

Kira Baldonado and P. Kay Nottingham Chaplin, EdD February 19, 2016

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

HANDOUTS FOR THIS PRESENTATION AVAILABLE AT:

NATIONAL CENTER FOR CHILDREN'S VISION AND EYE HEALTH

Website: http://nationalcenter.preventblindness.org/publications-and-presentations

(listed as last bullet point under "Presentations" labeled "2016 Region IV Head Start Association Presentation See Jane See: Key Information for Healthy Vision in Young Children")

YEAR OF CHILDREN'S VISION Website:

http://nationalcenter.preventblindness.org/resources-2

(listed as the first item under "Conferences and Presentations" labeled as "2016 Region IV Head Start Association Presentation See Jane See: Key Information for Healthy Vision in Young Children")



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 Director - National Center for Children's Vision and Eye Health at Prevent Blindness



Dr. P. Kay Nottingham Chaplin (Doctorate of Education):

- Former Director/Lead Trainer Vision Initiative for Children – WVU Eye Institute
- Current Director Vision and Eye Health Initiatives at Good-Lite and School Health Corporation
- Member Expert Advisory Committee to the National Center for Children's Vision and Eye Health at Prevent Blindness







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



5 Topics

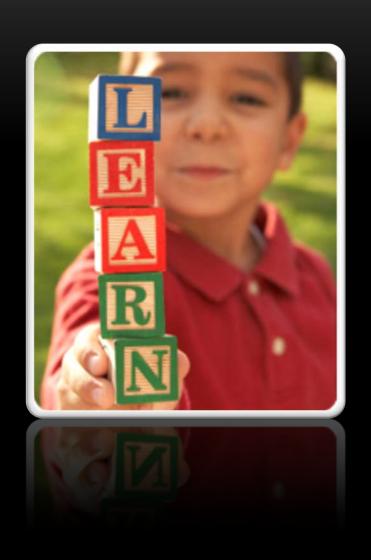
- 1. Overview of vision and eye health problems and impact of vision problems on learning
- 2. Vision screening, including 5 key vision developmental milestones in the first year of life

- 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

VISION DISORDERS IN YOUNG CHILDREN

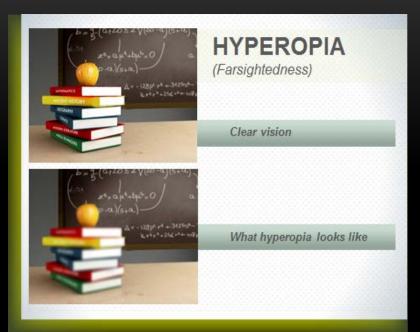
1 in 20 = Number of preschool-aged children estimated to have a vision problem that can interfere with:

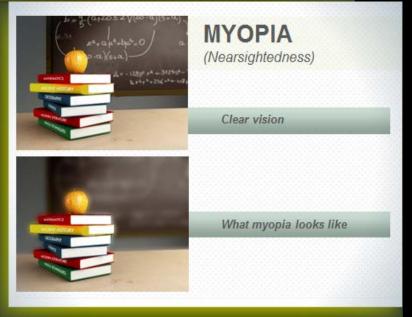
- Literacy
- Social development, and
- Education



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

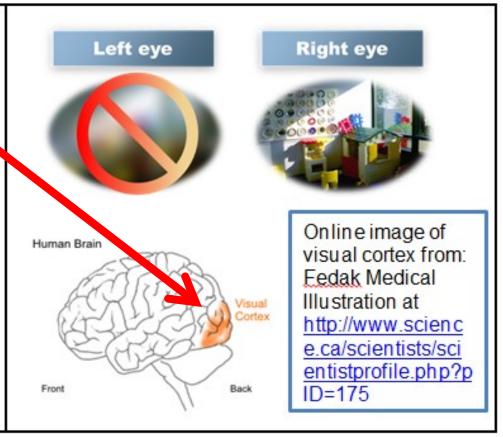
- Misaligned eyes
- Uncorrected refractive errors and strabismus can lead to amblyopia





Amblyopia am-blee-OHpee-ah

A loss of vision at the brain level in one or both eyes when nerve cells in the visual cortex of the brain receive insufficient visual stimulation from the eyes while the sense of sight is developing; primary causes strabismus, cataract, and refractive errors.



