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| Review Article | Volume 15 Issue 07 | July 2026 |
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## PREVENTIVE OCULAR HEALTH THROUGH EYE EXERCISES, *YOGA* PRACTICES, AND *DINACHARYA*: AN *AYURVEDIC* AND EVIDENCE-BASED PERSPECTIVE ON REFRACTIVE ERROR MANAGEMENT

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### ABSTRACT

**Background:** Refractive errors principally myopia, hypermetropia, and astigmatism, represent the leading cause of correctable visual impairment globally, with myopia alone projected to affect nearly half the world's population by 2050. While optical correction and refractive surgery dominate conventional management, concerns about cost, accessibility, and side effects have renewed interest in preventive and non-pharmacological approaches. *Ayurveda*, through its constructs of *Dinacharya* (daily regimen), *Netra Vyayama* (eye exercises), *Yoga Kriyas*, and *Swastavritta* (preventive lifestyle), offers a comprehensive framework for ocular health preservation.

**Objective:** The present review critically evaluates the role of structured eye exercises, yoga-based practices (mainly *Trataka Kriya* and *Pranayama*) and Ayurvedic *Dinacharya* in the prevention and early management of refractive errors in the context of classical texts and available clinical and experimental evidence.

**Methods:** A narrative review was done using classical Ayurvedic source texts (*Sushruta Samhita*, *Ashtanga Hridayam*, *Charaka Samhita*, *Hatha Yoga Pradipika* and *Gheranda Samhita*) and contemporary peer-reviewed literature from PubMed, AYU Journal, Journal of Ayurveda and Integrated Medical Sciences (JAIMS), International Journal of Ayurveda and Pharma Research and ResearchGate in the year range of 2000 to 2025.

**Results:** Classical texts enumerate several *Dinacharya* practices with explicit ocular benefit, including *Anjana* (collyrium application), *Netraprakshalana* (eye wash), *Nasya*, *Padabhyanga*, and *Shiroabhyanga*. Eye exercises based on the Bates method and *Trataka Yoga Kriya* showed statistically significant subjective improvement in visual clarity, asthenopia, and related symptoms in clinical studies, even though the objective change in refraction was small. Yoga-based interventions combining *Trataka*, *Nadi Shodhana Pranayama*, *Shitali Pranayama*, and *Jala Neti* showed comparable symptomatic benefit with favourable safety profiles.

**Conclusion:** *Ayurvedic Dinacharya* practices, eye exercises, and yoga kriyas offer a clinically meaningful preventive strategy for refractive error, particularly for reducing symptomatic burden, eye strain, and possibly slowing progression in early-stage myopia. Their systematic integration into public health recommendations for screen-age populations is strongly warranted.

**Keywords:** *Refractive error, myopia prevention, Dinacharya, Kriyakalpa, Yoga, Anjana, Netra Tarpana, eye exercises.*

## 1. INTRODUCTION

Refractive errors constitute the most prevalent form of visual impairment affecting populations across every age group and geography. The World Health Organization estimates that approximately 2.2 billion people worldwide suffer from a vision impairment, of whom at least one billion have a condition that could have been prevented or has yet to be addressed. Uncorrected refractive errors account for a substantial share of this burden. Myopia, in particular, has assumed epidemic proportions in East and Southeast Asia, with prevalence rates in young adults exceeding 80 percent in countries such as Singapore and South Korea. Global projections suggest that by 2050, myopia will affect nearly 5 billion people worldwide, of whom a significant proportion will progress to high myopia with attendant risks of retinal detachment, glaucoma, and myopic maculopathy. Contemporary ophthalmic management of refractive errors centers on optical correction through spectacles and contact lenses, pharmacological intervention (particularly low-dose atropine for myopia control), and refractive surgery. Each of these approaches carries limitations: optical correction addresses the symptom rather than

