



See to Achieve

Jen Simonson, OD, FCOVD
Cami Dowis, MEd, COVT

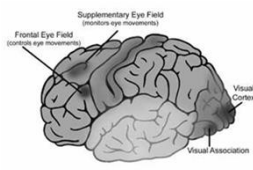
Vision disorders are the fourth most common disability in the United States and the most prevalent handicapping condition in children.

Letter Reversals and Reading

The panq was going to blay in the qark. Bodqyø father blayep the prum in the qanb. When the danb started to dlay, it pibnø sounp goop. The grum was off the deat. The danp stoqbed dlaying. Then Bopdyø father lookep bowen between the grums. There was Bodqy with a dig sqoon holding his father dlay the prums!

80% of Learning happens through the Visual System

- 70% of children with a learning disability in reading have some form of visual impairment, such as ocular motor, perceptual, or binocular dysfunction.
- 8 million children in American have not had an eye examination before entering school.




Do you see what I mean?

In our minds, seeing is equated with understanding.

Vision Disorders


- What kind of vision problems are there?
- What is it like to see with a vision problem?
- How can you identify if a child may have a vision problem?
- How can vision problems be treated?



Does your eyesight ever give you headaches?

Only when I look at my boss, my monthly bills, and the price of gas.


How do you identify if a child may have a Vision Problem?



E
TZOV
EHPNTZ


Snellen Acuity Testing

- The ability to see "20/20" at distance
- Measured by the Snellen chart
- Even if a child passes this test, it doesn't mean they don't need glasses or that they have "good vision"




Sight vs. Vision

- Sight is the ability to see an object clearly
- Good eyesight is the ability to see small things far away
- Vision is the ability to relate what has been seen to all senses and past experiences
- Visual perception is modified by the health, nutrition, fatigue and emotions of the individual.



What are vision skills?

- VISUAL ACQUISITION: FIXATE, FOCUS, FOLLOW & FUSE
- Tracking – the ability to follow a moving object.
- Fixation – the ability to locate an object.
- Focus – Ability to see clearly.
- Depth Perception – ability to judge distance.
- Binocularity – the ability to use both eyes together and to fuse the information into one perception.
- Visualization – The ability to form mental image.




Eye Movements in the Classroom

What we see and may think:

- Loses place when reading; skipping words or lines.
- "Not paying attention, rushing."
- Avoids Reading
- Not "school-oriented"
- Has poor reading comprehension
- "Not bright, not interested"

What is really happening

- The eyes are jumping over words or even entire lines.
- Eye fatigue and frustration are avoided when not reading. This is a clever adaptation.
- When words are skipped, the text does not make sense.




VISION

- Vision for Action
 - Directing Reach and Grasp
 - Directing Eye Movements
 - **WHERE IS IT??**
- Vision for Perception
 - Patterns
 - Colors
 - Places
 - Faces
 - Memory
 - **WHAT IS IT??**



Discovering a Vision Problem


- A skilled observer can spot signs indicating that a child may have a visual problem.
- Your job is not to diagnose, but to know when to recommend a complete optometric examination. Note – This doesn't mean just a health check and glasses check! Not all examinations are the same!
- You want to suggest an office that
 - 1) works with children and 2) tests for all visual problems, not just medical problems
 - For example, some doctors do not see a child until they are dilated. These medications paralyze the focusing muscle and prevent testing of near vision skills.



The ABCs of Vision Difficulties

Appearance


- Closing of an eye
- Eye turning in or out at any time
- Excessive blinking
- Squinting
- Tearing
- Redness
- Swelling



The ABCs of Vision Difficulties

Behavior


- Poor attention Span
- Poor tracking
- Poor eye-hand coordination
- Poor eye teaming
- Confusion of Shapes
- Holds book very close or very far away



The ABCs of Vision Difficulties

Complaints


- Eye discomfort
- Headaches
- Burning
- Itching
- Double vision
- Dizziness
- Blur



Signs & Symptoms of an Eye Teaming Problem

Covering or closing an eye

AN EYE TEAMING PROBLEM FROM THE VIEWPOINT OF THE STUDENT




AFPA Oklahoma's Public and Minority Organizations

EYE TEAMING SKILLS
The ability of both eyes to work together as a team

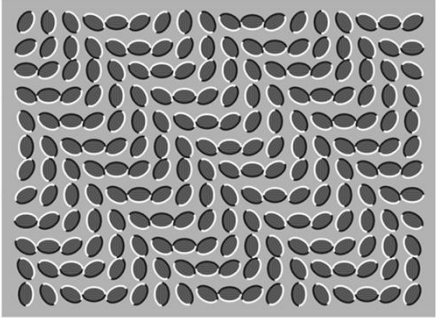
(Okapi)
(Okapi) / (Okapi) / (Okapi)
The Okapi is a member of the giraffe family. It is found in the rainforests of the Democratic Republic of the Congo. It is a very shy animal and is very difficult to see. It has a unique pattern of black and white spots on its body. It is a very important animal in its ecosystem.