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

Kulp, M. T., Ciner, E., Maguire, M., Moore, B., Pentimonti, J., Pistilli, M., Cyert, L., Candy, R., Quinn, G., & Ying, G. for The VIP-HIP Study Group. (in press). Uncorrected hyperopia and preschool early literacy: Results of the Vision In Preschoolers – Hyperopia In Preschoolers (VIP-HIP) Study. *Ophthalmology.* Retrieved from http://www.aaojournal.org/article/S0161-6420(15)01412-8/abstract

- "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.



Peterseim, M. M., Papa, C. E., Parades, C., Davidson, J., Sturges, A., Oslin, C., Merritt, I., & Morrison, M. (2015). Combining automated vision screening with on-site examinations in 23 schools: ReFocus on Children Program 2012 to 2013. *Journal of Pediatric Ophthalmology & Strabismus, 52*(1), 20-24.

3 Ways to Screen Vision

- Three vision screening approaches, depending on child's age:
 - Developmental questions in Year 1
 - 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



- Age 6 to no later than 8
 weeks: Eye contact when
 initiated by parent
- 2. Age 3 months: *Enjoyable* communication with social smile
- 3. Age 3 to 4 months: Awareness of and exploration of hands
- 4. Age 5 to 6 months: Watching and copying goal-directed reach and learning to copy motor functions
- 5. Age 7-10 months: Recognition of family faces

Missing any of these milestones = referral for an eye exam and early intervention!

Instrument-Based Screening



Welch Allyn SureSight® Vision Screener - Version 2.25

- <u>Discontinued 1.1.16</u>
- Will provide Technical Phone, Repair / Service and Calibration support activities on the product for 5 years or until parts are no longer available.



Plusoptix



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)

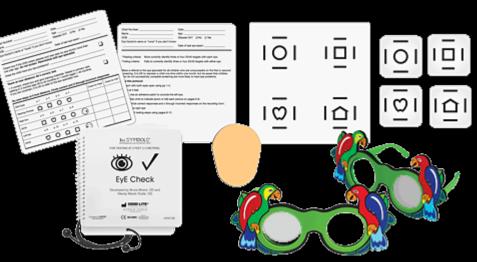
Donahue, S. P., Baker, C. N., American Academy of Pediatrics, Committee on Practice and Ambulatory Medicine, Section on Ophthalmology, American Association of Certified Orthoptists, American Association for Pediatric Ophthalmology and Strabismus, and American Academy of Ophthalmology (2016). Procedures for the evaluation of the visual system by pediatricians. *Pediatrics, 137*(1), 1-9. Retrieved from http://pediatrics.aappublications.org/content/137/1/1.52

Cotter, S. A., Cyert, L. A., Miller, J. M., & Quinn, G. E. for the National Expert Panel to the National Center for Children's Vision and Eye Health. (2015). Vision screening for children 36 to <72 months: Recommended Practices. *Optometry and Vision Science, 92*(1), 6-16. Retrieved from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4274336/

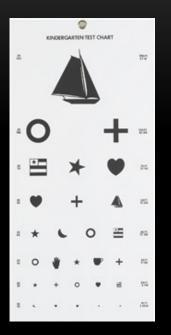
Instrument-Based Screening

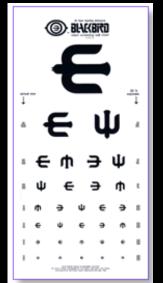
- If use instruments, have test of visual acuity as back-up.
 - Why? If device has 90% "capture rate", how screen 10%?

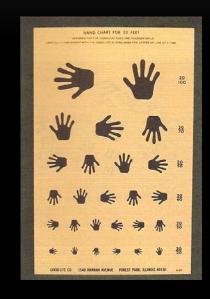




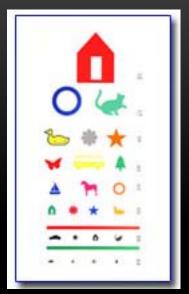
"Not so great" charts . . .

