

EARLY-AGE VISION SCREENING IS CRUCIAL

Visual acuity goes hand-in-hand with childhood brain development.

BY PAM HUSTON, CO

Everett & Hurite Ophthalmic Association is a private practice with several locations in Western Pennsylvania. I have been the practice's orthoptist (see *Orthoptics At A Glance*) for 20 years, traveling to six of our offices and performing primary vision screenings on our new patients.

Our patient base comes by way of referrals, and it ranges from premature babies to adults in their 90s. We serve patients who are nonverbal, some of whom are physically and mentally challenged.

SCREENING IN EVERYDAY PRACTICE

To obtain a baseline understanding of what a patient's vision could or should be, I screen him or her using the Plusoptix Vision Screening Device (Plusoptix). In less than 10 seconds, I can determine pupil size, alignment, and refractive error.¹ As an example: we have identified anisocoria (unequal pupil size) a condition that, although rarely sinister, can be associated with neurologic issues.² The Figure shows an example of the measurement output on the screening device.

The information I obtain with the screening device also provides a starting point for my examination with the eye chart, saving me time. I know if 20/20 is possible for the patient, and I can bypass unnecessary, expensive, and time-consuming additional testing. The data generated by the device are particularly useful in directing

Darren L. Hoover, MD, the ophthalmologist with whom I collaborate, during his postcycloplegia examination of non-verbal individuals to ensure we do not miss details regarding refractive error.

AMBLYOPIA AND STRABISMUS

Most of the children who are referred to us have amblyopia in one or both eyes that was identified during a school screening or by a pediatrician. Some of the kids also have strabismus. When the eye turns in or out, the brain shuts it off and vision does not develop normally. If left untreated, the child will be blind in that eye. There are cosmetic ramifications and self-esteem considerations with this condition as well. Kids may fail a vision screening in one eye, even though they see the world fine with both eyes together. Glasses can be used to strengthen their vision, and patching may also be involved.

Corneal opacities, ptosis, and blocked tear ducts can be identified during early childhood vision screenings. Kids



Screening for eye issues at a young age allows eye care providers to identify pathologies that, if left untreated, could have major consequences.

ORTHOPTICS AT A GLANCE

- Orthoptics is a well-established profession within eye care.
- Orthoptists have been working in the ophthalmic field for more than 75 years.
- Orthoptists evaluate and treat patients with disorders of the visual system with an emphasis on binocular vision and eye movements.
- The American Association for Pediatric Ophthalmology and Strabismus recognizes orthoptists as a valuable adjunct to the practice of pediatric ophthalmology and to ophthalmologists who treat strabismus and binocular vision disorders.
- Orthoptists are qualified to independently evaluate and treat pediatric and adult patients with eye movement and binocular vision disorders.

