁴ such as:

1. Cardiovascular diseases (mainly heart disease and stroke), which were the leading cause of death.
2. Diabetes mellitus
3. Musculoskeletal disorders (especially osteoarthritis - a highly disabling degenerative disease of the joints)
4. Some cancers (endometrial, breast, and colon).
5. Obesity is the second leading cause of death in United States accounting for 300,000 deaths per year¹⁵.
6. Gynecomastia may be seen¹⁵.
7. Menstrual abnormalities in female¹⁵.
8. Gall stones¹⁵
9. Obesity hyperventilation Syndrome¹⁵.

The risk for these non-communicable diseases increases, with an increase in obesity.

Childhood obesity is associated with a higher chance of obesity, premature death and disability in adulthood. But in addition to increased future risks, obese children experience

breathing difficulties, increased risk of fractures, hypertension, and early markers of cardiovascular disease, insulin resistance and psychological effects.

WHO has developed the "Global Action Plan for the prevention and control of non-communicable diseases 2013-2020"

2. Ayurvedic view : *Sthaulya*

Sthaulya has been described as one of the *Ashtauninditiya* (eight most criticized) disease in *Charak Samhita*¹⁶.

When there is a movement of buttock, breast and abdomen (*Nitamb*, *Udar* and *Stana*) they become pendulous while walking due to excess of *Meda* (fat) and *Mansa*, (muscles) the person remains in sad mood or depressed is called as *Sthaulya Purush*¹⁷ His strength is rendered disproportionate with his physical growth. Due to obstruction caused by *Meda Dhatu*, there is an obstruction to the movement of *Vata* .This *Prakupit Vata* enters in stomach increases appetite and absorption of food. So patient digests food quickly and become a voracious eater. If he does not get food, when he needs it, he can be subjected to many diseases of serious nature; even it may lead to sudden death¹⁸ .

Etiology

Sthaulya is caused due to following reasons¹⁹

1. over intake of food.
 2. Intake of heavy, sweet, cooling and unctuous food.
 3. Lack of physical exercise.
 4. Abstinence from sexual intercourse.
 5. Day sleeping.
 6. Uninterrupted cheerfulness.
2. Specific measures include avoiding specific etiological factors such as diet prorogating *Kapha*, *Guru*, *Snigdha*, *aatyashana*, *adhyashana*, *awyayam* ,*awyaway* ,*atinidra* etc. The role of *Swasthavritta* extends at different levels of prevention i.e. primordial, primary, secondary and tertiary prevention.

Role of *Swasthavritta* in Primordial prevention of *Sthaulya* (obesity)

Primordial prevention is the prevention of the emergence or development of risk factors in countries or population groups in which they have not yet appeared .This is the true kind of prevention in lifestyle diseases like *Sthaulya* and it is achieved through individual and mass education of regular exercise (*Vyayam*) till the appearance of features of *Ardhashakti Vyayam* (exercise till increased rate of respiration, perspiration, feel of freshness) as a part of *Dincharya* (daily regime). This can be done through the means of mass education and cultural practice. Emphasis has been given in *Swasthavritta* on *Sanskar.Sadvrutta* includes good habits to be follow for lifetime to bring lifestyle changes including diet, exercise and weight reduction. Use of proper dietary habits as per *Ashtvidh Ahar vidhisheshayatan*²⁵, and *Dwadash Ashan Pravichar*²⁶ (eight and twelve rules for taking diet) from very beginning of life i.e. childhood is again a strong measure in preventing risk factors of from emerging lifestyle disorders.

Role of *Swasthavritta* in Primary prevention of *Sthaulya* (obesity)

7. Lack of mental exercise.

As a result of all this things following are the consequences²⁰,

1. Other *Dhatus* do not grow to the extent, fat grows.
2. Longevity is affected.
3. Body movement is impaired due to looseness.
4. Sexual act becomes difficult.
5. Small quantity of seminal fluid.
6. Weakness prevails as the equilibrium of *Dhatus* is disturbed.
7. Bad smell of the body.
8. Excessive sweating.
9. *Khpha* also increases as the fat is associated with *Kapha*.
10. Person cannot withstand physical exercise.
11. Excessive hunger and thirst.

