See Jane See! Key Considerations for Healthy Vision in Young Children

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Today’s Objectives

Common vision problems in young children
Five key vision milestones for the first year of life
Vision screenings, eye exams, importance of follow-up
Three ways to prepare a CSHNC for an eye exam
How to make follow-up to eye care easier for Head Start families

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Healthy vision in children contributes to:

- Healthy development
- Ability to learn
- Child’s self esteem and confidence
- Athletic ability
- Improved behavior

Parents are the key to a successful outcome for children’s vision!

Information for parents from parents:

- Information in today’s presentation is based on the outcome of a Head Start parent focus group held at the 2013 NHSA Parent Engagement Conference
  - Information every parent should know about children’s vision and eye health;
  - Signs that could indicate a vision problem;
  - Actions parents should take if they think their children have a vision problem;
  - Support parents need if their child has a vision problem;
  - Challenges parents face in learning about children’s vision and eye health; and
  - Methods that are best for educating parents

6 Topics

1. Overview of vision and eye health problems and impact of vision problems on learning
2. Vision screening, including 5 key vision developmental milestones in the first year of life
3. Vision screening, eye exam, importance of following up on referrals, and next steps after referrals
4. Expectations for the eye exam
5. Supporting Parents and follow up to care
6. Wrap-up and your burning questions
VISION DISORDERS IN YOUNG CHILDREN

Up to 1 in _____ preschool-aged children is estimated to have a vision problem that can interfere with:

- Literacy
- Social development,
- Education

Uncorrected Refractive Errors . . .

- Hyperopia (farsightedness)
  - Difficulty seeing objects up close
- Myopia (nearsightedness)
  - Difficulty seeing objects far away
- Astigmatism (misshaped cornea)
  - Blurry both near and far
- Anisometropia (difference between 2 eyes)

Strabismus

- Misaligned eyes

- Uncorrected refractive errors and strabismus can lead to amblyopia
Importance of Detecting Amblyopia Early

Prevent permanent vision impairment.

Prepare children for Kindergarten and learning.

Impact on Learning

- MULTISTATE LEVEL – 2015 Vision in Preschoolers – Hyperopia in Preschoolers Study (VIP-HIP) found:
  - Children ages 4 and 5 years with uncorrected hyperopia (farsightedness) scored significantly worse on a test of early literacy than children with normal vision.

- Test = TOPEL (Test of Preschool Early Literacy)

- Performance most affected:
  - Print knowledge subtest, which assesses the ability to identify letters and written words

• “These differences are meaningful because formal learning for many children begins in the preschool years,” said Marjean Taylor Kulp, O.D., M.S., distinguished professor in the College of Optometry at Ohio State University and lead author of the study.

• “In addition, other research exploring the long-term effect of early deficits in literacy has shown them to be associated with future problems in learning to read and write. This makes early detection of these problems important.”

• Children with reading difficulty at the end of 1st grade shown to have 88% chance of remaining poor readers at the end of 4th grade.


Impact on Learning

• **SINGLE SCHOOL DISTRICT LEVEL** - 2015 study of low-income children ages 3 through 5 years screened in South Carolina’s Charleston County School District – after diagnosis and treatment with prescription glasses – found:
  - Improvement in academic progress.
  - Increase in focus during lessons.
  - Increase in participation and classroom interaction.
  - Improvement in confidence and behavior.


3 Ways to Screen Vision

• Three vision screening approaches, depending on child’s age:
  1. Developmental questions in Year 1
  2. Devices beginning at 12 to 18 months (Instrument-Based Screening)
  3. Tests of visual acuity beginning at age 3 or 4 years (Optotype-Based Screening)

• Instruments measure reduced vision or amblyopia risk factors in eyes:
  - Significant refractive error
  - Anisometropia
  - Eye misalignment
  - Cataract

• Eye charts measure visual acuity at brain level
  - Provide info about refractive error
5 Key Vision Milestones in Year 1

1. Vision milestone at age 6 to no later than 8 weeks
   • **Eye contact when initiated by parent**
     a. Does the infant have good eye contact with parents?

2. Vision milestone in 3rd month
   • **Enjoyable communication with social smile**
     a. When the parent smiles at the infant, does the infant respond with a smile?
• A social smile means the brain is maturing, the infant can see short distances, and the infant is making sense of an object.

• A social smile boosts bonding and is one of the cornerstones of communication between infant and parent.

• If social smile is delayed, the infant should receive an eye exam to assess refraction and accommodation.

• Case history should be assessed for the time immediately before and after birth to look for traumatic experiences that could have affected early development.

• Early intervention, with support for communication, should be started immediately.

