Vision Health for Children on the Autism Spectrum

Lisa DiBonaventura, M.A., COMS, the Statewide Director for Vision and Vision Loss Services at the Massachusetts Department of Developmental Services provides a discussion on the importance of vision health for children and additional considerations for vision care for children with special healthcare needs.

1. Why is it important to regularly assess a child’s vision?

Regularly assessing a child’s vision is critical starting within the first year of life because it is the only way to ensure that eyes are healthy and that the visual perception system is developing and functioning properly. Vision impacts development, safety and health and affects how a child learns, plays, and feels. Some children, especially those with neurodevelopmental delays, including autism spectrum disorders, and/or who have a family history of eye problems, are at a greater risk for vision concerns. Unfortunately some vision problems, such as having an eye turn, if left untreated in childhood can lead to life long and permanent vision loss.

Recommendations for eye care for children, which include guidelines for vision screening and comprehensive eye exams, differ slightly among professional organizations and states (state law). Vision screenings (embed http://www.aapos.org/terms/conditions/107 ), designed to detect vision problems, are typically recommended annually or once every two years, and are provided at the primary care provider or pediatrician’s office, at school, and/or in collaboration with a Department of Public Health. Comprehensive eye exams by an eye care provider (embed http://www.preventblindness.org/whos-who-eye-care ) including an optometrist (embed http://aoa.org ), an ophthalmologist (embed http://www.aao.org/about/eyemds.cfm ) or a pediatric ophthalmologist (embed http://www.aapos.org/terms/conditions/87 ) typically occur as a follow up to a vision screening, as recommended by a primary care provider, pediatrician and/or as needed; and lead to diagnosis and treatment.

Although startling to consider, vision concerns in children can indeed be difficult to detect both from a child and caregiver perspective:

- Each child sees the world only through his/her own eyes. If the images a child views are blurry, doubled or otherwise impaired, he/she may (or may not) experience these unclear images as normal. Also, depending upon age, the child may not have the language or ability to explain how he/she is seeing or attribute how he/she is feeling to a vision problem.

- Parents and teachers likewise cannot always easily detect that a child has a vision concern. Even if a child’s eyes look perfectly healthy and beautiful to others, the visual experience for the child may be distorted.
Vision problems thus can go undetected, especially if regular eye exams and/or vision screenings are missed, resulting in significant impact on growth during this critical time of brain development.

A helpful list of common signs and symptoms associated with vision problems typically experienced by children can be found on Prevent Blindness’ website for its National Center for Children’s Vision and Eye Health (embed http://nationalcenter.preventblindness.org/links-additional-resources-childrens-vision ). If your child presents with any vision concerns, be sure to document your observations, and report these to your child’s primary care provider, pediatrician, or an eye care provider. Even if no vision problems are apparent, having regular eye exams and/or vision screenings, with follow up as recommended is an important part of health care for every child.

2. Why is it particularly important to focus on the vision of kids with Autism Spectrum Disorders?

Focusing on the vision of children with an autism spectrum disorder (ASD) is critical for two reasons: Studies suggest that children with ASD have an increased rate of vision problems (compared to children who do not have an ASD), and children with ASD may have specific vision perception sensitivities and/or traits which impact their daily lives. A concern is that a visual behavior believed related to an ASD, may in fact be a sign of an undiagnosed vision problem, making eye exams vitally important for children with ASD.

Two small scale studies published in 2013 point to higher rates of refractive error, eye turn and amblyopia among children with an ASD1,2:
- Refractive Error, including near sightedness, far sightedness, and/or astigmatism, which affect how clearly a child sees was found in 27-29% of children with ASD.
- Eye Turn, also called strabismus, which can affect a child’s depth perception and ability to see one clear image instead of double vision, was found in 21 – 41% of children with ASD.
- Amblyopia, a decrease in vision from an eye which can impair a child’s depth perception and may result in visual field loss, was found in 10 – 11% of children with ASD.

Many of these causes of vision problems can be treated, and amblyopia prevented, if diagnosed early in life. The “eyeSmart” website hosted by the American Academy of Ophthalmology (embed http://www.geteyesmart.org/eyesmart/diseases/index.cfm ) and the American Optometric Association’s website (embed http://www.aoa.org/patients-and-public/eye-and-vision-problems/glossary-of-eye-and-vision-conditions ) are two sources for information regarding these, and other conditions affecting vision throughout a child’s life.
In addition to increased prevalence for some vision problems, a child with an ASD may also present with specific vision perception sensitivities and/or traits which can impact daily function, and also affect how an eye exam needs to be performed. Some of these traits are similar to symptoms of various eye conditions, including Cortical Vision Impairment (CVI) (embed http://www.aph.org/cvi/define.html) and are why eye exams for children are so important. Vision sensitivities and/or traits of children with an ASD may include but are not limited to:

- Intense focus on light, people, objects, brightly colored objects
- Focus on visual details rather than the whole
- Focus on very small items/pieces
- Increased ability on tasks of visual search
- Movement of hands, fingers or objects in front of eyes
- Avoidance of eye contact
- Dislike/Avoidance of dark lights, bright lights and/or flashes of light

Information regarding all visual behavior is important for an eye care provider to know and consider when preparing for and during a child’s eye exam. The keys for healthy eyes and the healthy development of the visual perception system for children with an ASD include early detection of vision problems; early treatment; regular care throughout childhood by an ophthalmologist or an optometrist who understands the child’s needs; and consistent communication and follow up with eye care providers by parents or guardians.

