

The Role of Integrated Ayurveda and Yoga in Addressing the NCD Epidemic in India

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Introduction

- India's NCDs contribute to over 63% of deaths.
- Major types: CVDs, Diabetes, Cancer, CRDs.
- High treatment cost: pushes 7% below poverty annually.
- economic repercussions are substantial, encompassing soaring healthcare expenditures, lost productivity due to illness and premature mortality, and a detrimental impact on national development
- Need for holistic, and integrative strategies including traditional medicine such as Ayurveda and Yoga.

Objectives of the Study

- Evaluate the current level of integration of Ayurveda and Yoga in the existing government healthcare framework for NCD management.
- Assess the effectiveness of ongoing government programs that promote integrated medicine to control NCDs
- To explore the perceived benefits and challenges of adopting Ayurvedic and Yogic interventions from the perspectives of healthcare professionals and patients.
- To provide evidence based recommendations for strengthening the integration of Ayurveda and Yoga into India's national health system for enhanced NCD control.

Research Questions & Methodology

Research Question

Whether the integration of Ayurveda and Yoga into Mainstream Treatment Modules ,could effectively help address the growing NCD burden in India?

Study Type: Comprehensive, Narrative, Descriptive & Analytical Literature Review

Setting: National Scale – Primary to Tertiary Healthcare

Inclusion: Research articles, academic journals, NHP 2017, MoHFW & AYUSH documents on Ayurveda & Yoga integration in Indian healthcare.

Exclusion: Non-Indian context or sole focus on alternative therapies.

Tools: Qualitative synthesis of government reports, policy documents, scientific publications, and institutional websites.

Duration: March 10, 2025 – May 31, 2025

- **Data Collection & Analysis:** Systematic gathering, thematic organization based on foundational principles, and disease-specific applications (CVD, diabetes, chronic respiratory disorders).

Foundational Ayurvedic Principles

Core Philosophy:

Holistic Health: Balance of three **Doshas** (Vata, Pitta, Kapha).

- **Illness:** Dosha imbalance → **Ama** (toxins).
- **Approach:** Root cause treatment, proactive prevention, highly personalized.

Key Preventive Pillars:

- **Dinacharya (Daily Regimens):** Daily routines for physiological balance & circadian rhythm harmony.
- **Ritucharya (Seasonal Regimens):** Seasonal adjustments for Dosha balance & immunity.
- **Trayopastambha (3 Pillars of Health):**
 - **Ahara (Diet):** Wholesome, constitutional diet.
 - **Nidra (Sleep):** Quality sleep for metabolism, immunity, hormones.
 - **Brahmacharya (Self-control):** Balanced physical desires for longevity.

Foundational Ayurvedic Principles

Therapeutic & Proactive Strategies:

- **Panchakarma (Detoxification):** Eliminates Doshas/toxins; enhances self-recovery.
- **Rasayana (Rejuvenation):** Fortifies tissues, boosts immunity, enhances well-being.
- **Satvritta/Achara Rasayana (Ethical Living):** Cultivates mental harmony, reduces stress.

Yogic Foundations

Core Elements:

- **Yamas & Niyamas:** Ethics, self-discipline.
- **Asanas:** Physical postures (strength, flexibility, organ health).
- **Pranayama:** Breathing techniques (lung capacity, oxygenation).
- **Dhyana:** Meditation (mental calmness, self-awareness).

NCD Prevention Mechanisms:

- **Mind-Body Connection:** Reduces stress/anxiety, improves emotional regulation.
- **Physiological Impact:** Decreases HPA axis activity, modulates cardiac/neuro-immune/ghrelin axes.
- **Physical Benefits:** Enhances flexibility, muscle tone, circulation; aids weight/visceral fat management.

Ayurveda & Yoga in Cardiovascular Diseases

Ayurvedic Concept:

- **Hridroga** linked to **Dosha imbalances** and **stress/lifestyle factors**.
- Focus on **holistic etiology**.

Prevention:

- "Prevention is better than cure."
- Stress avoidance, healthy routines (**Swasthyavritt Palana**), **Ahara** (diet) & **Vihara** (lifestyle) modifications.
- **Rasayana** herbs/preparations for cardioprotection.