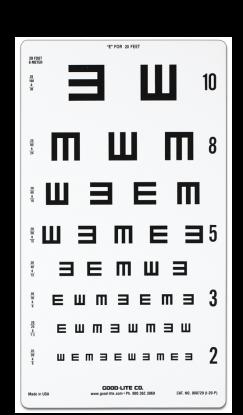


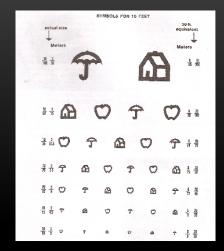


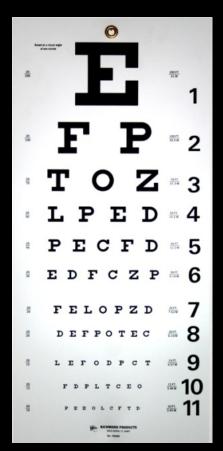








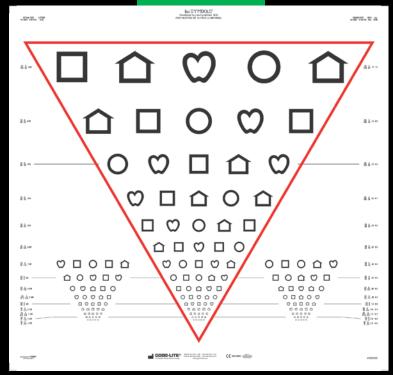




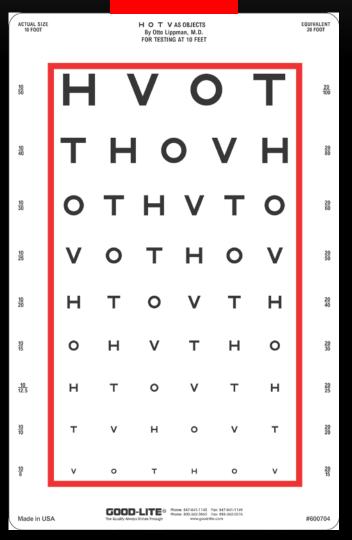
Why "not to great"? Do not meet national/international guidelines for standardized tests of visual acuity.

- Line outside optotypes
- 20/32 vs. 20/30
- 10 feet vs. 20 feet









Why Not So Great?

- Children may not know their letters.
- Some optotypes require discrimination of direction, which is not sufficiently developed in preschool-aged children.
- Not well validated in the screening environment.

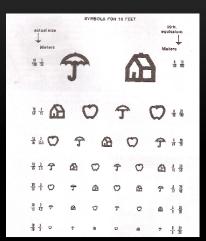
NOT Recommended by NCCVEH and/or AAP



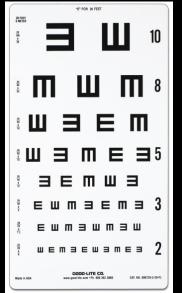
"Sailboat"



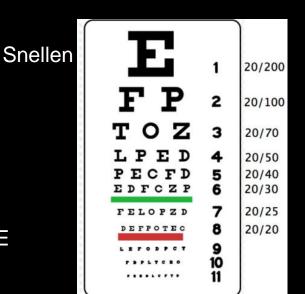
Allen Pictures



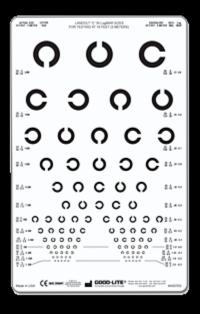
Lighthouse or "House, Apple, Umbrella"



Tumbling E



Landolt C



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.

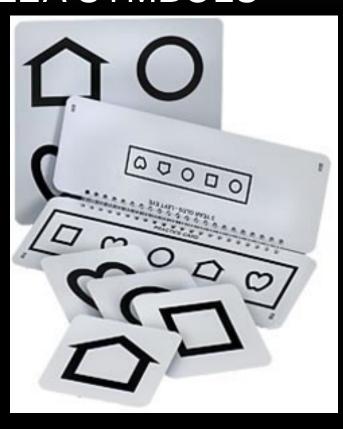




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OPTIONS: 10-FOOT SCREENING

LEA SYMBOLS®



HOTV



Occlusion:

Children likely to peek when given responsibility for their own occlusion.

