

Research Article

Integrative approach to obesity management: Ayurvedic & Modern perspective

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ABSTRACT

Modernization , affluence , and advancements in science and technology have led to increase in sedentary lifestyle which unintentionally invites a range of health issues one of which is *Sthaulya* (Obesity). *Sthaulya* affects physical ,mental, and social health. *Sthaulya* (Obesity) is considered a principal public health concern and ranked as the fifth foremost reason for death globally. Overweight and obesity are one of the main lifestyle disorder that leads to further health concerns and contributes to numerous chronic disease including cancers, diabetes , metabolic syndrome and osteoarthritis , cardiovascular disease. *Ayurvedic* management of obesity adopts a comprehensive and individualized approach aimed at restoring *doshic* balance, enhancing metabolic function, and reducing excess adiposity. Therapeutic strategies include dietary regulation (*Ahara*), lifestyle modifications (*Vihara*), pharmacological interventions using herbal formulations, and bio-purificatory therapies (*Panchakarma*).

Introduction

Obesity is a complex, multifactorial condition influenced by genetics, environment, behavior and lifestyle .With the rapid pace of industrialization and economic progress, more occupations are becoming sedentary and dietary patterns are also changing with a decline in healthy diet intake and increase in intake of unhealthy food i.e sugar,fats, processed food . India is in 7th place in terms of obesity index. Lifestyle changes are considered the cornerstone in both prevention and management of *Sthaulya* (obesity). These changes target the root causes, such as poor diet, physical inactivity, poor sleep and chronic stress. *Sthaulya* (obesity) is not merely a matter of excess weight,it is associated with a wide range of metabolic and systemic complications including Type 2 Diabetes, Hypertension, cardiovascular diseases, and certain cancers. These comorbidities significantly contribute to increased morbidity and mortality worldwide.

According to *Ayurveda* *Sthaulya* (obesity) is caused due to over-nourishment as a consequence of the intake of a heavy, sweet, cold and fatty diet, lack of physical exercise, abstinence from sexual intercourse, sleeping during day, uninterrupted cheerfulness, lack of mental activities and genetic defects. Increased *Medo Dhatu* causes obstruction of *Srotasa* which leads to excessive *Vata* in *Kostha* and increase *Agni*. This *Agni* leads to *Shoshana* of *Ahara* thus leads to *Prakopa* of *Vata*. Increased *Agni* and excessive *Vata* causes excessive hunger and thirst. *Sthaulya* ,characterized by significant alteration in lipid metabolism. According to *Acharya Charaka* it is one among *Astonindita* due to eight *Doshas* i.e *Ayurharash* (decreased life expectancy), *Javoparodha* (lack of excitement), *Krichavyavyta* (decreased sexual capacity), *Daurbalya* (weakness), *Daurgandhya* (smell), *Swedaabadha* (excessive sweating), *Atimatrakshudha* (excessive hunger), *Pipasaatimatra* (excessive thirst).¹

Due to its multifactorial nature, obesity requires a comprehensive approach to prevention and management, integrating dietary regulation, physical activity, behavioral changes, and, where appropriate, medical or traditional therapeutic interventions. *Ayurvedic* literature have mentioned both therapeutic measures as well as dietary

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measures to manage obesity Main line of treatment of *Sthaulya* according to *Ayurveda* is *Guru* and *Aptarpana Ahara Vihara*.² According to *Acharya Charaka*, the management of *Sthaulya* (obesity) should focus on the use of *Vata-nasaka*, *Kapha-nasaka*, and *Medo-nasaka ahara* (dietary measures that balance *Vata* and *Kapha* while reducing excess fat). Therapeutic interventions such as *Ruksha* (dry), *Ushna* (hot), and *Tikshna* (sharp/potent) *Basti* (medicated enemas) are considered beneficial in the treatment of obesity.³ Various medicinal substances are also recommended for managing *Sthaulya*, including *Vidanga* (Vayvidang), *Nagara* (dry ginger), *Kshara* (alkaline preparations), and *Lauha Bhasma* (calcined iron). Additionally, formulations such as *Bilvadi Panchamula*, when administered with honey, and *Silajit* combined with *Agnimantha Rasa*, are regarded as effective in reducing excess body fat and improving metabolism.⁴ *Acharya Charaka* further emphasizes that excessive sleep and a stress-free, inactive lifestyle can contribute to the development of obesity.⁵ Therefore, adopting an active lifestyle, maintaining regular physical activity, and practicing moderation in daily habits are essential for preventing weight gain and managing *Sthaulya* (obesity) effectively.

In *Ayurveda*, particularly in *Swasthavritta* (the science of healthy living), along with classical Yoga practices, regular physical activity (*Vyayama*) and *Yogic* interventions are recommended for the prevention and management of *Sthaulya* (obesity).

