



## Role of Specific Ayurvedic Diet in the Treatment of Sthoulya (Obesity) – A Case Study

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### ABSTRACT

Ayurveda is one of the oldest medical sciences in the world and offers a deep understanding of various diseases through its unique principles and methodologies. In Ayurveda, "Sthoulya" is elucidated by various scholars, with Charakacharya ranking it between "Ashtanindityapurusha" and "Santarpanjanyarogas". In modern times, obesity has emerged as a prevalent metabolic disorder, often attributed to a sedentary lifestyle and excessive consumption of fatty foods. Madhavnidankar, Charakacharya and other scholars have associated Sthoulya with "medodhatavagnimandya" indicating slow metabolism of adipose tissues. Therefore, treatment strategies often emphasize dietary management tailored to these underlying factors.<sup>(1)</sup>

Keywords - Sthoulya, Ayurvedic diet, Obesity, Ahara Vihara

### Introduction

\* The present time is more threatened by various diseases of civilization. Sthoulya (obesity) is one such lifestyle disease. In the process of modernization and rapid urbanization, human beings fall prey to various diseases. Unhealthy eating habits and lifestyle play a major role in the development of many diseases, including obesity. Although therapy with prescription drugs is often unavoidable. Lifestyle modification can play a key role in obesity. In Ayurveda and other alternative therapies, obesity can be managed through Ahara (diet) and Vihara (lifestyle).

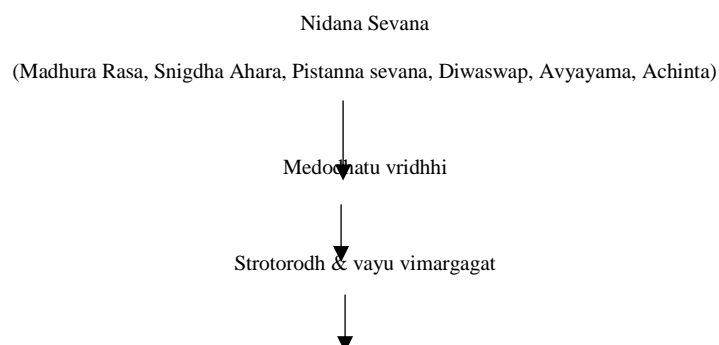
\* Ayurveda has a scientific approach to Ahara planning, that is why Acharya Charaka included Ahara as the first among the three pillars of life.

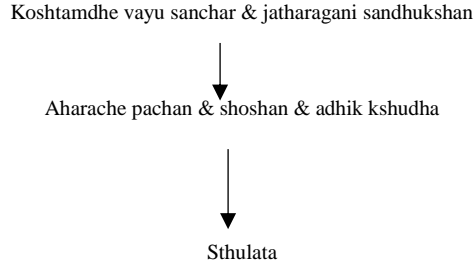
\* Ahara is an important ingredient for disease management. Likewise, Ahara is considered an important tool to protect life and health

\* Obesity carries a stigma in many contemporary societies, particularly in the Western world. However, throughout history it has been viewed as a sign of well-being and fertility, a perspective that is still held in some regions today. The American Medical Association officially recognized obesity as a disease in 2013.<sup>(2)</sup>

\* In India, overweight rates have risen from 9.7% at the beginning of the 21st century to nearly 20% in research published after 2010. Studies indicate a rapid increase in obesity and overweight among children and adolescents, extending beyond affluent communities. include the poor rural population. Despite the prevailing problems of malnutrition and underweight in these areas, the trend towards obesity persists.<sup>(3)</sup>

### Samprapti of Sthoulya<sup>(4)</sup>





## CLINICAL FEATURES OF STHOULYA (OBESITY)

मेदोमांसातिवृद्धत्वात् चल स्फिग उदर स्तनः।

अयथोपचयोत्साहो नरः अतिस्तूल उच्यते ॥<sup>(5)</sup>

An individual is considered morbidly obese if there is an abnormal increase in fat and muscle mass, resulting in sagging buttocks, abdomen, and breasts, along with decreased metabolic rate and energy levels. The causes of obesity are complex and go beyond a simple imbalance between caloric intake and caloric expenditure. Contributing factors include race, sex, age, ethnic and cultural background, socioeconomic status, dietary habits, pregnancy and menopause, psychological influences, maternal lactation history, hormonal and metabolic factors, genetic predisposition, and level of daily physical activity.