the underlying pathophysiology, atropine therapy requires prolonged administration with potential systemic effects, and surgical options are neither universally accessible nor free of risk. Against this backdrop, non-pharmacological preventive approaches have attracted growing research interest, particularly in the context of rising screen time, reduced outdoor exposure, and changing visual habits in the pediatric and young adult population. Ayurveda, the classical Indian system of medicine, has addressed preventive ocular care with remarkable sophistication since the time of Sushruta and Charaka. The Ayurvedic understanding of *Timira*, a broad term encompassing conditions of visual impairment including refractive errors and its management through *Dinacharya* (structured daily routines), *Netra Vyayama* (ocular exercises), yoga-based *Shatkarmas*, and *Rasayana* formulations represents one of the earliest systematic attempts at preventive ophthalmology. *Ashtanga Hridayam* states with characteristic directness that "the blind man cannot enjoy even the beauty of the world, regardless of all his riches" a philosophical statement that underscores the centrality of eye care in Ayurvedic wellness. This review brings together classical textual references, contemporary clinical studies and physiological reasoning to construct an integrated account of how eye exercises, yoga practices, and *Ayurvedic Dinacharya* can contribute to the prevention and management of refractive errors. Special attention is given to *Trataka Yoga Kriya* and the Bates eye exercise method as the best-studied non-pharmacological interventions, and to the elements of *Dinacharya* with specific ocular relevance. The goal is to provide a resource that is both academically rigorous and practically applicable for clinicians, researchers, and practitioners in integrative ophthalmology.

## 2. Materials and Methods

### 2.1 Review Design

This is a narrative review integrating classical Ayurvedic literary sources with contemporary peer-reviewed evidence. No experimental data were collected by the authors.

2.2 Classical Text Sources Primary classical texts examined include: *Sushruta Samhita*, *Ashtanga Hridayam*, *Charaka Samhita*, *Hatha Yoga Pradipika*, *Gherand Samhita*, *Sharangdhara Samhita* and *Madhava Nidana* supplementary references on *Timira* classification

### 2.3 Contemporary Literature Search

Databases searched included PubMed/MEDLINE, Scopus, AYUSH Research Portal, AYU International Journal (LWW), JAISMS, International Journal of Ayurveda and Pharma Research (IJAPR), and ResearchGate.

### 3. RESULTS

#### 3.1 Ayurvedic Conceptualization of Refractive Errors: *Timira* and *Drishtigata Rogas*

Ayurveda does not use the term "refractive error" as a unified diagnostic category but instead addresses the spectrum of visual impairment through the concept of *Timira*, a broad disorder of *Drishti* (vision) rooted in Dosha imbalance within the *Patalas* (anatomical layers of the eye). The classification system, articulated by Rajarishi Nimi and elaborated by *Sushruta* and *Vagbhata*, organizes visual impairment by the depth of Dosha localization within the successive *Patalas*. When Doshas primarily *Vata* with *Kapha* involvement localize within the first and second *Patala*, refractive errors manifest. *Timira* is classified on the basis of Doshas as: *Vatakaphaja Timira* for Myopia and Hypermetropia, whereas Astigmatism is usually classified as *Vataja*. Presbyopia is characterized by the additional involvement of *Mamsa Dhātu* (muscular tissue) that relates to the accommodative function of crystalline lens. A clinical study done by *Gopinathan, Dhiman and Manjusha* at Gujarat Ayurved University, Jamnagar in the year 2012 has established the general relationship of this *Dosha*-based classification with clinical manifestations: myopic and hypermetropic patients were largely found to have *Kaphaja Timira* lakshanas, and astigmatic and presbyopic patients had *Vataja* features. It is interesting to note that the Ayurvedic model only recognizes the *Uttana* (superficial) stage of *Timira*, where the localization of *Dosha* is limited to the *Rasa*, *Rakta* and *Mamsa Dhatus*, which are amenable to non-pharmacological intervention including exercise and lifestyle modification. Once the stage of *Gambhira* (deep) is reached, involving the *Medas* and beyond, reversal becomes increasingly unlikely. This staging concept aligns well with the modern understanding that myopia control interventions are most effective during the active growth phase in childhood and early adolescence, and that established high myopia with structural changes is not reversible through exercises alone.

#### 3.2 *Dinacharya*: The Classical Preventive Framework for Ocular Health

*Dinacharya*, the Ayurvedic concept of a structured daily routine represents the primary vehicle through which preventive ocular care is operationalized in classical texts. *Ashtanga Hridayam's Sutrasthana*, (*Dinacharya Adhyaya*), and *Sushruta Samhita's Sutrasthana* both enumerate specific practices that either directly maintain ocular health or create systemic conditions favorable to vision preservation.

