

AN OVERVIEW OF AYURVEDIC MANAGEMENT OF *STHAULYA* W.S.R OBESITY

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ABSTRACT

Obesity is a significant burden on global healthcare. Among non-communicable diseases, obesity (*Sthaulya*) vividly prevails in both developed and developing country due to the change in the life style (*Aahara, Vihara and Manasika*) and working conditions. It is major global issue and emerging health problem in developing countries such as India. In Ayurveda, *Sthaulya* (Obesity) belong to *Santarpanajanya Vyadhi* and described by many *Acharyas*. In Ayurvedic text many drugs, medicinal preparations *Pathya – Apathya, Yogasana* and *Dinacharya* are described which have significant result in prevention and cure of this global issue. An effort has been made to understand Obesity through Modern and *Ayurvedic* perspective and to find out the likely solutions for obesity through *Ayurveda*. This article reflects light on etiopathology of *Sthaulya*, its sign & symptoms, preventive

methods like *Nidan Parivarjan, Dinacharya*, therapeutic management along with medicine, diet, *Pathya Apathya*, nonpharmacological methods like exercise and *Yogic kriyas*. Incidence of Obesity is increasing among the adult population due to changes in lifestyle and behavioural patterns of the people. *Sthaulya* is included under *Ashtau Nindita* (Eight undesirable conditions), the *Shleshma Nanatmaja, Santarpana Nimittaja, Ati-Bruhmana Nimittaja* and *Bahu Dosha Janita Vikara*. *Sushruta* mentioned *Dhatvaagnimandya* (Metabolic disturbances) as a reason of *Sthaulya*.^[1] Obesity is a concerning epidemic worldwide. According to WHO in 2014, 266 million men and 375 million women were

estimated to be obese worldwide. 39% of adults aged 18 years and over were overweight in 2016, and 13% were obese. Worldwide obesity has nearly tripled since 1975. In 2016, more than 1.9 billion adults were overweight. Of these over 650 million were obese.^[2] *Sthaulya* is among one of the 8 unwanted diseases mentioned by *Acharya Charaka*. To correct vitiated *Doshas* and *Agni* through Ayurvedic treatment, *Nidana Parivarjana*, *Pathya Aahar-Vihara* and *Aptarpana Chikitsa* should be done.

KEYWORD: *Sthaulya*, *Aptarpana*, *Meda*, *Agni*, *Langhan*, *Rukshana*.

NIRUKTI

A person having heaviness and bulkiness of the body due to extensive growth especially in *Udaradi region* is termed as "*Sthula*" and the state (*Bhava*) of *Sthula* is called "*Sthaulya*".^[3] Obesity comes from Latin word 'Obesus' meaning fat.

DEFINITION

A person having pendulous appearance of *Sphika* (Hip), *Udara* (Abdomen) and *Stana* (Chest) due to the inordinate increase of fat (*Meda Dhatu*) and flesh (*Mamsa dhatu*) and with reduced enthusiasm towards life is called *Atisthula*.^[4] According to the modern science, Obesity is defined as an accumulation of excess body fat (Adipose tissue) that is of sufficient magnitude to impair health.

CLASSIFICATION

Acharya Vagbhata classified *Sthaulya* in the context of indications of *Langhana Upakrama* as *Adhika*, *Madhyama* and *Hina Sthaulya*.^[5] *Vagbhata*'s classification can be correlated with modern science as given below.

1. *Hina Sthaulya*(Underweight- (B.M.I. 25-30 kg/m²)
 - Without any secondary disease and complication
 - Duration less than 1 year
2. *Madhyam Sthaulya*(Obesity class 1 & 2- (B.M.I. 30-40 kg./m² - Obese)
 - Without any secondary disease but with least complication
 - Duration between 1-5 year
3. *Adhika Sthaulya*(Severe Obese- B.M.I. > 40 kg./m² – Very Obese)
 - With secondary disease and complication
 - Duration of more than 5 year.

TYPE OF OBESITY

A. According to Body Fat Distribution

- 1. Central obesity**-Increased accumulation of fat in the trunk and in the abdominal cavity/Intra-abdominal. It is associated with a greater risk for several diseases than generalized obesity.
- 2. Generalized Obesity**-Excess accumulation of fat diffusely in the subcutaneous tissue.

