

Ayurvedic Concept of Sharirik Prakriti and Its Relevance in Yoga Therapy.

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ABSTRACT

Background: Sharirik Prakriti, the individual constitutional typology of Ayurvedic medicine determined by the relative dominance of the three Doshas (Vata, Pitta, Kapha) at conception, offers a candidate explanatory framework for inter-individual variability in yoga therapy response. Although both systems emphasize individualized healthcare, the scientific literature integrating formal Prakriti assessment with structured yoga prescription remains limited and fragmented.

Objectives: To critically review the classical and scientific evidence for Sharirik Prakriti as a basis for personalized yoga therapy; to synthesize physiological and psychological correlates of each Prakriti type; and to propose a testable, Prakriti-informed yoga prescription model for empirical validation.

Methods: A systematic search of PubMed/MEDLINE, Scopus, Web of Science, Cochrane CENTRAL, Google Scholar, AYUSH Research Portal, DHARA, and IndMED was conducted for the period 2000–2026. Original research articles, randomized and non-randomized trials, observational studies, systematic reviews, and meta-analyses published in English were included. Editorials, letters, abstracts without full text, animal studies, and duplicates were excluded. Study quality was assessed, and findings synthesized narratively.

Results: Genomic studies (Patwardhan & Bodeker, 2008; Govindaraj et al., 2015) identify molecular correlates distinguishing Prakriti groups, including 52 differentiating single nucleotide polymorphisms (SNPs) correctly classifying individuals by principal component analysis. Pharmacogenomic work associates Pitta Prakriti with CYP2C19 fast-metabolizer genotype frequency (Ghodke et al., 2011). A critical review of 64 Prakriti assessment instruments (1987–2024) found that only a minority had undergone formal psychometric validation. Regarding yoga-outcome evidence, a meta-analysis of 14 RCTs found 10/14 reporting favourable yoga effects on heart rate variability (HRV), though only two trials met acceptable methodological quality (Posadzki et al., 2015). A broader narrative review of 59 studies (n = 2,358) confirmed increased vagal dominance with sustained yoga practice (Tyagi & Cohen, 2016). No adequately powered RCT directly tests Prakriti-stratified yoga prescription.

Conclusions: Sharirik Prakriti shows promising but preliminary scientific support as a stratification variable for personalized yoga therapy. The principal gap is the absence of RCTs testing the full causal chain from validated Prakriti assessment to yoga-specific physiological outcomes. A stepwise research framework validated instrument, constitutional classification, prescribed yoga protocol, and multi-domain outcome measurement is proposed to guide future trials

Keywords: Sharirik Prakriti; Dosha; Yoga Therapy; Personalized Yoga; Vata; Pitta; Kapha; Ayurgenomics; HRV; Mind-Body Medicine; Precision Medicine

INTRODUCTION

Ayurveda, that ancient Indian system of medicine laid out in classical works like the Charaka Samhita, the Ashtanga Hridaya, and the Ashtanga Samgraha, frames Sharirik Prakriti (bodily constitution) as a kind of personal, stable phenotypic signature—basically a unique profile—shaped by the relative dominance of the three Doshas Vata (driving movement and neurological activity), Pitta (driving metabolism and transformation), and Kapha (driving structure and lubrication) that is established right at the moment of conception. Prakriti is said to steer physical traits, metabolic pace, disease risk, psychological leanings, pharmacokinetic behavior, and in a very direct sense, the way a person responds to a therapeutic plan or intervention.

Yoga, meanwhile, is widely discussed in systematic reviews and meta-analyses as a multi-component mind-body practice, and it has documented beneficial outcomes for physical fitness, autonomic nervous system (ANS) balance, mental wellbeing, and overall quality of life. Still, clinicians and researchers keep noticing a recurring point: even when people follow the same

yoga protocol, their results can differ a lot. Most yoga programs used in clinical trials and in broader public health settings tend to rely on one standard, uniform template, sort of like a “one size fits all” pharmacology approach—an idea that precision medicine is now trying to challenge more firmly.

The Ayurvedic notion of Sharirik Prakriti gives a kind of theoretically grounded but still historically validated stratification scheme for customized yoga therapy. If we slot Prakriti assessment into how yoga is actually prescribed, it may realistically help therapeutic results, lower chances of negative or backfiring reactions, boost how well patients stick with the program, and also support that larger push toward precision care and personalized medicine. Even though these two older Indian frameworks match up conceptually, the empirical research where formal Prakriti checking is truly merged with a structured yoga prescription is still pretty thin, and a bit scattered in terms of methods.

