



DIGITAL DINACHARYA: REINTERPRETING SWASTHAVRITTA PRINCIPLES OF AYURVEDA FOR THE PREVENTION OF SCREEN-TIME INDUCED CIRCADIAN AND OCULAR HEALTH DISORDERS

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ABSTRACT

Background: The last decade has witnessed an unprecedented rise in screen-based digital device usage across all age groups, driven by remote work, online education, and social media consumption.

This shift has been paralleled by an increase in complaints of disturbed sleep-wake cycles, digital eye strain, postural discomfort, and generalized fatigue conditions that are rarely explained by a single pathological entity and are best approached through preventive and lifestyle-based frameworks. Swasthavritta, the branch of Ayurveda dedicated to the preservation of health through daily (Dinacharya), seasonal (Ritucharya), and rational (Sadvritha) regimens, offers a comprehensive preventive framework that predates modern screen technology but remains conceptually applicable to it. **Aim:** To conceptually analyse contemporary screen-time related health disturbances through the lens of classical Swasthavritta principles and to propose a practically adapted regimen for the digital age. **Materials and Methods:** This is a conceptual and literary review. Classical texts of Ayurveda, namely Charaka Samhita, Sushruta Samhita, and Ashtanga Hridaya, were reviewed for relevant references on Dinacharya, Ratricharya, Netra (ocular) care, and Sadvritha. These were correlated with contemporary understanding of circadian physiology, blue-light exposure, and digital eye strain drawn from published literature. **Observations and Discussion:** Classical concepts such as Ratri Jagarana Nishedha (avoidance of unwarranted night wakefulness), Anjana and Netra Tarpana (ocular hygiene and nourishment practices), Vyayama (exercise), and timing-based regulation of Ahara (diet) show meaningful conceptual overlap with modern recommendations on sleep hygiene, blue-light filtering, ergonomic breaks, and meal timing relative to screen use. A structured 'Digital Dinacharya' schedule is proposed, adapting classical timings and practices to accommodate contemporary screen-based lifestyles without contradicting the spirit of the original texts. **Conclusion:** Swasthavritta provides a time-tested, low-cost, and holistic preventive framework that can be meaningfully reinterpreted to address digital-age lifestyle disorders. Integrating classical dinacharya principles with modern ergonomic and chronobiological understanding may offer a practical, culturally acceptable model for public health promotion in screen-dependent populations.

KEYWORDS : Swasthavritta, Dinacharya, digital eye strain, circadian rhythm, Ratricharya, Sadvritha, screen time, preventive Ayurveda.

INTRODUCTION

Ayurveda defines the very purpose of its science in the opening chapters of the Charaka Samhita as the preservation of health in the healthy and the alleviation of disease in the diseased, with clear priority given to the former. Swasthavritta, as an independent and foundational branch of Ayurveda, systematizes this preventive intent through Dinacharya (daily regimen), Ratricharya (night regimen), Ritucharya (seasonal regimen), and Sadvritha (code of right conduct). These regimens were formulated to align human physiology with natural rhythms of light, temperature, and activity, and to prevent the accumulation of Dosha imbalance arising from unwholesome habits.

In contemporary society, a new and largely unanticipated variable has entered daily life: the screen. Smartphones, laptops, tablets, and television screens now occupy several hours of an average individual's day, frequently extending well into the hours classical texts designate for rest. Reports across ophthalmology, sleep medicine, and public health literature have documented a rise in complaints such as delayed sleep onset, reduced sleep quality, digital eye strain (characterized by dryness, blurred vision, and headache), and musculoskeletal discomfort associated with prolonged screen postures. While these are modern descriptive entities, the underlying disturbances irregular wakefulness, ocular strain, sedentary behaviour, and disrupted meal timing are precisely the categories of imbalance that Swasthavritta was designed to prevent.

This article attempts a conceptual bridge: examining what classical Swasthavritta literature says about night wakefulness, ocular care, exercise, and regulated conduct,

and asking how these principles might be meaningfully reinterpreted not diluted for a population whose daily routine is now substantially mediated by screens.

