

## Review Article



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**“INTEGRATIVE ROLE OF KAYACHIKITSA IN NON-COMMUNICABLE DISEASES: AN EVIDENCE-BASED REVIEW”****Ms. Priya Bhaware<sup>1</sup>****AFFILIATIONS:**

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**ABSTRACT**

**Introduction:** Non-Communicable Diseases (NCDs), including diabetes, cardiovascular diseases, obesity, cancer, and chronic respiratory disorders, constitute a major global health burden. Modern medicine provides symptomatic and disease-modifying therapies, yet limitations such as side effects, high costs, and incomplete remission necessitate integrative approaches. Ayurveda, particularly its specialty of *Kayachikitsa* (internal medicine), offers holistic strategies targeting root causes through lifestyle modification, diet, detoxification, and personalized therapeutics. **Methods:** A comprehensive literature review was conducted using classical Ayurvedic texts (*Charaka Samhita*, *Sushruta Samhita*, *Ashtanga Hridaya*), modern databases (PubMed, Scopus, Web of Science, AYUSH Research Portal), and gray literature. Peer-reviewed studies, systematic reviews, randomized controlled trials (RCTs), and observational studies on Ayurvedic interventions for NCDs were included. Exclusion criteria comprised non-peer-reviewed reports and anecdotal case notes. **Results:** Evidence indicates that *Kayachikitsa* principles such as *Nidana Parivarjana* (removal of causative factors), *Shodhana* (detoxification therapies), *Shamana* (palliative treatments), and *Rasayana* (rejuvenation therapies) significantly contribute to NCD management. Clinical studies highlight benefits of Panchakarma in metabolic syndrome, *Rasayana* in delaying complications of diabetes, and yoga-pranayama integration in hypertension and anxiety disorders. Dietetics (*Ahara*) and lifestyle (*Vihara*) regimens align with modern preventive medicine, showing promising outcomes in risk reduction and improved quality of life. **Discussion:** An integrative model combining modern diagnostics with *Kayachikitsa*'s holistic management may enhance therapeutic outcomes in NCDs. However, gaps remain in large-scale RCTs, standardized protocols, and mechanistic studies. **Conclusion:** *Kayachikitsa* provides a scientifically relevant and patient-centered framework for NCD management. Its integration with evidence-based modern medicine can address unmet needs in prevention, long-term care, and quality of life improvement.

**KEYWORDS:** Ayurveda, Integrative Medicine, Kayachikitsa, Lifestyle Disorders, Non-Communicable Diseases

## INTRODUCTION

Non-Communicable Diseases (NCDs) represent one of the most pressing public health challenges of the 21st century, accounting for nearly 74% of global deaths.<sup>[1]</sup> Major conditions include cardiovascular disorders, diabetes mellitus, cancers, chronic respiratory diseases, and obesity. These diseases share common risk factors such as sedentary lifestyle, poor diet, stress, and environmental influences, making their management complex and multidimensional. Despite significant advances, modern medicine faces challenges in providing holistic, cost-effective, and sustainable care for NCDs.<sup>[2-3]</sup>

Ayurveda, India's traditional system of medicine, emphasizes a personalized and preventive approach. *Kayachikitsa*, the branch of Ayurveda devoted to internal medicine, deals extensively with systemic disorders, including those that parallel modern NCDs.<sup>[4-6]</sup> It emphasizes *Nidana Parivarjana* (elimination of causative factors), dietary regulations, detoxification procedures, rejuvenative therapy, and psychosomatic balance. Classical descriptions of *Prameha*, *Hridroga*, *Sthoulya*, and *Rajayakshma* closely resemble modern NCD categories, demonstrating Ayurveda's age-old understanding of chronic disease patterns.<sup>[7-8]</sup>

This review aims to evaluate the integrative role of *Kayachikitsa* in the management of NCDs by critically analyzing classical Ayurvedic concepts, contemporary research, and clinical evidence. Objectives include: (1) to summarize the classical references of NCDs in Ayurveda, (2) to explore therapeutic approaches of *Kayachikitsa*, (3) to assess modern evidence supporting these practices, and (4) to identify research gaps and future prospects for integrative management.<sup>[9-10]</sup>

## MATERIALS AND METHODS

The present review adopted a structured literature search strategy focusing on both Ayurvedic and modern scientific literature:

- **Databases Searched:** PubMed, Scopus, Web of Science, AYUSH Research Portal, Google Scholar.
- **Ayurvedic Texts:** *Charaka Samhita*, *Sushruta Samhita*, *Ashtanga Hridaya*, *Madhava Nidana*, and relevant commentaries.

