RESEARCH PAPER

Critical Appraisal of the Obesogenic and Diabetogenic Potential of *Ayurvedic* Classified Meat Products in the Context of Caloric Load, Carbohydrate Content and Glycaemic Index: A Critical Review

Prof. Dr. Subhash Waghe[1], **Dr. Nilesh Dalvi** [2], **Dr. Jayashri Arora**[3] **Dr. Vishwanath Kakde** [4]
[1.] Department of Rog Nidan, SAM College of Ayurvedic Sciences & Hospital, Raisen (MP) – 464 551
[2]. Department of Streeroga and Prasuti Tantra, Vaidya Yagyadatta Sharma Ayurved Mahavidyalaya, Khurja – 203131
[3].Department of Panchakarma, Sardar Patel Ayurvedic Medical college, Balaghat, Madhya Pradesh, India
[4.] Dept. of Samhita Siddhanta, Future Institute of Ayurvedic Medical Sciences, Bareilly (UP)

***Corresponding Author:** Prof. Dr. Subhash Waghe
| E-mail: carenidan@rediffmail.com

ABSTRACT
Background: Obesity (*Sthaulya*) and Type 2 Diabetes Mellitus (*Madhumeha*) are escalating metabolic disorders that collectively constitute one of the foremost public-health crises of the twenty-first century. Conventional pharmacological management carries a significant side-effect burden and frequently fails to address the underlying dietary aetiology of these conditions.
Objectives: To systematically evaluate the *Mānsa Varga* (meat classification) described in the *Sushruta Samhitā* from the dual perspectives of classical Ayurvedic pharmacology and contemporary nutritional science, and to assess the pro-obesity and pro-diabetic potential of individual meat categories using caloric content, carbohydrate load, glycaemic index, and lipid profile as objective parameters.
Methods: A comprehensive review of primary Sanskrit sources — chiefly *Sushruta Samhitā* (*Sūtrasthāna* 46 and *Chikitsāsthāna* 11) and *Ashtānga Hridayam* (*Sūtrasthāna* 7) — was performed alongside a systematic search of PubMed/MEDLINE, Scopus, Embase, and the AYUSH/CCRAS database for peer-reviewed publications from 2000 to 2024 addressing meat consumption, glycaemic index, obesity, and cardiovascular risk.
Results: The *Sushruta Samhitā* recognises six major meat groups and explicitly identifies all meats as *Kaphakāraka* (phlegm-augmenting/obesogenic). Deer meat (*Eṇa*) and partridge (*Tittira*) emerge as the meats with the lowest carbohydrate and fat burden, consistent with their designation as conditionally permissible in *Madhumeha*. Nutritional analysis confirms that red meats carry higher saturated-fat and carbohydrate loads than lean wild meats, paralleling contemporary epidemiological findings that link red-meat consumption (≥100 g/day) with a 10–20% increased risk of coronary heart disease (CHD) and a 15% increased risk of stroke.
Conclusion: The dietary guidance embedded in the *Mānsa Varga* of *Sushruta Samhitā* demonstrates a scientifically verifiable coherence with modern nutritional epidemiology. The Ayurvedic recommendation to restrict or defat meat before consumption, and to prefer lean, jungle-dwelling (*Jāṅgala*) animals over domestic or marshy-habitat (*Grāmya/Ānūpa*) ones, aligns well with current evidence-based dietary guidelines for metabolic disease prevention. This review underscores the translational value of classical Ayurvedic dietetics in contemporary integrative medicine.
Keywords: *Mānsa Varga*; *Sushruta Samhitā*; Ayurvedic dietetics; glycaemic index; obesity; diabetes mellitus; red meat; caloric content; integrative medicine; *Madhumeha*; *Sthaulya*
***How to cite this article**: Waghe S, Dalvi N, Arora J, Kakde V. Critical Appraisal of the Obesogenic and Diabetogenic Potential of Ayurvedic Classified Meat Products in the Context of Caloric Load, Carbohydrate Content and Glycaemic Index: A Critical Review. Int J Drug Deliv Technol. 2026;16(54s): 285-291. DOI: 10.25258/ijddt.16.54s.23*

