



# Screen Time and Online Learning

## WHAT IS SCREEN TIME?

Screen time includes any time using smart phones, electronic tablets, laptops, desktop computers, and television screens. With online learning (e-learning) and increasing entertainment offered on these digital screens, it is more important than ever to be aware of possible eye issues that can be related to using screens.

## WHAT IS ONLINE LEARNING?

Online learning (e-learning or remote learning) is a method of education that takes place virtually via the internet either on a computer or an electronic tablet. With the onset of the coronavirus (COVID-19) pandemic, online learning has become more common in the school systems and children have had to make big adjustments. In many areas of the world and at many grade levels, online learning may be here to stay.

## WHAT ARE EYE ISSUES WITH SCREEN TIME AND ONLINE LEARNING?

Online learning takes place through a computer screen, television, or tablet. With increased amounts of screen time and near work, children can be at a higher risk for eye strain, eye pain, headaches (digital eye strain), and worsening myopia (nearsightedness).

## WHAT CAN CAUSE THESE EYE ISSUES?

When children stare at an electronic screen, children may not be blinking as much as they normally would be blinking, which can lead to dry eyes and eye pain. Also using screens for long periods of time without taking breaks results in children constantly focusing on these screens, which can lead to headaches (digital eye strain) and worsening nearsightedness.

## WHAT CAN WE DO TO PREVENT THESE PROBLEMS AND KEEP MY CHILD SAFE DURING SCREEN TIME?

Below are some simple tips organized into an easy to remember word, “**SCREENS**” to help you remember how to keep developing eyes and brains healthy while using technology:

### Screen limits:



For older children who use digital screens for school work, limit recreational use of screens as much as possible. When they use screens, try to give them the option to use a bigger screen and hold screens further away when possible. Currently, the American Academy of Pediatrics offers the following recommendations for screen time:

- For children under 2 years old: no screen time outside of video phone time.
- For children 2-5 years old: limit screens to 1 hour a day.

### **Comfortable** (get comfortable):

While using screens, make sure children take time to get their bodies and eyes comfortable. Place the screen at eye level and have them sit upright when possible, to help with good posture. Keep computers and tablets at arm's length away (approximately 25 inches from their face) to relax their eyes. Because eyes have to work harder to focus on objects closer compared to farther away, by increasing the child's distance from the screen, it will help them relax their eyes. And when possible, it is better to allow your child to watch TV from the couch instead of giving them a smartphone or tablet.

### **Rest** (aka the 20/20/20 rule):

Take frequent breaks from electronic screens to decrease eye strain. A simple rule to follow is the 20/20/20 rule. This means when using screens for a long time such as e-learning or playing video games, have your child to take a 20 second break every 20 minutes and look at something at a distance (at least 20 feet away), for example have your child look down the hall or out the window. Remember looking at a distance lets the eyes relax. Taking these breaks and looking away from the screen and at a distance will allow your child's eyes to relax and help decrease eye strain. This can help decrease some of the symptoms caused by long periods of near work such as headaches and increasing nearsightedness.

### **Eye drops**

Often when children are engaged with screens, they blink less often, which can lead to eye dryness. If you notice your child is rubbing his/her eyes, his/her eyes are becoming red, or he/she complains of eye pain/strain after using screens, you should encourage him/her to blink more. If increased blinking does not fix the problem, you can try using over-the-counter lubricating eye drops, such as artificial tears (not Visine). You can also try using humidifiers, especially in the winter to decrease eye dryness.

### **Exit outside**

Remember in addition to limiting screentime, children need exposure to sunlight and physical activity. Encourage at least 1-2 hours of outdoor time per day when weather



permits to help children's eyesight as well as keep them physically active and healthy. Research has shown that exposure to natural light can help decrease the risk of children from becoming more nearsighted or myopic.

### **No Nighttime screens:**

There is no proven toxicity to blue light (which is usually present when using screens) except that it can disrupt the sleep/wake cycle (circadian rhythm). Exposure to screens before bed can keep children awake. It is recommended to stop screen use at least 1 hour before bedtime. You can use the nighttime settings on smartphones and tablets to limit blue light exposure to minimize the effect of screens on sleep. You can also try using blue light blocking glasses to filter out the blue light before bedtime, which will decrease the exposure to blue light, but will not reduce digital eye strain. Instead of using tablets and computers before bedtime, it is best to use books/soft music before bedtime for children.

### **Screen settings:**

Decrease the brightness and increase the contrast on the screen settings for all of your child's electronic devices. You can also use a matte filter to decrease glare. If the screen is brighter than the surrounding light, your child's eyes have to work harder to see, so make sure the screen is not brighter than the surrounding light. Avoid using electronic devices in dark, dimly lit rooms or placing bright lights in front of your child's face or against the electronic screen (for example, avoid a bright desk lamp next to the electronic monitor), which will cause uncomfortable glare.

## **WHEN SHOULD MY CHILD BE SEEN BY AN EYE DOCTOR?**

It is important to be evaluated by a pediatric ophthalmologist if your child is having symptoms related to online learning such as increased eye strain, headaches, double vision, or blurred vision, especially if they have not had a recent eye exam. The pediatric ophthalmologist will likely perform a complete eye exam to ensure your child does not have any other issues that could cause similar symptoms such as needing glasses or strabismus (eye misalignment).

### **Sources:**

1. <https://www.aao.org/eye-health/tips-prevention/screen-use-kids>
2. <https://www.aao.org/newsroom/news-releases/detail/protect-your-eyes-from-too-much-screen-time>
3. <https://publications.aap.org/pediatrics/article/138/5/e20162591/60503/Media-and-Young-Minds>



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