B. Clinical classification of obesity

- 1. Stage 0**-No apparent Obesity-related risk factor
- 2. Stage 1**-Presence of obesity-related sub-clinical risk factors, mild physical symptoms.
- 3. Stage 2**-Presence of established obesity -related chronic disorders
- 4. Stage 3**-Stabalized end-organ damage.
- 5. Stage 4**-Severe (End stage) disabilities

ETIOPATHOGENESIS

According to Ayurveda

Due to the imbalance between the energy consumption in the diet and energy expenditure through exercise and bodily functions.

Nidana of *Sthaulya* is basically classified in four groups

1. *Aharaja Nidana*
2. *Viharaj Nidana*
3. *Manasika Nidana*
4. *Beejadusti*

<i>Aharatmaka Nidana</i>	<i>Viharatmaka Nidana</i>	<i>Manasa</i>	<i>Other</i>
<i>Adhyasana</i> (eating when previous meal is not digested)	<i>Avyayam</i> (lack of physical exercise)	<i>Achintana</i> (no worries)	Intake of sweet substances by mother during pregnancy
<i>Atisampurana</i> (binge eating)	<i>Avyavaya</i> (lack of sexual intercourse)	<i>Manasonivritti</i> (relaxation of the mind)	<i>Beejadoshha</i> (Defective genes)
<i>Ati Brimhana</i> (eating food high in calories)	<i>Divaswapana</i> (sleeping during day time)	<i>Saukhya</i> (happiness)	<i>Amarasa</i> (indigestion)
<i>Guru ahara</i> (food heavy to digest)	<i>Asana sukha</i> (long time siting)		<i>Snighda, Madhura Basti sevena</i> (enema which contain Oily and sweet drugs)
<i>Madhura ahara</i> (excessive use of food sweet in taste)	<i>Bhojanottarasnana</i> (after taking food idle		<i>Tail abhyanga</i> (oil Massage)

	sitting)		
<i>Snigdha ahara</i> (oily food)	<i>Swapnaprasangat</i> (excessive sleep)		<i>Snigdha Udvaartana</i> (powder massage with oily drugs)
<i>Sheeta</i> (cold food)	<i>Harshanitya</i> (always being cheerful)		
<i>Navanna</i> (recently harvested grain)	<i>Sukh sayya</i> (comfortable bedding)		
<i>Atyanavmadyapan</i> (excessive use of freshly prepared alcohol)	<i>Priyadarshana</i> (constantly seeing those things which are liked)		
<i>Paya vikara</i> (milk and its product)			
<i>Iksuvikara</i> (sugarcane and its product)			
<i>Guda</i> (jaggery)			
<i>Udada</i> (black gram)			

According to modern science

- 1. Genetic aspect-**Obesity is polygenic disorder.
- 2. Environmental Contribution-**Increased sedentary behaviour result in reduced activities of daily living.
- 3. Body weight dysregulation-** Dysregulation of a complex interplay of both hormonal/endocrine and neural mechanism that control appetite and satiety.

SYMPTOMS

Subjective symptoms^[6]

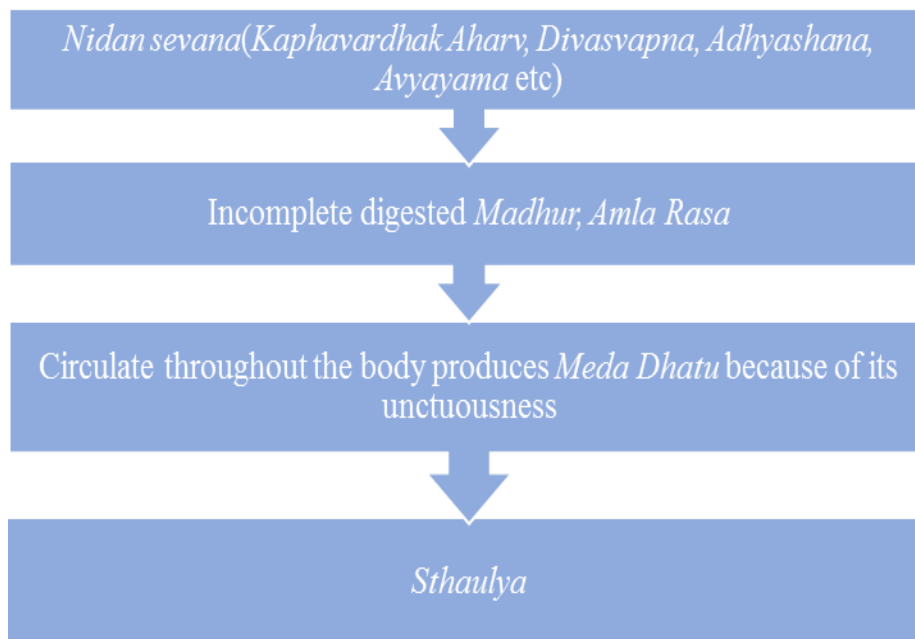
- ✓ Increased hunger (*Atikshudha*)
- ✓ Increased thirst (*Atipipasa*)
- ✓ Perspiration (*Atisweda*)
- ✓ Breathlessness (*Atiswasa*)
- ✓ Sleepiness (*Atinidra*)
- ✓ Difficulty to perform heavy work (*Aayas Ashamata*)
- ✓ Sluggishness (*Jadata*)
- ✓ Short lifespan (*Alpayu*)
- ✓ Decreased body strength (*Alpabala*)
- ✓ Bad body odour (*Dourgandhya*)
- ✓ Unclear voice (*Gadgada*)