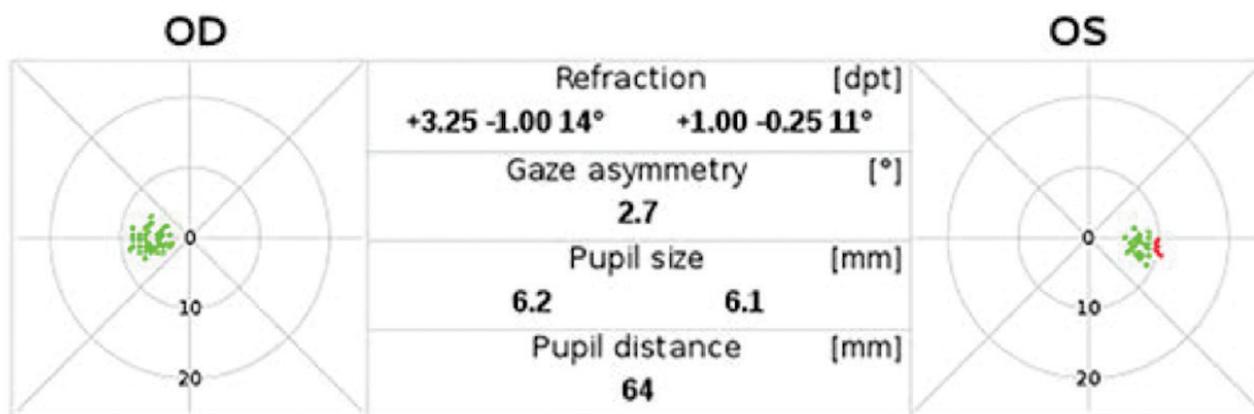
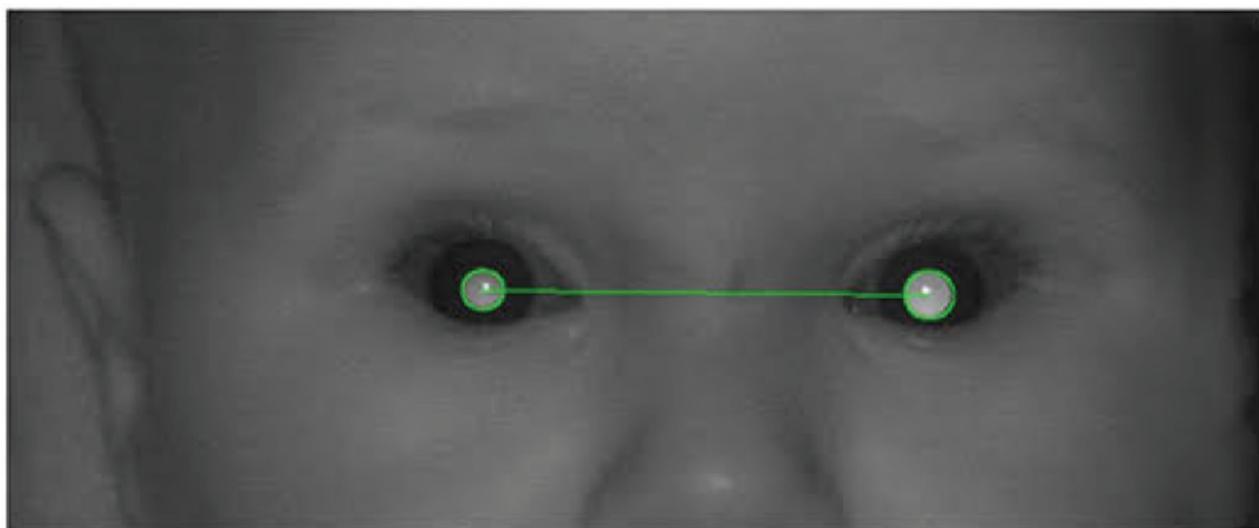


Figure. The readout from the Plusoptix Vision Screening Device (Plusoptix) shows measurement results indicating that this child is at a high risk for anisometropic amblyopia OD. Her right eye has +2 D more hyperopia than the left. That difference may lead to poor vision in her right eye. The vision is not clear so the brain shuts it off, and vision may not develop normally if left uncorrected. This child will most likely need glasses to correct the vision in her right eye. Her pupils are equal and normal and there is no strabismus.

with unilateral blocked tear ducts have a higher risk of amblyopia,³ and those born prematurely or with Down syndrome are at risk of needing glasses at an early age.

When parents bring in a child who has failed a vision screening at age 5, they often bring younger siblings along with them. Parents love that I can quickly check each child and determine if there are any concerns that should be identified earlier. It takes me 10 seconds to provide this bonus service.

CONCLUSION

Vision screening is very important for all children before they reach 5 years of age—under 3 is even better. For children to learn, they must see the world. Many parents tell me how vision correction has emboldened their formerly tentative child.

Parents often worry when their young child needs glasses, sure that their rambunctious 5-year-old will not wear them. When kids can see their world with straight eyes, they love their glasses, they want them, and they wear them. ■

1. Silverstein E, Couahue SP. Field evaluation of automated vision screening instruments and impact of referral criteria choice on screening outcome. *J Pediatr Ophthalmol Strabismus*. 2015;52(6):364-370.
 2. Thompson S, Pilley SF. Unequal pupils. A flow chart for sorting out the anisocorias. *Surv Ophthalmol*. 1976;21(1):454-458.
 3. Noelle S, Matta, David I, Silbert. High prevalence of amblyopia risk factors in preverbal children with nasolacrimal duct obstruction. *AAPDS*. 2011;15(4):350-352.

Pam Huston, CO

- orthoptist, Everett & Hurite Ophthalmic Association, Pittsburgh, Pa.
- 412-780-1476; pshuston@zoominternet.net
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