

Screen Time, Myopia and Computer Vision Syndrome

In addition to social media, television, and online games, students are doing more schoolwork digitally and more social activities are also now screen based. As technology use in schools is on the rise, the simplistic screen time limits for children and youth become less practical. Instead, teaching healthy screen usage is needed to ensure staff, student and families are aware of the effects of technology use on eye health and what can be done as preventative measures.

Interesting Statistics:

Researchers in China compared annual eye screenings of 123,535 children aged six to 13 from 2015 to 2020. They found alarming rates of myopia progression in children in a region that was locked down for six months. Some needed corrective lenses 1.4 to three times higher than they had needed in the previous five years before the COVID-19 pandemic.

In a 2022 Statistics Canada survey, Canadians reported looking at screens an average of about 3.2 hours per day. But Canadian research released in April 2023 shows that occupational and recreational screen time averages among participants were much higher than pre-pandemic levels, with people often reporting six to seven hours per day.

By 2050, more than half of the world's population is expected to be myopic, meaning one in every two people will be nearsighted, a finding backed by the World Health Organization.

Key Understanding:

- Increased use of technology, including learning, social media, games or socializing on a screen, can affect student's eye health.
- Looking at a computer screen makes your eyes have to focus and work harder.
- Blink rates decrease when staring at a screen, down to about 10% of normal. So that means we are blinking once instead of 10 times.
- Excessive screen use can change the structure of the eyeball and lead to atrophy of the glands that keep it moist. (Football shape vs. baseball shape)
- The more screen time students are getting, the less other things they are doing.
- Increased usage of screens can contribute to computer vision syndrome and Myopia (nearsightedness), some of which are linked to further problems later on in life, such as, cataracts, glaucoma, retinal degeneration, and less eligibility for refractive surgery.
- Symptoms of Computer Vision Syndrome
 - Eyestrain
 - Headaches
 - Blurred Vision
 - Dry Eyes

TIPS

Planning for offline activities that prioritize eye health is a necessary measure in addition to setting screen time limits.

- Get outside.
 - Outdoor activities are proven to reduce the risk of developing myopia. In the Waterloo study, each additional hour of outdoor time per week lowered the odds of a child having myopia by 14 per cent.
 - "2" is a recommendation for two hours of outdoor play each day to stimulate the healthy development of the focusing system of children's eyes and ward off nearsightedness.

- Take more frequent breaks.
 - Utilize the BLINK 20-20-20 Rule. Every twenty minutes, focus on an object twenty feet away, for twenty seconds to reset and refocus the eyes or
 - Use the 20/20/20 rule: Every 20 minutes take 20 seconds to fully blink 20 times.

- Screen size and Distance Matters
 - Move the screen to an angle where you are not straining to look up and keeping your eyes open wider.
 - Use the 1-2-10 rule when it comes to screen positioning: Hold phones 1 foot away; sit 2 feet away from laptops and desktops; and 10 feet away from a television.
 - Students should keep devices at least an arm's length away from their face.
 - Larger screens are better than smaller screens, so having the teacher do full class instruction on a large screen is better for student's eye health than small screens for everyone.
 - The smaller and closer a screen is, the harder a student's eyes must work to focus on it. If possible, work on a larger screen, such as a laptop or desktop computer, rather than a small phone screen.

- Vision Screens and Eye Exams
 - Children should have at least one eye exam between the ages of two and five, and yearly after starting school.
 - Students complaining of dry or irritated eyes, eye styes, headaches, blurred vision, or eye pain need to be checked.
 - Children may not be aware that their vision is a problem if they assume everyone sees the way they do.

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