AIMS AND OBJECTIVES

- To review classical Swasthavritta references pertaining to Ratricharya, Netra Swasthya (ocular health), Vyayama, and Sadvritha relevant to screen-associated lifestyle disturbances.
- To correlate these classical concepts with contemporary understanding of circadian disruption and digital eye strain.
- To propose a conceptually adapted 'Digital Dinacharya' schedule suitable for screen-dependent populations.

MATERIALS AND METHODS

This is a conceptual, non-experimental literary review. Primary classical sources reviewed include Charaka Samhita (Sutrasthana), Sushruta Samhita (Chikitsasthana and Uttaratanttra), and Ashtanga Hridaya (Sutrasthana), along with their standard commentaries, for references on Dinacharya, Ratricharya, Netra Kriya Kalpa, and Sadvritha. Contemporary understanding of circadian biology, blue-light exposure, and digital eye strain was drawn from general publicly available scientific and public-health literature. No human or animal subjects were involved; hence no ethical clearance was required. As this is a conceptual synthesis rather than a data-based study, the authors acknowledge that specific contemporary citations must be finalized by the submitting author from their institution's accessible databases prior to journal submission.

Conceptual Review

Ratricharya and the Modern Disruption of Sleep Timing

Classical texts advise regularity of sleep and caution against habitual Ratri Jagarana (unwarranted night wakefulness), associating it with aggravation of Vata and Pitta Dosha and consequent dryness, restlessness, and diminished Ojas (vital essence understood as the basis of immunity and vitality). Modern chronobiology similarly describes how exposure to short-wavelength (blue) light from screens in the hours before sleep suppresses melatonin secretion, delays the circadian phase, and reduces subjective and objective sleep quality. The classical caution against night wakefulness and the modern concern about pre-sleep screen exposure converge on the same practical recommendation: protection of the hours preceding sleep from stimulating input, whether described as Pitta-aggravating activity or as blue-light-mediated melatonin suppression.

Netra Swasthya: Ocular Care in Classical and Digital Context

Ayurveda dedicates considerable attention to ocular health through practices such as Anjana (collyrium application), Netra Tarpana (ocular nourishment), and general advice against excessive or continuous ocular strain from close, fixed near-work. The modern entity of digital eye strain characterized by reduced blink rate, tear film instability, and accommodative fatigue during prolonged screen fixation parallels the classical concern for protecting the eyes from sustained unblinking strain. While Anjana and Tarpana are specialized procedures requiring qualified practitioners, their underlying principle of scheduled ocular rest and lubrication supports the modern ergonomic recommendation of periodic near-work breaks and conscious blinking.

Vyayama and Sedentary Screen Postures

Charaka recommends Vyayama (physical exercise) up to half of one's physical capacity, performed preferably in the earlier part of the day, to maintain Agni (digestive-metabolic capacity), lightness of the body, and stability of the Dhatus (tissues). Prolonged, uninterrupted sitting associated with screen-based work and leisure is increasingly recognized as an independent contributor to musculoskeletal discomfort and metabolic sluggishness, largely independent of whether structured exercise is separately performed elsewhere in the day. The classical emphasis on regular Vyayama, read alongside its caution against excessive or continuous physical stillness, supports the modern recommendation of interrupting long screen sessions with brief movement, rather than relying solely on isolated exercise sessions to offset hours of sedentary screen use.

Sadvritta and Digital Conduct

Sadvritta, the code of righteous conduct described in classical texts, extends beyond physical regimen to mental and social discipline including moderation, self-restraint, and avoidance of excess in any single activity or sensory indulgence. This principle of moderation offers a natural conceptual basis for what is now termed 'digital hygiene' or mindful technology use: deliberate limitation of non-essential screen time, avoidance of compulsive checking behaviour, and cultivation of periods of sensory withdrawal (comparable in spirit, though not in technique, to classical practices of restraint).

