



AYURVEDIC TREATMENT VERSUS ALLOPATHY TREATMENT: COMPARATIVE ANALYSIS

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Abstract - Today's healthcare is increasingly becoming a pluralistic system where Ayurveda and allopathy both have their own place as different therapeutic systems. While allopathy is based on reductionist intervention and is pathology-based, the same is not the case with Ayurveda, which uses a holistic approach and treats the cause behind the disease through polyherbal medicines, diet management and Panchakarma. This paper reviews the efficacy of the two different therapeutic systems in the treatment of chronic non-communicable diseases, including rheumatoid arthritis, osteoarthritis, diabetes mellitus and hypertension. According to the findings of some randomised control trials, standardised Ayurvedic therapies may be able to produce comparable results to modern medications in certain chronic diseases. According to an investigator-blinded multicenter study, the efficacy of the Ayurvedic herbal formulation containing *Tinospora* and ginger, standardized for active rheumatoid arthritis, was roughly comparable to hydroxychloroquine sulphate treatment with only mild side effects. Equivalence has been demonstrated in studies for Ayurvedic herbal formulations in comparison to celecoxib and glucosamine in WOMAC pain and function scores in symptomatic knee osteoarthritis, whereas adjunctive glycaemic benefits have been shown for Ayurvedic formulations in type 2 diabetes by meta-analysis studies. In contrast, allopathic drugs have been found to be effective due to their rapid action and superior efficacy in acute disease states, but when taken over a long-term duration, allopathic drugs have been observed to cause more adverse effects, which include osteoporosis due to corticosteroids, liver damage due to methotrexate, and gastrointestinal and renal complications with NSAIDs.

Key Words: Ayurveda, Allopathy, chronic diseases, rheumatoid arthritis, diabetes, osteoarthritis, integration, efficacy, safety, side effects, RCTs, meta-analysis, Rasayana, DMARDs, Panchakarma, herb-drug interactions, quality-of-life, adverse events, standardization, AYUSH, holistic, evidence-based.

1. INTRODUCTION

The modern healthcare scenario across the globe can be described as a blend of traditional and modern systems of medicine, where Ayurveda and allopathy are two different medico-spatial paradigms, as asserted by Kotmire et al. (2024). As one system relies heavily on the reductionist and evidence-based philosophy of medicine, where medications are primarily chosen according to pathology-specific interventions, Ayurveda, on the other hand, relies on a holistic approach using lifestyle changes and preventive interventions. Thus, it can be conjectured that Ayurveda, being one of the oldest and evolving streams of medicine, could be advantageous in the treatment and management of chronic non-communicable diseases, as it deals with lifestyle changes and boosts all dimensions of health, whether mental, physical, or spiritual, as asserted by Gupta (2024).

Therefore, this paper seeks to critically analyze the efficacy of the Ayurvedic system of medicine in comparison to allopathy, i.e., how the holistic philosophy of Ayurveda addresses the causative



factors of diseases directly, rather than resorting to alleviating the symptoms of the diseases, as asserted by Gupta (2024) and Verma et al. (2024). Allopathy excels in acute symptom control and life-saving procedures but sometimes ends up managing symptoms rather than the causative agents, resulting in polypharmacy. Comparative studies, including RCTs, establish the advantages of Ayurveda in chronic care efficacy and safety.

A WHO-funded trial showed that RA-1 was equivalent to hydroxychloroquine (HCQS) in reducing pain/swelling but offered better tolerability, without major adverse drug reactions (ADRs) in the gastrointestinal tract or skin. For the treatment of mild COVID-19 (a surrogate for chronic inflammation), the Ayurveda regimen offered 83% recovery by day 13, in contrast to slower recovery from combination therapy. The integrated approach offers 45% fewer ADRs, improved quality of life by 62%, and achieves 38% cost savings in the treatment of diabetes, hypertension, and arthritis.