- **Search Terms:** “Kayachikitsa AND NCDs,” “Ayurveda AND Diabetes/Hypertension/Obesity/Cancer,” “Panchakarma AND lifestyle disorders,” “Rasayana AND prevention,” “Integrative medicine AND Ayurveda.”<sup>[11]</sup>
- **Inclusion Criteria:** Peer-reviewed studies, systematic reviews, RCTs, animal studies, and observational clinical studies published between 2000–2025; references from classical Ayurvedic literature.<sup>[12]</sup>
- **Exclusion Criteria:** Non-peer-reviewed material, anecdotal evidence, conference abstracts without full data, duplicate studies.<sup>[13]</sup>
- **Review Type:** Narrative synthesis with thematic categorization.<sup>[14]</sup>
- **Study Types Considered:** Clinical trials, observational studies, experimental pharmacological research, systematic reviews, and classical Ayurvedic references.<sup>[15]</sup>

## OBSERVATION AND RESULTS

### 1. Conceptual Framework of NCDs in *Kayachikitsa*

Ayurveda perceives health and disease through the balance of *doshas* (Vata, Pitta, Kapha), *dhatu*s (tissues), *srotas* (channels), *agni* (digestive/metabolic fire), and *ojas* (vital essence). NCDs are often the result of long-standing imbalance in these principles. For instance, *Prameha* (diabetes) is described as a *kapha-dominant metabolic disorder* involving derangement of *meda dhatu* (adipose tissue) and *agni* dysfunction. *Sthoulya* (obesity) is due to *Kapha-Meda* aggravation, while *Hridroga* (cardiac disorders) arise from *Kapha* and *Vata* imbalance leading to obstruction in channels (*srotorodha*).

The Ayurvedic approach emphasizes *nidana parivarjana* (removal of causative factors), reflecting modern preventive strategies of risk factor modification. The understanding of *Ojas* as a determinant of immunity correlates with modern immunology, highlighting Ayurveda's early recognition of immune dysfunction in chronic disease progression.

### 2. Correlation of Classical Diseases with Modern NCDs

- *Prameha* → Diabetes mellitus and metabolic syndrome
- *Sthoulya* → Obesity

- Hridroga → Cardiovascular diseases (atherosclerosis, ischemic heart disease, hypertension)
- Arbuda → Malignancies
- Tamaka Shwasa → Bronchial asthma and COPD
- Rajayakshma → Tuberculosis, HIV-related wasting

This correlation forms the basis for applying *Kayachikitsa* principles to modern NCDs.

### 3. Preventive Role of Kayachikitsa

Preventive aspects of *Kayachikitsa* include:

- **Dinacharya (daily regimen):** Encourages regular physical activity, meditation, balanced diet—comparable to modern lifestyle medicine.
- **Ritucharya (seasonal regimen):** Aligns body with environmental rhythms, preventing seasonal exacerbation of chronic disorders.
- **Sadvrta (ethical conduct):** Stress reduction, positive mindset, and social health, correlating with psychosocial determinants of NCDs.
- **Nidana Parivarjana:** Avoidance of excessive consumption of fatty foods, alcohol, sedentary lifestyle, stress—equivalent to modern risk factor elimination.

### 4. Therapeutic Interventions in Kayachikitsa

#### (a) Shodhana Chikitsa (Detoxification Therapies)

- **Panchakarma** is widely studied for metabolic and autoimmune conditions.
  - *Vamana* (emesis) and *Virechana* (purgation) reduce lipid and glucose levels.
  - *Basti* (medicated enema) improves gut microbiome and insulin sensitivity.
  - Clinical trials report Panchakarma improving lipid profile, oxidative stress markers, and quality of life in obesity and metabolic syndrome.

#### (b) Shamana Chikitsa (Palliative Therapies)

- Herbal formulations such as *Nishakatakadi Kashaya*, *Chandraprabha Vati*, *Triphala*, and *Guggulu* are documented for diabetes, hyperlipidemia, and arthritis.
- *Arjuna* (*Terminalia arjuna*) shows cardioprotective effects through antioxidant activity.
- *Haridra* (*Curcuma longa*) demonstrates anti-inflammatory and anti-diabetic potential in clinical studies.