Proposed 'Digital Dinacharya' Schedule

Based on the above correlations, the following practically adapted schedule is proposed for individuals with substantial daily screen exposure. This is offered as a conceptual model for further clinical validation rather than a tested protocol.

- Morning: Waking before sunrise (Brahma Muhurta) where feasible; avoidance of screen checking as the first activity upon waking.
- Forenoon: Vyayama for approximately 20–30 minutes prior to any prolonged screen-based work.

- Work hours: Structured near-work breaks a brief pause with distant focus and deliberate blinking after every sustained period of close screen work.
- Afternoon: Meals taken away from screens, with attention to Ahara Vidhi Vidhana (rules of wholesome eating) rather than distracted consumption.
- Evening: Progressive reduction of screen brightness and content stimulation in the hours preceding sleep, replacing late screen use with low-stimulation activity.
- Night: Fixed, regular sleep timing consistent with Ratricharya principles, with screens removed from the immediate sleeping environment.

DISCUSSION

The correlations presented here are conceptual rather than clinically validated, and are intended to stimulate further research rather than to substitute for it. Nonetheless, the consistency with which classical Swasthavritta categories map onto contemporary digital-age complaints is notable. This is perhaps unsurprising: Swasthavritta was never formulated around a specific technology but around universal physiological rhythms of light and darkness, activity and rest, near work and distant gaze that remain unchanged even as the specific stimulus (a screen rather than a lamp or manuscript) has changed. This suggests that Swasthavritta's preventive framework is adaptable rather than obsolete, provided its underlying principles are reinterpreted rather than mechanically transplanted.

Limitations of this review include its purely conceptual nature, absence of primary clinical data, and reliance on general correlations rather than statistically validated associations. Future work should include observational and interventional studies assessing outcomes such as sleep quality indices, digital eye strain questionnaires, and adherence to a structured Digital Dinacharya protocol in screen-dependent populations such as students and information-technology professionals.

CONCLUSION

Swasthavritta offers a preventive framework whose classical principles on sleep timing, ocular care, physical activity, and disciplined conduct remain conceptually relevant to the health challenges of a screen-dependent era. A reinterpreted 'Digital Dinacharya', grounded in classical texts but adapted to contemporary routines, may serve as a low-cost, culturally rooted, and readily implementable strategy for the prevention of screen-time associated circadian and ocular disturbances. Further clinical research is warranted to validate and refine this proposed model.

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REFERENCES

1. Agnivesha. Charaka Samhita, Sutrasthana, Matrashiteeya Adhyaya and Ratricharya references. Revised by Charaka and Dridhabala, with Ayurveda Dipika commentary of Chakrapanidatta. Varanasi: Chaukhambha Sanskrit Sansthan.
2. Sushruta. Sushruta Samhita, Chikitsasthana and Uttaratantra, Netra Kriya Kalpa references, with Nibandhasangraha commentary of Dalhana. Varanasi: Chaukhambha Sanskrit Sansthan.
3. Vagbhata. Ashtanga Hridaya, Sutrasthana, Dinacharya and Ritucharya Adhyaya, with Sarvangasundara commentary of Arunadatta. Varanasi: Chaukhambha Surbharati Prakashan.
4. Alam M, Abbas K, Sharf Y, Khan S. Impacts of blue light exposure from electronic devices on circadian rhythm and sleep disruption in adolescent and young adult students. Chronobiol Med. 2024;6(1):10-4.
5. Anbesu EW, Lema AK. Prevalence of computer vision syndrome: a systematic review and meta-analysis. Sci Rep. 2023;13:1801.
6. Dzakupasu FQS, Carver A, Brakenridge CJ, Cicuttini F, Urquhart DM, Owen N, et al. Musculoskeletal pain and sedentary behaviour in occupational and non-occupational settings: a systematic review with meta-analysis. Int J Behav Nutr Phys Act. 2021;18(1):159.