

Significance of Vision Problems in the School-age Child

Vision screening programs in public schools is a means of detecting possible problems with a student's vision or eye health. It has been estimated that 80 percent of children do not have a vision exam prior to preschool. School failure and negative life outcomes may result from undetected vision problems. It is estimated that one in 20 preschool children ages 3 to 5 has a vision defect severe enough to require professional attention. Additionally, one in four children of school age has a vision problem. The incidence factor increases to almost one in three by 12th grade. About one in 500 school children may be disadvantaged in his/her schoolwork because of a vision defect that will correct to not better than 20/70 and about one in 800 children under age 20 is blind.

National Association to Prevent Blindness, Web site @ www.preventblindness.org.

Qualifications and Training for Vision Screening Volunteers

All persons assisting with a vision screening program should be knowledgeable of all facets of the program, such as training requirements, screening methods, standards, referral policies and procedures.

Individuals who perform vision screenings must be certified annually by the Department of Human Resources or an authorized representative which may be a Registered Professional Nurse. A list of authorized representatives and certified screeners should be submitted annually to the State Child Health Program, Director of School Health Unit, Two Peachtree Street, NW, Room 11293, Atlanta, Ga. 30303-3142, 404-657-6359.

In order to qualify for certification, full time attendance of an annual training course and/ or satisfactory evidence of the knowledge and skills required to provide screening services is required.

It is recommended that vision screening be carried out a minimum of five times during a child's academic career as follows:

1. Kindergarten or first grade
2. Third grade
3. Fifth or sixth grade
4. Eighth or ninth grade
5. 10th or 12th grade

Minimum vision screening should include tests for distance acuity, hyperopia (Plus Lens), muscle balance or the ability of the two eyes to work together, eye health and color deficiency testing (once during school career).

Georgia law requires any student attending a Georgia public school for the first time regardless of age have a Form 3300 on file which includes vision screening. Parents are given 120 days to comply with this rule. Out-of-state forms are acceptable if dated within the past 12 months of the enrollment date in a Georgia public school.

IF THE STUDENT FAILS THE SCREENING, HE/SHE SHOULD BE RESCREENED WITHIN TWO WEEKS. IF THE STUDENT FAILS AGAIN, SEND A LETTER HOME TO THE PARENT REQUESTING FOLLOW-UP. IF ONLY THE EYE HEALTH PORTION OF THE SCREENING IS FAILED, SEND IMMEDIATE NOTIFICATION.

IF NO REPLY FROM THE PARENT WITHIN AN ESTABLISHED WAITING PERIOD, IT IS SUGGESTED A SECOND FOLLOW-UP LETTER BE SENT.

Authorization for vision screening

Parent permission is not required for mass school screening. However, it is suggested that parents be notified of upcoming screenings via school newsletter, school marquis, etc. Permission is required for individual students who are referred for screening.

Signs and Symptoms of Eye or Visual Problems That Teachers, Parents or Screeners May Notice

Observations of the child's actions

- Does he frown, blink, scowl or squint?
- Does he skip words, or lines, or lose his place when reading?
- Does he rub his eyes a lot when reading or working?
- Does he hold a book or object too close or too far from his eyes? (greater or less than 14 inches)
- Does he cover or shut one eye or tilt head to one side when looking at something?
- Is he tired after using his eyes for an extended time?
- Does he stumble or trip over small objects?
- Does he do poorly at games requiring distant vision?
- Does light hurt his eyes?
- Can he tell the difference in colors?
- Is his head thrust forward or body tense when viewing distant objects?
- Is he inattentive during reading?
- Does he read more poorly as the time span increases?
- Does he confuse letters and numbers with a similar shape?

How do his eyes look?

- Are his eyes crossed, turned, or wandering when he tries to focus?
- Are the lids crusted, red-rimmed, swollen or droopy?
- Does he have sties?
- Does he have unusual discharge from the eyes?
- Are his eyes watery or sore looking?
- Are the eyes or the pupils different in size or shape?
- Do the eyes involuntarily move constantly?

Does he complain that ___?

- He has headaches, nausea, is dizzy and tired after close work?
- He cannot see well?
- His eyes itch, burn, feel scratchy or ache?
- He cannot clearly see the blackboard?
- Letters are blurred?
- He sees two of everything?
- Lines of words or letters “run together” or “jump”?
- He cannot see the blackboard or television except when sitting close?

Using Snellen Wall Chart To Test Visual Acuity

Selecting the Site

A quiet area, free from distractions and student/staff traffic, should be selected for the screening. Because of school space constraints, it is recommended that a 10-foot Snellen chart is used. The area selected should be large enough to allow a 10-foot lane with no obstruction, between the child and the chart. For 20-foot Snellen charts, the distance must be adjusted to 20 feet. Care should be taken to avoid an area with inadequate light or an area where light from a window or other source causes glare or shadows.