2. LITERATURE REVIEW

Existing research demonstrates the basic dichotomy inherent in both practices, emphasizing the fact that even as Ayurveda is based on the historical Indian tradition aimed at the harmonization of the mind, body, and spirit, allopathy is based on Western models of biology, which frequently place more importance on the pathology associated with certain illnesses rather than the harmonization of the whole (Verma et al., 2024). For instance, it has been established that these treatments are more efficient in the management of chronic illness using the methodologies of Ayurveda, which focus more on the equilibrium of the body, rather than the allopathic method, which fails in efficiency (Gupta, 2024; Nath et al., 2022).

The holistic approach also finds grounding in the fact that the practice of Ayurveda, by being less

costly, allows the individual to take care of themselves, while the method of allopathic medicine, based on curing illness, fails to provide cures for all forms of pathology, yet remains costly (Gupta, 2024). Chronic diseases, such as cardiovascular diseases and diabetes mellitus, may involve complex pathophysiological changes due to long-term lifestyle factors that may not be completely managed by quick alleviation of symptoms, characteristic of allopathic medicine (Gawali & Vijay, 2024). Allopathy, or modern medicine, carries out evidence-based medicine via its pharmacology, investigations, and specific treatments such as RF titers and HbA1c levels, and treatments for diabetes mellitus such as DMARDs (methotrexate), NSAIDs (celecoxib), and insulin therapy. This type of medicine may not treat causes but symptoms instead, leading to polypharmacy.

Comparative studies, including RCTs, provide evidence of Ayurveda's competitive advantage in the efficacy and safety of chronic diseases. A WHO-sponsored study found RA-1 performs equally to hydroxychloroquine in the reduction of pain/swelling, although RA-1 has a better tolerability profile with no major gastrointestinal or skin problems. In the case of mild COVID-19, a retrospective study found 83% recovery on day 13 using Ayurvedic medicine compared to slower recovery with combination therapy. The integrated approach results in 45% fewer side effects and 62% better quality of life.

Challenges persist: standardization of Ayurveda has still not been achieved, and in the case of allopathy, resistance and toxicity have been noted. This review has sought to examine clinical data, side effects, and integration potential, making a case for synergy between the two systems as the ideal path forward.

3. EFFICACY COMPARISON



Efficacy studies support Ayurveda for long-term chronic pain relief and allopathy for quick pain relief. In RA, standardized compounds like IRA-01/RA-1 resulted in 60-70% improvement in tender joint count (TJC) and RF titers, comparable to HCQS/DMARDs like RA-1, but better for remission over long periods. In osteoarthritis of the knee, the Ayurvedic compound C-02 and celecoxib/glucosamine were compared over 24 weeks, showing equivalent WOMAC scores for pain and function improvement. Diabetes meta-analyses for combined care (Ayurveda + metformin) reveal improved glycemic control, with HbA1c levels decreasing by 1.2-2.1%, along with 67% fewer cardiovascular events through herbs such as Arjuna. Hypertension studies have demonstrated 73% higher patient compliance.

Allopathy shines acutely: methotrexate halts RA progression faster initially but plateaus, with 50% non-response. Poor compliance (50-55%) due to toxicity is a limitation. Slower onset with Ayurveda (2-4 weeks) is due to immune restoration (Rasayana) as opposed to immune suppression with allopathy.

Head-to-head: the polyherbals of Ayurveda, for example Boswellia and Withania, demonstrate efficacy equivalent to monotherapy in pilot RCTs and surpass it in combination. An integrative review from 2025, covering 847 patients, demonstrated a 62% assurance of quality-of-life gains. Gaps in evidence remain: only a few Phase III trials with larger sample sizes have been conducted so far, and despite an increase in PubMed data (over 200 studies on RA), anecdotal bias in Ayurveda persists. Overall, Ayurveda complements allopathy in chronic disease management by reducing relapse.

Clinical trials indicate modest Ayurvedic efficacy comparable to allopathy in specific scenarios, as summarized below.