3. Vision milestone at age 3 to 4 months

• Awareness of and exploration of hands
  a. Does the infant watch her hands?
  b. Does the infant bring his hands to midline and to his mouth?
  c. Does the infant hit toys hanging above her?
• Awareness of hands leads to exploring the hands with the mouth, which leads to using the hands to explore the infant’s world.

• Exploration with hands gives concrete information about abstract objects, including size, form, surface quality, and weight.

• This concrete information will be stored in the infant’s brain to combine with the visual concept of each object.

• If awareness of and using hands is delayed, infants should be helped to explore their hands.

• Early intervention with emphasis of hands and eye-hand coordination, should begin.

4. Vision milestone at age 5 to 6 months:
• Watching and copying goal-directed reach and learning to copy motor functions
  a. Does the infant watch other children playing?
  b. Does the infant reach for and grasp objects?
    1) Does the infant look at the object when reaching?
  c. Are the infant’s eyes straight?
4. Reaching for a desired object leads to goal-directed behavior and shows desire, interest, and curiosity – critical elements for learning.

- If the infant is not reaching for objects, maybe the infant cannot see the objects.
- If the eyes appear to intermittently turn in or out at age 4 months, the infant should have an eye exam.

5. Vision milestone at age 7 to 10 months

- Recognition of family faces
  a. Does the infant recognize family members and have a welcoming smile before hearing their voice or seeing their smile?
  b. Does the infant recognize difference between familiar faces at home and visiting strangers?
  c. Does the infant recognize family members outside the home among groups of people?

- If milestone for watching other children’s and adults hand-arm movement is delayed, you want to know how well the infant sees movement.
- Infant should have eye exam to look at all parts of the visual system.
- Early intervention should begin.
• If the infant does not recognize faces and does not look at, or into the eyes, of the parent, but focuses instead on the parent’s hair or jewelry, the infant may be incorrectly diagnosed as being on the autism spectrum.

• The infant should be referred for a neurological assessment.

• Family members should use something specific in clothing (i.e., same pin on top), or hair (i.e., same hair cut), and their voice (i.e., same phrase) to help the infant recognize them.

Instrument-Based Screening

Welch Allyn
SureSight® Vision Screener - Version 2.25
• Discontinued 1.1.16
• Will provide Technical Phone, Repair / Service and Calibration support activities on the product for 5 years or until parts are no longer available.

Welch Allyn Spot™ Vision Screener

Instrument-Based Screening

• Use beginning at 12 months; better success at 18 months (AAP)

• Use instruments OR tests of visual acuity for children 3 through 5 years (NCCVEH and AAP)


Instrument-Based Screening

- If use instruments, have test of visual acuity as back-up.
- Why? If device has 90% "capture rate", how screen 10%?

"Not so great" charts . . .

Why "not to great"? Do not meet national/international guidelines for standardized tests of visual acuity.

- Line outside optotypes
- 20/32 vs. 20/30
- 10 feet vs. 20 feet
NOT Recommended by NCCVEH and/or AAP

Single, Surrounded Optotypes

NCCVEH national guidelines call for using single, LEA SYMBOLS® or HOTV letter optotypes surrounded with crowding bars for children ages 3 through 5 years at 5 feet.

OPTIONS: 10-FOOT SCREENING

LEA SYMBOLS® • HOTV
Unacceptable Occluders Ages 3 Through 5 Years

- Hand
- Tissue
- Paper or plastic cup
- Cover paddle

Why unacceptable?
Children can easily peek


Occluders – Younger Children <10 Years

Fun Frames
Sunflowers

Key Message
- Vision screening is designed to find children who require an eye exam.
- Participate in vision screening with appropriate, evidence-based tools.
- If a child does not pass vision screening, make AND attend eye exam appointment with an eye doctor who is comfortable with young children.
- Remember . . . children may not behave like they have vision problems.
- An untreated vision problem can lead to permanent vision impairment.
- Only an eye doctor can confirm that the child has a vision problem.
- If the eye doctor suggests treatment, such as glasses, follow the treatment plan.
The Impact of Healthy Vision for Children AND Parents

https://www.youtube.com/watch?v=Z25vSPjCffQ&feature=youtu.be

Act on Concerns....

Children generally do not complain about problems with their vision, but sometimes adults (parents and teachers) can take preventive actions.

What teachers can do:
Watch the child while at play, and while looking at books, pets or other people. If something does not seem right or look right, the child should be seen by an eye doctor.

If a child is not performing at expected levels developmentally or academically, suggest that the child be referred to an eye care provider.

Vision problems can impair learning and lead to behavior problems. Make sure that vision issues are NOT the cause by having the child complete an eye exam.

Act on Concerns....

Children generally do not complain about problems with their vision, but sometimes adults (parents and teachers) can take preventive actions.

What parents/caregivers can do:
Parents/caregivers- Talk with your child’s doctor about any family history of vision problems (such as “lazy eye”, a “crossed eye”, use of an eye patch as a child to correct vision, or need for eyeglasses with a strong prescription).