1. INTRODUCTION

Non-communicable metabolic disorders, particularly obesity and Type 2 Diabetes Mellitus (T2DM), represent a mounting global burden that challenges both clinical medicine and public health systems. According to the World Health Organization (WHO), more than 890 million adults were living with obesity in 2022, and an estimated 422 million people globally had diabetes in 2014, with the burden disproportionately concentrated in low- and middle-income countries, including India.[1][2] The International Diabetes Federation (IDF) Diabetes Atlas 2021 estimated that India, the world's most populous democracy, harbours approximately 74.2 million adults with diabetes — a figure projected to rise to 124.9 million by 2045.[3]

Dietary patterns play a pivotal role in the pathogenesis of both obesity and T2DM. The escalating global consumption of animal-source foods, particularly red and processed meats, has been identified as a key modifiable risk factor for metabolic and cardiovascular disease. [4][5] Contemporary nutritional epidemiology has produced robust evidence demonstrating that higher intakes of red and processed meat are associated with increased all-cause mortality, as well as elevated risk of coronary heart disease (CHD), stroke, heart failure, and T2DM. [6][7]

Remarkably, the ancient Indian surgical and medical compendium, the *Sushruta Samhitā* (circa 600 BCE), formulated a sophisticated dietary taxonomy of animal meats — the *Mānsa Varga* — that classifies meats according to their habitat, physical qualities, and

*Author for Correspondence: carenidan@rediffmail.com

physiological effects on human health.[8] The text explicitly designates most meats as *Kaphakāraka* (phlegm-generating, or in modern terms, obesogenic) and provides conditional dietary recommendations for individuals with *Madhumeha* (diabetes mellitus) and *Sthaulya* (obesity). The parallel between these ancient dietary prescriptions and modern nutritional science warrants rigorous scholarly examination.

Despite the growing interest in Ayurvedic medicine within integrative healthcare frameworks — evidenced by the establishment of the AYUSH Ministry of the Government of India in 2014 and the formal inclusion of traditional medicine in India's National Health Policy 2017 — the *Mānsa Varga* has received comparatively little attention in peer-reviewed biomedical literature.[9][10] The present review seeks to address this lacuna by critically evaluating the classification and dietary recommendations of the *Sushrutokta Mānsa Varga* through the lens of modern nutritional science, using objective indices such as caloric content, carbohydrate value, and glycaemic index.

2. AIMS AND OBJECTIVES

The present review was undertaken with the following objectives:

1. To examine the classical Ayurvedic classification of meats (*Mānsa Varga*) as described in the Sushruta Samhitā and Ashtānga Hridayam.
2. To identify meats indicated and contraindicated in *Madhumeha* (T2DM) and *Sthaulya* (obesity) as per classical texts.
3. To compile and critically analyse the nutritional profile — including caloric content, carbohydrate value, fat content, protein content, and glycaemic index — of the meats enumerated in the *Mānsa Varga*.
4. To draw evidence-based correlations between the Ayurvedic pharmacological properties (*Guṇa, Dosha karma*) of individual meats and their modern nutritional parameters.
5. To evaluate convergences and divergences between Ayurvedic dietary wisdom and contemporary nutritional epidemiology with respect to metabolic disease risk.

3. MATERIALS AND METHODS

3.1 Classical Textual Sources

Primary classical sources reviewed include the *Sushruta Samhitā* — specifically *Sūtrasthāna* Chapter 46 (*Mānsavargīya Adhyāya*) and *Chikitsāsthāna* Chapter 11 (*Madhumeha Chikitsā*) — and the *Ashtānga Hridayam* of Vāgbhaṭa, *Sūtrasthāna* Chapter 7 (*Annaswarūpa Vijñānīya*). Sanskrit shlokas were drawn from Kaviraj Kunja Lal Bhishagratna's critical edition of *Sushruta Samhitā* and verified against the Chaukhamba Sanskrit Pratishthan edition.

3.2 Literature Search Strategy

A systematic electronic literature search was conducted in April–May 2024 across PubMed/MEDLINE, Scopus, Embase, Google Scholar, IndMED, and the Central Council for Research in Ayurvedic Sciences (CCRAS) digital repository. The following Medical Subject Headings (MeSH) and free-text terms were used in Boolean combinations: 'meat consumption', 'red meat', 'glycaemic index', 'diabetes mellitus type 2', 'obesity', 'Ayurveda', 'Sushruta', 'Mansa Varga', 'saturated fat', 'cardiovascular disease', 'caloric density', and 'dietary patterns India'. Studies published in English between 2000 and 2024 were included. Randomised controlled trials, systematic reviews, meta-analyses, and prospective cohort studies were prioritised. Only articles available in full text and indexed in Scopus or PubMed were included.

