

A Review Article on "Childhood Obesity (*Bala Sthaulya*) Through the Lens of *Ayurveda*: Looking at *Nidana, Samprapti and Chikitsa*"

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ABSTRACT

Nearly half of the world's population is thought to be fat or overweight. Thus, it is one of the biggest problems facing public health in the twenty-first century. Childhood obesity is a problem when extra body fat negatively impacts a child's health or well-being. The increasing incidence of childhood obesity and its numerous detrimental health consequences have led to its recognition as a significant public health issue. The most alarming feature of obesity is that it reduces life expectancy. In addition, it lowers life quality and increases the risk of heart disease, diabetes, sexual impairment, hypertension, arteriosclerosis, gallstones, strokes, and other physical and mental illnesses. Numerous factors, such as increased food intake, a sedentary lifestyle, less mental and physical exertion, and occasionally heredity, contribute to obesity. *Sthaulya* and *Medoroga* have used the term "obesity" in texts from *Ayurveda*. Charak described that *Atisthauilya* character is included under *Asta Ninditiya Purusha*. *Atisthauilya* was identified by *Acharya Charak* as a *kapha dosha* ailment. The main contributing factors to the pathophysiology of *Atisthauilya* are vitiated *Medo dhatu*, *Agni dusti*, and *Kapha dosha*. There are several ways to treat *Sthaulya* as described in our classics: *Nidana Parivarjarna*, *Pathyapthya*, *Santarpanotha vikara chikitsa*, *Guru Apatarpana chikitsa*, *Satata karshana*, and *Langhana chikitsa* [*Shodhana & Shaman rupi chikitsa*]. Three types of *Pathyas* are mentioned: (a) *Aharaja Pathyas*, such as *Purana Shali*, *Kulattha*, *takra*, *madhu*, etc. (b) *Viharaja Pathyas*, such as *Vyayamas Adhwagamana*, etc. and (c) *Manasika Pathyas*, such as *Chinta*, *Shoka*, etc. When *Pathyas* are used in conjunction with treatment procedures, better results are obtained.

KEYWORDS: Obesity, *Sthaulya*, *Santarpana janya vyadhi*, *Medo roga*, *Astaninditiya adhyaya*, *Meda dhatu*, *Vyayama*, *Samshodhna*, *Samshmana*

INTRODUCTION

In all age categories, the prevalence of *sthaulya*, or obesity, is rising globally. *Astanindatiya Adhyaya* in *Sutra sthana* of *Charaka Samhita* provides a detailed description of *Sthaulya*, a *Santarpanjanya Vyadhi* according to *Ayurvedic Samhitas*.

Medovaha Srotas is mostly impacted by *Sthaulya* disease, which leads to an overabundance of *Medodhatu* and ultimately presents as obesity disease. Obesity, or *Sthaulya*, is becoming more common in all age categories globally. Excess body fat that adversely impacts a child's health or well-

being is known as childhood obesity. Obesity in children is becoming a major public health problem due to its numerous negative health impacts and increasing prevalence. In children and adolescents, obesity has emerged as the most prevalent non-communicable disease. Genetic, physiological, behavioural, environmental, economic, and political elements are all part of the multifactorial aetiology. According to the World Health Organization (WHO), childhood obesity is a new epidemic, the leading global health issue, and one of the most significant public health issues of the twenty-first century.[1, 2], [3]The WHO predicts that there will be more than 54 million overweight or obese children in 2015.[4] Obesity in children can have a major negative impact on their health [5] and may be the root cause of some social and psychological issues.[6] The family may also have a significant direct or indirect financial strain as a result.[7] Thus, it is imperative that this issue be addressed from the ground up using efficient preventative and therapeutic strategies. Common therapies for childhood obesity include behaviour modification, medication, and surgery.[8] In emerging nations, the incidence of childhood obesity (5–19 years) is rising due to rapidly changing food habits and a sedentary lifestyle; in India, this prevalence is 22%.[9] Obesity has been most noticeable in cities, but it is also progressively spreading to semi-urban and rural areas. The fact that fat reduces longevity is its most alarming feature. In addition, it lowers quality of life and causes a number of physical and mental disorders, including heart disease, diabetes, sexual dysfunction, hypertension, arteriosclerosis, gallstones, and strokes. Authorities consider obesity to be one of the most significant public health issues of the twenty-first century. It is a major preventable cause of mortality globally and is becoming more common in both adults and children.[10] It is now well acknowledged that obesity is a disease that may be substantially avoided by making lifestyle modifications, particularly with regard to eating. Age, sex, race,