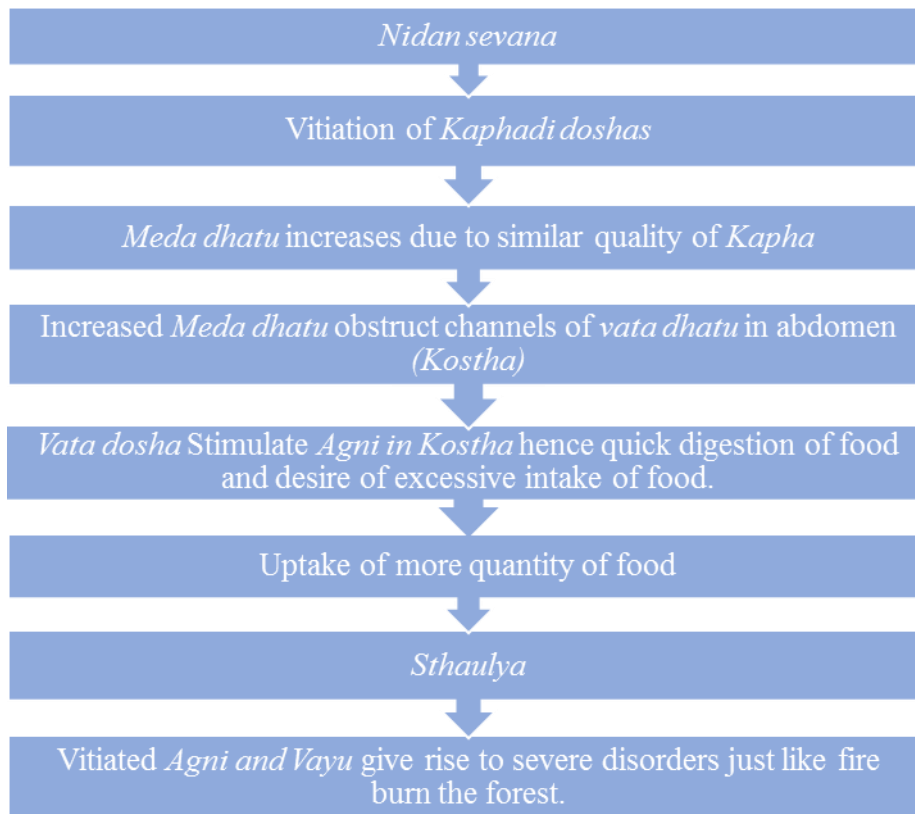
THE CARDINAL SYMPTOMS AND EIGHT-FOLD DOSA

Cardinal Symptoms of <i>Sthaulya</i>	Eight-fold dosha of <i>Sthaulya</i> ^[7]
<i>Medomamsaativrudhi</i> (excessive accumulation of <i>Meda</i> and <i>Mamsa</i>)	<i>Ayushohrasa</i> (Shortening of lifespan)
<i>Chalasphik, Udara, Stana</i> (flabby buttocks, abdomen, breasts due to excessive fat deposition)	<i>Javoparodha</i> (lack of interest in physical activity /sluggish movement)
<i>Ayathopachaya-anutsaha</i> (improperly formed <i>Medodhatu</i> causes <i>utsahahani</i> in the individual)	<i>Kricchravyavaya</i> (difficulty in sexual intercourse)
	<i>Dourbalya</i> (weakness)
	<i>Dourgandhya</i> (unpleasant odour from the body /foul smell from the body)
	<i>Sweda atipravriti</i> (over sweating)
	<i>Kshudhatimatra</i> (to much hunger)
	<i>Pipasatiyoga</i> (excessive thirst)