So, this integrative systematic review was set up in a few parts to try to clarify things, namely: (1) gather classical plus scientific support for Sharirik Prakriti as a real constitutional typology; (2) look over the bodily and mental associations tied to each Prakriti type; (3) check what evidence exists on yoga effects across the key outcome areas; and (4) put forward a connected, testable Prakriti based yoga prescription model, with falsifiable, clearly testable suppositions.

2. METHODS

2.1 Review Design

This review was organized like a systematic review with some narrative synthesis, and it followed the PRISMA 2020 reporting guidelines too. Since the heterogeneity in the study designs meant that proper meta-analysis could not be done, especially when the work connected Prakriti typology to yoga-specific outcomes, an integrative narrative method was used. We did this in line with the SANRA framework, the Scale for the Assessment of Narrative Review Articles.

2.2 Search Strategy

A comprehensive literature search was conducted across eight electronic databases: PubMed/MEDLINE, Scopus, Web of Science, Cochrane Central Register of Controlled Trials (CENTRAL), Google Scholar, the AYUSH Research Portal (Government of India), DHARA (Digital Helpline for Ayurveda Research Articles), and IndMED. The search period was restricted to January 2000 through June 2026 to capture the period of substantive molecular and genomic Prakriti research.

Search terms included: Sharirik Prakriti; Ayurveda; Prakriti Assessment; Yoga Therapy; Personalized Yoga; Vata; Pitta; Kapha; Dosha; Ayurgenomics; Mind-Body Medicine; Integrative Medicine; Precision Medicine; Heart Rate Variability. Boolean operators (AND, OR) were applied to combine concept clusters.

2.3 Inclusion and Exclusion Criteria

Included: original research articles; randomized and non-randomized clinical trials; observational and cross-sectional studies; systematic reviews and meta-analyses; peer-reviewed publications in English. Excluded: editorials and opinion pieces without primary data; letters to the editor; conference abstracts without full-text; animal studies; duplicate publications.

3. RESULTS

3.1 Classical Concept of Sharirik Prakriti

Sharirik Prakriti is described in classical Ayurvedic literature as the steady phenotypic constitution of a person, basically formed at the moment of conception when the Doshas come together from the parental germinal parts (Shukra and Shonita). This is then further tuned by what the mother eats and does during gestation, plus seasonal and surrounding influences, and also the state of the uterine environment. In this system, seven well-known constitutional categories are mentioned: three single-dosha kinds (Vata, Pitta, Kapha), three dual-dosha kinds (Vata-Pitta, Pitta-Kapha, Vata-Kapha), and one tri-doshic type (Sama Prakriti). The last one is often treated as ideal, yet it is rarely seen in clinical practice.

For each type, there are typical physical signs, functional patterns, and behavioral tendencies. People with a Vata lead are often lean, appetite can be changeable, sleep tends to be light, and they may feel anxiety, along with creativity and fast mental processing. Those with Pitta dominance commonly have a medium build, strong hunger, sharp intellect, and a higher tendency for inflammation, irritability, and eventual burnout. Kapha-dominant individuals usually show a heavier frame, consistent energy, a composed mindset, better immunity, and a tendency toward emotional withdrawal, plus metabolic sluggishness, kind of like things move slower.

3.2 Scientific Basis of Prakriti: Genomic and Molecular Evidence

The exploration for the underlying molecular basis of the Prakriti classification is undoubtedly one of the most prominent areas of research in integrative medicine. The connection between HLA alleles and Prakriti classification was introduced by Patwardhan & Bodeker (2008) in the concept of “Ayurvedic genomics,” according to which traditional mind-body classification refers to biological differences embodied in specific genetic phenotypes.

It has been further developed by Ghodke, Joshi, & Patwardhan (2011), who found a statistically significant relationship between Prakriti type and polymorphism of the CYP2C19 gene coding for enzymes of the cytochrome P450 superfamily involved in liver drug metabolism. It has been shown that people with predominant Pitta dosha carry a faster metabolizer genotype of the gene in question, thus confirming the claim made in the Ayurveda literature about the faster processing of substances in people with predominant Pitta dosha.

The genomic evidence for the existence of Prakriti constitution types has been augmented considerably by Govindaraj et al. (2015) in a GWAS on single nucleotide polymorphisms in a controlled Indian sample (n=262), which showed that a group of 52 SNPs was statistically significantly different among the Vata, Pitta, and Kapha groups. Interestingly, a principal component analysis (PCA) of the aforementioned SNPs successfully classified the sample subjects according to their Prakriti categories, showing that the system of constitutional types is not arbitrary and reflects certain biological differences in genotypes.

At the level of physiological adaptations, Aggarwal et al. (2010) have shown that differences in the EGLN1 genotype, responsible for the physiological adaptations to hypoxia, differ in people of different extreme constitutional types defined on Ayurvedic criteria, thus pointing to the functional significance of Prakriti-related genotypes going beyond metabolism.