### Symptoms

1. Aati sweda (excessive Sweating)
2. Sharamjanya Swasa (shortness of breath on mild exertion)
3. Aati Nidra (excessive sleep)
4. Jadyatha (rigidity)
5. Alpaayu (Short life)
6. Alpabala (Decreased bone strength)
7. Uathashahani (Inertia)
8. Sharir Durgandhta (Abominable Body Odor)
9. Gadgadtava (unclear voice)
10. Kshudha vridhi (excessive hunger)
11. Ati Trishna (excessive thirst)

## ASHTAVIDH PARIKSHA

Nadi: 74/ min	Mala: Twice a Day
Mutra: 4-5 times/day	Jivha : saam
Shabda: Prakrita	Sparsh : anushnashit
Druk: Prakrita	Akriti: Madhyam

## DASHVIDH PAREEKSHA

Prakriti: Vata kapha	Satva : Prawara Sattva
Vikriti : Samana Vayu,meda	Satmya: Shad Rasa Satmya
Sara: Mamsa sara	Ahara shakti:Pravara
Abyavarana shakti: Prawara	Jarana shakti: Pravara
Samhanana: Madhyama	Vyayama shakti: Prawara
Pramana:Madhyama	Vayah: yuva

**SAMPRAPTI GHATAKA**

Dosha: Tridosha / Kapha Pradhana

Dushya: Meda

Adishtana: Sarva Sharira

Srotas: Medovaha Srotas

Agni: Jatharagni mandya

Udbhawastana : Amashaya

Sadhya Asadyata : Kruccha Sadhya

**Complaints**

Sr. no	Present complaints	Duration
1	Increased body weight	3 years
2	Heaviness in body (Gurugatrata)	3 years
3	Polydipsia (Atitrushna)	2 years
4	Polyphagia (Atikshuda)	2 years
5	Continuous feeling of laziness	2 years
6	Exertional dyspnea (Ayasena swaskasthata)	2 years

**Anthropometry, personal history, body weight and BMI before starting treatment**

BP	120/80 mm/hg
Pulse	82/min
Height	156cm
Weight	71kg
BMI	29.3kg/m <sup>2</sup>
Chest girth	84.3cm
Abdominal girth	90cm
Hip girth	100cm
Ahara	Snigdhaahar- Milk and milk products, Pistanna- Rice and bakery products
Vihara	Diwaswap, Avyayam, Achinta
Nidra	Impaired
Kshudha/Trushna	good

**Srotas Parikshan**

Name of Srotas	Dushtilakshana
<b>Rasvaha</b>	Exertion dyspnea (Ayasena swaskasthata) heaviness in body (Gurugatrata), constant feeling of laziness (Utsahahani)
<b>Mansvaha</b>	expansion of Spik and Udara
<b>Medovaha</b>	Increased body weight Excessive sweating (Swedabadha) Polydipsia (Atitrushna) Polyphagia (Atikshuda)

- INVESTIGATION**

1. CBC
2. Thyroid profile
3. Lipid profile

- **PAST HISTORY OF ILLNESS**

Past medical history - H/O Hyperthyroidism,

No H/O Diabetes Mellitus, Hypertension

Surgical history - No H/O any surgery

Drug history - Tab. Thyronorm 75 mcg (1 OD)

Family history - Not significant

Menstrual history - Regular

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### PRESENT HISTORY OF ILLNESS

A 26 year female patient apparently healthy 3 years ago gradually She observed that there was gradual increase in body weight, heaviness in body (Gurugatrata), exertional dyspnea (Ayasena swaskasthata) Continuous feeling of laziness, Polydipsia (Atitrushna), Polyphagia (Atikshuda). So, she came to OPD of our institute for the Ayurvedic treatment where she was diagnosed with Sthoulya (Obesity). (Overweight as per BMI= 29.3kg/m<sup>2</sup>)

Sr.no	Classification	BMI
1.	Severely underweight	BMI less than 16.5 kg/m <sup>2</sup>
2.	Underweight	BMI under 18.5 kg/m <sup>2</sup>
3.	Normal weight	BMI greater than or equal to 18.5-24.9kg/m <sup>2</sup>
4.	Over weight	BMI greater than or equal to 25-29.9 kg/m <sup>2</sup>
5.	Obesity	BMI greater that or equal to 30kg/m <sup>2</sup>
6.	Obesity class I	BMI 30-34.9kg/m <sup>2</sup>
7.	Obesity class II	BMI 35-39.9kg/m <sup>2</sup>
8.	Obesity class III	BMI greater than or equal to 40kg/m <sup>2</sup>

Treatment Given

- Patient above BMI of 25 are taken in the study, and difference between BMI is measured after 12 days and followed by next 12 days.