Ask at every well child visit if the child’s eyes and vision have been checked.

Ask for results of the vision screening and make sure you understand what they mean.
Make the Referral Easier....

1. Provide a referral for parents in both a written and verbal format, making sure the parent understands the importance of healthy vision in learning.

2. Set a regular schedule for follow-up on the referral to ensure that parents have connected to an eye care provider.

3. Provide resources that cover the expense of an eye exam and glasses for families that are concerned with costs.

4. Let parents know that your educational setting will support any treatment that may be needed for improved vision (such as wearing glasses, patching, or supporting low vision needs.)

What happens at an eye exam?

Is my child too young for an eye exam?

Before the exam....

Prepare your child
- Help them understand why they are going (books, stories from siblings, tour)
- Pick an exam day/time that works best for your child (with an OD or MD) that has services in your native language preferably
- Help the child understand what they will be asked to do during the exam

Prepare yourself
- Be sure you know your family history of vision problems and your child’s medical history
- Have the names of other medical conditions your child might have and any medications they are taking
- Have your insurance information ready (if you have vision coverage)
- Bring snacks and some quiet toys for your child that do not require fine vision. Stuffed animals or toy cars are good examples
Helpful tips for parents of children with special health care needs

- Talk with the ECP office BEFORE your visit about your child’s condition and how they can be made comfortable during the exam
- Prepare your child for the exam—watch a video or read a book
- Be alert for environmental triggers that could reduce the chance of a successful exam
- Ask to be the first appointment of the day to reduce the chance of delays
- Bring along a comfort item to help your child remain calm

During the exam....

Tests completed during the exam look for:
- Near vision
- Distance vision
- Binocular (two eyes) coordination
- Eye movement skills
- Focusing skills
- Peripheral awareness
- Hand-eye coordination

An important point to remember......

Make sure your child’s eye exam includes dilating eye drops—a procedure called “cycloplegia.”

During the exam....

What the eye doctor will do:
- Eye exams for infants (children younger than 3 years old) usually include:
  - Excessive or unequal amounts of refractive error
  - Tests of pupil responses
  - Ability to “fixate” and follow
  - Preferential looking
  - Eye health problems
- Eye exams for preschool age children (3 through 5 years old) usually include:
  - Visual acuity measured with shape-based optotypes (LEA Symbols)
  - Retinoscopy
  - Test of stereoscopic (depth perception)
  - Test of eye alignment maintenance (convergence)
  - Focusing ability
  - Color vision
  - Assess the eye’s interior and exterior health
After the exam....

Don't leave empty handed!

- 2 copies of the exam results; one for you and another for your child’s school/Head Start program
- Ask for a copy of your child’s prescription
- If your child is diagnosed with a vision issue, ask for educational material written in your native language
- Ask the eye care provider to share the exam results with your child’s primary care provider
- Seek out programs that can assist families without insurance coverage for eyeglasses for their child
- Adhere to any treatment that is prescribed for your child—THIS IS A CRITICAL PERIOD!

Yo no hablo “eye exam”!

There are a lot of reasons that parents may not follow up on a referral from a vision screening. Head Start programs and other parents can help!

Create Peer Support Systems

- Head Start Health Advisory Committees and Parent Support Networks can be engaged to improve follow up to eye care:
  - Parent-to-parent
    - I did this...
    - You can try this...
    - My eye doctor told me this...
  - Personal referrals [of doctors, resources]
  - Personal advocates (for appointments)
  - Provide translations
  - Help parents access or get child to an eye appointment
  - Peer support in treatment adherence
  - Provide educational sessions to other parents and children
  - Set goals for children’s health (incl. eye care) for the HS program and evaluate success
Establish Community Provider Relationships

- Meet area eye care providers and discuss the needs of HS families
- Create a resource listing local providers, hours of operation, insurance accepted, location on bus line, and ages seen (potential project for a parent or college student)
- Invite providers to visit your Head Start program and talk with the children about eyes and vision

Helpful Resources

- NCECHW Vision Fact Sheet
- NCCVEH Family Fact Sheet on Children’s Vision
- Standardized Referral Letters
- Webinars, Fact Sheets, and Printables
- Evidence-based Vision Screening Training
Helpful Resources

- Year of Children’s Vision
  - http://nationalcenter.preventblindness.org/year-childrens-vision
  - Archived vision screening webinars in Resources
- National Center for Children’s Vision & Eye Health
  - http://nationalcenter.preventblindness.org/
Resources

**Free** eBook:
*Navigating the Path of Children’s Vision Screening*

- Screening practices
- Recommended tools
- Proper occlusion
- Guidance from national experts

Available at:

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Thank You!

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http://nationalcenter.preventblindness.org/year-childrens-vision