

## CONCERNS OVER CHILDREN'S VISION AND EYE HEALTH AS MORE CLASSROOMS GO HIGH-TECH

*The Wisconsin Optometric Association offers tips to help students make the most out of high-tech classrooms*

**MADISON, WI** – Classrooms around the country are now much more high-tech oriented than in the past, as teachers have been incorporating smartboards, tablets, and other digital tools into their daily curriculum in recent years. As a result, technology has students spending much of their time learning and socializing in front of a screen. However, while these devices can greatly enhance learning, they can also increase the challenges posed to students' proper vision and eye health.

According to the American Optometric Association (AOA), children can experience many of the same symptoms related to computer and technology use as do adults. Extensive viewing of computer or electronic device screens can lead to eye discomfort, fatigue, blurred vision, and headaches. Often, children will have a limited degree of self-awareness, performing a certain task with great concentration until near exhaustion (for example, continuous viewing of an electronic device, or even playing video games).

"While these high-tech classrooms can greatly enhance learning, they can pose a number of challenges to the visual system," advises Dr. Kellye Knueppel, Milwaukee and Madison area optometrist and President of the Wisconsin Optometric Association (WOA). "Since digital devices both inside and outside of the classroom are so compelling to students, they tend to stare at them and use them for hours at a time, which fatigues their visual system."

Children are very adaptable by nature, but unfortunately, that same adaptability can lead to vision and eye health issues when coupled with frequent use of technology and electronic devices. A child who is viewing a computer screen with a large amount of glare often will not think about changing the computer arrangement or his or her surroundings to achieve more comfortable viewing, which can result in excessive eye strain. Children also often accept blurred vision caused by nearsightedness, farsightedness, or astigmatism as natural, feeling that everyone sees the way they do. Visual impairment and staring at a computer or e-device screen can compound the effects of eye strain in children.

Prolonged use of technology can cause Computer Vision Syndrome (CVS), which occurs when vision and eye health problems related to near work are experienced while using computers and technology, or are associated with using digital devices. "Many of these issues can be solved with frequent breaks, proper set up of computer screens, and yearly, comprehensive eye exams by a licensed eye doctor," explains Dr. Knueppel. Parents and teachers can help students avoid CVS by coaching them to follow the 20-20-20 rule. At least every 20 minutes, students should take a 20-second break and view something 20 feet away when using technology or doing near work. People need to rest their eyes to keep them moist, and staring off into the distance helps the eyes from locking into a close-up position.

The WOA recommends the following guidelines to prevent or reduce vision and eye health problems associated with CVS:

- Computer screens should be about 4-5 inches below eye level as measured from the center of the screen and held 20-28 inches away from the eyes.
- The most efficient viewing angle on a computer screen is slightly downward about 15 degrees.
- If possible, windows or other light sources should not be directly visible when sitting in front of the monitor. If this occurs, turn the desk or computer to prevent glare on the screen.
- Reduce the amount of lighting in the room to match that of the computer screen.
- Avoid dry eye when using a computer or digital device by blinking frequently; this keeps the front surface of the eye moist.

A comprehensive eye examination from a licensed doctor of optometry will ensure that a child can see clearly and comfortably while detecting any hidden conditions that may contribute to eye strain. When necessary, glasses or contact lenses can provide clear, comfortable vision for using technology. According to Dr. Knueppel, "Early detection and treatment are vital in correcting vision problems and helping students see clearly."

### **About the Wisconsin Optometric Association**

*The Wisconsin Optometric Association (WOA) is a nonprofit affiliation of licensed doctors of optometry and associated businesses dedicated to the preservation and enhancement of the vision welfare of the people of Wisconsin. The WOA accomplishes its goals through: education and dissemination of information, organized governmental activity, legislation and regulation, mediation with consumer and public interest groups, and provision of collective benefits to its members. Approximately 650 doctors of optometry are currently members of the WOA, located in nearly every county in the state. All members must be licensed to practice optometry by the State of Wisconsin. For more information, visit WOA's website at [www.woa-eyes.org](http://www.woa-eyes.org).*