socioeconomic status, and other factors all affect body fat. In Ayurvedic writings, the terms *Sthaulya* and *Medoroga* have been used to denote obesity. *Asta Ninditiya Purusha* also includes *Atisthaulya*.

MATERIALS AND METHODS

Ayurvedic classic texts, relevant modern medical publications, Ayurvedic and related pharmaco-clinical dissertations, websites, and research and review articles that have already been published using manual search, PubMed, Medline, and Google Scholar were the sources of the information.

REVIEW OF LITERATURE

Medoroga (disorders of fat metabolism) has been widely discussed in Ayurvedic writings. According to Acharya Charaka (*CS Sutra sthana* 21/3–5), childhood obesity is associated with *Sthaulya*, One of the eight unwholesome constitutions (*Asta Ninditiya Purusha*).

The pathophysiology of *Sthaulya* is described as follows in Charaka Samhita Chikitsa Sthana 15:

"*Meda Dhatu Vriddhi* causes *Srotorodha* and *Agnimandya*, which in turn causes *Atisampurana Madhura-Snigdha-Aahāra*." Poor eating habits and a sedentary lifestyle are the main causes of *Sthaulya*, according to *Sushruta*. *Sushrut samhita Sutra sthana* 15/44–45

Acharya Vagbhatta highlights the need for *Achar Rasayana* by stressing the psychological and spiritual effects of *Sthaulya* in children.

Nidana of sthaulya

According to *Nidana of Sthaulya Charaka*, a single causal factor might result in a variety of medical problems. Once more, a single disease may result from a single causative agent. Only one disease may be brought on by numerous causal variables. Once more, numerous diseases may be caused by underlying factors.[11]

Four categories can be used to classify the etiologic variables mentioned in the Ayurvedic text

1. *Aharaja nidan*
2. *Viharaja nidan*
3. *Manasika nidan*
4. *Anya nidan*

Aside from these, the elements that could vitiate *Meda* and *Shlesma* could be regarded as contributing to *sthaulya*. Maharshi *Vagbhatta* and *Acharya Sushruta* both indicated endogenous reasons. In addition to other elements in the etiopathology at *Sthaulya*, *Vagbhatta* had identified defective intercellular metabolism as the primary culprit.[12] Other texts have respectfully adopted the *Brihatrayi's* explanation of the etiological components of *sthaulya*, but only *Charaka* has identified *Beeija dosha* as one of the causes in addition to others. Exogenous causes of *Sthaulya* include *Meda*, which intensifies diet and routines, whereas endogenous variables include *Dosha*, *Dhatu*, *Mala*, *Srotas*, and so on.

An important factor in raising *Meda dhatu* in *Sthaulya* is *Ahara rasa*. This is what *Acharya Sushruta* has said. In other words, *Sthaulya* and *Karshya* are dependent on the amount and quality of *Ahara rasa*. According to *Samanya Vishesh Siddhanta* [13], an excess of *Dhatu* is produced when people consume meals that are comparable in substance (*Dravya Samanya*), quality (*Guna Samanya*), and action (*Karma Samanya*). The overconsumption of fatty substances is also linked to the growth of *Meda Dhatu*. Overproduction and *Dhatu's* buildup are caused by *Ahara's* unique *Rasa*, *Guna*, *Virya*, *Vipaka*, *Karma*, and *Panchabhautik* composition, which is a result of *Dravya samanya siddhanta*.