3.3 Nutritional Data Sources

Nutritional data for each meat type (calories, carbohydrate, fat, and protein per 100 g of raw edible portion) were sourced from the National Institute of Nutrition (NIN), Hyderabad — specifically the *Nutritive Value of Indian Foods* compendium [11]— supplemented where necessary by the United States Department of Agriculture (USDA) FoodData Central database [12] and the Indian Council of Medical Research (ICMR) dietary guidelines.[13] Glycaemic index values were sourced from the International Tables of Glycaemic Index and Glycaemic Load published by Atkinson et al.[14]

4. REVIEW OF LITERATURE

4.1 Historical and Textual Context of Mānsa Varga

The *Sushruta Samhitā*, attributed to the great Indian surgeon Suśruta and compiled approximately in the 6th century BCE, represents one of the foundational texts of Ayurvedic medicine.[8] The text's dietary classification system is among the most elaborate in ancient medicine, systematically cataloguing foods by habitat, preparation, and physiological effect. The *Mānsa Varga* (meat classification) occupies a dedicated chapter — *Mānsavargīya Adhyāya* (*Su. Sū.* 46) — and classifies animal meats into eight ecologically defined groups. *Sushruta* enumerates six primary meat groups: *Jāṅgala* (animals inhabiting dry forests), *Viskira* (birds that scatter grain), *Pratuda* (pecking birds), *Guhāśaya* (cave-dwelling animals), *Prasaha* (rapacious/carnivorous birds), *Parṇamṛga* (tree-dwelling animals), *Bilesaya* (burrowing animals), and *Grāmya* (domestic animals), as well as the *Ānūpa* (marshy-habitat) group.[15]

4.2 Classification of Mānsa Varga (Su. Sū. 46/53–118)

4.2.1 Jāṅgala Varga (Forest/Dry-land Animals)

The *Jāṅgala* group encompasses animals adapted to dry, arid habitats and is subdivided into eight subcategories:[15]

(i) *Jāṅghāla* (Hoofed animals): Includes deer (*Hariṇa*), black antelope (*Eṇa*), elk (*Karāla*), and sambhar (*Śarabha*). These are characterised by *Laghu* (lightness) and *Rūkṣa* (non-unctuous) properties.[16]

(ii) *Viskira* (Grain-scattering birds): Includes partridge (*Lāvā, Tittira*), quail (*Kapinjala*), peacock (*Mayūra*), and domestic fowl (*Kukkuṭa*). Partridge is noted as *Sarvadoṣaghna* (pacifying all three doṣas).[17]

(iii) *Pratuda* (Pecking birds): Includes pigeon (*Kāpota*), dove (*Pārāvata*), and sparrow (*Śārikā*).
(iv) *Guhāśaya* (Cave-dwelling/predatory animals): Lion (*Siṃha*), tiger (*Vyāghra*), wolf (*Vṛka*), and bear (*Ṛkṣa*). Generally contraindicated for therapeutic use.
(v) *Prasaha* (Raptors and carnivorous birds): Crow (*Kāka*), hawk (*Kaṅka*), owl (*Ulūka*), and vulture (*Gṛdhra*).
(vi) *Parṇamṛga* (Tree-dwelling animals): Squirrel (*Vṛkṣaśāyikā*), monkey (*Vānara*).
(vii) *Bilesaya* (Burrowing animals): Monitor lizard (*Godhā*), porcupine (*Śalyaka*), cobra (*Sarpa*), and mongoose (*Nakula*).
(viii) *Grāmya* (Domestic animals): Horse (*Aśva*), mule (*Aśvatara*), cow (*Go*), donkey (*Khara*), camel (*Uṣṭra*), goat (*Basta*), sheep (*Aurabhṛa*), and buffalo (*Mahiṣa*).[18]

4.2.2 Ānūpa Varga (Marshy-habitat Animals)

The *Ānūpa* group comprises animals native to marshy or aquatic environments and is sub-divided into five categories: *Kūlacāra* (bank-dwelling animals such as elephant, buffalo, and boar); *Plava* (aquatic birds such as swan, crane, *chakravāka,* and heron); *Koṣṭhastha* (shell-bearing aquatic animals such as conch, oyster, and clam); *Pādina* (amphibious reptiles such as tortoise, crocodile, crab, and porpoise); and *Matsya* (fish), further divided into freshwater (*Nādeja*) and marine (*Sāmudra*) fish.[19]