Unacceptable Occluders Ages 3 Through 5 Years

Hand

Why unacceptable?

• Tissue

 Children can easily peek

Paper or plastic cup

Cover paddle

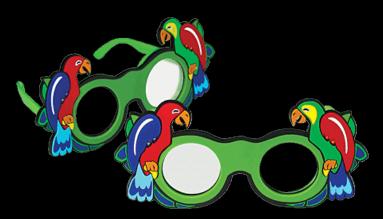
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Occluders – Younger Children <10 Years





Fun Frames



Sunflowers



Occluders – Aged 10 Years and Older





Key Message

- Vision screening is designed to find children who require an eye exam.
- Participate in vision screening with appropriate, evidencebased 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



"David" did not pass his Kindergarten vision screening.

When his mother asked why he did not tell her he had problems seeing, he responded. "I didn't know."

Parent, WV



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....

- 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.
- 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?

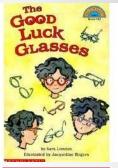
Before the exam....

Prepare your child

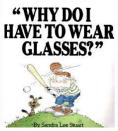
- Help them understand why they are going (books, stories from siblings, tour)
- Pick an exam day/time that works best for <u>your child</u> (with an OD or MD) that has services in your native language preferably
- Help the child understand what they will be asked to do during the exam

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
- Ask to complete and submit any paperwork ahead of the exam to reduce wait time
- Ask to be the first appointment of the day to reduce the chance of delays

- 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
- 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
- o Eye movement skills
- o Focusing skills
- o 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 stereoacuity (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 <u>and</u> 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!



Easy to understand text









Create Peer Support Systems

- Head Start Health Advisory Committees and Parent Support Networks can be engaged to improve follow up to eye care:
 - o 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
 - o 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

Vision Screening: THE NATIONAL CENTER ON Health A Fact Sheet for Early **Care and Education Programs**

hildren use all their senses to learn. Children's play with puzzles, crayons, balls, and blocks can improve important visual skills. These skills contribute to a child's school readiness. An uncorrected vision problem can be a barrier to this readiness.

Timely vision screening (coupled with an eye examination when indicated) is an important step toward early detection of any possible vision problems. Early detection can also lead to effective intervention and restore proper vision. Head Start and Early Head Start programs, in collaboration with parents,2 are requ perform or obtain the results of a child's vision screening within 45 calendar days of the child's entry into the program (30 days for programs of shorter duration).3 Health managers may begin by looking at a

child's most recent physical for the date and results of a child's vision screening. Many programs also choose to do their own vision screening. Reasons may include: The child was uncooperative for an earlier

- screening; The results of the child's screening are
- unavailable; A family or staff member reports a concern about the child's vision;
- The Health Services Advisory Committee recommends universal vision screening.

any time, such as before or within the first few weeks of a new program year when man children are entering at once. Trained staff or volunteers can perform vision screening. Programs can contact <u>Prevent Blindness</u>, which has a vision screening certification training program. The training is available from Prevent Blindness and its affiliates. Other qualified community groups can also conduct ageappropriate, evidence-based vision screening Some programs have worked with voluntary community groups such as:

- Lions Club
- · State or community organizations Medical schools or ophthalmology training programs

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Read Start National Center on Health Tall-free phone: 888-227-5125 E-mail: NO brito-Qua

Referral for an Eye Examination

refer children for an eye exam when they do not pass vision screening or are at risk of a vision problem because of a referral to an eye doctor for a comprehensive eye exam

You are receiving this document because your child <u>First, MJ, Last</u> had his/he vision screened or should have an eye exam because of a medical or developmental risk for a vision problem and needs a complete eye exam with an eye doctor (an optometrist or an ophthalmologist.) It is important to schedule stment. If the eye doctor finds a vision problem, early treatm

- Complete the Consent and Release of Information block below AND the top part of the back of this page
- ☐ Take this paper with you to the eye exam and give the form to your eye do ☐ Ask the eye doctor to send exam results to us and discuss the eye exam results with us, if necessary

help cover all or part of eye care expenses for children. Let us know if you want information about these program.