SAMPRAPTI(ETIOLOGY)

1. *Samprapti chakra of Sthaulya* according to Acharya Sushruta



2. *Samprapti chakra of Sthaulya* according to Acharya Charaka^[8]**DIAGNOSIS**

Specific Criteria to measure obesity

1. Body Mass Index- It is defined as a person's weight in kilograms divided by the square of his / her height in meters (kg/m²).

$$\text{Body mass Index} = \frac{\text{Body weight (In kg)}}{\text{Height (in metres)}^2}$$

BMI (Body Mass Index) according to Body Mass Index^[9]

WHO Classification	BMI(Kg/m ²)	Risk of comorbidity
Overweight	25-30	Mildly increased
Obese 18.5-24.9	>30	
Class-I 25.0-29.9	30-35	Moderate
Class-II >30.0	35-40	Severe
Class-III 30.0-34.9	>40	Very Severe

2. Age specific weight for height table
3. Skinfold Measurement
4. Waist Circumference-

Normal range of Waist circumference: Men: 94–102 cm;

Women: 80-88 cm

5. Waist/Hip ratio- (>0.55 is obese)

6. Lab Investigation

Lipid Profile

Blood glucose

Blood Pressure

TREATMENT

1. *Nidan parivarjana*

The first line of treatment of obesity is to avoid all the *Aharatmak, Viharatmak and Manasika nidan* described in text.

2. *Aptarpana Chikitsa*^[10]

Sthaulya is Santarpanjanya Vikar that's why *Aptarpana Chikitsa* should be followed to get rid of excess fat.

Chikitsa sutra of Sthaulya

“गुरु च अपतर्पण वेष्टम् स्थौल्यं चरक सूत्र 21/20

Heavy food which is hard to digest (Less carbohydrate) and non- saturating(less fat) but lower down the appetite is suitable for obese person.

Aptarpana chikitsa includes 3 procedure of *Shat Upakramas* that is^[11]

- *Langhan*
- *Rukshana*
- *Swedana*

i. *Langhan Therapy* – *Langhan* are of 10 types

<i>Sanshodhana</i>	<i>Sanshamana</i>
<i>Vaman</i>	<i>Pachana Aushadi</i>
<i>virechan,</i>	<i>Upavasa</i>
<i>Shiro virechana(Nasya)</i>	<i>Vyayama</i>
<i>Niruh basti</i>	<i>Maruta sevana</i>
	<i>Atapa sevana</i>
	<i>Pipasa</i>

Sanshodhana Chikitsa applied where *bala of rogi and rog* is of great extent. *Rogi* able to bear *Shodhana* (purification) process and *Doshas of roga* are vitiated in very much amount.

Sanshamana Chikitsa applied where *bala of Rogi* and *Roga* are of less extent and patient not able to bear *Shodhana* process that's why *rogi* treated with *Shamana Chikitsa*. Vitiation of *Doshas* are in less amount.

- ii. *Rukshana Therapy*- *Rukshana* (dryness causing) therapy is that which causes dryness, roughness, and coarseness. Regular use of substances having pungent, bitter and astringent tastes, indulgence in women, use of oil-cakes of mustard and *tila* (sesame), buttermilk, honey and similar things tend to induce dryness and reduces the excessive *Meda* formed in body.
- iii. *Swedana Therapy*- *Swedana* (sudation) therapy possesses hot, acute, flowing (unstable), unctuous, dry, minute (subtle), liquid, stable and heavy qualities which result in rapid conversion of excess of *Sneha into Meda*.

3. *Shodhana Chikitsa*

- i. *Vaman*
- ii. *Virechana*
- iii. *Anuvasana basti*- contraindicated in Obesity
- iv. *Niruh Basti-Lekhana basti* with drugs having *Tikshna, Ushna and Ruksha* properties.

