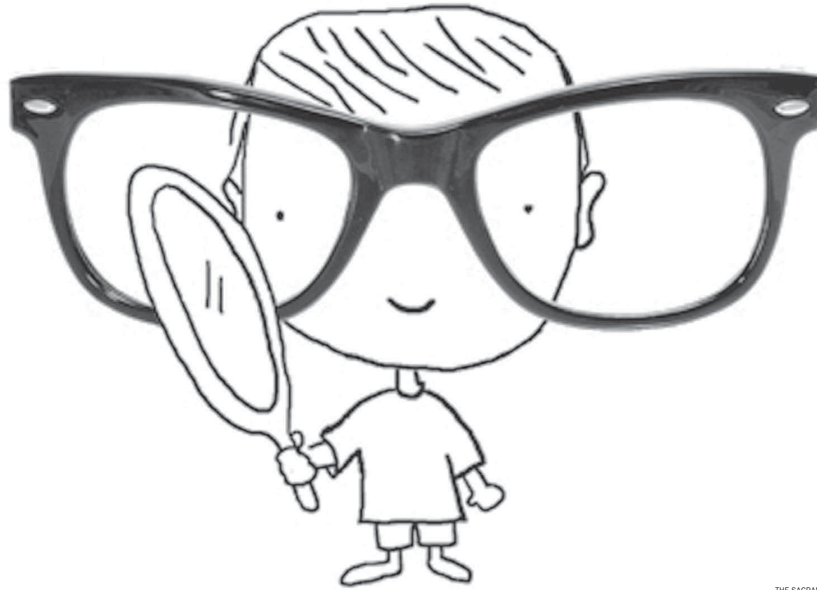


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THE SACRAMENTO BEE

## A blurry future

Nearsightedness is on the rise in children, but the cause remains to be seen

BY PAIGE ALLEN | SUN CHRONICLE STAFF

**G**lasses just might be the newest accessory for kids all over the globe.

A sharp rise in nearsightedness — or myopia — in the United States and other countries is leading to more children needing glasses and contact lenses.

While there's no disputing the increase — nearsightedness has increased 66 percent in the United States from 1971-1972 to 1999-2004 according to a study from the National Eye Institute — there is some question over what's causing the increase, said Frank Masci, an Attleboro ophthalmologist, a longtime member of the **Sturdy Memorial Hospital** medical staff.

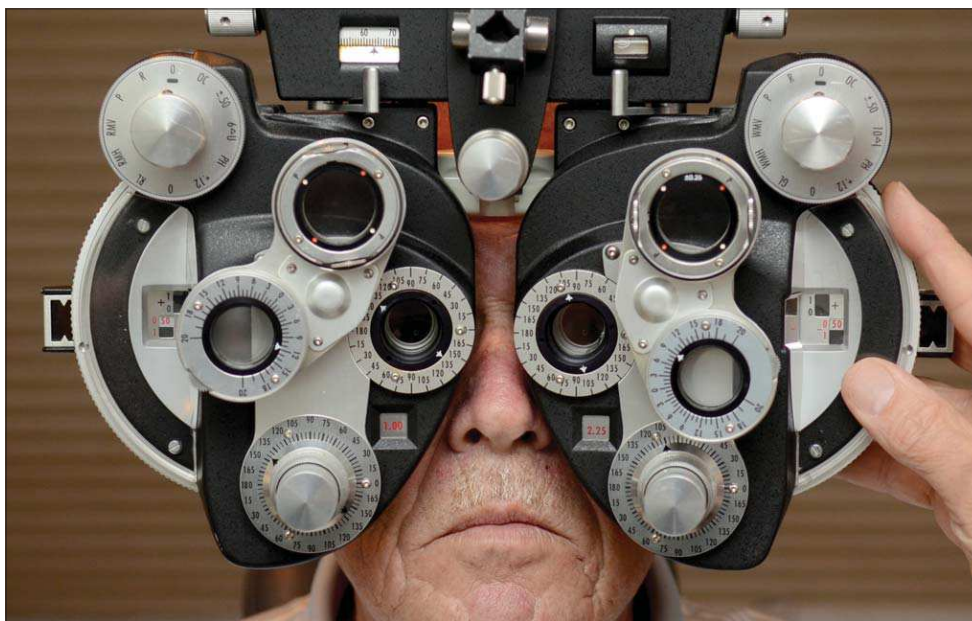
"It certainly is on the increase," Masci said. "We're all seeing a lot more nearsighted patients." Myopia, a refractive error of the eye, occurs



AP FILE PHOTO

Children's nearsightedness, perhaps best characterized by "Family Matters" character Steve Urkel, played by Jaleel White in the 1990s, has increased 66 percent in the last 40 years.