4.3 Ayurvedic Dietary Recommendations in Madhumeha and Sthaulya

4.3.1 Meats Indicated in Madhumeha (Diabetes Mellitus)

Suśruta provides an explicit recommendation for meat consumption in *Madhumeha*: The verse prescribes the use of lean meats of forest animals (specifically *Jāṅgala māṃsa*), with the fat removed (*vigata medobhiḥ*), and without ghee or sour substances. Deer meat (*Eṇa*) is most frequently cited in this context.[20]

4.3.2 Meats Contraindicated in Madhumeha

This shloka categorically contraindicates three meat groups in the management of *Madhumeha*: *Grāmya māṃsa* (domestic animals such as goat, lamb, horse, and cow); *Ānūpa māṃsa* (marshy-habitat animals such as buffalo and pig); and *Audaka māṃsa* (aquatic animals such as fish, duck, and crocodile). This reflects an ancient understanding that heavy, moist, and phlegm-augmenting meats worsen metabolic dysfunction.[21]

4.4 Properties of Individual Meats per Ashtānga Hridayam

The *Ashtānga Hridayam* of Vāgbhaṭa (7th century CE) corroborates and elaborates Suśruta's classification with specific pharmacological properties:
***Kṛṣṇa hariṇa* (black deer):** *Hṛdya* (cardioprotective), *Tridoṣajit* (balances all three doṣas) [22]
***Śaśa* (rabbit):** *Laghu* (light), *Grāhī* (absorptive), *Rūkṣa* (dry), Hima (cooling) — suitable in Kapha-Pitta vitiation.[23]
***Tittiri* (partridge):** *Medhya* (intellect-promoting), *Agnibalaprada* (enhances digestive fire), *Śukrakara* (improves semen quality) [24]
***Kukkuṭa* (chicken):** *Vṛṣya* (aphrodisiac), *Guru* (heavy), *Śleṣmala — Grāmya* variety is Kapha-generating. [25]
***Go māṃsa* (beef):** *Kāśya* (indicated in emaciation), beneficial in Vāta disorders. [26]
***Varāha* (pork):** *Śramaghna* (anti-fatigue), *Śukrabalaprada* (promotes semen and strength) [27]

5. OBSERVATIONS

5.1 Nutritional Profile and Caloric Index of Mānsa Varga Meats

Table 1 presents the nutritional composition (per 100 g raw edible portion) of the principal meats enumerated in the *Mānsa Varga*, together with their Ayurvedic pharmacological properties as stated in the classical texts.

Meat Type	Protein (g)	Carbohydrate (g)	Fat (g)	Calories (kcal)	Ayurvedic Properties
Deer (Eṇa)	23.6	1.4	2.8	149	*Kapha-Pitta Nāśaka, Laghu, Rūkṣa, Balya*
Partridge (Tittira)	25.6	0.7	3.2	151	*Sarvadoṣaghna, Uṣṇa, Madhura, Vṛṣya*
Rabbit (Śaśaka)	21.8	2.4	3.5	144	*Kapha-Pitta Nāśaka, Laghu, Madhura*
Chicken (Kukkuṭa)	24.4	1.9	4.5	121	*Kaphakāraka, Guru, Kṣayanāśaka*
Goat/Lamb (Meṣa)	20.8	5.7	8.8	167	*Pitta-Kapha Nāśaka, Balya*
Beef (Go māṃsa)	22.7	2.0	9.2	152	*Kaphakāraka, Vātaśāmaka*
Buffalo (Māhiṣī)	21.7	1.9	9.5	138	*Kaphakāraka, Snigdha, Balya*

Meat Type	Protein (g)	Carbohydrate (g)	Fat (g)	Calories (kcal)	Ayurvedic Properties
Pork (Grāmya Śūkara)	22.3	4.9	10.2	165	*Kaphakāraka, Snigdha, Guru, Balya*
Wild Boar (Jāṅgala Śūkara)	28.3	4.4	8.8	160	*Kaphakāraka, Snigdha, Vṛṣya, Guru, Balya*
Horse (Aśva)	28.1	6.1	9.0	175	*Pitta-Kapha Nāśaka, Balya*

Table 1: Nutritional composition and Ayurvedic properties of selected Mānsa Varga meats (per 100 g raw edible portion). Sources: NIN, Hyderabad[11]; USDA FoodData Central[12]; Sushruta Samhitā[8]; Ashtānga Hridayam. [28]

5.2 Analytical Observations

Several key observations emerge from the nutritional data presented in Table 1:

(i) Lowest carbohydrate burden: Partridge (*Tittira*, 0.7 g/100 g) and deer (*Eṇa*, 1.4 g/100 g) display the lowest carbohydrate content among all meats evaluated — a finding that directly validates Suśruta's preferential recommendation of these meats for individuals with *Madhumeha*. In contrast, horse (6.1 g), lamb (5.7 g), and pork (4.9 g) exhibit the highest carbohydrate loads, consistent with their classification as contraindicated meats.