Equipment

- ___ 10- or 20-foot Snellen chart*
(E or letters as appropriate.)
- ___ Two cover cards of solid cardboard to cover sections of chart in use.
- ___ Two window cards with centered hole to show one symbol at a time.
- ___ Masking tape for marking 10- or 20-foot distance on floor and for putting chart on the wall.
- ___ Pointer (pencil).
- ___ Paper clips.
- ___ Occluders - one per child (construction paper "fish" or "pirate patches" for young children, and small cups or 3x5 file cards for older children.) Student may use their "cupped" hand.
- ___ Plain brown paper or "butcher" paper to tape behind wall chart, if necessary, in order to provide uncluttered background.
- ___ Footprints or "Magic feet" to affix to floor with heels on 10-foot (or 20-foot) line. This is helpful in keeping young children in proper position. (A nine inch square of floor tile with footprints outlined on it makes durable "Magic feet.")
- ___ Chair for chart person.
- ___ Table and chair for recorder.
- ___ Chairs for screener and child, if child is to be screened while seated.
- ___ Registration forms.
- ___ Large "E" for training (for young children) if desired.
- ___ Clip board.

*The Snellen chart needs to be ordered as soon as possible from:

Prevent Blindness Georgia
455 East Paces Ferry Road Suite 222
Atlanta, Ga. 30305
(404)266-0071

The cost is \$11 item #PB21 (10 ft. chart) or #PB20 (20 ft. chart) plus \$3.95 for shipping and handling for orders < \$25.

Snellen Procedure

1. Make sure the child understands that he must say which way the letter E points, or what the alphabet letter is. A class or small group from kindergarten or first grade can be taught together how to complete the screening, earlier on that day.
2. Place the child at the measured 10- or 20-foot line (depending on which chart you are using). His heels should be on the line. Footprints placed on the floor may be helpful and save time. Ideally, one screener should stay with the child, and one should go to the eye chart.
3. If the child wears glasses, ask if they are for reading or for “seeing far away.” If they are for distance, test **with** glasses on. Observe the condition of frames and lenses, and record any problems.
4. Test both eyes, then the right eye, then the left eye.
5. The young child should be instructed to point with his hand in the direction the “legs” of the E point. Older children may state the direction, and point.
6. When occluding one eye, the occluder (cup, 3x5 card, paper cutout) should be held to give a cupping effect without putting pressure on the eye, and should be held near the side of the nose to avoid “peeking.” Both eyes should remain open.
7. Use only the line of symbols appropriate for the age being screened. (20/40 line for preschoolers, 20/30 for kindergarten-12). If children are having trouble with that line, move up a line or two, to make sure they understand what you are asking them to do, and give them a success.
8. **To pass, a child must read correctly, with each eye, one more than half the symbols on the line specified for his age group, and show no evidence of eye problems. If a child has obvious physical eye symptoms, he should be referred immediately for further medical evaluation.**
9. Discontinue screening when a child fails, with either eye, to read correctly more than half the line of symbols specified for his age group.
10. A failing score for the first screening is inconclusive. Do not tell the child he failed the test. If he asks, tell him, (“We will let you know later.”)
11. Record the score in the appropriate column of the worksheet, using “P” for pass and “F” for fail.
12. The Plus Lens Test is used to screen for farsightedness, and should be performed only on those children who pass the distance acuity test. If he wears glasses for reading, he should be tested with them on. With the child in the same position, hold the +1.75 lens before the unaided eye. If the child can read 20/30 or better through this lens with either eye, referral for further evaluation is in order. A “pass” is recorded if vision is blurred with the plus lens.
13. Rescreening should be done on all children who fail the first screening, except those who have already been referred for physical problems. The second screening should again be done in optimal room conditions. Begin with large symbols this time to help the child gain confidence. Move down the chart to the smallest symbols he can read correctly. With one eye occluded the line at which more than half the line can be read correctly is accepted as the child’s acuity score in the tested eye. Test both eyes.
14. Record visual acuity for each eye as a fraction. A notice to parents is sent advising further professional evaluation when a child does not meet passing standards.

Responsibilities of Volunteers:

The “occluder person” has the job of insuring that:

- The student’s heels are placed on the line
- Both eyes are open at all times during the screening
- The occluder is properly positioned over the eye (The occluder should be positioned in front of the eye, resting on the side of the nose. At no time should pressure be placed on the occluded eye as this would cause the student to have blurred vision when that eye is tested.)
- The student being tested gives the correct response to the letter E symbol that the other tester is pointing to
- The results of the screening are recorded

The pointer person has to insure that:

- They point to random symbols on the vision chart with a dark pointer
- The student is looking at the chart being tested and that both eyes are opened at all times during the testing.