Nidan – Aharaj Nidana – Adhyasana (eating before digestion of food), *Atisampurana* (over eating), *Atibrumhana* (eating high calories food), excessive consumption of *Guru Ahara* (heavy food), *Madhura Ahara* (sweet food), *Snigdha Ahara* (unctuous food), *Sheeta Ahara* (cold food), *Navanna* (usage of fresh grains). Excessive usage of *Navamaddya* (fresh alcoholic preparation), *Gramyamamasa Rasa* (domestic animal's meat and soups), *Payavikara* (milk & food prepared by milk), *Ikshuvikara* (sugarcane's preparations), *Guda Vikara* (jaggery's preparations), *Godhuma* (wheat), *Masha* (black gram), *Bhojanotara Jalapana* (drinking water after food).⁶⁻⁷

Ahara in sthaulya.^{8,9,10}

Laghu, (light to digest), *Ruksha* (dry), *Ushna* (warm), *Tikta* (bitter), *Katu* (pungent), *Kashaya* (astringent)

Cereals used in obesity – *Yava* (barley), *Shyamaka* (barnyard millet), *Kodrava* (kodo millet), *priyangu* (foxtale millet), *Laza* (parched grain) old *Shali* rice.

Pulses used in obesity – *Kulattha* (horse gram), *Mudga* (green gram), *Chakmudga*, *Adhaki* (*Arhar*) *Masur* (red lentils)

Vegetables – *Vartak* (Brinjal), *Shigru* (Drumstick) *Tanduliya* (amaranthus) *Karvellaka* (bitter gourd), *Kushmand* (winter melon) *Patol* (pointed gourd)

Fruits (phala varga) – *Amlaki* (Indian gooseberry) *Dadima*

(pomegranate) *Jambu* (Malabar plum) *Erandakarkati* (papaya) *Kapitha* (wood Apple), *Bibhitki* (beleric myrobalan) *Haritaki* (chebulic myrobalan)

Drava varga – *Takra*, *Madhu*, *Ushnodak*, *Tila Taila*, *Sarspa taila*

Kritan varga (group of processed food items) – *Mudga Yusha* (green gram soup), *Mudgamlak Yusha* (green gram soup with *Amla*), *Kullatha Yusha* (horse gram soup), *Laja Manda* (liquid portion of gruel of parched grain), *Yava Mantha*, *Yava Peya* (thin gruel of barley), *Yava Saktu* (roasted grain flour of barley), *Medohara Rotika*, *Yava Rotika*, *Madhudaka* (water mixed with honey).

CONTEMPRERY DIET – Macronutrient Distribution, carbohydrates 50-55%, fat 20-25% (limit saturated fat below 10%), protein 15%

Carbohydrate diet – Low carbohydrate diet should be used preferably complex carbohydrate i.e. Brown rice, oats, whole wheat, barley, millets (*Ragi*, *Jower*, *Bajra*) quinoa, lentils, kidney beans, black gram, etc. It is effective for short term weight loss, works by reducing insulin and appetite.

Protein diet – Lean meat, fish, egg, plant protein (soy, pulses), low fat dairy products (curd, paneer). It enhances satiety and thermogenesis.

Fats – Healthy fats i.e. Avocados, olive oil (extra virgin) canola oil, almond, peanuts, flaxseed should be included in diet.

Micronutrients in diet – Micronutrient deficiencies are common in *Sthaulya* (obesity) due to poor quality despite excess calorie intake (hidden hunger). Micronutrient rich diet should be included in diet i.e. fruits, cereal, dairy products etc

Pathya vihar – *Vyayam* (exercise) *Udvartan* (powder massage) *Sharma*, *Prajagar*, rohan, *Upvasa*, *Ashwa* & *Hasti Rohana*.

According to contemporary science aerobic exercises i.e. brisk walking, cycling, resistance training, sleep management, stress management, etc.

Yoga for management of obesity¹¹

Category	Asanas / Practices
Standing Position Asanas	<i>Tadasana</i> , <i>Padahasthasana</i> , <i>Ardhakatichakrasana</i> , <i>Trikonasana</i>
Sitting Position Asanas	<i>Vakrasana</i> , <i>Vajrasana</i> , <i>Uttarasana</i> , <i>Mandukasana</i>
Supine Position Asanas	<i>Setubandhasana</i> , <i>Uttanpadasana</i> , <i>Pawanmuktasana</i> , <i>Naukasana</i>
Prone Position Asanas	<i>Bhujangasana</i> , <i>Shalabhasana</i> , <i>Makarasana</i> , <i>Dhanurasana</i>
Relaxation	<i>Shavasana</i>
Pranayama	<i>Kapalabhati</i> , <i>Nadishodhana</i> , <i>Bhramari</i>