Aaharatmak nidan:

1. According to *acharya charak* the *nidan* are *Ati-sampurnata*, *Santarpana*, *Guru*, *Madhuara*, *Seeta*, *Sleshmala aahara sevana*, *Navanna*, *Navamadya sevana*, *Gramya rasa sevana*, *Oudukya rasa sevana*, *Mamsa sevana*, *Paya vikara sevana*, *Dadhi*, *Sarpi*, *Ikshu*, *Guda vikara sevana*, *Shali*, *Godhuma*, *Masa*, *Rasayana*, *Vrishya sevana*, drinking water immediately after eating.[14]

2. *Sushrut* has also explained some *nidan* of *sthaulya* are *Adhyasana* & *Sleshmala aahara sevana*. [15]
3. *Astanga Sangraha* has also described some same *nidana* same as *charak* that are *Ati- sampurna*, *Santarpana*, *Madhura*, *snigdha*, *Mamsa sevana*, *paya vikara*, *Bhojana utara jalapana*. [16]
4. *Astanga Hridaya* explained extra two *nidana* than *A.S* that are *sarpi* & *Ikshu vikara*. [17]
5. *Sleshmala aahara sevana* is only accepted in *Madhav Nidan*. [18]
6. *Madhura Annasevana*, *Snigdha*, *Sleshmala aahara* & *Bhojana utara jalapana* are accepted by *acharya Bhava Mishra*. [19]

Dietary composition that leads to *sthaulya* are *Rasa – Madhura rasa*, *Guna – guru*, *sheeta*, *Manda*, *Sthira*, *slakshna*, *Sthula*, *Picchila*, *Veerya- sheeta*, *Vipaka- Madhura*, *Karma –Brimhana*, *Santarpana*, *Abhisyanada*, *Vrishya*, *Maha Bhuta – Prithvi*, *jala mahabhuta* dominant.

Viharatmak nidan:

1. *Viharas* mentioned in *CharakSamhita* are *Avyayama*, *Avyavayava*, *Divaswapna*, *Swapnaprasamgat*, *Asanasukha*, *Gandhamalayanusevana*, *Bhojanauttarasnana*. [14]
2. *Acharya Sushrut* has mentioned *Divaswapna* in *vihar*. [15]
3. *Astanga Sangraha* accepted *Viharatmak nidana* same as *Charak* are *Avyayama*, *Avyavayava*, *Divaswapna*, *Swapnaprasamgat*, *Asanasukha*, *Bhojanauttara Snana*. [16]
4. *Astanga Hridaya* described *Swapnaprasamgat*, *Asanasukha* as *nidan* of *sthaulya*. [17]
5. *Avyayama*, *Avyavayava* both are mentioned in *Madhava nidan*. [18]
6. *Bhava Mishra* accepted both *Avyayama* & *Divaswapna* as like *Charak Samhita* and also mentioned *Bhojanottara nidra* as another *vihar* of *nidan*. [19]

Manasika nidana:

1. Charak has described following manasika nidanas- *Harshanityatvata, Achintanat, Manasonivrutti, Priyadarsana*. [14]
2. *Acharya Sushrut, Bhava Mishra & Madhav* haven't mentioned any *manasika nidana*. [15,18,19]
3. In *Astanga Hridaya & Astanga Sangraha* there is no description of *Priyadarsana* as *manasika nidana* and accepted rest all *nidanas* same as in *Charak Samhita* but in *Astanga Hridaya* there is mentioned an extra *nidana* i.e. *Soukhenya*. [16,17]

Anya nidana:

1. *Charak* described extra etiological factor for *Sthaulya* except *Aaharatmak, Viharatmak & Manasik nidana* are *Beejadoshha swabhava, Snigdha madhura vasti sevana, Tailaabhyanga and Snigdha udvartana*. [14]
2. According to *maharshi Sushrut* and *acharya Bhava Mishra Amarasa* can play a role in the development of *Sthaulya*. [15,19]
3. Both A.H. & A.S. mentioned *Sthaulya* may be developed from excess use of *snigdha Madhura vasti sevana & taila abhyanga*. [16,17]

It is possible to classify the causes of *Sthaulya* in another way using *Samanya-Vishesh siddhanta*. [13] promoted by *Acharya Charaka*, which states that the amount and quality of nutrients recipients receive determines whether their *Dhatu* rises or falls. An increase in *Meda* occurs in the body as a result of excessive ingestion of substances that are similar to *Meda (Guna Samanya)* and actions that have actions similar to *Meda (Karma Samanya)*.

