

COMPUTER VISION SYNDROME STUDY 3

BLUE LIGHT...REACHES DEEPER...DAMAGE THE RETINA



Digital devices permeate every aspect of the American life. According to the Vision Council's annual survey of digital device use, 69 percent of American adults use a smartphone on a daily basis— compared with 45 percent three years ago. And 42.5 percent use a tablet or e-reader, compared with 26 percent in 2012.

From the moment people get up until the time they go to bed again—including when they are eating, exercising and reading—they are using their smartphones, tablets, computers, laptops and other electronic devices. The use of such technology has increased each year since the Vision Council first conducted a survey on the topic in 2012. According to the 2014 Vision Watch survey results, nearly three in 10 adults (29.8 percent) are high users, spending more than nine hours each day using digital devices.

Digital devices allow people to live in the present—connecting with others, sharing information and capturing memories. Yet many users fail to notice how the hours spent with this technology can affect vision health, both immediately and over a lifetime.

Eyes are one of the most vital organs and a window into the bigger picture of what is going on inside the bodies. Even so, many people neglect to care for their eyes when it comes to digital devices, which can have unintended health consequences.

More than 90 percent of adults report using digital devices more than two hours a day, putting them at risk for digital eye strain. Our options are limitless, often including more than one device at a time from televisions, smartphones, computers, tablets or e-readers and video game consoles. When face-to-face with computers, screens sit about two feet from our eyes and people tend to stare at them for prolonged periods, which decreases blinking. Blinking is important to prevent dryness or irritation in eyes. In addition, many of workspaces are not “eye-gonomically” designed to prevent digital eye strain. For smaller digital devices, they tend to be held 8 to 12 inches from the eyes, even further fostering conditions for digital eye strain, which is characterized by dry, irritated eyes; blurred vision; eye fatigue; and head, neck and back pain.

While adults with computer-oriented jobs seem to be the prime targets of over-exposure to digital devices, one in four children use these devices more than three hours a day. This exposure, which occurs both at school and at play, poses a risk to children's developing eyes. Accelerated myopia, or nearsightedness, is just one potentially troubling byproduct of too much screen time.

Additionally, the optical industry is paying close attention to the issue of blue light exposure, also referred to as high-energy visible, or HeV, light exposure.

Because blue light can reach deeper into the eye than ultraviolet light, it may damage the retina. Although the issue is nascent, emerging research points to a possible link between exposure to blue light and long-term vision issues such as age-related macular degeneration (aMd) and cataracts.

As more people from all age groups spend added time in front of digital screens, new lens technologies are enhancing the experience while preventing eye strain. During a comprehensive annual eye exam, an eye care provider can evaluate any symptoms of digital eye strain, as well as discuss lens options or lifestyle changes for alleviating and protecting against future discomfort.

To raise awareness of the issue of digital eye strain and what is available to alleviate its symptoms, the Vision Council commissioned its third annual survey to examine the increasing usage of digital devices and consumer knowledge about the impact on vision. Nationwide, 9,749 adults participated in this survey, which was conducted in October 2014.¹⁷

¹⁷The Vision Council. Hindsight is 20/20/20: Protect your eyes from digital devices. 2015 Digital Eye Strain Report. Thevisioncouncil.org.