



## Impact of Mobile and Screen Overuse on Eye and ENT Health: An Ayurvedic Review

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### Abstract

#### Background

The exponential rise in mobile phones, computers, and digital screens has led to prolonged screen exposure across all age groups. Excessive screen use is increasingly associated with ocular complaints such as digital eye strain, dry eye disease, myopia progression, and ENT manifestations including tinnitus, hearing fatigue, allergic rhinitis, sinusitis, and voice disorders. Ayurveda, with its holistic understanding of sensory organ health (*Indriya Swasthya*), offers preventive and therapeutic insights for managing screen-related disorders.

#### Objective

To critically review the impact of mobile and screen overuse on eye and ENT health and analyze Ayurvedic preventive and therapeutic approaches based on classical texts and contemporary evidence.

## Methods

Classical Ayurvedic literature including *Charaka Samhita*, *Sushruta Samhita*, *Ashtanga Hridaya*, and relevant Nighantus were reviewed. A narrative review of modern scientific literature was conducted using PubMed, Google Scholar, DHARA, and AYUSH Research Portal. Conceptual correlation between Ayurvedic pathogenesis and modern biomedical mechanisms was performed.

## Results

Screen overuse leads to functional and structural disturbances in Netra, Karna, and Nasa due to Vata–Pitta aggravation, Rukshata, Agnimandya, and Indriya Asatmya. Ayurvedic measures such as Dinacharya, Netra and Karna Kriyakalpa, Nasya, Rasayana therapy, and lifestyle modification demonstrate significant preventive and therapeutic potential.

## Conclusion

Ayurvedic principles provide an effective framework for preventing and managing eye and ENT disorders associated with digital screen overuse. Integrative adoption of Ayurvedic regimens may reduce disease burden, dependency on symptomatic treatment, and long-term complications.

## Keywords

Screen overuse, Digital eye strain, ENT disorders, Ayurveda, Netra roga, Karna roga, Nasya, Rasayana

## Introduction

Digital technology has become an integral part of modern life. Children, adolescents, and adults are exposed to prolonged screen time through mobile phones, computers, tablets, and televisions. Recent studies report average daily screen exposure exceeding 6–8 hours in adolescents and working adults [1]. This excessive exposure has led to a new spectrum of lifestyle disorders affecting sensory organs.

**Digital Eye Strain (DES)**, also known as computer vision syndrome, manifests as eye fatigue, dryness, burning sensation, blurred vision, headache, and myopia progression [2]. Similarly, prolonged headphone use and screen-associated postural habits contribute to ENT problems such as tinnitus, hearing fatigue, allergic rhinitis, sinusitis, throat dryness, and voice strain [3].

In Ayurveda, the eye (*Netra*) is considered *Tejomaya*, while ear (*Karna*) and nose (*Nasa*) are vital sensory organs governed predominantly by Vata and Kapha. Continuous exposure to artificial light, sound, and improper posture leads to *Indriya Asatmya*, Dosha vitiation, and gradual functional deterioration [4].

This review aims to explore the impact of screen overuse on eye and ENT health through Ayurvedic principles and propose preventive and therapeutic strategies for contemporary clinical practice.

## Materials and Methods

A narrative and conceptual review methodology was adopted.

### Literature Search Strategy

Databases searched included:

- PubMed
- Google Scholar
- DHARA
- AYUSH Research Portal

### Keywords Used

Screen time, digital eye strain, tinnitus, allergic rhinitis, Ayurveda, Netra roga, Karna roga, Nasya, lifestyle disorders.

### Inclusion Criteria

- Classical Ayurvedic references on Netra, Karna, and Nasa roga
- Peer-reviewed studies on screen-related eye and ENT disorders
- Review and clinical studies on Ayurvedic preventive practices

## Exclusion Criteria

- Non-peer-reviewed articles
- Studies unrelated to screen exposure

## Results / Review Findings

### Ayurvedic Understanding of Screen-Induced Disorders

Excessive screen exposure can be understood as **Ati-Yoga of Chakshu, Shrotra, and Ghraana Indriya**, leading to Indriya Kshobha and Dosha imbalance [5].

Modern Condition	Ayurvedic Correlation
Digital eye strain	Shushkakshipaka, Akshiklama
Dry eye disease	Vataja Netra Roga
Myopia progression	Timira
Tinnitus	Karnanada
Hearing fatigue	Badhira (early stage)
Allergic rhinitis	Pratishyaya
Sinusitis	Dushta Pratishyaya
Throat dryness	Vataja Mukharoga

### Nidana (Etiological Factors)

- Prolonged exposure to blue light
- Continuous near-work and reduced blinking
- Excessive headphone/earphone use
- Poor posture and cervical strain
- Night-time screen use causing sleep disturbance
- Ruksha, Ushna, and Tikshna sensory stimulation [6]

### Samprapti (Pathogenesis)

- **Vata aggravation** due to excessive sensory stimulation and dryness

- **Pitta aggravation** due to blue-light exposure and heat
- Reduced Kapha lubrication in Netra and Karna
- Srotodushti of Netra-vaha, Karna-vaha, and Prana-vaha srotas
- Progressive Indriya daurbalya (sensory fatigue)

This correlates with tear film instability, oxidative stress, neurosensory fatigue, and mucosal inflammation described in modern medicine [7].

## Ayurvedic Preventive Measures

### Dinacharya and Lifestyle Regulation

- Limiting screen time
- 20-20-20 eye rule (every 20 minutes, look 20 feet away for 20 seconds)
- Avoidance of screen exposure before sleep [8]

### Netra Swasthya Practices

- Netra Prakshalana with Triphala Kashaya
- Anjana (Sauviranjana/Rasanjana under guidance)
- Padabhyanga (foot massage) [9]

### Karna and Nasa Protection

- Karna Purana with Tila Taila or Bilva Taila
- Pratimarsha Nasya with Anu Taila or Shadbindu Taila [10]

## Therapeutic Approaches

### Shamana Chikitsa

- Triphala, Yashtimadhu, Amalaki
- Saptamrita Lauha
- Dashamoola preparations for ENT symptoms

### Rasayana Therapy

- Chakshushya Rasayana
- Amalaki Rasayana

- Ghrita-based formulations for ocular nourishment [11]

## Modern Pharmacological Correlation

Ayurvedic Action	Modern Interpretation
Chakshushya	Antioxidant, retinal protection
Vata-shamana	Neuromuscular relaxation
Rasayana	Neuro-immunomodulation
Snigdha therapy	Tear film stabilization

## Discussion

The rising prevalence of screen-related eye and ENT disorders reflects a modern lifestyle incompatible with natural sensory physiology. Ayurveda addresses this imbalance by emphasizing moderation, sensory hygiene (*Indriya Nigraha*), and nourishment of sense organs [12].

Ayurvedic therapies focus on restoring lubrication, reducing oxidative stress, calming neural hyper-excitability, and strengthening sensory tissues. Integrating these measures with modern ergonomic guidelines can significantly reduce symptoms, prevent disease progression, and improve quality of life [13].

However, standardized clinical trials and long-term outcome studies are required to establish strong evidence-based protocols.

## Conclusion

Excessive mobile and screen use has emerged as a significant risk factor for eye and ENT disorders. Ayurveda provides a comprehensive preventive and therapeutic approach through lifestyle regulation, local therapies, and Rasayana intervention. Integrative adoption of Ayurvedic principles may play a vital role in safeguarding sensory health in the digital era.

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