Therapies:

- **Samshodhana (Purification)**: Virechana, Basti – addresses hyperlipidemia, hypertension, obesity, CHF.
- **Shamana (Pacifying)**: Tailapana, Ghritapana, Langhana – balances specific Dosha-aggravated Hridroga.

Key Herbs/Formulations:

- Arjuna, Rasona, Guggulu, Ashwagandha, Brahmi.

Ayurveda & Yoga in Cardiovascular Diseases

Primary Prevention:

- Targets: Lifestyle stress, weight, lipids, BP, smoking, diabetes.
- Benefits: Reduced BP, HR, MI/stroke risk; high smoking cessation.

Secondary Prevention:

- Targets: All-cause mortality, MI, stroke; atherosclerosis progression.
- Benefits: Reduced risk of major cardiac events; improved lipids, angina.

Mechanisms:

- Calms sympathetic nervous system, improves physiological regulation, normalizes sleep/appetite.
- Overall: Supports cardiac health by reducing stress and improving vital functions.

Cardiac Rehabilitation:

- Post-surgery support.
- Benefits: Improved physical conditioning, stress reduction, better LVEF/lipids, reduced anxiety/depression.

Ayurveda & Yoga in Diabetes

Ayurvedic View:

- Diabetes (Madhumeha) from **Dosha imbalances, weak Agni, Ama, Dhatu Kshaya.**
- Holistic metabolic understanding.

Interventions & Benefits:

- **Diet (Ahara):** Bitter vegetables, specific grains; avoids sugar/fats → Blood sugar regulation, improved digestion.
- **Lifestyle (Vihara):** Regular exercise (Vyayama) → Improved insulin sensitivity, weight/stress control.
- **Herbal Medicines (Aushadha):** Gurmar, Turmeric, Shilajit, polyherbal formulas → Pancreatic regeneration, enhanced insulin, glycemic regulation, anti-inflammatory/antioxidant.

Outcomes:

- Clinically proven **reductions in HbA1c, FBS, PPBS.**
- Potential for **symptom amelioration & diabetes remission.**

Ayurveda & Yoga in Diabetes

Yogic Interventions for Diabetes Mellitus

Key Practices & Benefits:

- **Asanas (Postures):** Stimulate insulin, regenerate pancreas, improve glucose uptake & metabolism.
- **Shuddhi Kriyas (Cleansing):** Enhance glucose uptake, reduce insulin resistance, lower blood sugar.
- **Pranayama (Breathing):** Improve cardio-respiratory function, regulate nervous system & metabolism.
- **Bandhas & Mudras (Locks & Gestures):** Benefit pancreatic function, reduce stress, influence metabolism.
- **Dhyana & Relaxation (Meditation):** Improve psychological well-being, reduce stress, regulate BP & glucose, enhance quality of life.

Ayurveda & Yoga in Cancer

Ayurvedic View:

- Cancer- **Tridoshic imbalance (Granthi/Arbuda)**, stemming from **weak Agni, Ama, Dhatu Kshaya**.
- Holistic disease etiology.

Interventions & Benefits:

- **Herbal Therapies:** (e.g., Turmeric, Ashwagandha)
 - **Effects:** Anti-inflammatory, antioxidant, anticancer, immune modulation, detoxification; may enhance chemo.
- **Dietary Changes:** (Sattvic, Agni-balancing, detox)
 - **Effects:** Supports cellular health, immunity, reduces oxidative stress/inflammation.
- **Lifestyle Modifications:** (Dinacharya, Ritucharya, mental well-being)

Effects: Balances body cycles, reduces stress, enhances overall health & immunity.

Ayurveda & Yoga in Cancer

Yogic Interventions for Cancers

Key Benefits & Evidence:

- **Reduces Cancer-Related Fatigue (CRF):**
 - **Mechanism:** Decreases inflammation, modulates stress hormones (cortisol), enhances immune function.
 - **Impact:** Improves mood, reduces stress/anxiety through mindfulness and pranayama.
- **Improves Quality of Life (QoL):**
 - **Impact:** Enhances daily functioning, treatment adherence, physical/mental resilience.
 - **Evidence:** Low-risk, low-cost therapy reducing anxiety, depression, and distress.
- **Reduced Recurrence & Death Risk (Breast Cancer):**
 - **Evidence:** TMC study showed a 15% reduction in recurrence/death risk with gentle postures, relaxation, and pranayama.
- **Stress Reduction:**
 - **Mechanism:** Lowers cortisol levels, enhances psychological well-being.

