5-1989

What is a vision screening?

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**Recommended Citation**

Johnson, Thomas; Lee, Julie; and Williams, Paul, "What is a vision screening?" (1989). *College of Optometry*. 158.  
https://commons.pacificu.edu/opt/158

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Abstract
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Degree Type
Thesis

Degree Name
Master of Science in Vision Science

Committee Chair
Frederick G. Downard

Subject Categories
Optometry
WHAT IS A VISION SCREENING?

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We wish to thank Dr. Frederick G. Downard for his advice and guidance in the completion of this project. We would also like to thank Dr. Robert Yolton and Mrs. Wilberta Teeter for their helpful answers to our many questions. Finally to all our patient models, we give a warm gratitude for their encouraging assistance during our photographic sessions.
Abstract

The visual needs of school age children are of great concern to educators and parents alike, yet many students do not receive any eye care before or during their school years. An obvious solution is mass screening programs to reach as many children as possible. Objective vision screenings can begin at an early age and should be encouraged as the first line of defense in preventing unnecessary visual anomalies. Ehrlich, Reinecke, and Simons estimated that only 21% of preschool-age children receive any form of vision screening.2 Robert Petersen stated that as the child grows older, there is a gradual decrease in the flexibility of the human organism to reap the benefits of treatment. Therefore, the earlier he is treated, the better his prognosis.5 These screening programs are an attempt to bridge the gap between those who get eye care and those who do not, but may need it.

Since it is impractical to provide professional eye examinations to everyone, screening programs have been instituted to insure that many children receive some type of vision care. Eye care professionals have been especially concerned and active with vision screening programs because of the need for early detection of visual anomalies. The screening battery developed by Pacific University College of Optometry is a thorough and quick assessment of any observable visual problems. This presentation can be used to help inform the public of the importance of vision screenings by illustrating each test performed and its purpose.
SLIDES

The slides are not available with this thesis copy in the library. There is another copy which includes the full script of the thesis and a set of correlating slides with Mrs. Teeter in the Learning Resource Center in Jefferson Hall. The script is only a partial thesis, and it is suggested to view the slides together with the script.
**INTRODUCTION**

Slide 1

Setting: Scenery of mountain.

Narration: Humans are visually-oriented creatures. A large percentage of the information taken is through vision, making it one of the most important factors in the process of learning.

Slide 2

Setting: Child in exam room with doctor.

Narration: Learning is more efficient if the tools the student uses are in optimum readiness. Therefore, proper eye-care is critical in maintaining this vision at its maximum.

Slide 3

Setting: Blurry mountain scenery.

Narration: However, many people overlook this fact and accept their vision as it is. If their vision is blurred, one may not be aware that his/her vision is not optically clear.

Slide 4

Setting: Mountain scenery: half clear, half blurry.

Narration: Any subtle changes in vision will go unnoticed unless properly corrected. One is unable to appreciate a blur, until a clear object is seen in comparison.

Slide 5

Setting: Children on playground.

Narration: Many children are unaware of any visual deficiencies. Vision screenings are one way to examine a large number of the children at one time and can easily be held at their school.
Slide 6

Setting: Children in classroom.

Narration: Among the population, many children do not receive the proper eye care necessary. One study estimated that 79% of preschool-age children enter school without vision examinations.²

Slide 7

Setting: Child with glasses in classroom reading.

Narration: It has been suggested that vision problems are among the most prevalent chronic health problems seen in children.¹ The earlier the detection of these problems, the less restrictions on the development of the child's social and academic future.

Slide 8

Setting: Child with crossed-eyes.

Narration: It has been found that crossed-eyes, wall-eyes, and lazy eyes are afflicted in at least 5% of children.² Yet a large percentage of these patients go undetected and untreated.

Slide 9

Setting: Child with glasses and mom.

Narration: Early detection is necessary for proper correction and therapy. One study reported that it is not the amount of the eye turn that determine the outcome of the treatment, but rather the earlier awareness of the problem.³
Slide 10

Setting: Pacific University's Optometry Clinic.

