



Obesity Revisited: Bridging Ancient Ayurvedic Wisdom and Modern Metabolic Science in the Management of Obesity



Ayurveda has long viewed obesity not as a simple matter of calories, but as a complex disorder of metabolic imbalance – a perspective that modern science is only now beginning to validate through the lens of inflammation, insulin resistance, and mitochondrial dysfunction. In this cover story, Dr Mukund Sabnis and Parth Sabnis revisit the classical Ayurvedic understanding of Medoroga, tracing striking parallels between ancient concepts like Ama and Abhishyandi and today's most pressing metabolic research. It is a compelling reminder that some of medicine's oldest observations may still have much to teach us.

Introduction

Obesity has emerged as one of the most pressing metabolic health challenges of our time, yet its conceptual roots stretch back thousands of years into classical Ayurvedic thought. Long before the language of insulin resistance, leptin signalling, or

chronic low-grade inflammation entered medical vocabulary, Ayurvedic scholars had already mapped out a sophisticated understanding of what they termed Medoroga or Sthaulya. This story revisits that ancient framework, exploring how concepts such as Abhishyandi (obstructive, channel-blocking

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qualities of food), Ama (the toxic byproduct of impaired digestion), and Agnimandya (weakened metabolic fire) offer a remarkably coherent lens through which to view the pathophysiology of obesity – one that resonates closely with contemporary findings on cellular inflammation, insulin resistance, and mitochondrial dysfunction. Drawing on classical texts including the *Charaka Samhita*, *Sushruta Samhita*, and *Bhavaprakasha*, alongside commentaries by Dalhana and Chakrapani, this story traces how Ayurveda's holistic, cause-oriented approach to obesity – encompassing diet, lifestyle, genetic predisposition, and therapeutic intervention – continues to hold relevance for modern metabolic medicine.

Obesity through the Ayurvedic Lens: Understanding Medoroga

Obesity, known as Medoroga in Ayurveda, has been extensively explored in classical Ayurvedic literature. Ayurveda is fundamentally a science dealing with metabolic disorders. Most diseases described in Ayurveda are broadly classified as either anabolic (Santarpanajanya) or catabolic (Apatarpanajanya) disorders. Their management, dietary advice, and lifestyle modifications are explained in the context of metabolic balance and Chaya-Apachaya (anabolism and catabolism).

Regarding Sthaulya or Medoroga, which corresponds to obesity in modern medicine, Ayurveda has advocated several non-pharmacological interventions that are now gaining global scientific recognition. Ayurveda describes unique etiological factors for obesity and metabolic disorders, not only in Medoroga but also in Prameha, another major anabolic disorder prevalent in modern times. Sedentary lifestyle, excessive daytime sleep, and the overconsumption of curd, milk, and dairy products are specifically mentioned as causative factors. Interestingly, this perspective differs considerably from contemporary nutritional science, where curd and yogurt are widely promoted as probiotics and are rarely contraindicated in obesity or diabetes.

Ayurveda emphasizes specific dietary causes because understanding these factors helps in preventing disease

progression and reversing the Samprapti (pathophysiology). Food substances such as curd and yogurt are described as Abhishyandi, meaning they obstruct the microchannels (Srotas) of the body. These substances aggravate Kapha Dosha directly and also vitiate Vata Dosha through obstructive pathology. The concept of Abhishyandi can be correlated with chronic low-grade cellular inflammation, which is now recognized as a major contributing factor in obesity and metabolic syndrome.

Abhishyandi Foods and the Concept of Cellular Obstruction

Bhavaprakasha clearly explains that substances causing obstruction in the microchannels and producing heaviness (Gaurava) and edema are termed Abhishyandi. As Medoroga is predominantly a Kapha-dominant disorder, excessive Kledana (humidification or fluid accumulation) results in pathological Abhishyanda. Foods possessing Madhura (sweet) and Picchila (slimy) properties, when excessively consumed, produce excessive Kapha in the Amashaya (stomach). In pathological states, this excessive humidification may initiate inflammatory processes within the body.

In the 21st chapter of Charak Samhita Sutrasthana, Chakrapani comments that sedentary lifestyle, excessive intake of sweet, sour, salty, cold, heavy-to-digest (Guru), and unctuous foods produce excessive dampness and inflammation at the cellular level. This pathological process may further spread to adjacent tissues through paracrine inflammatory mechanisms. Therefore, understanding the concept of Abhishyandi is extremely important while dealing with obesity and other anabolic disorders.

Ama and Agnimandya: Ancient Insights into Metabolic Toxicity

The concept of Ama is equally important while understanding the pathogenesis of obesity and metabolic disorders. Due to impaired Agni (Agnimandya), improperly digested metabolites

are formed, which Ayurveda terms as Ama. This Ama possesses obstructive and inflammatory properties and circulates throughout the body, affecting various tissues and microchannels (Srotas). At a molecular level, Ama may be correlated with toxic metabolic intermediates, inflammatory mediators, endotoxins, and oxidative stress, which contribute significantly to insulin resistance, mitochondrial dysfunction, and chronic low-grade inflammation.