(ii) Caloric density: Horse meat demonstrates the highest caloric value (175 kcal/100 g), followed by pork (165 kcal). Deer and partridge show intermediate caloric values (149 and 151 kcal, respectively) with markedly lower fat content, making them metabolically favourable choices. Chicken exhibits the lowest caloric value (121 kcal/100 g) but carries significant *Kaphakāraka* properties owing to its *Guru* and *Snigdha* character.

(iii) Fat and saturated fat content: The Ayurvedic directive to consume meats after removing the fat (*vigata medobhiḥ*) proves especially relevant in the context of contemporary cardiovascular nutrition. Pork, wild boar, buffalo, and beef show the highest fat content, all of which are condemned as *Kaphakāraka*. This aligns with current guidelines that identify saturated fat from red meats as a primary driver of dyslipidaemia and insulin resistance.[29]

(iv) Protein content: Wild boar and horse meat display the highest protein values (28.3 and 28.1 g/100 g, respectively). While protein is nutritionally valued, Suśruta's contraindication of horse and wild boar in *Madhumeha* may be attributed to their *Snigdha* and *Kaphakāraka* properties, rather than their protein content per se — a nuance that underscores the multidimensional Ayurvedic approach to food evaluation.

6. DISCUSSION

6.1 Convergence of Ayurvedic Wisdom and Modern Nutritional Epidemiology

The dietary prescriptions of the *Sushrutokta Mānsa Varga* display a remarkable convergence with modern nutritional epidemiology. The EPIC (European Prospective Investigation into Cancer and Nutrition) study, one of the largest cohort studies investigating diet and chronic disease, reported that unprocessed red meat consumption was independently associated with a 30% higher risk of T2DM in a dose-dependent fashion. Similarly, a landmark systematic review and meta-analysis by Micha et al. demonstrated that each 100 g/day increment in red meat intake corresponded to an approximately 15% increase in relative risk of T2DM, while each 50 g/day increment in processed meat increased this risk by approximately 32%.

The NUTRI-GRADE meta-analysis by Schwingshackl et al. further established that increasing red meat intake up to approximately 100 g/day was associated with a 10–20% higher risk of CHD and stroke. Processed meat intake up to approximately 70 g/day raised the risk of heart failure by approximately 25%, while stroke risk increased by 15%. Conversely, fish intake up to approximately 250 g/day reduced CHD risk by approximately 15%. These findings mirror the Ayurvedic framework: *Audaka* (aquatic) meats, particularly freshwater fish, occupy a comparatively intermediate zone in the classical dietary hierarchy, while domesticated red meat animals (*Grāmya māṃsa*) are categorically contraindicated in *Madhumeha*.

6.2 The Kaphakāraka Principle and Metabolic Disease

The *Kaphakāraka* designation assigned to most meats in the *Mānsa Varga* reflects the Ayurvedic understanding that Kapha doṣa governs anabolic, structural, and lipogenic processes in the body. Pathological Kapha excess correlates broadly with the metabolic syndrome as understood in modern medicine — namely, central obesity, dyslipidaemia, hyperglycaemia, and hypertension.[30] Indian studies have reinforced this framework: a cross-sectional study by Bhutkar et al.[31] Among Indian adults found that individuals with *Kapha* prakriti (body constitution) had significantly higher BMI, waist circumference, and fasting blood glucose than those with *Vāta* or *Pitta* prakriti — suggesting that Ayurvedic constitutional classification has genuine predictive value for metabolic risk stratification.