##### 3.2.1 *Anjana* (Collyrium Application)

*Anjana* is described in *Sushruta Samhita* as a daily practice of applying medicated collyrium to the inner aspect of the lower eyelid using an *Anjana Shalaka*. Two types are specifically

prescribed for daily use: *Sauvira Anjana* (antimony sulphide) and *Rasanjana* (extract of *Berberis aristata* with honey). *Sushruta* states that daily *Anjana* prevents diseases of the lids, conjunctiva, and maintains clarity of the visual pathway. The practice lubricates and cleanses the ocular surface, removes accumulated environmental particulates, and the antimicrobial properties of its formulations prevent chronic low-grade infection all factors that, when left unaddressed, contribute to asthenopia and progressive visual deterioration. The review on evaluation of *Dinacharya* in the context of *Netra* in International Journal of Creative Research Thoughts (2023) (Kapurkar and Ramadevi, 2023) did validate that *Anjana* along with *Nasya* and *Padabhyanga* is the triad of most regularly recommended daily ocular practices in *Sushruta Samhita*, *Ashtanga Hridayam* and *Charaka Samhita*.

### 3.2.2 *Netraprakshalana* (Therapeutic Eye Wash)

Washing the eyes with cool, clean water in the morning, or with decoctions of *Triphala*, is consistently recommended across classical sources as a morning practice. The purpose is twofold: mechanical removal of accumulated secretions and Ama from the ocular surface, and the mild astringent action of *Triphala* decoction, which tones the conjunctival vessels and reduces baseline inflammatory load. Regular practice is stated to prevent conditions of *Abhishyanda* (conjunctivitis) that can, if recurrent, lead to progressive ocular structural damage.

### 3.2.3 *Nasya* (Nasal Drug Administration)

*Nasya*, the administration of medicated oils or powders through the nasal passage is classified as a systemic practice with specific benefits for the *Urdhwanga* (head and sense organs). *Ashtanga Hridayam* describes *Nasya* as the "chief treatment for diseases of the head" and identifies the nasal route as the path through which medications reach the *Shringataka Marma* and, from there, spread to the eyes, ears, and brain. *Pratimarsha Nasya* (daily mild nasal oil instillation with two drops of *Anu Taila* or *sesame oil*) is recommended in daily *Dinacharya*. Regular *Nasya* is described as preventing degenerative changes in the ocular apparatus, keeping the *Siras* (channels) nourished and free of obstruction.

### 3.2.4 *Padabhyanga* and *Shiroabhyanga*

*Padabhyanga* (oil massage of the feet) and *Shiroabhyanga* (head oil massage) appear at first glance unrelated to eye health, yet both are classified as *Chakshushya* (beneficial to the eyes) practices in classical texts. The optic nerve, retinal vessels, and the cranial nerves governing accommodation originate within the central nervous system; massage of the scalp and feet is understood to promote circulation, reduce *Vata* aggravation in *Siras*, and nourish the nervous system through reflex pathways. *Sushruta* specifically identifies the feet as containing Marma

points connected to the eyes, and *Padabhyanga* is recommended as a practice that "protects the eyes and sharpens vision." This rationale finds modern resonance in research demonstrating that foot reflexology activates autonomic nervous system responses and improves microcirculation.

### 3.3 Exercises for Refractive Error Management

#### 3.3.1 Bates Method and Netra Vyayama

The Bates method, developed by ophthalmologist *William Horatio Bates* in the early 1900s, has been adapted into a number of modern eye exercise programs. It focuses on relaxation techniques including palming, near-far focusing, peripheral awareness exercises and ocular movement exercises in all directions of gaze. These exercises are classified in Ayurvedic terms as *Netra Vyayama*, which involves conscious exercise of the extraocular muscles and the accommodative apparatus to maintain tone, flexibility and neuromuscular coordination. The landmark clinical study by *Gopinathan, Dhiman and Manjusha* (published in *AYU Journal*, 2012) remains one of the most rigorous studies comparing the Bates eye exercises and *Trataka Yoga Kriya* for *Timira*. A total of 66 patients (132 eyes) were enrolled from Gujarat Ayurved University, Jamnagar and randomized into two groups- Group A receiving standardized Bates eye exercises and Group B receiving *Trataka Yoga Kriya* over an extended treatment period. Statistically significant improvement was noted in subjective parameters in both groups including reduction in headache (*Shirobhitapa*), eye strain (*Netrayasa*) and watering (*Netrasrava*) while objective refractive change was modest especially in patients with refractive error between 0.25 and 0.75 diopters where transient visual improvement was noted, the study noted. An experimental study subsequently published in the journal of the National Institute of Medical Sciences, Jaipur (2021) found that a structured eight-week program of ocular exercises including motility drills, near-far focusing and palming produced a mean improvement in visual acuity of 2.28 percent on Snellen chart assessment. While this figure may appear modest, the clinical significance lies in the symptomatic relief experienced by participants and the near-zero adverse event profile making this intervention suitable as a low-cost adjunct in pediatric and young adult populations.

