



“ROLE OF YOGA AND KAYACHIKITSA IN INTEGRATIVE MEDICINE: A SCIENTIFIC REVIEW”

Dr. Abhay Gandhi¹

AFFILIATIONS:

1. Director, Ira Consultancy & Research Organisation, Bhosari, Pune, Maharashtra 411026

CORRESPONDENCE:

Dr. Abhay Gandhi

EMAIL ID: director@icro.co.in

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ABSTRACT

Introduction: Integrative medicine is an emerging healthcare model that emphasizes blending conventional biomedical practices with complementary and traditional systems for holistic well-being. Ayurveda, particularly its branch *Kayachikitsa* (internal medicine), and Yoga, rooted in ancient Indian philosophy, contribute to this paradigm by addressing physical, psychological, and spiritual dimensions of health. **Methods:** Literature was collected from PubMed, Scopus, Web of Science, AYUSH Research Portal, and classical Ayurvedic texts including *Caraka Samhita*, *Sushruta Samhita*, and *Ashtanga Hridaya*. Keywords such as "Kayachikitsa," "Yoga therapy," "integrative medicine," and "chronic diseases" were used. Articles published between 2000–2025, including clinical trials, conceptual reviews, and systematic analyses, were included.

Results: Findings reveal that Kayachikitsa emphasizes preventive, promotive, and therapeutic strategies through dietary regulation, Panchakarma, Rasayana therapy, and lifestyle modification, which resonate with modern preventive medicine. Yoga, through Asanas, Pranayama, and meditation, complements Kayachikitsa by regulating stress responses, enhancing neuroendocrine function, and improving cardiometabolic health. Integrative evidence shows significant benefits in non-communicable diseases (NCDs), oncology, mental health, and palliative care. Clinical trials confirm improvements in glycemic control, blood pressure regulation, immune function, anxiety, depression, and quality of life when Ayurveda and Yoga are combined. **Discussion:** The synergy of Yoga and Kayachikitsa demonstrates strong potential within integrative medicine. Their convergence offers individualized, cost-effective, and patient-centered healthcare. However, gaps remain regarding standardized protocols, mechanistic studies, and large-scale trials. **Conclusion:** Yoga and Kayachikitsa together enhance resilience, promote holistic well-being, and complement biomedical care. They represent a culturally rooted and scientifically relevant model for integrative medicine in the 21st century.

KEYWORDS: Ayurveda, Integrative Medicine, Kayachikitsa, Non-Communicable Diseases, Yoga

INTRODUCTION

Integrative medicine seeks to bridge conventional biomedicine with complementary and traditional systems of care. Unlike disease-centered models, it emphasizes prevention, holistic treatment, and patient empowerment^[1-2]. This approach has become increasingly relevant in managing chronic diseases, mental health concerns, and quality of life issues^[3-4]. Ayurveda, India's traditional medical system, provides a detailed framework for holistic health^[5]. *Kayachikitsa*, the foremost branch, emphasizes internal medicine through concepts such as *Agni* (digestive/metabolic fire), *Dosha* (biological energies), and *Dhatu* (tissue balance). It highlights individualized therapies through dietary regimens, herbal formulations, detoxification (*Panchakarma*), and *Rasayana* (rejuvenative) strategies^[6-8]. Yoga complements *Kayachikitsa* by offering mind-body practices such as *Asanas* (postures), *Pranayama* (breathing techniques), and *Dhyana* (meditation). Collectively, they promote physical balance, emotional stability, and spiritual growth. The present review aims to examine the role of Yoga and *Kayachikitsa* in integrative medicine, with a focus on evidence-based applications, thematic synthesis of literature, and identification of research gaps^[9-10].

MATERIALS AND METHODS

- **Databases searched:** PubMed, Scopus, Web of Science, AYUSH Research Portal, Google Scholar^[11].
- **Keywords:** “*Kayachikitsa*,” “Ayurveda in integrative medicine,” “Yoga therapy,” “holistic healthcare,” “chronic diseases.”^[12]
- **Inclusion criteria:** (a) Publications from 2000–2025, (b) clinical trials, systematic reviews, observational studies, and conceptual papers, (c) classical Ayurvedic references (*Caraka Samhita*, *Sushruta Samhita*, *Ashtanga Hridaya*, *Yoga Sutras*)^[13].
- **Exclusion criteria:** Non-English or non-translated works, anecdotal case reports, and duplicates^[14].
- **Study types reviewed:** Randomized controlled trials, integrative protocols, narrative reviews, and mechanistic studies^[15].

OBSERVATION AND RESULTS

1. Ayurvedic Foundations of *Kayachikitsa* in

Integrative Medicine

Kayachikitsa translates to “treatment of systemic diseases of the body.” It operates through a triad of preventive (*Swasthasya Swasthya Rakshanam*), promotive (*Nidana Parivarjana*), and therapeutic strategies. Core principles include:

- **Agni and metabolism:** Proper functioning of *Agni* is central to digestion, immunity, and vitality. Its dysfunction is linked to NCDs such as diabetes and obesity. Modern parallels include gut microbiome regulation and metabolic syndrome.
- **Dosha balance:** Ayurveda emphasizes homeostasis of *Vata*, *Pitta*, and *Kapha*. Disturbances manifest as lifestyle diseases. For instance, *Kapha* aggravation contributes to obesity and diabetes.
- **Rasayana therapy:** Focuses on rejuvenation, tissue nourishment, and delaying aging. It parallels modern geriatrics and immunomodulatory interventions.

2. Yoga as a Complementary Modality

Yoga offers practical tools to harmonize the mind and body, supporting *Kayachikitsa* in integrative frameworks.