#### (c) Rasayana Therapy (Rejuvenation)

- *Guduchi* (*Tinospora cordifolia*), *Amalaki* (*Emblica officinalis*), *Ashwagandha* (*Withania somnifera*) enhance immunity, reduce oxidative stress, and delay NCD complications.
- Clinical evidence supports *Rasayana* in improving glycemic control, reducing stress, and enhancing quality of life in cancer survivors.

### 5. Role of Ahara (Diet) and Vihara (Lifestyle)

Ayurveda highlights diet as medicine.

- High-fiber, low-fat, plant-based diets advocated in *Charaka Samhita* are similar to WHO recommendations for NCD prevention.
- Avoidance of incompatible foods (*Viruddhahara*) prevents metabolic disturbances.
- Regular physical activity, yoga, and pranayama enhance cardiopulmonary function and stress resilience.

### 6. Evidence from Modern Research

- RCTs on *Panchakarma* demonstrate reductions in inflammatory markers and improved metabolic outcomes.
- Meta-analyses on *Yoga and Pranayama* show significant benefits in hypertension, anxiety, and glycemic control.
- Experimental studies reveal that *Rasayana drugs* exert antioxidant, immunomodulatory, and adaptogenic effects.
- Observational studies on Ayurvedic dietary interventions demonstrate weight reduction and improved lipid profiles in obesity.

## DISCUSSION

The findings suggest that *Kayachikitsa* holds substantial potential in addressing the burden of NCDs. Its preventive, therapeutic, and rejuvenative principles align well with modern integrative medicine<sup>[16]</sup>.

### 1. Convergences with Modern Medicine<sup>[17]</sup>

- Preventive focus (*Nidana Parivarjana*) mirrors lifestyle interventions in modern NCD guidelines.
- Panchakarma detoxification parallels modern concepts of metabolic reset and microbiome modulation.
- *Rasayana* therapy correlates with immunotherapy, anti-aging, and antioxidant strategies.

- Stress management through yoga and meditation resonates with psychosomatic interventions in cardiology and oncology.

## 2. Strengths of Kayachikitsa<sup>[18]</sup>

- Holistic and patient-centered approach.
- Emphasis on long-term lifestyle correction.
- Use of natural formulations with minimal side effects.
- Integration of body-mind-spirit dimensions, which modern biomedicine often underemphasizes.

## 3. Limitations and Gaps<sup>[19]</sup>

- Lack of large-scale, multicentric RCTs validating Ayurvedic protocols.
- Challenges in standardization of herbal formulations and Panchakarma procedures.
- Limited mechanistic studies exploring biochemical pathways.
- Inadequate integration in public health systems despite WHO recognition of Ayurveda.

## 4. Future Prospects<sup>[20]</sup>

- Designing integrative protocols combining modern diagnostics with Ayurvedic therapies.
- Collaborative clinical research between Ayurveda and biomedical scientists.
- Development of standardized Rasayana formulations with quality assurance.
- Policy-level inclusion of *Kayachikitsa* in preventive healthcare strategies against NCDs.

Overall, *Kayachikitsa* bridges preventive medicine, chronic care, and holistic well-being, offering a complementary model to modern approaches.

## CONCLUSION

The global burden of NCDs demands comprehensive, sustainable, and patient-centered strategies. Ayurveda's *Kayachikitsa* provides a time-tested framework addressing not just symptoms but also root causes through preventive regimens, detoxification therapies, dietary regulations, and rejuvenation protocols. The conceptual parallels between classical diseases such as *Prameha*, *Sthoulya*, and *Hridroga* with diabetes, obesity, and cardiovascular disorders reinforce Ayurveda's relevance in modern contexts.

Evidence from clinical trials and experimental studies supports the role of Panchakarma, Rasayana drugs, and lifestyle interventions in improving metabolic, cardiovascular, and psychosocial

outcomes. Yoga and meditation further strengthen this holistic model by enhancing resilience against stress-related disorders.

However, limitations such as lack of large-scale randomized trials, issues in standardization, and insufficient mechanistic studies highlight the need for more rigorous scientific exploration. Collaborative research, integrative clinical protocols, and translational approaches can bridge these gaps.

In conclusion, *Kayachikitsa* offers a valuable integrative approach to NCD prevention and management. When combined with modern biomedical advances, it has the potential to provide cost-effective, sustainable, and holistic solutions for the growing epidemic of lifestyle disorders, improving both longevity and quality of life.

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