Narration: Screenings can examine a large number of children at one time and are fairly inexpensive; however, an eye-care professional should be present for proper referrals. It is important to remember that they are not comprehensive eye exams, but are quick evaluations for any observable vision abnormalities. At Pacific University, College of Optometry, there is a nominal charge for each screening, but community organizations sometimes assist in these projects.

PROCEDURES

Slide 11

Setting: Summary of station set-up.

Narration: For efficiency, the screening is separated into these stations:

1. Case History
2. Far Vision
3. Near Vision
4. Retinoscopy
5. Ophthalmoscopy
6. Final Evaluation

The child is given a recording form to carry with him/her to each station.

Slide 12

Setting: Case history station.

Narration: At the first station, case history is taken. Proper information of the child is needed to help assess his/her vision. Questions regarding glasses, family eye history, visual symptoms, and hobbies are asked.
Slide 13


Narration: At the second station, the child's far vision is evaluated. He/she is asked to read an eye chart at a far distance. If the child has not learned his/her alphabet, a correlating picture chart is used instead.

Slide 14

Setting: Far VA station. Intern observing far cover test on child.

Narration: Also at this station a Cover Test is performed which tests the child's two-eyed coordination when he/she is looking at a far distance. This test helps determine if the child's eyes have a tendency to point closer or further away from the point of object.

Slide 15

Setting: Near station. Intern testing near VA on child.

Narration: At the third station, the child's near vision is examined. First, the child reads an eye chart to determine the clarity of his/her vision.

Slide 16

Setting: Near station. Intern observing near cover test on child.

Narration: A near cover test is also performed here to determine the eye's posture tendencies while looking at a near target.

Slide 17

Setting: Near station. Intern and child testing eye movement skills.

Narration: Eye movement skills are examined to assess if the eye muscles are in accurate coordination together. Also, the examiner will perform a Near Point of Convergence test which helps determine the closest distance the two eyes can point together and still maintain a clear and single target.
Slide 18

Setting: Near station. Child with polaroid glasses being examined with the stereofly test.

Narration: This test assesses the child’s stereovision. The two eyes must be able to work together as a team. Each eye sees a slightly offset picture from the other. Then the brain must be able to fuse both pictures into one and perceive it as floating off the page. This concept is similar to the 3-D movies.

Slide 19

Setting: Near station. Intern testing child’s color vision.

Narration: Also at this station, the child’s color vision is tested. The child is asked to either call out or trace the hidden pattern. Congenital color defects have been found to be more prevalent in males than females.

Slide 20

Setting: Retinoscopy station.

Narration: At the fourth station, the child’s refractive status is determined while he/she is looking out into the distance. In other words, what type of lenses are best suited for his/her far vision. Usually, to keep the child looking out into the distance, a cartoon film is shown.

Slide 21

Setting: Ophthalmoscopy station.

Narration: Then at the fifth station, the internal health of the eye is examined for any pathological abnormalities.

Slide 22

Setting: Final evaluation station.

Narration: Since all the tests are performed by interns, a supervising doctor evaluates each child’s findings at the final station.
Slide 23

Setting: Final Evaluation grades.

Narration:
The child is given a grade of:
(1) Pass.
(2) Fail with a recommendation to be examined by an eye care practitioner.
(3) Fail with a recommendation to be examined by a physician.

SUMMARY

Slide 24

Setting: Summary (#1-5).

Narration:

Summary:
1. Vision screenings are necessary to examine a large number of children at one time.
2. Subtle vision changes may go unnoticed.
3. Early detection is needed for proper correction so the child can perform at his/her maximum visual performance.
4. If vision is hindered, then other activities may also be affected such as academics and social activities.
5. If a child has a family history of visual abnormalities or diseases, then that child is recommended to have a complete eye exam on a regular basis.
6. The vision screenings should be performed with proper testing batteries and an eye-care professional is needed for proper final evaluations.

7. It is highly emphasized that these visual evaluations are only screenings; therefore, all referrals should be seen by a proper eye-care professional for a more complete examination.

8. It is recommended for children to have a vision exam at ages:
   a.) 6 months (or prior to 1 year)
   b.) 3 years
   c.) 5-6 years (or early school age)
   d.) then every 2-3 years thereafter, or otherwise indicated by a doctor.
REFERENCES