Accordingly, the *Nidanas* of *Sthaulya* can be categorized as follows:

Dravya Samanya: Fatty diet taking from animal & vegetable sources (*Sarpi, Taila, Vasa, Majja*)

Guna Samanya: Diet containing *Snigdha*(oily), *Guru guna* [such as *Dugdha*(milk), *Masha, Dravya* having

sheeta veerya (cold in potency), and substances which have dominant *Rasa-Madhura Rasa & Madhura in Vipaka*]

Karma Samanya: *Divaswapna* (sleeping in day time), *Avyayama* (no exercise), *Avyavaya* (no sexual activity), *Sukhasana* (excess sitting), *Taila Abhyanga* (oil massage), *Snigdha Udvardhana* (unctuous unctious), etc.

Reason behind the paediatric obesity in urban areas, town areas & cities especially metropolitan city:

1. Nutritional and dietary aspects:[20]

Excessive consumption of junk food: Processed snacks, soft drinks, high-calorie fast food and sugary desserts are easily available in the city.

Unique home-made recipes with well-balanced ingredients: Busy working parents are attracted to convenience foods, skipped breakfast in particular, which increases the tendency to overeat later.

2. Sedentary lifestyle:[21]

Lack of physical activity: Playing outside is reduced due to lack of open fields, playgrounds and safety concerns.

Screen dependence: Spending too much time in front of a computer, tablet, TV or mobile device.

Transport behaviour: Using a car or school bus instead of walking or cycling.

3. Urban and socio-economic context:[22]

Urban stress: Study pressure and lack of sleep can affect metabolism and lead to obesity. Access to unhealthy food outlets: Snack stalls and fast-food restaurants are common in urban areas.

Lack of physical education in the classroom: Due to academic demands, sports and exercise are often neglected.

Air pollution affects metabolic processes and indirectly reduces outdoor exercise.

4. Family and psychosocial factors:[23]

Parental lifestyle: Children inherit sedentary or obese habits of their parents.

Emotional eating: Stress, loneliness or depression are common causes of overeating in urban children.

Lack of monitoring: Working parents are unable to keep track of their children's food and exercise levels.

5. Patterns of behaviour and culture Celebratory culture:[20]

Constant consumption of high-fat, high-sugar foods during festivals.

Reward system: Use of food as a reward, such as sweets or fast food.

Westernization of diet: The shift from traditional to high-calorie, Western diets.

6. Hormonal and genetic factors of Obesity or diabetes in the family like, Endocrine disorders: Cushing's syndrome (less common but relevant) and hypothyroidism.[24]
7. Influence of marketing and media Aggressive promotion of unhealthy foods for children. When celebrities endorse it, junk food becomes attractive and in demand.[25]
8. Ignorance of Parents and other caregivers have a lack of health knowledge in feeding children. Exaggeration of the risks of childhood obesity: The belief that 'baby fat' is temporary and natural.[23]

Eight defects of *sthula purusa*:[26]

1. *Ayusohrasa* (reduction in lifespan)
2. *Javoparodha* (Absence of zeal)
3. *Kricchra Vyavaya* (Inability to perform a sexual act)
4. *Daurbalya* (General debility)
5. *Daurgandhya* (The body smells bad)
6. *Swedabadha* (A lot of perspiration)
7. *Kshudhatimatrata* (Overeager appetite)
8. *Pipasatatiyoga* (too much thirst)

Above defects are described by *acharya Charak* in *sutra stan* chapter 21 (*Astaninditiya Adhayaya*)

Samprapti of *sthaulya*:

1. According to *Charaka*, due to hindrance or obstruction of *srotas* by *meda dhatu* the *Vata* moves primarily into the *kostha* (stomach), whips up the *Agni*, and absorbs the meal. The obese man has a high appetite and digests meals quickly. Overeating increases *Rasa* production, which in turn causes *Meda Dhatu* to

expand excessively and result in *Sthaulya*. [27]