Excessive consumption of such foods may contribute to lipotoxicity and glucotoxicity, which often remain unnoticed until metabolic biomarkers become deranged. Similarly, freshly harvested grains, newly brewed alcohol, reheated food, and rancid food may contribute to the formation of advanced glycation end products (AGEs), thereby initiating the pathogenesis of obesity.

Samprapti of Medoroga: The Meda-Vata Dysfunction and Its Parallel to Leptin/Insulin Resistance

Charaka explains the Samprapti (pathophysiology) of Medoroga in a highly sophisticated manner. The pathology of obesity and other anabolic disorders involves a disturbed interaction between Meda Dhatu and Vata Dosha. Due to obstruction caused by excessive Meda, Vata becomes aggravated and stimulates excessive appetite, leading to frequent eating and progressive fat accumulation. This explanation remarkably resembles modern concepts of leptin resistance and insulin resistance. Excessive hunger described in Medoroga may be interpreted as hypothalamic dysregulation involving appetite-controlling hormones and gut-brain signalling pathways.

At the tissue level, Charaka describes obesity using the phrase ‘medomāṃsātivrddhatvāccalasphigudarastanaḥ’, indicating excessive accumulation of fat in the abdomen, hips, breasts, and other body parts. This description closely resembles central obesity and visceral fat accumulation, which are strongly associated with inflammation and insulin resistance.

An important observation in Ayurvedic literature is the concept of ectopic fat deposition. Charaka uses the term Medomamsa, which may indicate fat infiltration into skeletal muscles. Modern medicine recognizes intramuscular fat accumulation as a marker of severe insulin resistance and



mitochondrial dysfunction. Such toxic lipid accumulation, particularly ceramides belonging to the sphingolipid group, plays a major role in metabolic dysfunction and impaired cellular energy generation.

The disturbance of Agni also explains the metabolic inflexibility observed in obesity. Improper functioning of Agni hampers nutrient sensing and cellular metabolism, leading to defective utilization of glucose and lipids. This may ultimately contribute to mitochondrial dysfunction, reduced ATP generation, and accumulation of toxic lipid intermediates such as ceramides. Therefore, correction of Agni remains one of the central principles in the Ayurvedic management of obesity.

Genetic Predisposition: Ayurveda's Early Recognition of Hereditary Obesity

Ayurveda also recognized the hereditary nature of obesity thousands of years ago. Charaka uses the phrase ‘bījasvabhāvāc copajāyate’, and Chakrapani comments,



‘sthūlamātāpṛtjanyatvāt’, indicating the genetic predisposition of obesity. These references are highly relevant today, as several genetic defects related to leptin signalling, pituitary dysfunction, and growth factors are known contributors to obesity. Nevertheless, Charaka also elaborates therapeutic approaches capable of managing metabolic obesity effectively.

Charaka further warns that obesity reduces life expectancy. Modern research strongly supports the association between obesity and reduced lifespan. The term Shaithilya used in the context of Medoroga signifies more than mere laxity; it indicates unhealthy, weakened, and disease-prone tissues resulting from Dhatvagni Mandya (impaired tissue metabolism).

One of the most significant complications observed in obese individuals is erectile dysfunction. Charaka accurately identifies this as Kruchhavyavayata (difficulty in sexual activity). From a modern perspective, obesity-associated endothelial dysfunction and reduced nitric oxide synthesis impair penile blood flow. Ayurveda considers this another

manifestation of obstructed Vata Dosha due to excessive Meda accumulation.

Therapeutic Approaches: Langhana, Deepana, Pachana, and Rukshana

In the management of obesity, Ayurveda gives prime importance to fasting and forms of intermittent dietary restriction. Charaka repeatedly emphasizes Langhana and controlled dietary intake in metabolic disorders. Foods that are heavy yet less nutritive, such as millets, are promoted. Herbs including Triphala, Musta, Haridra, Haritaki, and Kutki are recommended in obesity management due to their metabolic and digestive actions.

Honey has also been widely recommended in obesity management, although its use often becomes controversial because of its fructose and glucose content. Chakrapani explains that honey possesses Yogavahi properties, meaning it enhances and carries the qualities of substances with which it is administered. Madhu Udaka (honey water), when used appropriately in small quantities, may help modulate gut microbiota and immune responses beneficial in obesity management.

Vagbhata strongly advocates the use of sesame oil in obesity prevention and treatment. Properly processed sesame oil has shown promising therapeutic effects when used scientifically.

Ayurveda emphasizes that without correcting Agni and eliminating Ama, sustainable management of obesity is difficult. Hence, therapies like Langhana, Deepana, Pachana, and Rukshana, and controlled fasting are advised to restore metabolic efficiency, improve digestion and tissue metabolism, and remove accumulated pathological metabolites.

Conclusion: Ancient Concepts, Modern Relevance

In conclusion, obesity or Medoroga is not merely a disease of modern civilization; it has existed since ancient times. However, its prevalence has increased dramatically in recent decades. Ayurveda provides a comprehensive and holistic understanding of obesity, addressing multiple pathological mechanisms through scientifically structured dietary, lifestyle, and therapeutic interventions. [\[2\]](#)

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