The Eyes Have Had It

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NOW that your kids have returned to the fall routine of homework and class projects, it's a good idea to be alert to signs of eye strain caused by lots of time at the home computer.

Computer vision syndrome is the umbrella term adopted by the American Optometric Association for the range of symptoms of eye strain that kids, as well as adults, can be susceptible to. They include itchy, burning eyes, dry eyes, blurred vision and headaches.

No, computer vision syndrome won't make your child go blind or cause permanent damage to the eyes.

"It's a myth that computer screens and TV damage your children's vision," said Amy Lambert, a pediatric ophthalmologist in Livingston. "But you can have symptoms of eye strain from too many hours spent in front of the computer."

While it's not a disease, eye strain can still have a negative impact on your kid's academic performance.

"If you have those symptoms during the day while at school, that's going to lead to loss of attention in the class, loss of comprehension and loss of an ability to sustain your focus during a class or in a lecture hall because you're physically uncomfortable," said Kimberly Friedman, a pediatric optometrist in Moorestown and immediate past president of the New Jersey Society of Optometric Physicians.

The American Optometric Association says 70 to 75 percent of computer workers experience eye and vision problems.

But many generations of children have spent long hours poring over their textbooks as they plug away at school work. What's different, these days?

Friedman said it comes down to differences in the way the eyes react to pixels, the electronic characters on the screen, versus print on a page. The eyes can easily maintain focus on the well-defined printed characters, which are usually presented in a black-on-white format. But there's not such a clear contrast on the computer screen because the pixels, which are tiny dots that make up the screen characters, are less even and defined.

"Pixels are brightest at the center and diminish in intensity toward their edges," said Friedman. As a result, she explained, it's harder for the eyes to maintain focus on the pixels. "Our focus starts to relax and things start to get blurry, so we have to kick our

focusing back in again. This is very difficult for the eyes to do." It can develop into vision fatigue and added stress on the eyes.

People also tend to blink less when working before a computer screen, which can lead to dry eyes, Friedman said. "When we're staring at a computer, we blink about five times less than we blink normally. If you're not blinking, the surface of the eye gets very dry."

Computer eye strain can also be linked to a screen that's lit too brightly or has a glare caused by a window or other light source facing the screen. It can stem from ergonomic mistakes, too, such as sitting at the wrong distance from the computer, not changing position for long periods of time and working at a computer that's at the incorrect height for the person using it.

Friedman said kids with existing focusing problems are going to be more likely to develop computer vision syndrome. "If they already can't maintain focus on printed material, it will be that much harder on a computer screen," she said.

There are simple measures you can take to prevent and reverse symptoms of computer vision syndrome.

Start with limiting your child's time on the computer, Lambert said. "In addition, it's important to position the computer screen so there isn't excessive glare, either direct or indirect, and make sure the screen is at the proper height for the child." Adjust the height of the computer so that the top of the screen is even with the position of the eyes, advised Christie Morse, a pediatric ophthalmologist in New Hampshire and president of the American Association for Pediatric Ophthalmology and Strabismus.

She also said the correct distance from the computer screen for kids is about 25 inches.

Your kids must remember to blink more often, said Friedman, and to take regular breaks from being in front of the computer screen. "Get up, walk around," she said.

There are also glasses designed to be worn when working at the computer, but there's disagreement among eye care professionals about the effectiveness of this type of eye wear for children.

Proponents of computer glasses say regular eyeglasses don't provide enough accuracy because computer viewing distance is usually different than reading distance -- 18 to 28 inches and 16 to 21 inches, respectively. "Computer glasses are set to the distance of the computer from the person's eyes," said Friedman. They can also be treated with anti-reflective coating to reduce glare and reflected light that reach your eyes.

But Morse contended "there's no scientific evidence that they're necessary for kids."

"I'm not an advocate of computer glasses," said Lambert. "It's very rare that they (children) need glasses for near vision for computer work. As we age, the eye ages and

we can't focus as well because the lens within our eye stiffens. Kids are great at focusing up close."

But that doesn't apply to every child, according to Friedman. "Someone who's 10 can certainly focus more than someone who's 45. Even though every 50-year-old has trouble focusing on a computer screen, not every 10-year-old would."

"But there are plenty who do" (have trouble), she added, "because we see them in our office all the time."

Eye health professionals did agree unanimously that parents should make sure their children regularly undergo a comprehensive eye exam that can catch any vision problems.

What to watch for

Parents, look out for the following symptoms of excessive computer use:

- Blurred or double vision.
- Itchy eyes.
- Burning sensation in the eyes.
- Tired eyes.
- Loss of focus.
- Dry eyes.
- Headaches.