3.3 Physiological Correlates of Prakriti Type

There have been reports of relationships between Prakriti type and physiological parameters. Individuals with Vata dominance have been found to have a low body mass index (BMI), increased heart rate variability in the high-frequency domain during rest (indicative of parasympathetic dominance at rest), and higher autonomic lability. Individuals with Pitta dominance have increased basal metabolic rate, increased levels of inflammatory cytokines in certain studies, and a high incidence of CYP2C19 fast-metabolizer phenotype. Kapha dominance is associated with increased BMI, reduced resting heart rate, and relative ANS stability. In a study by Rotti et al. (2014), determinants of Prakriti were evaluated for correlation with modern physiological science.

3.4 Psychological Correlates of Prakriti Type

Observational evidence indicates Prakriti-specific distinctions in stress response, emotional profile, and cognitive styles. In a review of ancient and modern literature, Dangi (2025) found that Vata-dominated females exhibited marked vulnerability to stress, showing elevated ratings on measures of perceived stress compared to their Kapha-dominated peers. Pitta dominance was related to irritability, competitiveness, and higher burnout risk, whereas Kapha dominance was associated with emotional detachment and lack of motivation under conditions of prolonged stress.

The above Prakriti-based constitution patterns seem consistent with classical descriptions of Vata as a regulating factor for the nervous system (susceptibility to anxiety and instability); Pitta as an agent for digestive fire and metabolic activity (tendency to perfectionism and inflammation-related changes in mood); and Kapha as an element responsible for structural stability (prone to inertia and heaviness of emotions). Constitutional variations in personality and temperament have been demonstrated in studies based on the Big Five personality approach, cognitive style assessment, sleep quality, and circadian preference.

3.5 Yoga Therapy: Components, Mechanisms, and Evidence

The principal therapeutic components of yoga include: Asana (structured postural practice, improving musculoskeletal function, balance, and body awareness); Pranayama (systematic breath regulation, influencing ANS via vagal afferents and chemoreceptor modulation); Meditation (attentional training and cognitive reappraisal, modulating prefrontal cortical activity and stress-response circuitry); and Yoga Nidra (structured guided relaxation, associated with theta-wave EEG activity and profound parasympathetic activation).

The proposed physiological mechanisms through which yoga exerts therapeutic effects are centered on autonomic modulation. A meta-analysis of randomized controlled trials by Posadzki, Kuzdzal, Lee, and Ernst (2015) found that 10 of 14 eligible RCTs reported favorable yoga effects on HRV domains, although only 2 of 14 trials met acceptable methodological quality, underscoring a persistent quality gap. Tyagi and Cohen (2016) conducted a comprehensive narrative review of 59 studies (n > 2,300 participants) and concluded that yoga practice is associated with increased vagal dominance during practice sessions and higher resting vagal tone among long-term practitioners. A related meta-analysis of mind-body exercises (Yoga and Tai Chi combined) by Zou et al. (2018) across 17 medium-to-high-quality RCTs reported significant pooled improvements in normalized high-frequency HRV power, LF/HF ratio, and perceived stress, with yoga showing larger effect sizes than Tai Chi.

Secondary mechanisms include: modulation of cortisol and HPA-axis hyperactivity; anti-inflammatory and immunomodulatory effects via cytokine regulation; improvement of hypothalamic-pituitary-adrenal axis feedback sensitivity; and enhanced interoceptive awareness. These mechanisms are plausibly Prakriti-relevant, given that Vata constitutions show greater ANS lability, Pitta constitutions show elevated inflammatory and metabolic activity, and Kapha constitutions show parasympathetic dominance with metabolic sluggishness.

3.6 Proposed Prakriti-Based Yoga Prescription Model

The following prescriptions are derived from classical Ayurvedic dosha logic, physiological correlates of Prakriti, and the evidence base for yoga's effects on the ANS. They are presented explicitly as a hypothesis-generating theoretical model requiring empirical testing in adequately powered RCTs, not as an established clinical protocol.