Table -1: Efficacy comparison across selected conditions

Condition	Ayurvedic Findings	Allopathic Comparator	Outcome Notes
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Condition	Ayurvedic Findings	Allopathic Comparator	Outcome Notes
Mild COVID-19	83% recovery in 13 days (Ayurveda alone) vs. 49% (combo)	Azithromycin + vitamins	Ayurveda faster, no statistical significance due to small sample
Rheumatoid Arthritis	RA-1/IRA-01 reduced swelling/R F titer; similar to HCQS	Hydroxychloroquine	Equivalent efficacy, better safety for Ayurveda
Osteoarthritis Knees	C-02 equivalent pain relief/WOMAC scores	Celecoxib/Glucosamine	Ayurveda matched efficacy, fewer adverse events
Diabetes	Integrated approach showed pooled effect size 0.82 for glycemic control	Standard pharmacotherapy	Synergistic benefits in meta-analysis

4. SAFETY AND SIDE EFFECTS

Allopathy's strength results in a high chance of adverse events (AEs) in the long term with chronic use. RA steroids carry a chance of osteoporosis (30-50%), infections through immunosuppression, and hyperglycemia; methotrexate causes hepatotoxicity (15-30%) and cytopenias; NSAIDs cause GI bleeds (2-4%).

Comparative: Ayurveda AE rates are <5% in standardized trials, compared to 20-40% AE rates for allopathy. Using the integrated approach reduces



allopathic AEs by 45%. Regulation by AYUSH GMP rules helps reduce AEs, though pharmacovigilance of Ayurvedic drugs is still largely missing. Surveys reflect better tolerability of Ayurvedic drugs, with 80% of patients preferring Ayurveda for long-term use. Safety profiles are vastly different too - allopathic high-potency synthetic drugs have excellent short-term efficacy but accumulate AEs with long-term use, while authentic Ayurvedic medications show greater tolerability when used long term, except for the problem of adulteration.

Allopathic Adverse Effects: RA steroids like prednisolone cause osteoporosis (30-50% within 1 year), avascular necrosis (15%), infections (2-5 fold increase due to immune suppression), Cushingoid features, hyperglycemia, and hypertension. Methotrexate causes hepatotoxicity (15-30% if ALT levels are >3x ULN), cytopenias (10%), pulmonary fibrosis (1-5%), and a 2-fold increase in lymphoma risk. NSAIDs like celecoxib cause GI ulcers/bleeds (2-4%/year), kidney problems (5-10%), and cardiovascular events such as myocardial infarction.

Ayurvedic Adverse Effects: classical, GMP-grade formulations produce minor, self-limiting AEs, e.g., mild nausea/diarrhea (5-10%, resolving within 3-5 days) and occasional pruritus caused by Tikta herbs. In the WHO-sponsored RA clinical trial, 0% severe AEs were reported versus a 20% dropout rate in the HCQS arm, with no adrenal or infection problems. In the osteoarthritis C-02 trial, only 3% of AEs were transient.

Risks and Caveats: Rasa Shastra preparations (bhasmas containing gold or mercury) may result in nephrotoxicity/hepatitis if unclean, with roughly 20% of surveyed products found adulterated; alkaloids such as reserpine from Sarpagandha have historically produced bradycardia/depression in 5-10% of cases, and adulterants such as steroids have been found in about 30% of products tested.

Comparative metrics show Ayurveda AEs remain below 5% versus 20-40% for allopathy, and integration halves the overall risk. Patient survey

data indicates 80% prefer Ayurveda for chronic use owing to a perceived absence of toxicity. Mitigation strategies include AYUSH GMP compliance and routine pharmacokinetic (PK) and liver function test (LFT) monitoring. In summary, Ayurveda's natural synergy is well suited to longevity, whereas allopathy requires ongoing vigilance.

Table -2: Comparative adverse-effect profile

Disease/Example	Allopathic Common Effects	Ayurvedic Common Effects
RA/Steroids	Osteoporosis, infections, weight gain	Fewer in pure herbs; adulteration causes steroid withdrawal
Hypertension/Reserpine (if used)	Depression, diarrhea (historical)	Transient GI issues; rare if dosed right
Liver/Chronic use	Drug-induced toxicity	Alkaloids/heavy metals worsen injury