भवन्ति चात्र-

मेदसाऽऽवृतमार्गत्वाद्वायुः कोष्ठे विशेषतः।

चरन् सन्धुक्षयत्यग्निमाहारं शोषयत्यपि॥५॥

तस्मात् स शीघ्रं जरयत्याहारं चातिकाङ्क्षति।

विकारांश्चाश्रुते घोरान् काश्चित्कालव्यतिक्रमात्॥६॥ cha su .21/5-6

2. *Sushruta* asserts that *Kapha vardhaka Ahara*, *Adhyashana*, *Avyayama*, and *Divaswapna* are responsible for the production of *Ama Rasa*. *Snigdhamsa* of this *Anna Rasa* results in *sthaulya*, which promotes excessive stoutness, while *Madhura Bhava Ama Rasa* moves within the body.[15]
3. *Vagbhatta* states that excessive use of *Kapha* and *Meda Sadharmi* *Amarasa* involves etiological variables that cause *Kapha Bhuishtha Dosha vridhhi*, which in turn causes *Agni vikriti*, which in turn causes the formation of *Ama*. This *Ama* flows straight to *Meda Dhatu*, where it creates *Medodhatwagni-mandya*, which increases and accumulates *Meda*. *Margavarodha* of *Vata* results from *Medovaha Sroto Sanga*, which is caused by vitiated *Kapha* and *Meda*. This vitiated *Vata* circulates throughout the body, particularly in the *Koshta*, and eventually leads to *Jathragni Sandhukshana*, which causes *Shighra Jarana* of *Ahara* and *Kshudhaadhikya*. Because of *Medodhatwagni Mandya*, the *Medodhatwagni's* ability to digest *Medamsa* is impaired, resulting in the development of *Apakwa Meda*, which is unable to give nourishment to the subsequent *Dhatu*. *Sthaulya* is the result of the accumulation of *Ama Meda* in *Sarvanga*, particularly in the *sphig-Udara-Stana* regions.[28]

Complication of *sthaulya*:

According to *Yogaratanakar* complications of *sthaulya* are *Atisara*, *Arsha*, *Prameha*, *Hridaya roga* (*kaphaja Hridaya roga*), *Sleepada*, *Apachi*, *kamala*. [29]

Symptoms of *sthaulya*:

According to acharya charak symptoms of *sthaulya* is like this, the person's breasts, abdomen, and buttocks continue to shake as a result of their increased fat and flesh. The body doesn't develop correctly. He lacks the appropriate zeal and ought to be viewed as an indication of fat.

मेदोमांसातिवृद्धत्वाच्चलस्फिगुदरस्तनः|

अयथोपचयोत्साहो नरोऽतिस्थूल उच्यते||९||

इति मेदस्विनो दोषा हेतवो रूपमेव च| cha. Su.21/09

CHIKITSA (Treatment):

Chikitsa is the process that restores equilibrium to the body's disrupted Dhatus.[30]

चतुर्णां भिषगादीनां शस्तानां धातुवैकृते|

प्रवृत्तिर्धातुसाम्यार्थां चिकित्सेत्यभिधीयते||५||cha.su.9/5

According to Ayurveda, the general principle for managing any condition is to divide it into following sections.[31]

1. *Nidan parivarjana*
2. *Samshodhana*
3. *Samshamana*

Nidan parivarjana:

The initial course of treatment is *nidana parivarjana*. [32] Avoiding *Nidana* of a specific disease at the right moment may aid in halting the disease's progression. Therefore, the *Sthaulya purusha* must abandon *Nidana*, which includes *Atisampurana*, *Madhura* (sweet substances), *Sheeta* (cold substances or *Dravya* with cold in potency), *Snigdha*(unctuous), *Guru Aahara* (the substance which is heavy to digest), and *Adhyashana*, as the first step. *Viharatmaka Nidana* should also be avoided in addition to these.

- गुरु चातर्पणं चेष्टं स्थूलानां कर्शनं प्रति|
- कृशानां बृहणार्थं च लघु सन्तर्पणं च यत्||२०||
cha.su.21/20

To make them *Krishna*, extremely fat persons should follow the *Guru* and *Apatarpanaa* diet.