(Referring primary care provider, school nurse, Head Start staff, Other,)

Practice/Office/School/Agency name and address

Consent and Release of Information

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- American Academy of Ophthalmology: www.aao.org/find_eyemd.cfm
- American Optometric Association: www.aoa.org
 Centers for Medicare and Medicaid Services: www.medicare.gov/physician.compare
 American Association for Pediatric Ophthalmology and Strabismus: www.aaoa.org
- All About Vision: www.allaboutvision.com/eye-doctor
 College of Optometrists in Vision Development: www.covd.org

VISION SCREENING IS KEY TO HEALTHY DEVELOPMENT!



Eye health is important for people at all ages, but particularly for children. Children use their vision to learn about their world. It is important that your child's eyes are checked during well baby and well child visits to make sure they are healthy.

Not all vision problems can be seen Children who have a problem may not realize it or be able to describe a problem with their is on the able to describe a problem with the sight. Regular eye screenings will help find possible problems.

Work with your medical home to keep your child's eyes healthy!

WHAT IS A "MEDICAL HOME?"

A MEDICAL HOME is the kind of primary health care we all want and deserve. A MEDICAL HOME is not a place—it is the way care is provided to your child/youth

At the core of a MEDICAL HOME is a knowledgeable, helpful health care health needs. The health care provider coordinates your care with specialists fother providers such as eye doctors and home health care, and community

The MEDICAL HOME also creates in central, trusted location where all of your child's medical history is collected

Prevent Blindness

211 West Wacker Drive Suite 1700 Chicago, Illinois 60606

800 331 2020

exe Pates

Eye Patch Choices

Prevent Blindness does not endorse or promote specific proment on the appropriateness of these patches for any given use. This lis

www.nexcare.com/wps/portal/3M

Coverlet® Eye Occlusor en_US/NANexcare/Nexcare/Product Cat/7N=3294631529+4326+3294529207 8rt=rud

Krafty Eye Patches™ SavCo Optical Inc. 9030 Kenamar Road #316 San Diego, California 92130 Phone: 858.537.0947

sales@kraftyeyepatches.com www.KraftyEyePatches.com Nexcare Opticlude Orthoptil Eye Patch 3M Health Care 3M Center, Building 275-5W-05 St. Paul, Minnesota 55144 Phone: 800.537.2191

NON-ADHESIVE PATCHES

Several alternatives to adhesive patches are available. Many of these are made by small businesses, some of which were started by parents of childre with amblyopia. Some are cloth patches for wearing over the eye, while

Sight Connection 9709 Third Avenue, NE, #100 Seattle, Washington 98115-2027 www.sightconnection.com

thers are eyeglass lens occluders

www.anissasfunpatches.com

DrPatch Phone: 855.37.2824 E-mail: info@drpatch.ca http://drpatch.ca/



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RESOURCES:

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



Resources

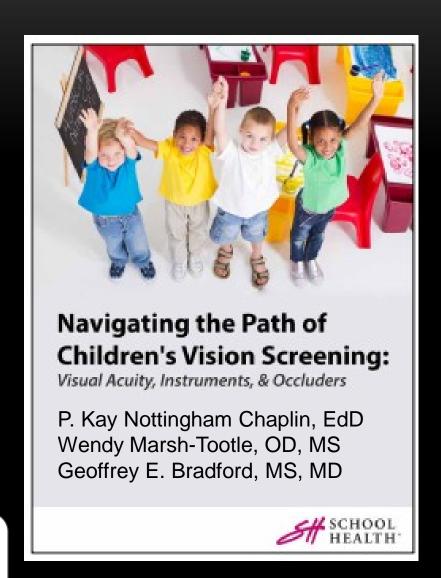
Free eBook:

Navigating the Path of Children's Vision Screening

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

Available at:

https://www.schoolhealth.com/media/pdf/ NavigatingVisionScreening.pdf



Thank You!

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Twitter - @VisionScreener

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