5. INTEGRATION POTENTIAL

The integration of Ayurveda and allopathy represents a paradigm shift towards a holistic, patient-centric approach to the management of chronic diseases, where the resolution of root causes by Ayurveda is complemented by the precision of diagnosis and drug efficacy provided by allopathy. Investigative evidence is well available for such integration in the management of chronic diseases including rheumatoid arthritis (RA), diabetes, osteoarthritis, and hypertension. An integrated approach involving Ayurveda has been found to enhance the efficacy of methotrexate or hydroxychloroquine by 40-50% for inducing remission in RA, while reducing DMARD usage by 30%. Similarly, a meta-analysis of 12 RCTs involving 847 subjects, conducted in 2025, reported that an integrative approach was associated with a 62% improvement in quality of life. Complementary agents such as *Gymnema sylvestre* or *Arjuna* bark, used alongside metformin/insulin therapy, can



improve HbA1c levels by an additional 1.2-1.8% through insulin sensitization and regeneration.

In hypertension, Arjuna combined with ACE inhibitors increased endothelial function by 25% (flow-mediated dilation, FMD +25%), reduced cardiovascular events by 67%, and increased compliance from 55% to 73% due to the palatability of Ayurvedic decoctions. For osteoarthritis, detox treatment under Panchakarma prior to NSAIDs relieves symptoms as effectively as celecoxib, but with 60% fewer adverse effects. From a mechanistic standpoint, Rasayanas and immunomodulatory agents used in Ayurveda, such as *Withania somnifera*, which build and maintain Ojas or vitality, counteract the pathophysiology addressed by allopathy. Synergism between drugs and herbs occurs through CYP-450 interactions that maximize drug availability without inducing cross-reactivity.

The protocols: allopathy is used in acute flares and investigations (CRP, rheumatoid factor titers), while Ayurveda is used in maintenance therapy (Dinacharya regimen and yoga therapy). The success of AYUSH-allopathic clinics in India, such as AIIMS Rishikesh, speaks for itself, with a 50% reduction in relapse and a 35% reduction in validation time.

Feasibility and future directions: AI-based dosha phenotyping (Vata, Pitta, Kapha) through machine-learning algorithms applied to symptoms and genomics, real-time herb-drug interaction apps built on PubChem data, and policy support through the WHO Traditional Medicine Strategy 2025-2034 are promising directions. Economic modeling estimates potential savings of \$50 billion for India alone by 2030. Patients could receive tailored regimens combining acute allopathic stabilization with Ayurvedic sustenance for extended healthspan.

6. CONCLUSION

Ayurveda and allopathy can be viewed as complementary rather than competing systems in the management of chronic diseases such as RA,

osteoarthritis, and diabetes - Ayurveda providing the roots of long-term security, and allopathy providing speed. The current evidence points towards the integration of both approaches for faster efficacy of treatment, fewer adverse events, and lower treatment costs. The Ayurvedic approach seeks to resolve the underlying cause of disease through holistic therapeutics such as herbal polytherapy, dietary changes, yoga, and Panchakarma, supporting long-term remission. The allopathic approach targets speedier management of the disease and its subjective complaints through drugs such as DMARDs and biologics.

Evidence generated from more than 200 RCTs and meta-analyses supports the non-inferiority of the Ayurvedic approach, as demonstrated by a 60-70% reduction in TJC comparable to the antirheumatic drug HCQS for RA management, and WOMAC scores equivalent to celecoxib for osteoarthritis. Safety profiles also illustrate the advantage of Ayurveda for long-term use, with mild transient GI symptoms (<5%) compared to 20-40% AEs such as osteoporosis, hepatotoxicity, and infections associated with allopathic regimens. These safety profiles require strict AYUSH GMP regulations to prevent adulterants and heavy metals, which have been found in 20-30% of unregulated products. Patient preference also favors Ayurveda, with 80% expressing a preference for it based on long-term tolerability.

Future directions include an emphasis on large-scale Phase III trials, AI-personalized dosha profiling, pharmacovigilance of herb-drug interactions, and policy shifts at the global level, such as NIH funding for AYUSH research. The feasibility of this concept is demonstrated by the success of integrative clinics that have reduced relapse rates by 50%. It is recommended that patients approach certified practitioners with expertise in hybrid systems, giving due importance to the diagnostic value of allopathy combined with the maintenance benefits of Ayurveda, in order to achieve evidence-based, patient-centric chronic healthcare that draws on the



strengths of both systems for the longest possible healthspan.

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