

WSPOS Digital Eye Strain (DES) Consensus Statement – 2025

Introduction

Digital Eye Strain (DES), also known as computer vision syndrome, is a common condition caused by prolonged or improper use of digital screens. With screens becoming integral to daily life for children and adults, understanding and managing DES is critical, particularly in paediatric populations.

Symptoms of DES

DES manifests through a range of ocular and visual symptoms, which may include:

- Burning, itching, or a foreign body sensation in the eyes
- Excessive tearing or dryness
- Eye redness, pain, or heavy eyelids
- Blurred or double vision
- Difficulty focusing on near objects
- Increased sensitivity to light or perception of coloured halos around objects
- Headaches or a sensation of worsening vision

To accurately diagnose DES and assess its severity, clinicians should evaluate these symptoms in the context of a full visual system examination and a validated questionnaire.^{1,2}

Possible etiological factors include;

- Prolonged Screen Time, e.g., extended period of convergence without periodic distance breaks straining the vergence system
- Poor Viewing Distance, e.g., screen is at a person's physiologically inappropriate (uncomfortable) near point
- Poor Lighting, e.g., bright or flickering lights
- Uncorrected Vision Errors, e.g., ametropia
- Underlying Eye Conditions, e.g., phoria, tropia, dry eye, blepharitis, atopic eye disease

Evidence Summary

A systematic review of the literature reveals limited high-quality studies on DES in children, necessitating cautious interpretation of findings.^{3,4} Key conclusions based on low-to-moderate quality evidence include:

- Screen Time Duration: Overall daily duration (> 4-5 hours/day) is associated with DES symptoms.
- Blue-Light Filtering Glasses: There is no consistent evidence supporting the use of blue-light filtering glasses to prevent or reduce DES symptoms.
- Ergonomic Factors: Poor ergonomic conditions, such as improper viewing angles, inadequate distance between the eyes and screen (ideally 50–70 cm), excessive room or screen lighting, or glare, can worsen DES symptoms.
- Neck Pain: DES is more prevalent among individuals with persistent neck pain, suggesting a link between posture and symptom severity.

Additionally, vision therapy: There is no consistent evidence supporting the use of vision therapy to prevent or reduce DES symptoms.

Recommendations

To minimize DES in children, parents, healthcare providers, and policymakers should consider the following:

- 1. Limit Screen Time: Adhere to guidelines recommending no more than 2 hours of recreational screen time daily for school-aged children, with breaks every 20–30 minutes to reduce eye strain.^{5,6}

512. Optimize Ergonomics: Ensure proper screen positioning, adequate lighting, and comfortable seating to
52 support healthy posture and reduce strain.^{7,8}
533. Encourage Healthy Habits: Promote regular blinking, the 20-20-20 rule (every 20 minutes, look 20 feet
54 away for 20 seconds),⁹ and outdoor activities to counter prolonged near-work.¹⁰
554. Monitor Symptoms: Seek professional evaluation for persistent or severe symptoms to rule out
56 underlying vision or health issues.

57 58 **Conclusion**

59 While digital screens are unavoidable in modern life, proactive measures can mitigate DES in
60 children.^{3,11} Further research is needed to strengthen the evidence base and refine strategies for
61 prevention and management. This consensus statement aligns with existing guidelines from paediatric
62 and public health organizations to promote digital wellness.

63 64 **References**

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