12 days of diet plan on

- Day 1- Mudgayush given to the patient throughout the day and this is to be continued till 3rd day of diet.
- On the 4th day Mudgayush with Goghrita, Vidang, marich and hing ( Asafoetida) given to the patient.
- Fruit diet given to the patient from 5<sup>th</sup> day till 12th day.
- **Repeat this diet for 12 more days.**

- Throughout the diet these fruits should be avoided:- Mango, Banana, custard apple, citrus fruits like orange.
- These fruits can be eaten:- Apple, papaya, pomegranate, watermelon, sweet lemon.
- Patient is instructed to drink only Ushnodaka for 12 days of diet <sup>(7)</sup>
- Follow the pathya and apathya Ahar and Vihar <sup>(8)</sup>

**Table 1 - Pathya/Apathya Ahara**

Ahara varga (food)	Pathya (Suitable)	Apathya (unsuitable)
Shuka Dhanya (food grain)	Yava, Venuyava, Kodrava,	Godhuma, navanna, sali
Shami Dhanya (pulses)	Mudga, Rajmasha, Kullatha, Masura, Adhaki	Masha, tila
Shaka Varga (vegetables)	Vrintaka, Patrashaka, Patola	Madhuraphala
Drava (liquid )	Takra, Madhu, Ushnodaka, Dugdha, tiltaila, Asava, Arishta	Ikshu, navnita, ghrita, dadhi
Mamsa (meat)	Rohita Matsya	Anupa, audaka

**Table 2 - Pathya/Apathya Vihara**

Pathya	Apathya
Shrama (Hardwork)	Sheetala jala
Jagarana (Late nights)	Divaswapa (Day sleeping)
Vyavaya (Sexual activity)	Avyayama, Avyavaya (less exercise and less indulgence in sexual activity)
Nitya langhana (regular use of Reducing therapy)	Swapna Prasanga (excessive sleeping)
Chintana (thinking)	Sukha shaiyya (comfortable bedding)
Shoka (sorrow)	Nitya harsha (Happiness)
Krodha (anger)	Achintana, manasonivritti (Idle mind)

**Observation**

Observation	Baseline Observation	On 5 <sup>th</sup> day of treatment	On 12 <sup>th</sup> day of treatment
Weight	71 kg	69kg	67.3kg
BMI	29.3 kg/m <sup>2</sup>	28.3kg/m <sup>2</sup>	27.6kg/m <sup>2</sup>
Chest girth	84.3cm	83.1cm	80.2cm
Abdomen girth	90cm	88cm	86cm
Hip girth	100cm	97cm	95cm

**Before and after treatment comparison****Changes in Lipid Profile**

Lipid	Before treatment	after treatment
Serum total cholesterol	220mg/dl (Increased)	191mg/dl
Serum triglyceride	116mg/dl	138mg/dl

<b>HDL</b>	40mg/dl	53mg/dl
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**Changes in Thyroid Profile**

Thyroid	Before treatment	after treatment
T3	143.9ug/dl	147.6ug/dl
T4	8.95mg/dl	7.06ug/dl
TSH	16.13ug/dl	5.0ug/dl

**CBC Investigation within normal range****Changes in sign and symptoms**

Sr. no	Sign and Symptoms	Before treatment	after treatment
1.	Increased body weight	+++	+
2.	Heaviness in body (Gurugatrata)	+++	+
3.	Polydipsia (Atitrushna)	++	+
4.	Polyphagia (Atikshuda)	+++	+
5.	Continuous feeling of laziness	++	+
6.	Exertional dyspnea (Ayasena swaskasthata)	+++	+

(++++) Severe presentation of symptoms, (+++) moderate, (++) mild, (+) Least or sometimes (-) No symptoms

**Final Observation**

Observation	Before treatment	after treatment
Weight	71 kg	60kg
BMI	29.3 kg/m <sup>2</sup>	24.6kg/m <sup>2</sup>
Chest girth	84.3cm	79.1cm
Abdomen girth	90cm	81.3cm
Hip girth	100cm	93.1cm

**Conclusion & Discussion**

Sthoulya is mentioned as Krichchrasadhya Vikar but on the basis of BMI one can say that if persons BMI lies between 25-30kg/m<sup>2</sup>. It can be termed as Sadhya (Curable) but if it goes beyond 30kg/m<sup>2</sup>, then it becomes difficult to cure.

The management of Sthoulya described in ayurvedic text comprising medicine dietary regulations as per samprapti of sthoulya, resulted as a effective treatment plan. Importance of healthy dietary habits has been proven effective. Lifestyle correction can be achieved by following treatment plan described in Charak Samhita.

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