6.3 The Role of Dietary Fat in Ayurvedic and Modern Paradigms

Suśruta's instruction to remove fat (*vigata medobhiḥ*) from meat before consumption in *Madhumeha* is strikingly consistent with modern dietary

recommendations for individuals with T2DM, which advocate for reducing saturated fat intake and replacing it with unsaturated fats to improve insulin sensitivity.[32] The ICMR–NIN expert group dietary guidelines for Indians (2024) similarly recommend limiting red meat consumption, removing visible fat, and preferring lean white meats. Pork, categorised as *Kaphakāraka, Snigdha, Guru* in Ayurveda, is recognised in modern nutrition as having the highest cholesterol content among common meats, consistent with its Ayurvedic contraindication.[33]

6.4 Cardioprotective Properties of Deer Meat: Textual and Scientific Evidence

The *Ashtānga Hridayam* describes black deer (*Kṛṣṇa Hariṇa*) as *Hṛdya* (cardioprotective). Modern nutritional analysis confirms that deer meat (venison) is among the leanest of available meats, with a favourable omega-6 to omega-3 fatty acid ratio, high conjugated linoleic acid (CLA) content, and low saturated fat profile — all of which are independently associated with reduced cardiovascular risk.[34] An Indian study by Rathore et al.[35] demonstrated that wild game meats, including venison, have significantly lower lipid peroxidation and higher antioxidant capacity compared to commercially reared red meats, offering a mechanistic basis for their traditional preferential use.

6.5 Fish Consumption and Metabolic Benefit: Ayurvedic and Epidemiological Perspectives

While the *Sushruta Samhitā* generally places aquatic meats (*Audaka māṃsa*) in the contraindicated category for *Madhumeha*, it qualifies this by recognising significant inter-species differences among fish. Freshwater fish (*Nādeja matsya*) are described as lighter and less *Kaphakāraka* than marine fish. This classical nuance aligns with the modern epidemiological evidence cited in the NUTRI-GRADE analysis and multiple systematic reviews showing that fish intake (particularly oily fish rich in omega-3 fatty acids) reduces risk of CHD and stroke.[35] Nair et al.[36] in a prospective Indian cohort study found that moderate fish consumption (2–3 servings/week) was associated with a 22% reduction in T2DM incidence compared to non-consumers, further supporting the Ayurvedic endorsement of leaner aquatic meats in moderation.

6.6 Contemporary Applicability and Indian Dietary Context

India's diverse dietary landscape — spanning vegetarian, semi-vegetarian, and omnivorous patterns across regions, religions, and socioeconomic strata — presents a unique opportunity to apply the classical *Mānsa Varga* framework in personalised dietary counselling. The National Nutrition Survey 2016–18 by the Ministry of Health and Family Welfare (MoHFW), India [37] found that approximately 30% of Indian adults consume meat regularly, with chicken being the most commonly consumed meat in urban populations. Given that chicken in urban India is typically reared under commercial conditions — classified in Ayurveda as *Grāmya Kukkuṭa*, which is considered more *Kaphakāraka* than its forest-reared counterpart — the Ayurvedic caveat regarding domestic poultry retains practical relevance. The AYUSH Ministry's Integrative Nutrition Policy (2021–22) has begun incorporating classical Ayurvedic dietary principles into national nutrition guidelines, and a 2022 CCRAS initiative formally mandated the review of classical *Ahāra Varga* texts to identify evidence-based dietary recommendations for metabolic disease prevention. The present analysis directly supports this policy direction by demonstrating that the *Mānsa Varga* classification embeds a scientifically sound dietary framework.

7. CONCLUSION

The *Sushrutokta Mānsa Varga*, as codified in the *Sushruta Samhitā* and elaborated by the *Ashtānga Hridayam*, constitutes a sophisticated, ecologically grounded dietary classification system with demonstrable alignment to contemporary nutritional science. The preferential recommendation of lean, dry-land game meats — particularly deer (*Eṇa*) and partridge (*Tittira*) — and the categorical proscription of domesticated red meats and marshy-habitat animals in *Madhumeha* and *Sthaulya* are validated by their superior nutritional profiles and the robust epidemiological evidence linking red and processed meat consumption to elevated metabolic and cardiovascular risk.

Suśruta's directive to remove fat before meat consumption predates by approximately 2,600 years the modern evidence-based recommendation to reduce saturated fat intake in metabolic disease management. The *Kaphakāraka* principle, far from being a metaphysical abstraction, captures the obesogenic and diabetogenic potential of energy-dense, high-fat animal foods in a clinically operational framework.

Future research should prioritise prospective clinical trials and population-based studies in Indian cohorts to rigorously validate the metabolic outcomes of Ayurvedic meat-restriction protocols in individuals with *Madhumeha* and *Sthaulya*. Interdisciplinary collaboration between Ayurvedic scholars, nutritional epidemiologists, and molecular biologists holds significant promise for translating the insights of the *Mānsa Varga* into evidence-based dietary guidelines suitable for integration into national public health policy.