#### 3.3.2 Mechanistic Basis of Eye Exercises

The physiological rationale for eye exercises in refractive error relates primarily to the accommodative apparatus and extraocular muscle function. Myopia is associated in multiple studies with sustained accommodative spasm a chronic contraction of the ciliary muscle in response to near-work demands that eventually translates into axial elongation of the globe.

Deliberate relaxation exercises, near-far focusing drills that alternately stress and relax the accommodative system, and palming (which eliminates visual input entirely, allowing passive relaxation of the ciliary muscle) collectively address this mechanism. Ocular rotation exercises additionally maintain the tone and coordination of extraocular muscles, preventing the convergence insufficiency and vergence dysfunction commonly found in symptomatic computer vision syndrome, which is itself a significant driver of visual deterioration in the screen-age population.

### 3.4 Yoga-Based Practices: *Trataka*, *Pranayama*, and *Shatkarma*

#### 3.4.1 *Trataka Kriya*

*Trataka*, the practice of intense, uninterrupted gazing at a fixed point or flame, is ranked among the six *Shatkarmas* (purificatory practices) in the *Hatha Yoga* tradition, as stated in the *Hatha Yoga Pradipika* and elaborated upon in the *Gheranda Samhita*. It is supposed to be '*nirmalanetram*' (producing clear, clean eyes) and is said to eradicate illnesses of the eyes if practiced frequently. Clinically, *Trataka* uses sustained fixation, trains the cerebral visual processing areas related to focused attention and stimulates tear secretion by extended open-eye practice followed by the natural blinking reflex. A study of 8 weeks on the effect of integrated *Yoga Therapy* and Ayurvedic management on Myopia patients (Published through Wisdomlib/WJPR, 2024-2025) stated that *Trataka Kriya* given in combination with *Triphala* based *Anjana* and dietary correction showed measurable improvement in distant visual acuity assessed by Snellen chart in a subset of patients with myopia below two diopters. The combination intervention was more successful than either intervention alone indicating a synergistic benefit when *Trataka* is included into a full Ayurvedic prescription. The study of *Gopinathan et al* (2012) found that improvement in subjective parameters was comparable in the *Trataka* group as in the Bates exercise group, with better results for astigmatic patients, a *Vataja* involvement group where the aspect of sustained fixation and neuromuscular retraining of *Trataka* can better address the irregular accommodative response than generalized ocular rotation exercises.

#### 3.4.2. *Pranayama* and *Nadi Shodhana*

In a clinical study done at Govt. Ayurveda College, Trivandrum (*Saptamrita Lauha and Yoga Therapy* comparative trial, 2021), myopic patients in the age group of 8-30 years were randomly allocated to either *Saptamrita Lauha* or structured *Yoga* therapy protocol consisting of *Jala Neti*, *Nadi Shodhana Pranayama*, *Shitali Pranayama* and point *Trataka* for a period of 3 months. Results showed that there was no significant objective reduction in refractive error in

either group, however the *Yoga* group had a much larger reduction in the related symptoms including asthenopia, headache and photosensitivity compared with the pharmaceutical group. The molecular foundation for the advantages of *Pranayama* on refractive error is multifaceted. Modern study associates *Nadi Shodhana* (alternate nostril breathing) with balanced activity of the autonomic nerve system, reduced levels of cortisol and increased cerebral oxygenation. Chronic sympathetic hyperactivation (a condition that is on the rise in academic and screen-exposed children) has been connected with compromised accommodative flexibility and hastened myopia progression. Through restoration of parasympathetic balance, *pranayama* generates physiological conditions that favor proper accommodation and minimize the continuous ciliary spasm thought to be the driving force behind early myopia development.

