

Computer Vision Syndrome: A Brief Overview

Neetha Dalvi S^{1*}, Sukanya V¹, Renukadevi DN²

¹Nursing Tutor, JSS School of Nursing, Mysore, Karnataka state, India

²Principal, JSS School of Nursing, Mysore, Karnataka state, India

DOI: [10.36348/sjnhc.2023.v06i11.009](https://doi.org/10.36348/sjnhc.2023.v06i11.009)

| Received: 07.10.2023 | Accepted: 14.11.2023 | Published: 20.11.2023

*Corresponding author: Neetha Dalvi S

Nursing Tutor, JSS School of Nursing, Mysore, Karnataka state, India

Abstract

Digital eye strain, also referred to as computer vision syndrome (CVS), is a contemporary health concern resulting from the growing use of digital devices such as e-readers, computers, smartphones, and tablets. These symptoms are mostly caused by the strain that extended screen time puts on the eyes and visual system. This review article will go over the prevalence, risk factors, symptoms, and possible treatments of CVS to provide readers with a general grasp of the condition.

Keywords: Computer vision syndrome (CVS), prevalence, digital eye strain, management strategies.

Copyright © 2023 The Author(s): This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC BY-NC 4.0) which permits unrestricted use, distribution, and reproduction in any medium for non-commercial use provided the original author and source are credited.

INTRODUCTION

In the digital era, there is a rise in screen-based activities that might lead to prolonged screen time and potential eye strain. A range of ocular and visual symptoms that can impact persons of various ages and occupations are together referred to as "CVS."

What is Computer Vision Syndrome (CVS)?

Computer vision syndrome is a type of eye strain that happens when you spend a lot of time using computers, smartphones or other digital devices [1].

Impact and Prevalence

Studies show that a sizable portion of the populace experiences symptoms related to CVS. While research findings on prevalence vary, a significant percentage of computer users report experiencing symptoms such as headaches, dry eyes, eye strain, and blurred vision. CVS may have an effect on productivity, work performance, and overall quality of life.

Factors Associated with CVS:

A number of factors have a role in the development of CVS, including:

1. **Extended Screen Time:** Using digital screens for extended periods of time can cause discomfort and strain the eye muscles.
2. **Blue Light Emission:** Blue light is produced by digital screens and can disrupt sleep-wake cycles and cause eye strain.

3. **Poor Ergonomics:** Back, shoulder, and neck pain can result from using digital gadgets in an improper or incorrect posture.
4. **Screen Glare:** It may be difficult to focus on the screen due to screen glare and dim lighting, which can lead to eye strain.
5. **Decreased Blink Rate:** When staring at a screen, people typically blink less frequently, which may result in dry eyes.
6. **Uncorrected Vision Issues:** Individuals who don't wear corrective glasses but already have vision issues may experience increased stress.

Signs and Clinical Manifestation

Typical symptoms of CVS consist of:

1. **Asthenopia:** Exhaustion, pain, and strained eyes.
2. **Dry Eyes:** Prolonged screen time can reduce blinking, which can irritate and dry out the eyes.
3. **Headaches:** Visual stress can trigger tension headaches.
4. **Blurred Vision:** Extended close work may result in brief difficulties focusing.
5. **Musculoskeletal Pain:** Neck, shoulder, and back pain can result from poor posture when using a screen [2].

Management and Prevention

There are several methods to treat and avoid Computer vision syndrome.

1. **The 20-20-20 Rule:** Take a 20-second break every 20 minutes and focus your gaze on an object 20 feet away.
2. **Appropriate Lighting and Glare Control:** Make sure the space is adequately lit, and minimise glare from the screen.
3. **Ergonomic Workspace:** Ensure that the wrist and back support are adequate, and that the chair and monitor are at the proper height.
4. **Blue Light Filters:** Consider donning blue light filters on screens or donning speciality glasses.
5. **Exercises for Blinking:** Remember to blink often to keep your eyes moist.
6. **Vision Correction:** Individuals who require treatment for refractive errors should wear the appropriate corrective glasses.
7. **Screen Distance and Angle:** Maintain a sensible distance and angle when watching screens.
8. **Routine Eye Exams:** Regular eye exams can assist in identifying and addressing vision problems. Three.

CONCLUSION

In conclusion, extended usage of screens is associated with a frequent issue known as computer vision syndrome. In the era of digital technology, symptoms can be mitigated and overall visual health can be enhanced by acknowledging its influence on visual comfort and implementing the appropriate strategies.

REFERENCES

1. Sheppard, A. L., & Wolffsohn, J. S. (2018). Digital eye strain: prevalence, measurement and amelioration. *BMJ open ophthalmology*, 3(1), e000146.
2. Rosenfield, M. (2016). Computer vision syndrome (aka digital eye strain). *Optometry in practice*, 17(1).
3. Portello, J. K., Rosenfield, M., & Bababekova, Y. (2013). Computer-related visual symptoms in office workers. *Ophthalmic & physiological optics*, 33(3), 352-358.
4. Veerabhadrapa, G. M. (2023). Computer Vision Syndrome (CVS): A Brief Overview. *International Journal of Nursing Education and Research*, 11(4), ISSN 2347-8640 (Print) 2454-2660 (Online).