According to *Yogaratanakar*: -

Foods and beverages that reduce fat and *kapha* while easing *vata* It is advised to remove excess obesity with a hot and sharp enema, *Guduchi*, *Devdaru*, *Musta*, *Triphala*, *Takrarishhta*, and honey. In this formulation honey is used for removing the excess obesity. [29]

- In *charak Samhita* it is mentioned to use *Bilwadi panchamula* along with honey, *shilajit* and *agnimantha* juice for the management of obesity.

बिल्वादिपञ्चमूलस्य प्रयोगः क्षौद्रसंयुतः|

शिलाजतुप्रयोगश्च साग्निमन्थरसः परः||२४||cha.su.21/24

विडङ्गं नागरं क्षारः काललोहरजो मधु|

यवामलकचूर्णं च प्रयोगः श्रेष्ठ उच्यते||२३||cha.su.21/23

Use of barley powder, amla juice, ash, *vidanga*, *shunthi*, *yavakshara*, and black iron powder combined with honey to minimize obesity.

Samshodhana:

Shodhana can be classified in to two categories

- a. *Bahya shodhana*
- b. *Abhayantra shodhana*

- For *Bahya shodhana* purpose *Ruksha udvartana* can be used in *sthaulya*. [33]
- *Abhayantra shodhana* includes *Vamana* (emetion), *virechana*(purgation), *Niruha vasti* (*Ruksha asthapana vasti*), *lekhana vasti*, *Rakta mokshana* (bloodletting), *Karshana Nasya*.

Samshamana:

By reducing the vitiated *Dosha* without upsetting the other *Dhatus*, *shamana* treatment eliminates the illness. When the disease is in its early stages, this kind of treatment works quite well.

Out of the *sadvidha upakrama* described in *charak Samhita langhana & rukshana karma* are applied in *sthaulya chikitsa* for *samshamana* purpose. [34,35]. *Shamana chikitsa* can be applied in seven methods according to *Astanga Hridaya* and six methods as per *charak Samhita*. [36] The seven *shamana* methods are

- *Deepana*
- *Pachana*

- Vyayama
- Atapa sevana
- Maruta sevana
- Kshudha nigraha (upavasa)
- Trushna nigraha

समीकरोति विषमान् शमनं तच्च सप्तधा॥६॥

पाचनं दीपनं क्षुत्तृड्व्यायामातपमारुताः॥AH.Su.14/06

Out of the seven types of procedure *charak* didn't mention *Deepana karma*.

चतुष्प्रकारा संशुद्धिः पिपासा मारुतातपौ॥

पाचनान्युपवासश्च व्यायामश्चेति लङ्घनम्॥१८॥cha.su.23/18

The *Langhana* (Apatarpana) can encompass all of things. The greatest treatment for *Sama* (साम) conditions is *langhana*, which is advised in *Samtarpanajanya Vyadhi*, *Amashyotha Vikara*, *Shleshmika Vikara*, and *Rasaja Vikara*.

According to *Rogi-Roga Bala*, patients with *Sthaulya* can benefit from all the above forms of *Langhana*.

Certain *Samshamana Yogas*, such as *Shilajatu* with *Agnimantha Swarasa*, *Guduchi*, *Bhadramusta*, *Triphala*, *Takrarista*, *Makshika*, *Vidangadi Lauha*, and *Bilvadipanchmula*, are recommended for extended periods of time.[36]

Additionally, the *Charaka Samhita* makes reference to *Sthaulya's* treatment in a number of locations. As *Medonasaka* and *Lekhana*, medications and preparations such as *Venuyava* (cha.Su. 27/20), *Madhudaka* (cha.Su. 27/323), *Lekhaniya Mahakashaya* (cha.Su. 4/3(3)), and *Karshana Yavagu of Gavedhuka* (cha.Su. 2/25) are recommended. Since *Laghavakara* action is attributed to *Dravyas* who are dominant in *Akasha* and *Vayavya Mahabhuta* (Su.Su. 26/11), *Sthaulya* can be managed with the help of these *vayu & akasha mahabhuta* dominant articles.

Drugs that are dominant in *Katu*, *Tikta*, and *Kashaya Rasa* can be utilized to cure *Sthaulya* because they have *Karshana* and *Upchayahara* characteristics, while *Tikta Rasa* has *Lekhana* and *Medoupshoshana Karma* (Su.Su. 26/43).