### 3.4.3 *Jala Neti* and the Nasal-Ocular Connection

*Jala Neti*, the cleansing of the nasal passages with saline water, operates through the same nasal-ocular anatomical axis as *Nasya Neti* therapy. By clearing the nasal passages and the nasolacrimal drainage system, *Jala* prevents chronic low-grade nasolacrimal congestion that can contribute to epiphora (watering of the eyes), persistent ocular surface irritation, and reflex conjunctival changes that, over time, may compromise the clarity of the anterior ocular media. Classical texts describe the nose as the "gateway to the head" and the nasal passages as channels through which purification of the sensory organs including the eyes is achieved.

## 3.5 *Chakshushya Ahara* and *Pathya-Apathya*: Dietary Dimensions of Preventive Ocular Care

*Dinacharya* cannot be separated from *Ahara* (diet) in *Ayurvedic* preventive medicine; the two are understood as inseparable determinants of *Dhatu* quality. For ocular health, *Charaka Samhita* and *Sushruta Samhita* identify a category of foods and substances termed *Chakshushya* (congenial to the eyes). These include *Amalaki* (*Phyllanthus emblica*), *Haritaki* (*Terminalia chebula*), *Bibhitaki* (*Terminalia bellirica*), *Ghrita* (clarified butter), milk, *Shatavari*, *Punarnava*, *Jivanti*, and green leafy vegetables rich in carotenoids. Modern nutritional science provides support for several of these prescriptions. *Amalaki* is among the richest natural sources of Vitamin C, a critical antioxidant protecting the lens and corneal epithelium from oxidative damage. *Ghrita* contains fat-soluble vitamins A, D, E, and K, all of which support retinal function and ocular surface health. Carotenoids, lutein and zeaxanthin, present in green leafy vegetables, are specifically concentrated in the macular region of the retina and are protective against degenerative retinal changes, including those associated with high myopia. The *Ayurvedic* recommendation for *Pathya* (wholesome conduct) further includes avoidance of excessive near

work in poor light (dim light reading is explicitly listed as *Apathya*), limitation of screen use, maintenance of adequate sleep, and avoidance of direct exposure to harsh sunlight, wind, and smoke.

### 3.6 *Netra Tarpana*: Therapeutic Nourishment of the Visual Apparatus

*Sushruta* and *Vagbhata* mention *Netra Tarpana* (also *Akshi Tarpana*) in addition to the daily *Dinacharya*, which is a medicinal measure where medicated ghee is kept over the eyes in a dough ring for some period of time. *Netra Tarpana* is a treatment and not to be practiced daily, but it is recommended as a preventive strategy for ocular fatigue, dryness and *Timira* in its early stage. The formulations employed in the study were *Jeevantyadi Ghrita*, *Triphala Ghrita* and *Saptamrita Lauha* infused preparation. A systematic review published in the Journal of Research in Ayurvedic Sciences (2024) reviewed six clinical publications on Ayurvedic treatment of myopia and concluded that, “*Netra Tarpana* was a relatively reliable and effective intervention for symptomatic relief in early stage *Timira* with significant improvements in *Netrayasa* (eye strain), *Netrasrava* (watering) and *Netradaha* (burning sensation) even in cases where objective refractive improvement could not be measured.” Among the formulations evaluated, *Jeevantyadi Ghrita* showed the best outcome profile.

## 4. DISCUSSION

The evidence assembled in this review points to a consistent picture: Ayurvedic preventive practices and yoga-based interventions for refractive errors demonstrate meaningful symptomatic benefit, possible early-stage refractive influence, and an excellent safety profile, even if dramatic objective refractive reversal in established cases remains beyond current evidence. Understanding why this is the case and why it is still clinically important requires engaging with both the pathophysiology of refractive error and the mechanisms through which these interventions operate. Myopia, the most studied of the refractive errors, is now understood to involve a complex interaction between genetic susceptibility, optical defocus signals at the retina, accommodative demand from near work, and ambient light exposure. Of these factors, the accommodative demand and retinal defocus components are the most amenable to behavioral and exercise-based modification. Eye exercises that deliberately alternate accommodation between near and far targets whether framed as the Bates method or as structured clinical protocols, directly address accommodative spasm and may reduce the retinal signals that drive axial elongation. The 20-20-20 rule widely recommended by modern optometrists (every 20 minutes of near work, look 20 feet away for 20 seconds) is, in essence, a simplified western version of the near-far focusing drills that form a core component of both