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MIKE GEORGE / THE SUN CHRONICLE

Some feel the development of nearsightedness corresponds to the amount of near work, reading and computer work, that goes hand-in-hand with education while others feel it relates to intelligence, according to Dr. Frank Masci. Here, Martin Lamoureux of South Attleboro is examined for nearsightedness at Masci and Dehm Eye Associates in Attleboro.

## BLURRY: Nearsightedness is on the rise

FROM PAGE E1

when the eyeball is longer so light doesn't focus on the retina like it should. People with myopia will typically struggle to see distant objects clearly while being able to see clearly for close-up tasks such as reading or using a computer.

While myopia rates in the U.S. are on the rise, so are the rates in other countries. Globally, more than 1.6 million people have myopia and if unchecked, the number is expected to reach 2.5 billion by 2020, according to the Myopia Institute.

Masci said myopia is seen more in children, but also said it's most often diagnosed at that age as parents or teachers see children struggling to see and they're brought to a doctor. Additionally, nearsightedness generally progresses over time before stabilizing when a person is in their mid-20s, Masci said.

Masci said there are several contributing factors to the rise of myopia. However, scientists and doctors don't agree on all of the factors.

One of the factors is genetics as certain people have a pre-disposition to the condition.

Where the waters get murky is on the second factor, Masci said, where scientists dispute whether spending more time doing up-close work, like schoolwork, homework, reading or computer work, contributes.

Masci said the likelihood of a person becoming nearsighted increases based on education level. A college graduate has a higher likelihood of becoming nearsighted than a high school graduate, who has a higher likelihood than non-graduates.

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There's also discussion on the in-

**'It certainly is on the increase. We're all seeing a lot more nearsighted patients.'**

Attleboro ophthalmologist  
Dr. Frank Masci

tensity of the work being done and the length of time you're focused on up-close work, he said.

Finally, it's been supported that more time spent outdoors in sunlight is beneficial. A dozen studies across the world have concluded that the more time people spend outdoors, the less likely a person is to become nearsighted. But why — if it's a result of the actual sunlight or a break from up-close work outdoors — is unclear, Masci said.

"There's not just one factor," he said.

There's no way to reverse nearsightedness, but it can be corrected through eyeglasses, contacts, and laser vision correction.

Though the rate has dramatically risen, Masci said he doesn't think doctors are diagnosing myopia more as improvements have been made in the medical field, saying glasses have been around for centuries.

Since the number of cases of myopia has been rising for decades and not just the last few years, Masci said it doesn't appear to be directly linked to the amount of time spent on digital devices like smartphones, computers and tablets.

Still, eye strain and eye fatigue has become a common problem in the digital age as people spend hours looking at screens, Masci said.

When the eye is focuses on something, the muscles are flexed, putting it under tension and stress, Masci said. Looking at or focusing on something for an extended pe-

riod of time — such as hours spent behind a computer screen at work or flicking through social media on a smartphone — can lead to the strain.

To help alleviate the strain, taking breaks throughout the day — a 20-second break to look at something at least 20 feet away after 20 minutes of doing up-close work or looking at a tablet or computer screen — is recommended by the Vision Council.

Masci said concern about whether digital devices and the light given off is safe for the eyes or not is theoretical at this point and it's simply too early to tell whether they cause damage to the eye.

Many studies in the medical field are done on animals and there's no good way to study the effects of digital devices on eyesight on animals, he said.

"We just don't know what these long term effects can be," he said.

Even though it's uncertain if and what the long-term effects are, Masci said the best thing to do is use devices in moderation.

Additionally, Masci warned against believing common misconceptions that are untrue — such as sitting too close to the TV or reading in the dark causing damage to the eye — as well as using caution in consuming medical news online. Getting regular checkups and advice from your doctor is important and if browsing online for information, stick to reliable sources such as the American Academy of Ophthalmology, the Mayo Clinic and the websites of teaching hospitals and universities.

"Not everything on the Internet is true," he said.

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