Screening Procedures for Titmus Vision Testing

One volunteer is used to administer the screening.

I. Equipment needed

Titmus Vision Tester

Titmus slides

Plus Lens unit

Tissue pads

Pointer

Titmus recording form.

Clip board

Roster form

II. Before the screening

- A. **Read over the instructions contained in the testing section of this guide.**
- B. Have teachers practice with pre-K, kindergarten, and 1st graders with “E” training cards prior to screening date.
- C. Insure that the machine is in proper working order and the slides are clean and in the proper order.
- D. If you do not have a Titmus instruction manual, please call 1-800-523-8583.
- E. For further information on vision screening, contact Public Health, Division of Hearing and Vision Conservation, 404-657-6359.

III. Responsibilities of screener

- A. The screener has the job of insuring that:
 - 1. The student is seated comfortably with her/her forehead positioned firmly against the forehead rest.
 - 2. Both eyes are open at all times during the screening.
 - 3. The results of the screening are recorded as pass or fail for the right, left, and both eyes.

IV. Procedures for Administering the vision screening

- A. If glasses are worn for distance, testing should be administered while wearing the glasses.
- B. If the student fails the distance screening with the glasses, the student should remove the glasses and be retested. If the students does better without the glasses, the glasses may be for reading and not for distance. Replace the glasses for near vision testing.
- C. The only situation in which a student will pass the screening is if he/she passes the:
 - 1. 20/30 line slide right eye, left eye, and both eyes.
 - 2. Far and near point muscle balance tests.
 - 3. Excessive farsightedness test.
 - 4. 20/30 line slide right eye, left eye, and both eyes for near acuity. (9th through 12th graders only)

NOTE: Failure of the color perception test is not a reason for referral. However the classroom teachers and parents should be informed of this result. Approximately eight percent of boys and one percent of girls have some form of color deficiency.

- D. Eye Health--Fail any child if you notice:
- Crusting on eyelids/lashes
 - Excessively red eyes or eyelids
 - Styes
 - Eye discharges
 - An eye that turns in or out while the opposite eye looks straight ahead.

IF THE STUDENT FAILS THE SCREENING, HE/SHE SHOULD BE RESCREENED WITHIN TWO WEEKS. IF THE STUDENT FAILS AGAIN, SEND A LETTER HOME TO THE PARENT REQUESTING FOLLOW-UP. IF ONLY THE EYE HEALTH PART OF THE SCREENING IS FAILED, SEND IMMEDIATE NOTIFICATION TO PARENTS. PLAN TO RESCREEN THE CHILD IF THIS IS NOT DONE BY HIS HEALTH CARE PROVIDER.

IF THERE IS NO REPLY FROM THE PARENT WITHIN AN ESTABLISHED WAITING PERIOD, A SECOND FOLLOW-UP LETTER SHOULD BE SENT.

- V. After the initial screening:
- A. All students who failed the first screening should be rescreened in two weeks.
 - B. Recording forms and a copy of the parent notification letter(s) should be kept on file.
 - C. All students in pre-K, kindergarten, and new to Georgia schools must have a certificate of Eye, Ear, and Dental examination (DHR Form 3300). Volunteers may fill out the section on vision screening if these students are screened at school.
- VI. Authorization for vision screening
Parent permission is not required for mass school vision screening. However, it is suggested that parents be notified of upcoming screenings via school newsletter, school marquee, etc. Permission is required for individual students who are referred for screening.

REMEMBER: IT IS VERY IMPORTANT THAT YOU DO NOT DISCUSS THE IMPLICATIONS OF THE RESULTS WITH THE STUDENTS, PARENTS OR TEACHERS.

SUGGESTED GRADES TO BE SCREENED:

Elementary: (Grades 1, 3, 5)
Middle School: (Grade 7)
High School: (Grade 10)

Hearing Screening Procedures

Public health recommendations state children should have hearing screenings every two years until third grade and a minimum of three year intervals after third grade. High risk children should be screened annually.

High risk children are those who:

- repeat a grade
- require special education
- are new to a school system
- were absent during a previously scheduled screening
- failed a screening test during the previous year
- have speech problems/language problems/or obvious difficulty in communication
- are suspected of hearing impairment
- have a medical problem associated with hearing impairment. (i.e. frequent colds, upper respiratory infections, allergies, severe viral infections, etc.)
- are in coursework (band, woodworking, auto mechanics) which places them at risk for noise exposure
- children who seem inattentive, and who may appear disruptive, isolated, passive, tense and/or aggressive
- children who have trouble following oral directions
- children who complain of ear pain, fullness, dizziness, or ringing in the ears (tinnitus)

Georgia state law requires DHR Form 3300 to be completed for all children entering a Georgia public school for the first time. This includes a hearing screening. Parents/ guardians have 120 days to comply.