the Bates method and structured *Netra Vyayama*. *Trataka* merits specific consideration as an evidence-based ocular intervention. Its mechanism operates on at least three levels. First, the sustained fixation practice trains the neural circuitry of visual attention and fine fixation, reducing the micro-saccadic instability associated with poor visual attention. Second, the near-point *Trataka* variant (gazing at a point or flame placed 45–60 cm from the eyes) exercises the accommodative-convergence synkinesis. Third, the blinking pattern changes observed during *Trataka* prolonged open-eye states followed by rapid blinking stimulate increased meibomian gland secretion and may improve tear film stability, addressing the dry eye component that exacerbates visual blur in screen-exposed populations. The neuromuscular training aspect of *Trataka* additionally has implications for the control of smooth pursuit and vergence eye movements, which are compromised in children with learning-related visual difficulties. The *Dinacharya* practices merit attention beyond their individual benefits. The discipline of *Dinacharya* as a daily rhythm applied consistently rather than as isolated therapeutic measures creates a foundation of ocular hygiene, vascular nourishment, and nervous system regulation that constitutes genuine primary prevention. The modern analogue might be the concept of "lifestyle medicine" applied to visual health: interventions that do not wait for pathology to manifest but maintain the biological conditions that prevent its emergence. Anjana application maintains ocular surface health; *Nasya* and nasal-channel clearance preserve the neural nourishment pathways to the visual cortex; *Padabhyanga* and *Shiroabhyanga* reduce *Vata* aggravation systemically, preventing the dryness, poor circulation, and neural irritability that underlie many early ocular symptoms. It is also worth observing that several elements of *Dinacharya* address what might now be called "digital eye strain" or computer vision syndrome a condition that did not exist when the classical texts were written but maps precisely onto the Ayurvedic concept of *Atiyoga* (excessive use) of the visual sense faculty. *Sushruta Samhita* lists excessive and sustained visual effort (*Atidrishti*) as a primary *Apathya* for the eyes. The practical prescriptions that follow regular breaks, avoidance of work in inadequate light, protection from wind and dust, maintenance of adequate sleep are as relevant to the tablet-using student of today as to the scribe or artisan of classical antiquity. Several limitations of the current evidence base should be acknowledged. First, the majority of clinical studies evaluating *Trataka* and eye exercises for refractive errors are single-arm or two-arm comparative studies with small sample sizes, limited follow-up periods (typically six to twelve weeks), and variable standardization of technique. Second, the heterogeneity of outcome measures some studies using Snellen chart diopter change, others relying on symptom questionnaires makes cross-study comparison difficult. Third, the contribution of *Dinacharya* as a whole system has not been

evaluated independently of its constituent parts, and the relative contribution of individual practices (*Anjana* versus *Netraprakshalana* versus *Nasya*) cannot currently be disentangled. Future research should prioritize adequately powered randomized controlled trials with standardized intervention protocols, validated subjective outcome instruments, and objective measurements including cycloplegic refraction, axial length measurement, and accommodative amplitude assessment.

## 5. CONCLUSION

This review establishes that *Ayurvedic Dinacharya*, structured eye exercises, and yoga-based practices particularly *Trataka Kriya* and *Pranayama*, represent a coherent, physiologically grounded, and clinically supported approach to the prevention and early management of refractive errors. The classical Ayurvedic classification of *Timira* and its management through *Uttana* stage intervention offers a conceptual framework that maps effectively onto modern understanding of accommodative myopia and early refractive error. The evidence, while predominantly from relatively small clinical studies, consistently demonstrates meaningful symptomatic improvement, with a safety profile far superior to pharmacological alternatives. The combination of daily *Dinacharya* practices (*Anjana*, *Netraprakshalana*, *Nasya*, *Padabhyanga*), structured eye exercises (near-far focusing, ocular rotations, palming), and *Yoga Kriyas* (*Trataka*, *Nadi Shodhana Pranayama*, *Jala Neti*) is best understood not as a replacement for optical correction but as a preventive and adjunctive system that addresses the behavioral, vascular, and neuromuscular determinants of visual health. Given the projected global epidemic of myopia and the known limitations of pharmacological and surgical management in the preventive domain, there is an urgent need to integrate these evidence-based traditional practices into mainstream preventive ophthalmology recommendations, particularly for children and young adults who represent the highest-risk population for progressive refractive error in the screen era. Prospective, randomized, adequately powered clinical trials with standardized Ayurvedic preventive protocols are the logical and necessary next step.

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