Prakriti Type	Recommended Practices	Caution / Avoid	Outcome Target
Vata (Vata-dominant)	Slow, grounding asana sequences; Nadi Shodhana pranayama; Yoga Nidra; restorative and yin yoga; warm, stable environment	Excessive vigorous, fast-paced, or erratic practice; cold, dry, or irregular schedules	ANS stabilization; reduced anxiety; improved sleep quality
Pitta (Pitta-dominant)	Cooling pranayama (Sheetali, Sheetkari); passive meditation; moderate-intensity non-competitive practice; cool environment	Hot yoga; overexertion; competitive or time-pressured sessions; heated environments	Cortisol reduction; HPA regulation; reduced inflammatory markers
Kapha (Kapha-dominant)	Dynamic, energizing sequences (Surya Namaskar); activating pranayama (Kapalabhati, Bhastrika); vigorous flow; morning sessions preferred	Exclusively sedentary or passive practice; excessive Yoga Nidra or slow yin without activation	Metabolic activation; weight management; mood and motivation enhancement

4. Evidence

Author(s) & Year	Study Type / Sample	Prakriti / Yoga Variable	Key Finding
Patwardhan & Bodeker (2008)	Conceptual/genomic hypothesis	HLA allele distribution	Proposed genetic basis for Prakriti typology; introduced Ayurvedic genomics framework
Aggarwal et al. (2010)	Population genetics; high-altitude cohort	EGLN1 gene variant frequency	Genetic variation linked to extreme constitutional types; physiological functional consequence
Ghodke et al. (2011)	Pharmacogenomic; Maharashtrian cohort	CYP2C19 polymorphism	Pitta-dominant types showed

Author(s) & Year	Study Type / Sample	Prakriti / Yoga Variable	Key Finding
			significantly higher fast-metabolizer genotype frequency
Rotti et al. (2014)	Multi-centre observational, Indian cohort	Physiological/biochemical parameters	Prakriti type associated with hematological, immunological, biochemical variation
Posadzki et al. (2015)	Meta-analysis; 14 RCTs	Yoga vs. control (HRV outcomes)	10/14 trials favored yoga; only 2 of acceptable methodological quality
Govindaraj et al. (2015)	Genome-wide SNP; n = 262, ancestry-controlled	52 differentiating SNPs	PCA of SNP variants correctly classified individuals by Prakriti group
Tyagi & Cohen (2016)	Narrative review; 59 studies, n = 2,358	Yoga practice vs. HRV and ANS	Increased vagal dominance during practice and at rest in long-term practitioners
Zou et al. (2018)	Meta-analysis; 17 RCTs (yoga + Tai Chi)	HF power, LF/HF ratio, perceived stress	Significant pooled improvement; yoga effects larger than Tai Chi

5. DISCUSSION

5.1 Strength of the Evidence Base

The evidence base under discussion displays a noteworthy disparity in terms of its structure. Studies on the relationship between yoga practice and autonomic, as well as psychological, measures such as HRV, cortisol, and perceived stress are fairly common and methodically sophisticated even though the quality may vary. On the contrary, the number of studies on associations between specific Prakriti types and yoga responses is quite limited; researchers either establish correlations between Prakriti type and baseline characteristics, or conduct experiments on yoga practice among unselected individuals without checking the whole causal pathway from Prakriti classification to tailored yoga practice and constitutional outcome.

5.2 The Validation Problem

The result of Kumar, P. (2024), who found that a majority of 64 Prakriti tests lack validation, poses a serious challenge for the field. Any experiment on the effect of Prakriti-based yoga is valid only when the process of Prakriti classification is also valid. Therefore, the creation and validation of a Prakriti test is a prerequisite for conducting necessary clinical trials.

5.3 Integration with Precision Medicine

The genomic data, particularly the Govindaraj et al. (2015) GWAS demonstrating that SNP panels can classify Prakriti groups with statistical significance, position this inquiry at the emerging intersection of precision medicine and integrative

healthcare. The Ayurvedic framework of constitutional individuality converges conceptually with modern precision medicine's emphasis on stratified, biomarker-guided therapeutic prescription. Future research integrating genomic, epigenomic, metabolomic, and autonomic profiling with Prakriti classification could provide a multi-omic foundation for truly individualized yoga-based interventions.

6. CONCLUSIONS

This integrative systematic review provides evidence demonstrating the scientific validity of the Sharirik Prakriti concept as a candidate paradigm for personalized yoga therapy, derived from converging findings in the realms of Ayurvedic genomics, pharmacogenomics, physiological phenotyping, and psychophysiology of the autonomic nervous system. The Prakriti classification is not only a classical descriptive construct but also has some representation of genomically and physiologically distinctive human phenotypes.

At the same time, there exists a crucial lack in the evidence base: No randomized controlled study with sufficient power has examined the main clinical hypothesis – the use of Prakriti-based stratification for better yoga prescription leads to better therapeutic outcomes. The proposals of yoga prescription for each Prakriti type in this review: calming and grounding for Vata, cooling and non-competitive for Pitta, and stimulating and activating for Kapha – provide a clinically plausible hypothesis to be tested rather than a clinically proven protocol.

The main innovation of this review lies in the positioning of the Sharirik Prakriti concept as a testable scientific construct in the field where constitutional medicine, precision healthcare, and yoga meet, with a well-defined step-by-step research program to prove its clinical value.

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