External procedure

Udvardana – It is recommended by the *Acharyas* for managing *Sthaulya* (obesity). The benefits of *Udvardana* are noted to include the reduction of *Kapha*, the breakdown of fat, and the firming of the body. *Charaka* has specifically mentioned the use of “*Teekshna Rooksha Udvardana*” for addressing *Sthaulya*.¹² *Udvardana* is characterized by its *Kapha-hara* (reducing *Kapha*) and *Medovilayana* (breaking down fat) properties in *Ayurveda*.¹³ Due to the *Ushna* (hot) and *Tikshna* (sharp) qualities of the herbs used and the vigorous massage during *Udvardana*, opens the *Siramukha* (openings of veins), facilitating the digestion of *Kapha* (mucous) and *Medas* (fat). As a result *Kapha* and *Meda* liquefy.

Peti Swedana – *Swedan Karma* (sweating therapy)

Cleansing process

Ayurveda mentioned the effectiveness of *Panchakarma* in treating obesity. Effectiveness of *Panchakarma* therapy can be achieved more if *Purvakarma* are done before main cleansing therapy.

Purvakarma – before cleansing process *Purvakarma* i.e *Snehana Swedana* are performed. *Purvakarma* prepares the body for elimination of *Doshas* easily. According to *Ayurveda* *Snehana* is generally contraindicated in *Sthaulya* but can be used in urgent situations. *Taila* is known for its *Lekhana* (scraping) and *Medohara* (fat-reducing) properties, as well as its *Sthulatvahara* (anti-obesity) action. *Ayurvedic* classics specifically recommend the use of certain oils like *Swarasa*, *Tuvaraka*, and *Bhallataka* for therapeutic purposes. *Snehana* (oleation) softens deeply embedded *Doshas*, while *Swedana* (sudation) liquefies these *Doshas* and moves them into the gastrointestinal tract (*Koshtha*). *Swedana* also separates impurities from peripheral tissues, facilitating the removal of blockages (*Srotorodha*) in the channels related to fat metabolism (*Meda Dhatu*).

Pradhana Karma in obesity includes *Vamana*, *Virechana* & *Basti*.

Vamana -*Sthaulya*, being a condition primarily caused by *Kapha*, is ideally treated with *Vamana*, especially *Mrudu Vamana*¹⁴. Herbs like *Madanaphala*, *Pippali*, *Nimba*, and *Yashti Phant* are recommended for this purpose. *Vamana* is effective in managing disorders related to *Shlesma* and *Meda*,¹⁵ emphasizing its role in alleviating *Kapha Dosh*.¹⁶ The *Vamaka Dravya*, with its *Ushna* and *Tikshna* properties, causes mild gastric irritation and inflammation, increasing blood vessel permeability and drawing the vitiated *Doshas* to the stomach. Its *Ashukari*, *Vyavayi*, and *Vikasi* properties stimulate the brain's vomiting center and forcefully ejecting gastric contents through the mouth. Thus, *Vamana* expels the vitiated *Doshas* (*Kapha*, *Meda*) from the body, potentially alleviating *Sthaulya* (obesity)

Virechana -*Acharya Charaka* has discussed *Virechana Karma* for treating *Santarpanajanya Vyadhi*.¹⁷ Clear indications for *Virechana* in *Sthaulya* are mentioned. *Virechana* formulations such as *Triphala*, *Aragvadha* and *Katukarohini* can be used. Other options include *Pippalyadi Churna*, *Hareetakyadi churna*, and *Trivrutadigitika/Leha*.¹⁸ In the pathology of obesity, impaired *Agni* metabolism due to obstructed *Vata* by excessive *Medas* leads to metabolic changes. *Virechana*, a cleansing procedure, corrects *Agni* at both gross and tissue levels. *Deepana Pachana* medications help clear these obstructions, improving *Agni* at the level of *Rasa* and *Meda Dhatu*. *Snehapana* enhances metabolism of these tissues, while *Snehana-Swedana* mobilizes and *Virechana* eliminates the excess *Mala Rupa Meda Dhatu*, thus aiding weight reduction. This process involves dissolving *Meda Dhatu Dosh* through *Snehapana* and eliminating it via *Virechana*. Further mobilization of fats through practices like *Abhyanga* and *Swedana* is crucial for effectiveness. Purgation expels these waste products, enhancing *Agni* function and cleansing body channels.¹⁹

Basti - *Niruha Basti* plays a significant role in managing *Sthaulya*. *Rookshan Tikshna Basti* is considered highly suitable for chronic and complicated disorders like *Sthaulya*.²⁰ *Charaka* highlights the role of *Ruksha*, *Ushna*, and *Tikshna Basti* in managing *Sthaulya*. *Sushruta* also recommends *Basti* therapy, emphasizing the importance of considering the patient's *Agni* and *Bala* while administering *Lekhana Dravya*, which combines the dominance of *Vata* and *Teja Mahabhuta*.²¹ *Sushruta* describes *Lekhana Basti* as being prepared with *Triphala Kwatha*.²² This *Basti* helps remove obstructions of *Meda*, *Kapha*, and *Kleda* from the *Srotas*, alleviates vitiated *Vata*, and normalizes the functions of *Agni* and *Vayu*.