Administration of *Virukshana* and *Chhedaniya Dravya*, particularly *Shilajatu*, *Guggulu*, *Gomutra*, *Triphala*, *Loha Raja*,

Rasanjana, and *Madhu*, in the appropriate dosage and period is recommended in *Sushruta Samhita* (Su.Su. 15/38).

Here, *Dalhana* has clarified that the properties of *Virukshana* and *Chhedaniya* aid in reducing *Meda* and removing blockages from the body channel respectively, namely from *Medovaha Srotas* due to its *Srotovishodhana* function.

Several drug groups, including *Varunadi Gana*, *Salasaradi Gana*, *Rodhradi Gana*, *Arkadi Gana*, *Muskadi Gana*, *Trayusnadi Gana*, and others, are referred to as *Medonasaka* in the 38th chapter of *Sushruta samhita Sutrasthana*. *Amalaki* is referred to as *Medopaham* (Su.Su. 44/70), while *Haritaki* is suggested for the treatment of *Santarpanajanya roga* (Su.Su. 44/69). Therefore, *Sthaulya* can be treated with *Haritaki* and *Amalaki*.

वातानुलोमनी वृष्या चेन्द्रियाणां प्रसादनी |

सन्तर्पणकृतान् रोगान् प्रायो हन्ति हरीतकी ||६९||Su.Su.44/69

शीतमामलकं रूक्षं पित्तमेदःकफापहम् |

बिभीतकमनुष्णं तु कफपित्तनिर्बहणम् ||७०|| Su.Su.44/70

Some formulations or yogas or single drugs for treatment of obesity [37]

- Single drugs – *Haritaki*, *Amalaki*, *Guggulu*, *Gomutra*, *Vacha*, *Guduchi*, *sunthi*, *patola*
- *Guggulu yogas* – *Navaka Guggulu*, *Medohara Guggulu*, *Trayusanadi Guggulu Amritadi Guggulu*, *Yograj Guggulu*
- *Kshara* – *Apamarga*, *Eranda & Yava kshara*
- *Sattu* – *Vyoshadi*, *Trayusanadi Sattu*
- Powder / *churna* – *Triphala churna*, *Vacha churna*, *Bidangadi churna*, *Mustadi churna*, *Phalatrikadi churna*, *Satsakara churna*,
- *Kwatha*- *Phalatrikadi Kwatha*, *Agnimanthadi Kwatha*, *Mustadi Kwatha*, *Katuki Kwatha*, *Triphala Kwatha*
- *Asava*- *Lohasava*, *Panchakolasava*
- *Arishta*- *Dantyarishta*
- *Rasa/Bhasma*- *Parada Bhasma*, *Loha Bhasma*, *Trimurti rasa*, *Aswakanchuki Rasa*

- Oils / *taila*- *Triphaladi taila* massage

Vihara that are used for *Samana* therapy for obesity:

Mainly exercise (*Vyayama*) has significant role in reducing obesity. *Acharya Charaka* has explained *Vyayama* in sutra stan seventh chapter vividly. *Sushrut* has also described about *Vyayama* in *chikitsa stan* 24th chapter also *Vagbhatta* described it in *sutra stan* 2nd chapter.

शरीरचेष्टा या चेष्टा स्थैर्यार्था बलवर्धिनी |

देहव्यायामसङ्ख्याता मात्रया तां समाचरेत् ||३१||cha.su.7/31

लाघवं कर्मसामर्थ्यं स्थैर्यं दुःखसहिष्णुता

दोषक्षयोऽग्निवृद्धिश्च व्यायामादुपजायते ||३२||cha.su.7/32

शरीरायासजननं कर्म व्यायामसञ्ज्ञितम् |

तत् कृत्वा तु सुखं देहं विमृद्नीयात् समन्ततः ||३८||Su.chi.24/38

शरीरोपचयः कान्तिगान्त्राणां सुविभक्तता |

दीप्तान्तिवमनालस्यं स्थिरत्वं लाघवं मृजा ||३९||Su.chi.24/39

न चास्ति सदृशं तेन किञ्चित् स्थौल्यापकर्षणम् |

न च व्यायामिनं मर्त्यमर्दयन्त्यरयो बलात् ||४१||su.chi.24/41

लाघवं कर्मसामर्थ्यं दीप्तोऽग्निर्मेदसः क्षयः |

विभक्तघनगात्रत्वं व्यायामादुपजायते ||१०||A.H.Su.2/10

Various *yoga, asana, pranayama* mentioned in classical text which are very much beneficial for *sthaulya* are: [38]