4. *Shamana Chikitsa*

- i. *Pachana Aushadi*-
- ii. *Upavasa*- Due to aggravated *Agni* in obese person it is not possible to do continuous fasting there for according to *Acharya Dalhana* Intermittent fasting should be done. Due to unavailability of carbohydrate in body, accumulated fat is used for energy.
- iii. *Vyayama*- Physical activity increases people's total energy expenditure, which help in energy balance and weight lose. According to *Acharya Charak Vyayam* bring lightness, stability, mitigation of *doshas* and strength in body [12]
- iv. *Maruta sevana*
- v. *Atapa sevana*- Animal studies suggest that chronic exposure to UVR could prevent obesity and cardiometabolic dysfunction.
- vi. *Pipasa*
- vii. *Udvartana Chikitsa*- *Triphala Churna, Kutaja Bark Churna, Amalaki Churna*

5. Single drugs

1. <i>Shilajatu</i>	2. <i>Vacha</i>
3. <i>Vidanga</i>	4. <i>Daruharidra</i>
5. <i>Musta</i>	6. <i>Guggulu</i>
7. <i>Amlaki Churna</i>	8. <i>Guduchi,</i>
9. <i>Sunthi</i>	10. <i>Gomutra</i>
11. <i>Loha Churna</i>	12. <i>Rasanjana</i>
13. <i>Madhu</i>	14. <i>Kshara</i>

6. Lekhaniya Mahakashaya

1. <i>Mustaka</i>	2. <i>Kustha</i>
3. <i>Haridra</i>	4. <i>Daru haridra</i>
5. <i>Vacha</i>	6. <i>Ativisha</i>
7. <i>Katuki</i>	8. <i>Chitrak</i>
9. <i>Chirbilwa</i>	10. <i>Hemavatya</i>

7. Compound Formation

1. <i>Brihat Panchmula</i>	2. <i>Amritadi Guggulu</i>
3. <i>Navaka Guggulu</i>	4. <i>Loha Arista</i>
5. <i>Dashang guggulu</i>	6. <i>Chavayadi Sattu</i>
7. <i>Trayushanadi Guggulu</i>	8. <i>Medohar Guggulu</i>
9. <i>Chavayadi Guggulu</i>	10. <i>Triphaladi Tail</i>

PATHYA (DO'S) AND APATHYA (DONT'S)

	Pathya (Do's)	Apathya (Dont's)
Cereals	Old Rice, <i>Bajara</i> , Maize (<i>Makka</i>), <i>Barley</i>	Newly harvested Rice, Wheat
Pulses	Chickpea (<i>chana</i>), Pigeon pea (<i>Arahara</i>), Green gram (<i>munga</i>), <i>Kulattha</i>	Black Gram
Fruits & vegetable	Brinjal, <i>Paravala</i> , Drum stick(<i>sighru</i>)	Potato
Others	Butter milk, Cardamom, <i>Amalaki</i> , Mustard oil, Luke warm water, <i>priyagu</i> , <i>Guggulu</i> , <i>Lauha bhasma</i> , <i>Silajatu</i> , Intake of water before meal, Food substances with pungent, bitter taste	Milk, curd, meat, fish, clarified butter, jaggery, intake of water after meal
Life style	Physical exercise, night awakening, worry, massage, with medicated paste/ powder (<i>Udvardana</i>), lightening (<i>Langhan</i>), sunlight exposure, walking, <i>Aptarpana</i> , Bathing with	Bathing with cold water, day sleeping, Luxurious, lifestyle, Oil massage

	lute warm water.	
Exercise	Squat double Jump, Mountain Climbers, Jump Rope, Bodyweight Balance, Cycling	
Yoga Asan	<i>Bhadrasana, Vjrasana, Vakrasana, Kapalbhata, Pranayama (Anulomvilom, Suryabheda, Bhastrika, Ujjayi, Brahmri), Trikonasana, Makarasana, Uttanpadasana,</i>	

CONCLUSION

Sthaulya is due to *Kapha Vardhak Ahar* and increased sedentary behaviour which result in excess fat or *Meda Dhatu* accumulation in body. It is the metabolic disorder which can be prevented by regulating calory intake and calory expenditure. Indulge in physical activity will also help in great extent to lose weight. Treatment protocol includes *Aptarpana Chikitsa (Langhana, Rhukshana, Swedana)*, *Shodhana Chikitsa (Vamana, Virechana, Niriha basti, Udvartana)*, *Sanshaman Chikitsa* includes (*Pachana, Upavasa, Vyayam, Atap sevana, Marut sevana, Pipasa*) incorporating physical activity, *Yoga* in daily schedule of Obese person.

Since obesity is highly prevalent disease major action should be taken by educating people with different aspect of obesity like causes, prevention, diet and complication.

Modification in lifestyle like changing eating habits and involving physical exercise in daily routine can prevent obesity at great extent.

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