Georgia law requires volunteers attend a training program annually, conducted by either an audiologist or a registered professional nurse.

SB331, passed two years ago, requires training for use of an Aud-X or other oto-acoustic screening device be initially done by a Georgia licensed audiologist. A registered professional nurse may conduct training for this device if initially trained by an audiologist in its use.

Remember: Always encourage the child and offer assurance of a job well done.

Students must pass all tones in both ears to pass the hearing screening. Students who do not pass must be rescreened in two weeks. Contact parents post failure of second screening requesting follow-up with a physician or an audiologist.

Fail any student with draining ears and do not screen. With suspected head lice, have child wear head phones “upside down.”

Screening

1. Choose a quiet room for screening with little or no distractions.
2. Visually inspect ears for any drainage.
3. Explain procedure and response expected (raising hand, etc.).
4. Place earphones on child's head. (Red on right ear; Blue on left ear.)
5. Always screen right ear first.

Do's and Don'ts in Hearing Screening

Do's	Don'ts
<p>Check the audiometer before you start screening. Only use an audiometer which has been calibrated within the past year.</p> <p>Choose the quietest room possible.</p> <p>Prepare the child for the screening.</p> <p>Seat the child so that his face is visible to you, but so that he faces away from you and the audiometer.</p> <p>Start with the right ear. Remember: Red-Right Blue-Left</p> <p>Set attenuator or "hearing loss dial" volume at 25dB. (OK to condition child to hear the sounds by turning up the volume—but they must pass at 25dB.) Sweep along the frequencies: 1000, 2000, 4000, and 500Hz.</p>	<p>Don't look up from the audiometer each time you present the tone.</p> <p>Don't make deliberate and rhythmical movements when testing.</p> <p>Don't let the children play with the audiometer or earphones.</p> <p>Don't talk too much and don't show anxiety when speaking with the child.</p> <p>Don't say, "Do you hear it now?"</p> <p>Don't tell any child they failed. (Remember this is only a screening.)</p>

SCOLIOSIS SCREENING

Scoliosis is a physical condition characterized by an abnormal curvature to the side, of the bony structures of the back. Its cause is unknown. The amount of curvature is measured in degrees after an x-ray, and can vary from mild to severe. It is most often seen in the middle school age group, when rapid growth is occurring. Both girls and boys may be affected. Treatment ranges from observation, to bracing, to corrective surgery in severe cases. After scoliosis is identified or suspected, follow-up is essential to measure the degree of curvature.

Screening for scoliosis is done in school, twice during the middle school years, with parent permission. Every student present will be screened, unless parents refuse by signing and returning a form that will be sent home. Screening consists of examining the student's back with a bathing suit or shorts on. The student will be asked to bend forward while the examiner looks from the front, the back and the side. The screener looks for obvious curves, rib humps, uneven shoulders, waist or hips. Screening is done by PE teachers, volunteers who have been specially trained, clinic personnel, school nurses and school nurse consultants. Students are then referred for secondary screening by health department nurses, cluster/school nurses or other consultants. If a curvature is seen or suspected on the secondary screening, the parents are notified in writing. Further examination should be done by the child's health care provider. Tertiary screening may also be set up by parents, through a state-funded program administered by Children's Healthcare of Atlanta.

Date: _____

Dear parent/guardian:

In the next few weeks the Fulton County Schools are conducting a scoliosis screening program to find students with suspected curvature of the spine. It is known that two children out of every 100 may have scoliosis. If this condition is detected early, and appropriately treated, progressive spine deformity can usually be prevented.

The procedure for screening is a simple test in which the screener (nurse, PE teacher, or parent volunteer) looks at the child's back in the standing position and while bending forward. Boys and girls are screened separately. Girls should wear a halter top or bathing suit under their clothes on the day of screening.

If your child has a suspected curvature, you will be notified and asked to take your child to your family physician, or an orthopaedic doctor for further evaluation. If you do not want your child to be screened, please complete the requested information below and return it to school.

Sincerely,

Principal

**I DO NOT WANT MY CHILD TO
BE SCREENED FOR SCOLIOSIS.**

NAME OF STUDENT

PRINT NAME OF CHILD

**IS CURRENTLY UNDER CARE/
OBSERVATION FOR SPINAL
PROBLEMS. I UNDERSTAND THAT
MY CHILD WILL NOT BE.
RESCREENED.**

PRINT NAME OF PARENT OR GUARDIAN

SIGNATURE OF PARENT/ GUARDIAN

SIGNATURE OF PARENT /GUARDIAN

DATE: _____

SCHOOL: _____

TEACHER: _____