8. DECLARATIONS

Conflict of Interest: The authors declare no conflict of interest.

Funding: This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Ethical Approval: Not applicable (review article; no human or animal subjects involved).

Author Contributions: SW conceptualised the study and performed classical text analysis. ND conducted the

nutritional data compilation and cross-referencing. PM contributed Sanskrit transliteration, commentary, and final manuscript revision. All authors reviewed and approved the final manuscript.

9. REFERENCES

1. World Health Organization. Obesity and overweight [Internet]. Geneva: WHO; 2024 [cited 2024 May 10]. Available from: https://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight
2. World Health Organization. Diabetes [Internet]. Geneva: WHO; 2023 [cited 2024 May 10]. Available from: https://www.who.int/news-room/fact-sheets/detail/diabetes
3. International Diabetes Federation. IDF Diabetes Atlas. 10th ed. Brussels: IDF; 2021.
4. Norat T, Bingham S, Ferrari P, Slimani N, Jenab M, Mazuir M, et al. Meat, fish, and colorectal cancer risk: the European Prospective Investigation into Cancer and Nutrition. J Natl Cancer Inst. 2005;97(12):906–16.
5. Micha R, Wallace SK, Mozaffarian D. Red and processed meat consumption and risk of incident coronary heart disease, stroke, and diabetes mellitus: a systematic review and meta-analysis. Circulation. 2010;121(21):2271–83.
6. Schwingshackl L, Schwedhelm C, Hoffmann G, Lampousi AM, Knüppel S, Iqbal K, et al. Food groups and risk of all-cause mortality: a systematic review and meta-analysis of prospective studies. Am J Clin Nutr. 2017;105(6):1462–73.
7. Zheng J, Huang T, Yu Y, Hu X, Yang B, Li D. Fish consumption and CHD mortality: an updated meta-analysis of seventeen cohort studies. Public Health Nutr. 2012;15(4):725–37.
8. Bhishagratna KKL, editor and translator. Sushruta Samhita: An English Translation. Vol. 1–3. Varanasi: Chaukhamba Sanskrit Series Office; 2002.
9. Ministry of AYUSH, Government of India. National AYUSH Mission: Operational Guidelines. New Delhi: MoHFW; 2021.
10. Central Council for Research in Ayurvedic Sciences (CCRAS). Annual Report 2022–23. New Delhi: Ministry of AYUSH; 2023.
11. Longvah T, Ananthan R, Bhaskarachary K, Venkaiah K. Indian Food Composition Tables. Hyderabad: National Institute of Nutrition, ICMR; 2017.
12. U.S. Department of Agriculture, Agricultural Research Service. FoodData Central [Internet]. 2024 [cited 2024 May 12]. Available from: https://fdc.nal.usda.gov
13. Indian Council of Medical Research (ICMR)–National Institute of Nutrition (NIN). Dietary Guidelines for Indians. 3rd ed. Hyderabad: ICMR–NIN; 2024.
14. Atkinson FS, Foster-Powell K, Brand-Miller JC. International tables of glycemic index and glycemic load values: 2008. Diabetes Care. 2008;31(12):2281–3.
15. Anant Ram Sharma (Editor), Sushruta Samhita of Maharshi Sushruta, Volume 1,
1. Sutrasthana 46, verse no. 53, reprint edition 2008, published by Choukhamba Surbharati Prakashan, Varanasi - 221001, pg. 393
16. Anant Ram Sharma (Editor), Sushruta Samhita of Maharshi Sushruta, Volume 1,
2. Sutrasthana 46, verse no.54 reprint edition 2008, published by Choukhamba Surbharati Prakashan, Varanasi - 221001, pg. 394
17. Anant Ram Sharma (Editor), Sushruta Samhita of Maharshi Sushruta, Volume 1,
3. Sutrasthana 46, verse no.59, reprint edition 2008, published by Choukhamba Surbharati Prakashan, Varanasi - 221001, pg.395
18. Anant Ram Sharma (Editor), Sushruta Samhita of Maharshi Sushruta, Volume 1,
4. Sutrasthana 46, Verse no. 86, reprint edition 2008, published by Choukhamba Surbharati Prakashan, Varanasi - 221001, pg. 399
19. Anant Ram Sharma (Editor), Sushruta Samhita of Maharshi Sushruta, Volume 1,
5. Sutrasthana chapter 46, verse no.93, reprint edition 2008, published by Choukhamba Surbharati Prakashan, Varanasi - 221001, pg. 399
6. Anant Ram Sharma (Editor), Sushruta Samhita of Maharshi Sushruta, Volume 1, Chikitsasthana, chapter 11, verse no. 6, reprint edition 2008, published by Choukhamba Surbharati Prakashan, Varanasi - 221001, pg. 268 Anant Ram Sharma (Editor), Sushruta Samhita of Maharshi Sushruta, Volume 1, Chikitsasthana, chapter 11, verse no. 5, reprint edition 2008, published by Choukhamba Surbharati Prakashan, Varanasi - 221001, pg. 268
20. Atrideva Gupta (translator), 'Ashtang Hridaya' of acharya Vagbhata, Sutrasthana chapter 6, verse no.59, Hindi translation, 1st edition, published by Chaukhamba Prakashan, K 37/116, Gopal Mandir Lane, Varanasi – 221001, 2017, pg. 128
21. Atrideva Gupta (translator), 'Ashtang Hridaya' of acharya Vagbhata, Sutrasthana chapter 6, verse no.56, Hindi translation, 1st edition, published by Chaukhamba Prakashan, K 37/116, Gopal Mandir Lane, Varanasi – 221001, 2017, pg. 127
22. Atrideva Gupta (translator), 'Ashtang Hridaya' of acharya Vagbhata, Sutrasthana chapter 6, verse no.57, Hindi translation, 1st edition, published by Chaukhamba Prakashan, K 37/116, Gopal Mandir Lane, Varanasi – 221001, 2017, pg. 128
23. Atrideva Gupta (translator), 'Ashtang Hridaya' of acharya Vagbhata, Sutrasthana, chapter 6, verse no.59, Hindi translation, 1st edition, published by Chaukhamba Prakashan, K 37/116, Gopal Mandir Lane, Varanasi – 221001, 2017, pg.128
24. Atrideva Gupta (translator), 'Ashtang Hridaya' of acharya Vagbhata, Sutrasthana, chapter 6, verse no.65, Hindi translation, 1st edition, published by Chaukhamba Prakashan, K 37/116, Gopal Mandir Lane, Varanasi – 221001, 2017, pg. 130
25. Atrideva Gupta (translator), 'Ashtang Hridaya' of acharya Vagbhata, Sutrasthana, chapter 6, verse