Impact: Crucial, as stress can influence cancer development

Ayurveda & Yoga in Chronic Respiratory Diseases

Ayurveda & Chronic Respiratory Diseases

Scope:

- Addresses common conditions like Asthma, Tuberculosis, COPD, and Rhinitis.

Interventions & Benefits:

- **Shodhana Karma (Purification Therapies):**
 - **Details:** Vamana Virechana (therapeutic emesis/purgation).
 - **Effects:** Eliminates accumulated Doshas and toxins, crucial for managing conditions like asthma.
- **Shamana Chikitsa (Palliative Therapies):**
 - **Details:** Administered after Shodhana, often combined with Pranayama.
 - **Effects:** Pacifies symptoms, promotes recovery, especially in rhinitis and asthma.
- **Ayurvedic Formulations (Adjuvants):**
 - **Examples:** Shwaskuthar Rasa, Sitopaladi Churna, Ashwagandha Churna, Triphala Guggul.
 - **Effects:** Significant positive outcomes on major respiratory symptoms when used as supplementary treatments.

Ayurveda & Yoga in Chronic Respiratory Diseases

Yogic Interventions for Chronic Respiratory Diseases

Key Benefits & Mechanisms:

- **Improved Breathing & Reduced Hyper-reactivity:**
 - **Mechanisms:** Helps control mind/emotions, aids sputum excretion, increases blood oxygen, enhances lung elasticity, prevents infections, aerates lungs. Desensitizes receptors, stabilizes nervous system, reduces stress hormones.
- **Strengthened Immune System:**
 - **Impact:** Reduces likelihood of chronic infections.

Specific Practices & Effects:

- **Pranayama (Breathing):** (e.g., Anulom Vilom, Bhramari, Bhastrika)
 - **Effects:** Augments cerebral blood flow/oxygenation, improves neuronal activity, regulates glands, lowers BP, provides calming effects. Improves Peak Expiratory Flow Rate (PFR) and reduces asthma attacks/medication.
- **Asanas (Postures):** Various postures supporting lung function.
- **Relaxation Techniques:** (e.g., Yoga Nidra, Aum Chanting)

Govt Policies & AYUSH Integration

National Health Policy 2017 –
AYUSH mainstreaming.

National AYUSH Mission
(NAM).

NPCDCS-AYUSH Pilot shows
clinical success.

All India Institute of Ayurveda,
CCRAS & AIIMS collaborations.

Challenges to Integration



LACK OF AWARENESS
AMONG ALLOPATHIC
DOCTORS.



INSUFFICIENT RESEARCH
ON COMBINED
PROTOCOLS.