The treatment of *Sthaulya* includes²¹:

1. *Pramitashana*(adequate quantity of food)
2. *Langhan*(fasting)
3. Heavy exercise.
4. *Ruksa udavartan*.(application of dry powder to body²²)
5. *Ratri jagarana*(late night work²²)
6. *Atimaitun*(excess sexual activity²²)
7. *Adhik Adhayana*(excess study²²)
8. *Chinta*(tension²²)
9. Use of certain medicines such as *Triphala*,(*Haritaki*-*Terminalia chebula*, *Bibhitaki*-*Terminalia bellerica*, *Amalaki*- *Terminalia chebula*) *Amalki*(*Embellica officinalis*) *Takrarishtha*, *Madhu*(Honey), *Sunthi*, *Kshar*, *Lohabhasma*, *Nagarmotha* (*cyperus rotundus*), *Shilajit* (mineral pitch²³).

Role of *Swasthavritta* in prevention of life style disorder *sthaulya*:

The basic aim (*prayojana*²⁴) of *Swasthavritta* is prevention of the disease by maintaining optimal health and well being through a comprehensive approach that involves body, mind and environment. Second to give the best results to the person having disease. According to *Swasthavritta* a healthy person is one who remains well established in self along with equilibrium of *Tridosha* (*Vata*, *Pitta*, *Kapha*),equilibrium of *agni*, equilibrium of *dhatu,mala,kriya*. Self is recognized by good aspect of spiritual health of body and mind.(*prassana atma*, *indriya*, *mana*) Dietetic factors, lifestyle as well as environmental factors affect health and disease is the result of disturbance in homeostasis of all above mentioned factors.

Sthaulya and *Swasthavritta*

Swasthavritta has a great potential in preventing all life style disorders. Obesity can be prevented by intervention in its cycle of pathogenesis as early as possible beginning from the avoidance of predisposing factors of the disease. Measures for prevention of *Sthaulya* (obesity) can be classified as:

1. General and
2. Specific measures.

1. General measures include properly observing *Dinacharya* and *Ritucharya sadavritta*, self control and knowledge of various factors affecting health, good habits, avoiding food in excess quantity(*Atyashana*), apathy *aacharana* ,*virudhashana* avoiding *Diwa Swapna* (Sleeping in day time), doing regular exercise and many others.

Primary prevention is action taken prior to the onset of disease which removes possibility that a disease will ever occur in future life. For this extensive surveys are conducted, free camps are arranged and high risk people are identified. This

group is advised to make certain changes in socio-economic, behavioral, food patterns, habits, sleep cycle and lifestyle. This include modification in lifestyle as per guidelines of *Ayurvedic* classical texts such as *Sadvritta* (good lifestyle practices), non suppression of natural urges, *Nidana Parivarjana* (avoiding causative factors) and so on after recognizing *Purvarroopa* (early signs) of *Sthaulya*.

Role of Swasthavritta in Secondary prevention of Sthaulya (obesity)

Secondary prevention involves measures which are taken to halt the progress of a disease at its incipient stage and prevent complication. Such measures which reduce *meda* and *kapha*, for example heavy exercise, *ruksa udavartana*, *ratri jagarana* *Pramitashana* (adequate quantity of food) , *Langhan* (fasting) *Atimaitun* (excess sexual activity ^{21,22} etc. are beneficial for patients of *Sthaulya*. Use of certain medicines such as *Triphala*, *Amalki Takrarishta*, *Madhu* (Honey) , *Suntha*, *Kshar*, *Lohabhasma*, *Nagarmotha* ,*Shilajit*.

Role of Swasthavritta in Tertiary prevention of Sthaulya (obesity)

It includes all measures that reduce or limit impairments and disabilities and minimize suffering of the patient due to disease. *Ayurveda* has limited role at this stage.

CONCLUSION

Obesity is a non-communicable disease is largely preventable. Supportive environments and communities are fundamental in shaping people's choices, making the healthier choice of foods and regular physical activity the easiest choice (accessible, available and affordable), and therefore preventing obesity.

With appropriate use of *Ayurvedic* preventive measures which are accessible, available and affordable such as *Dincharya*, *Ritucharya*, *sadvritta*, *Ahar vidhi*, and therapeutic measures such as use of medicines can be prevented at all levels and longevity can be increased.

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