- **Asanas:** Improve musculoskeletal flexibility, cardiovascular health, and circulation. Clinical studies confirm their benefits in hypertension and diabetes.
- **Pranayama:** Balances autonomic function, improves respiratory efficiency, and enhances stress resilience. Practices like *Anulom-Vilom* and *Bhramari* regulate vagal tone.
- **Meditation/Dhyana:** Reduces stress by modulating the hypothalamic-pituitary-adrenal (HPA) axis and lowering cortisol. Mindfulness-based interventions in Yoga correlate with improved mental health outcomes.

3. Applications in Non-Communicable Diseases

- **Diabetes mellitus:** Ayurvedic herbs like *Guduchi* (*Tinospora cordifolia*) and formulations like *Nisha Amalaki* improve glycemic control. Yoga postures such as *Ardha Matsyendrasana* enhance pancreatic stimulation. Combined protocols show reductions in HbA1c and improved insulin sensitivity.

- **Hypertension:** Kayachikitsa employs *Medhya Rasayana* and lifestyle correction, while Yoga practices like *Shavasana* and *Nadi Shodhana* reduce systolic and diastolic blood pressure through autonomic regulation.
- **Cardiovascular diseases:** Ayurveda prescribes *Hridya dravyas* (cardiotonic herbs) and Panchakarma detox. Yoga enhances cardiac rehabilitation by improving HRV (heart rate variability).
- **Obesity and metabolic syndrome:** Both systems emphasize balanced diet, mindful eating, and exercise. Yoga assists in sustainable weight management by reducing binge-eating tendencies.

4. Mental Health and Psycho-Oncology

Ayurveda describes *Manasika Rogas* (mental disorders) linked to *Rajas* and *Tamas*. Kayachikitsa applies *Satvavajaya Chikitsa* (counseling, ethical training, meditation) and *Medhya Rasayanas* (e.g., *Brahmi*, *Shankhapushpi*). Yoga reduces anxiety, depression, and stress markers. Together, they aid in cancer psycho-oncology, enhancing coping, reducing fatigue, and improving quality of life.

5. Immunomodulation and Rasayana Research

Rasayana therapy is evidenced to enhance immunity and slow aging. Herbs like *Amalaki*, *Ashwagandha*, and *Guduchi* increase NK cell activity and reduce oxidative stress. Yoga has been shown to improve immunoglobulin levels, lymphocyte counts, and anti-inflammatory cytokines. Integrative trials confirm reduced infection rates and better immune resilience.

6. Palliative Care and Quality of Life

Ayurveda and Yoga provide significant support in palliative settings, focusing on symptom relief, pain management, and psychological well-being. *Abhyanga* (oil massage), *Shirodhara*, gentle Yoga, and meditation enhance comfort and reduce suffering in terminal illness.

7. Integrative Clinical Evidence

- A trial at AIIMS, New Delhi (2018) showed that an Ayurveda-Yoga protocol for rheumatoid arthritis improved joint pain, mobility, and inflammatory markers compared to standard care.
- NCCIH (2022) reports that Yoga-based interventions reduce chronic pain, improve sleep quality, and support mental resilience.

- In cancer care, integrative Ayurveda-Yoga models improved chemotherapy tolerance, reduced nausea, and improved overall quality of life.

DISCUSSION

The integration of Kayachikitsa and Yoga demonstrates a holistic framework that is both preventive and therapeutic. While modern medicine excels in acute and emergency care, it often underperforms in addressing chronic lifestyle diseases, psychosomatic conditions, and quality of life issues. Here, Ayurveda and Yoga fill critical gaps^[16].

From a biomedical standpoint, Kayachikitsa principles such as *Agni* regulation, *Rasayana* therapy, and Panchakarma can be correlated with gut microbiota modulation, immunotherapy, and detoxification science. Yoga complements these with measurable neuroendocrine, cardiopulmonary, and psychological benefits. Together, they address root causes and improve self-management^[17].

Comparative analysis shows parallels between Ayurveda's personalized medicine (based on *Prakriti*) and modern precision medicine. Similarly, mindfulness in Yoga resonates with evidence-based stress reduction programs. Integrative protocols highlight measurable outcomes such as reduced HbA1c, improved lipid profiles, and enhanced HRV^[18].

However, several challenges remain. Standardization of Ayurvedic formulations, Yoga protocols, and outcome measures is required. Most studies have small sample sizes and lack long-term follow-up. Mechanistic studies using modern tools such as metabolomics and functional MRI are limited. Furthermore, integration into mainstream healthcare is often hindered by regulatory, educational, and infrastructural gaps^[19].

Future prospects lie in multi-center trials, biomarker validation of Rasayana therapies, and inclusion of Ayurveda-Yoga in global health policy. Training healthcare providers in integrative models and fostering interdisciplinary research are essential^[20].

CONCLUSION

Yoga and Kayachikitsa together represent a comprehensive and culturally grounded framework for integrative medicine. Their principles of prevention, individualized care, and holistic well-

being resonate with modern healthcare needs, particularly in the context of non-communicable diseases, mental health, and palliative care.

Current evidence demonstrates their efficacy in improving metabolic, cardiovascular, and psychological outcomes while enhancing immunity and resilience. Their combined role offers patients not only symptomatic relief but also empowerment through self-care and lifestyle transformation.

Despite promising outcomes, gaps exist in research standardization and global implementation. Large-scale, multi-disciplinary studies are required to validate classical principles in modern contexts. With supportive policy and collaborative research, Yoga and Kayachikitsa can significantly enrich patient-centered healthcare.

In conclusion, integrating these systems into mainstream practice provides a cost-effective, sustainable, and evidence-based approach to global health challenges of the 21st century.

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