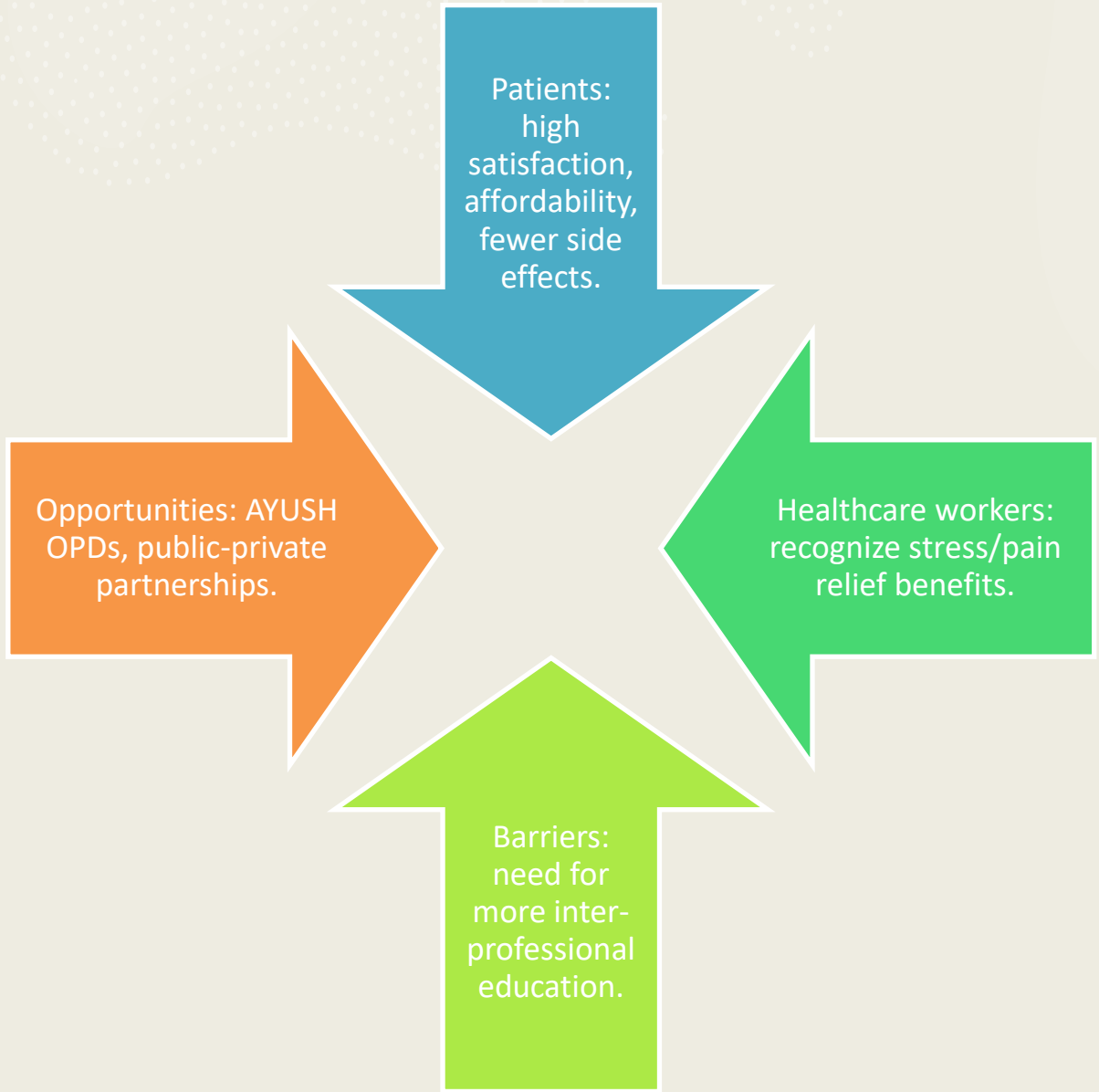


NO STANDARDIZATION
IN INTEGRATIVE
PRACTICE.

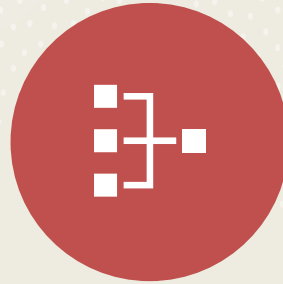


SKEPTICISM AND POOR
INTER-SYSTEM
REFERRAL PRACTICES.

Stakeholder Perspectives



Recommendations



STANDARDIZE INTEGRATIVE
CARE MODELS AND
PROTOCOLS.



EXPAND CROSS-TRAINING
FOR MEDICAL
PROFESSIONALS.



FUND CLINICAL TRIALS ON
INTEGRATIVE TREATMENTS.



BOOST AWARENESS VIA
BCC, IEC CAMPAIGNS.

Future Implications

Cost savings in healthcare expenditure.

Potential for reversing lifestyle diseases.

Empowering community-based self-care.

Global positioning of India in integrative health leadership.

Conclusion



Integration is sustainable, low-cost, culturally embedded.



Requires policy support, research, training, public buy-in.



Promotes proactive, preventive, personalized healthcare.



Transformational potential for India's NCD control roadmap.

Bibliography

WHO, MoHFW,
NPCDCS, National
Health Policy 2017.

AHA, AIIMS, CCRAS,
ICMR, Tata Memorial
Centre.

Relevant RCTs and
policy documents
cited in dissertation.

Thank You

- Questions and Answers
- Dr. B Hari Hara Krishna | IIHMR University Jaipur