3. It can be challenging to find providers for kids with special concerns. What do you recommend?

Even in states with adequate resources for eye care, it can be challenging to find providers for children with special concerns. Communication is critical to find the right provider, to make sure that the ophthalmologist or optometrist understands your child’s needs prior to the eye exam, and so that your child is prepared as can be for the exam. Here are some tips and resources:

Help for Finding an Ophthalmologist or Optometrist:
Parents or guardians may ask for recommendations from their child’s primary care physician, school nurse or health manager. In addition, the following directories are available to identify eye care providers in your area:

**Eye Care Provider Directories:**
- American Association for Pediatric Ophthalmology and Strabismus “Find a Doctor” Directory (embed https://aaosso.aapos.org/ebusaapos/FindanEyeMD/tabid/1192/Default.aspx)
- American Optometric Association “Doctor Locator Search” ( embed http://www.aoa.org/doctor-locator-search )
• American Academy of Ophthalmology “EyeSmart Find and Eye M.D.”
  (embed http://www.geteyesmart.org/eyesmart/find/index.cfm)

**Insurance Coverage for Eye Exams and Eye Glasses:**
Insurance plans can vary regarding benefits for eye care. Depending upon your child’s insurance provider, you may need a referral from your child’s primary care provider or pediatrician prior to scheduling a visit with an eye care provider. If your child does not have insurance for eye exams or for prescription eyeglasses, assistance programs such as EyeCare America, (embed http://www.eyecareamerica.org/) InfantSEE, (embed http://www.aoa.org/optometrists/education-and-training/public-health/infantsee) OneSight, (embed www.onesight.org/na/contact_us/get_help/), and Prevent Blindness (embed http://nationalcenter.preventblindness.org/vision-care-financial-assistance-information) are available to help.

**Considerations for Scheduling and Preparing for Eye Exams:**
After choosing an eye care provider for your child, take care when scheduling and planning for the appointment to help create the most successful atmosphere for the exam:

- Share specific vision related information. Some providers will send you a packet of information, along with a questionnaire to help the ophthalmologist or optometrist best prepare for your child’s eye exam. Even if a questionnaire is not sent to you, be sure to share/include all of your questions, concerns, observations, and provide information regarding any vision perception sensitivities or traits that your child may have.
- If waiting is difficult, schedule the appointment to be the first of the day, the first after the provider’s lunch break, or the last of the day to reduce waiting time as much as possible.
- Prepare your child based on his/her needs. It may be very helpful to talk about the appointment, visit the office, or watch a video about going to the eye doctor. (Many videos are available on YouTube through a search for “eye exams for children”. It is always important to watch first without your child, as you’ll know best which video, if any will be helpful). Whatever approach you use, planning with your child is an important step to drawing attention to his/her eyes, and for a successful exam.

4. **Is there anything else you recommend or advise for families?**

This has been a wonderful opportunity to draw attention to the importance of vision care for children with ASD throughout childhood. There is so much to consider, but I hope that the information shared will serve as a helpful introduction. Before closing, I’d like to draw attention to the need for us all to focus on eye safety, to offer information on the vision loss rehabilitation professionals who work with children in schools, and to provide a list of resources for children with ASD who have vision impairment, legal blindness or deaf-blindness.

Vision Care / Autism Consortium Summer eNewsletter 2013
Eye Safety & Sun Protection:
Caring for children’s vision includes focusing on eye safety and sun protection for eyes. Prevent Blindness’ website (embed link http://preventblindness.org/preventing-eye-injuries ) covers all bases with information to Protect Your Child from Eye Injuries, including at home, at play, during sports and from the sun. Prevent Blindness also offers resources on First Aid for Eye Emergencies.

Teacher of the Vision Impaired & Orientation & Mobility Specialist:
Teachers of the Vision Impaired (TVI) (embed http://www.familyconnect.org/parentsite.asp?SectionID=72&TopicID=345&DocumentID=3947 and Certified Orientation & Mobility Specialist (COMS) (embed http://www.visionaware.org/section.aspx?FolderID=8&SectionID=115&TopicID=515 ) are professionals who work in the school system with children who have vision impairment, including challenges with visual perception, legal blindness or deaf-blindness. For additional information, please contact your state department for education or disability services.

Thank you so very, very much for this wonderful opportunity to draw attention to children’s vision and eye care needs.

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References:
5. J of Neuroscience 2013 April 33(16);6776-6781