Basti Dravyas reach the large and small intestines, they are absorbed through the intestinal mucosa. Due to the light (*Laghu*), hot (*Ushna*), and sharp (*Tikshna*) properties of the *Basti* substances, they break down obstructions in the channels and expel morbid materials from throughout the body. This process disrupts the pathogenesis of diseases like *Sthaulya* (obesity).

Discussion

Obesity (*Sthaulya*) is a multifactorial disorder with complex etiopathogenesis involving dietary habits, lifestyle factors, and metabolic disturbances. Both modern science and *Ayurveda* recognize the significant role of sedentary lifestyle, overnutrition, and behavioral factors in its development. In *Ayurveda*, *Sthaulya* (Obesity) is primarily considered a *Santarpanajanya Vyadhi*, resulting from excessive nourishment leading to vitiation of *Kapha Dosh* and accumulation of *Meda Dhatu*. The *Ayurvedic* concept

of *Agnimandya* (impaired digestive fire) and *Srotorodha* (obstruction of channels) closely correlates with modern understanding of metabolic dysfunction, insulin resistance, and altered lipid metabolism. The increase in *Meda Dhatu* leads to obstruction of bodily channels, which further aggravates *Vata Dosha*, resulting in increased appetite and altered metabolism. This creates a vicious cycle contributing to the progression of obesity. Management of *Sthaulya* in *Ayurveda* is holistic and focuses on breaking this cycle through *Ahara* (diet), *Vihara* (lifestyle), *Aushadhi* (medications), and *Shodhana* (*Panchakarma* therapies). Dietary modifications emphasizing *Laghu*, *Ruksha*, *Ushna*, *Tikta*, *Katu*, and *Kashaya* qualities help in reducing *Kapha* and *Meda*. The inclusion of barley, millets, pulses like *Kulattha* and *Mudga*, and vegetables like bitter gourd aligns well with modern recommendations of low-calorie, high-fiber diets.

Lifestyle interventions such as *Vyayama* (exercise), *Udvardana* (dry powder massage), and *Yoga* practices play a crucial role in enhancing metabolism, reducing fat accumulation, and improving overall physical fitness. *Yogic* practices including *Asanas* and *Pranayama* not only aid in weight reduction but also help in stress management, which is a significant contributing factor in obesity. *Panchakarma* therapies such as *Vamana*, *Virechana*, and *Basti* provide a unique approach by eliminating vitiated *Doshas* from the body. These therapies help in correcting metabolic imbalances, improving *Agni*, and facilitating the breakdown and elimination of excess *Meda Dhatu*. Procedures like *Udvardana* and *Swedana* further support fat mobilization and improve circulation. From a contemporary perspective, the *Ayurvedic* approach complements modern strategies such as calorie restriction, macronutrient balance, and physical activity. While modern medicine focuses on symptomatic and risk-factor management, *Ayurveda* provides a root-cause-based, individualized, and preventive approach.

Thus, integrating *Ayurvedic* principles with modern lifestyle interventions may offer a more effective and sustainable strategy for managing obesity and its associated complications.

Conclusion

Obesity is a growing global health concern with significant physical, psychological, and social implications. *Ayurveda* describes *Sthaulya* as a disorder of *Meda Dhatu* associated with *Kapha* predominance and metabolic imbalance. The *Ayurvedic* approach to obesity management is comprehensive, emphasizing dietary regulation, lifestyle modification, herbal medications, and detoxification therapies. Interventions such as *Laghu Ahara*, regular physical activity, *Yoga*, and *Panchakarma* therapies play a vital role in reducing excess body fat, improving metabolism, and restoring doshic

balance. Unlike conventional approaches that primarily target weight reduction, *Ayurveda* focuses on correcting the underlying causes and maintaining long-term health. Therefore, a holistic and integrative approach combining *Ayurvedic* principles with modern scientific strategies can be highly effective in the prevention and management of obesity. Adopting healthy lifestyle practices remains the cornerstone for achieving sustainable weight management and overall well-being.

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