

## **A Public Health Side Effect of the Coronavirus Pandemic: Screen Time-Related Eye Strain and Eye Fatigue**

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“Screen time” refers to the duration of time spent in activities that involve peering into a digital screen, including media viewing, working on a computer or tablet, electronic communication, and playing video games. For the average person, screen time has surged over the past two decades. Prior to COVID-19, the typical American already spent nearly 11 hours per day in front of digital screens.<sup>1</sup>

The upward trend in screen use has resulted in a 21<sup>st</sup> century public health problem: eye strain from the use of digital devices. As technology advanced from the old cathode ray tube monitors to liquid crystal display and light-emitting diodes (LED) monitors, and then to plasma panels, our screens have steadily become brighter and denser, with more intense images.

Nearly two-thirds of Americans report symptoms of digital eye strain.<sup>2</sup> Eye strain from screen use can lead to visual disturbances and other physical discomforts, including tearing, tired eyes, blurred vision, burning sensations, redness, double vision, and general eye fatigue. Secondary physical issues include stiff neck, headache, backache, and overall fatigue.<sup>2,3</sup> The bottom line is that too much screen time, whether for work or entertainment, is bad for our health.

The COVID-19 pandemic has led to a massive increase in our screen time, thanks to increased time spent on virtual education, working from home, entertainment consumption, online shopping, and electronic communication with friends and family.

### **How Coronavirus Has Affected Screen Time**

Studies are beginning to show evidence of coronavirus on screen time. Many iPhone users have been getting weekly reports of their increased screen time.<sup>4</sup> The online teleconferencing software, Zoom, appears to have zoomed in usage, jumping from 200 to 300 million users over just 21 days in April.<sup>5</sup> A recent survey by a national parenting nonprofit reported an almost 500% increase in children’s online time during the pandemic.<sup>6</sup>

More time at home has also meant more screen time on things like online shopping and even religious service attendance. Just in the first three months of 2020 (when social distancing and stay at home orders were beginning), Amazon sales were up 26% over the same period last year.<sup>7</sup> According to an article proclaiming that “When God Closes a Church Door, He Opens a Browser Window,” millions of Americans are now attending religious services on line, through Facebook streaming, prerecorded YouTube videos, Zoom conferencing, and more.<sup>8</sup>

We are fortunate to have these connecting devices and technologies. They help us stay productive, enable us to access needed resources, and help reduce social isolation during a period of intense physical distancing. However, more use also equates to more physical side effects, particularly with respect to our eye health.

## Recommendations

Recommended prevention of eye strain and fatigue is mainly by way of ensuring good ergonomic practices in the use of computers. For example, using larger screens, reasonable font sizes, and practicing good working posture are good starts. While using devices, it is important to make an extra effort to blink frequently, since this keeps eyes from getting dry, and to try to take frequent breaks from the screen.<sup>9</sup>

Eye exercises may also help our eyes. For example, to reduce eye fatigue and its effects, eye professionals have recommended taking a break from the screen every 20 minutes, and looking at an object at least 20 feet away for 20 seconds or more.<sup>10</sup> Some researchers suggest avoiding computer screens during the evening, since blue and violet light emitted from these devices may disrupt our circadian rhythms, possibly causing sleep disturbances.<sup>11</sup>

Paying attention to and reducing our screen time when possible will improve our sight and reduce the risk of developing other associated poor health conditions (e.g., back and neck pain, chronic headaches, fatigue) as we age.

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