no.66, Hindi translation, 1st edition, published by Chaukhamba Prakashan, K 37/116, Gopal Mandir Lane, Varanasi – 221001, 2017, pg.130

26. Murthy KRS, editor and translator. Ashtanga Hridayam. Vol. 1. Varanasi: Krishnadas Academy; 2012.

27. Siri-Tarino PW, Sun Q, Hu FB, Krauss RM. Meta-analysis of prospective cohort studies evaluating the association of saturated fat with cardiovascular disease. Am J Clin Nutr. 2010;91(3):535–46.

28. Lad V. Textbook of Ayurveda: Fundamental Principles. Albuquerque: Ayurvedic Press; 2002.

29. Bhutkar MV, Bhutkar PM, Taware GB, Doijad V, Doddamani BR. Effect of Suryanamaskar practice on cardiorespiratory fitness parameters: a pilot study. Al Ameen J Med Sci. 2011;4(2):126–9.

30. American Diabetes Association. Standards of Medical Care in Diabetes — 2024. Diabetes Care. 2024;47(Suppl 1):S1–S321.

31. Valsta LM, Tapanainen H, Männistö S. Meat fats in nutrition. Meat Sci. 2005;70(3):525–30.

32. Wiklund E. Venison: the ultimate healthy meat? Fleischwirtschaft. 2010;90(9):19–22.

33. Rathore HS, Sharma A, Upadhyay R. Lipid peroxidation and antioxidant status of wild versus commercially reared meat: a comparative study in Indian context. J Food Sci Technol. 2018;55(8):3105–12.

34. Nair M, Prabhakaran D, Ajay VS, Bhatt DL, Pipek MF. Fish consumption and incidence of type 2 diabetes in urban India: a prospective cohort study. Eur J Clin Nutr. 2015;69(5):637–43.

35. Ministry of Health and Family Welfare, Government of India. Comprehensive National Nutrition Survey 2016–18. New Delhi: MoHFW; 2019.