- *Asana - sarvangasana, padahastasana, dhanurasana, paschimottasana, Ardhamastyendrasana, Halasana, Bhujangasana, Pavanamukatasana, Katichakrasana, Matsyasana, Suryanamaskar, Ushtrasana.*
- *Pranayama – Bhatsrika, Suryabhed, Kapalbhathi*

Pathya - Apathya: [39,40]

Pathya aahara:

1. *Anna varga - Shasthika shali, Rakta Shali, purana Shali, Yava, Chanaka.*
2. *Shuka dhanya varga – Venu yava, kodrava, nivar, yava, jurna*
3. *Shami dhanya varga- Kulattha, Mudga, Rajamasa, Masur, Adakai, chanaka*
4. *Mutra varga – Gomutra*
5. *Madya varga- Purana sidhdu*
6. *Jala varga- Sunthi siddha jala, sruta sheeta jala, panchakola shruta jala*

7. *Mamsa varga- Jangala mamsa, Rohita Matsya, Aja mamsa*
8. *Ksheera varga- Takra*
9. *Shaka varga- karabellaka, Sigru, Potala, Alaboo, Patrasaka, Nimba patra*
10. *Kanda varga- Sunthi, Lasuna, Adraka*
11. *Phala varga – Amalaki*
12. *Dravya varga -Ushnodaka, Tila taila, Sarsapa taila, Jeerna madya, Aasava, Arista, Takra, Madhu*

Apathya Aahara:

1. *Anna varga- Masha, Navanna*
2. *Shuka dhanya varga- Navanna shali, Godhuma*
3. *Shami dhanya varga-Tila, Masha*
4. *Madya varga- Nutana madya*
5. *Jala varga –Sheetala jala, Dushita jala*
6. *Ksheera varga- Dadhi, Dugdha (ksheera)*
7. *Mamsa varga- Anupa mamsa, Gramya mamsa, Audaka mamsa*
8. *Phala varga – Mahura (sweet in taste) phala*
9. *Dravya varga – Ghrita, Navaneeta, Dugdha, Dadhi, Ikshu*
10. *Shaka varga- kanda saka, Madhura saka*

Pathya vihara:

- *Vyayama*
- *Vyavaya*
- *Jagarana*
- *Krodha*
- *Soka*
- *Chinta*

Apathya vihara:

- *Avyavayava, Achinta*
- *Avyayama*
- *Ati Asana, sukha sajja*
- *Diva swapna*
- *Manosha nibrutti*
- *Nitya harsha*

CONCLUSION

Eventually, *Sthaulya* is a *Kashtasadhya Vyadhi* and a *Santarpanjanya Vyadhi*, which is linked to obesity in the modern period and brought on by bad eating and lifestyle choices.

People, particularly preschool-aged and school-age children, become obese as a result of modern civilization's flawed lifestyle, poor diet, and erroneous standards of living. Therefore, our initial objective is to change the unhealthy lifestyle and poor eating habits of fat people. The primary treatment is *Nidan Parivarjan*, which we ought to use first. People who have *Kapha Pradhana Prakriti* are more likely to have *Sthaulya*. *Sthaulya* manifestation is mostly caused by the *Dosha* and *Dushya* of *Kapha, vata & Meda*. Following various Pathyas, such as Aharaja, Viharaja, and Manasika Pathyas, in addition to herbal remedies and yoga poses like asanas, pranayama, meditation, and relaxation techniques, can help one lose weight, reduce body fat, and manage their weight. Instead of the rapid weight loss promoted by crash dieting, the weight loss is anticipated to be moderate, long-term, and permanent as a result of holistic care.

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