



pediatric eye news

FALL 2015

From the Department of Ophthalmology, Division of Pediatric Ophthalmology, Columbia University Medical Center and the Morgan Stanley Children's Hospital of New York

Greetings

Dear Colleagues:

Greetings from the Department of Ophthalmology, Division of Pediatric Ophthalmology at Columbia University Medical Center and the Morgan Stanley Children's Hospital of New York. We are excited to present the first edition of our newsletter devoted to pediatric eye care. In addition to short articles, we will also



Top: Steven E. Brooks, M.D.



Left: Lauren Yeager, M.D. examining patient Nicholas Ramirez at the Center

provide news about the division, new developments in the field that might be of interest to primary care, and present a brief case, or quiz, to test your EyeQ.

Most of all, we hope that the newsletter will be informative and fun to read. Detailed information about our outstanding physicians, our services, and our facilities can be found on our webpages at <http://childrensnyp.org/mschony/ophthalmology.html>.

Since school is now back in session, this edition of the newsletter will focus on vision screening, an issue that will soon move to the front and center as children transition back to the classroom. So, without further delay, here is the first edition of *Pediatric Eye News*.

Vision Screening: The Basics

By providing screening examinations, primary care providers play a vital role in the early detection of vision problems. Because young children only rarely complain about blurry vision, especially if it occurs in only one eye, vision screening is very important. The AAFP, AAP, and AAO all recommend regular screening of children's vision as part of a child's routine health care. Published guidelines can be found at <http://pediatrics.aappublications.org/content/111/4/902.full.pdf+html>. Although the methods and pass/fail thresholds will vary depending on the maturity

and capabilities of the child, all rely either on direct measurement of visual acuity, or identification of risk factors that might threaten or be associated with poor vision (e.g. strabismus, cataract, asymmetric or high refractive error, nystagmus, ptosis).

Without doubt, the most valuable tools at the provider's disposal are an ophthalmoscope, an age appropriate vision chart, and a program in place to use them on a regular basis. Commercially available photoscreeners have also emerged

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Division News

The Division of Pediatric Ophthalmology is happy to announce that it now offers appointments at two Manhattan locations; the Stephen Ross Pediatric Eye Center located on the 5th floor of the Morgan Stanley Children's Hospital of New York, and the Robert Burch Family Eye Center located at 15 west 65th St, on the first floor of the Lighthouse-Guild building. Comprehensive pediatric eye examinations are provided at both locations.

The Department of Ophthalmology also welcomes the arrival of Danielle Trief, M.D. Dr. Trief has joined us as a cornea specialist with a particular interest in pediatric corneal disease. She will be seeing patients at 15 west 65th St as well as at the Harkness Eye Institute located on the CUMC campus at 635 west 165th St in Manhattan.

EyeQ Test:



1. The AAP recommends measurement of visual acuity be performed beginning at age
 - a. 4 months
 - b. 6 months
 - c. 1 year
 - d. 3 years
2. Vision charts are calibrated for a specific testing distance. If a 20 ft. chart is used at a 10 ft. testing distance then the following correction should be employed.
 - a. No correction, the testing is invalid
 - b. The number in the denominator should be cut in half (ie. 20/80 should be converted to 20/40)
 - c. The number in the numerator should be doubled (ie. 20/80 should be converted to 20/160)
 - d. The number in the numerator should be changed to 10 (ie. 20/80 should be converted to 10/80)
 - e. C and D are correct.
3. In myopia, children can see more clearly if they
 - a. Get closer
 - b. Mover farther away
 - c. Use reading glasses
4. Anisometropia means that
 - a. The pupils are of unequal size
 - b. Strabismus is present
 - c. A child cannot accurately judge distance
 - d. There is a difference in refractive error between the two eyes
5. In order to be treated effectively, amblyopia must be detected
 - a. At birth
 - b. By age 5 or 6 years
 - c. By age 2
 - d. By the end of puberty

Answers: 1. d, 2. e, 3. a, 4. d, 5. b.

Vision Screening: The Basics *(continued from page 1)*

as a very effective means of screening for vision-threatening risk factors. These devices can be readily used on young children, and require only minimal staff training. They evaluate the red reflex in the pupils to detect significant asymmetry between the eyes, media opacities, or significant refractive (optical) errors. The ophthalmoscope can be effectively used for the same purpose. The following link provides an excellent illustration of the concept and possible outcomes. <http://pediatrics.aappublications.org/content/122/6/1401/F1.large.jpg>

As school begins there will be a predictable uptick in the number of children who need their vision evaluated. The primary care provider on the front lines, together with the pediatric ophthalmologist or optometrist, will form an effective team to deal with these issues.

Journal Round-Up

A perennial question that we are asked by parents is whether or not reading or prolonged use of a tablet can be harmful to the eyes. Until now it was generally thought that how we used our eyes had little effect on how they developed, compared to genetically determined patterns of growth. New research however, led by Andrei Tkachenko, PhD, a vision research scientist at Columbia, has found that individuals with a variant of the APLP2 gene were five times more likely to develop myopia in their teens if they had read an hour or more each day during childhood. Those who carried the APLP2 variant, but spent less time reading, had no additional risk of developing myopia. The findings were reported in the August 27 issue of PLOS Genetics (PLOS Genet. 2015 Aug 27;11(8):e1005432), and open the door to potential interventions to prevent myopia in high risk children. The group's findings lend support to the concept that myopia is due to a combination of genetic predisposition and behavior or environment. Until more is known, it is recommended that children spend at least two hours playing outside each day, and less time glued to their cellphones and tablets.

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*A Publication of the Department of Ophthalmology,
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