Signs & Symptoms of an Eye Movement Problem



- Having to use finger to keep place
- This is expected in the early grades when learning to read.
- By third grade, it's a sign there's a vision problem.

These are NOT animated slides.
The pictures are perfectly still.



How your brain reads:

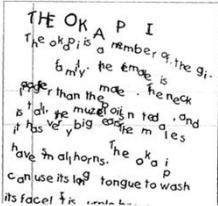
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rghit pclae. The rset can be a taotl mses and you
can sitll raed it wouthit a porbelm.

Tihs is bcuseae the huamn mnid deos not raed
ervey lteter by istlef, but the wrod as a wlohe.
Amzanig huh? yaeh and I awlyas tghuhot
spling was ipmorantt! if you can raed tihs psas
it on !!

SAMPLE OF AN EYE HAND COORDINATION
PROBLEM


AFA Alabama's Writing and Literacy Organization

EYE-HAND COORDINATION
The ability of the eyes to direct fine movements of the hands at close distances



Visual Perception

- The ability to understand and remember visual information
- Includes many skills: form perception, visual discrimination, visual memory, visual sequential memory, visual closure, figure ground and directionality




A VISUAL PERCEPTION PROBLEM FROM THE VIEWPOINT OF THE STUDENT


AFA Alabama's Writing and Literacy Organization

VISUAL PERCEPTION
The ability to consistently remember what letter shapes mean. Most often confused with learning disability.

Okaqi
(oh-kap'-ee)
The okapi, *Okapia johnstoni*, in the giraffe family, Giraffidae, is unique among mammal animals in the female is larger than the male. She may stand 1.62 m (5.5 ft) at the shoulder and be 1.95 m (6.5 ft) long. The neck is tall, the muzzle is long.



HOW STRONG ARE OUR VISUAL PERCEPTIONS?



Count every "F" in the following text:

FINISHED FILES ARE THE RESULT OF YEARS OF SCIENTIFIC STUDY COMBINED WITH THE EXPERIENCE OF YEARS...

How many did you count?

- Did you see 6?

Your brain has trouble with "of" – your auditory-visual processing "hears" a "V"

FINISHED FILES ARE THE RESULT OF YEARS OF SCIENTIFIC STUDY COMBINED WITH THE EXPERIENCE OF YEARS...

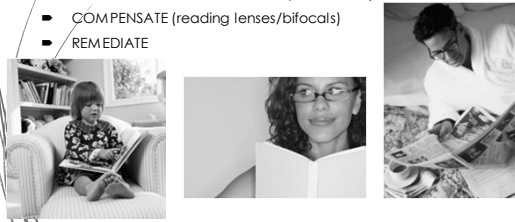
Delayed or Incomplete Vision Development

- A child may not be ready for the visual demands of the grade.
- This is not typically "out grown"
- Development may be enhanced with optometric treatment and activities, but will still progress through normal stages.




What would you do if you had a Vision Problem?

- Options:
 - AVOID (unmotivated)
 - ADAPT (auditory learning, hold book closer, move head to read, close an eye, tilt head)
 - COMPENSATE (reading lenses/bifocals)
 - REMEDIAL



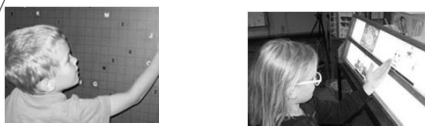
Remediation of Vision Problems

- Lenses
 - To compensate for a refractive error such as myopia, hyperopia or astigmatism
 - To relieve stress on the near focusing system
 - To prevent stress on the near focusing system
 - Training lenses
- Prisms
 - To compensate for an eye teaming problem such as a wandering eye or vertical misalignment
 - To change a person's posture
 - Training lenses
- Vision therapy
- Combination of above



ABC's of Detecting Vision Problems

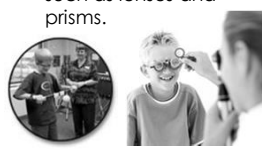
- Identification and treatment of visual problems is a continuing goal for doctors of optometry. Part of every optometrist's training in all colleges of optometry is the treatment of visual problems by procedures called "orthoptics" or "vision therapy".



VISION THERAPY


- Vision therapy is like physical therapy for the eyes and brain. We see with our brains and minds, not just our eyes.
- Vision Therapy is that part of optometric care devoted to developing, improving, and enhancing people's visual performance.

Vision therapy involves medically supervised programs of therapeutic procedures and the use of medically regulated devices, such as lenses and prisms.



What Can You Do?


- "I think there might be a vision problem"
- "I've noticed these behaviors, have you had their vision checked by a developmental optometrist?"
- Could you fill out this checklist to see if vision is causing some of these difficulties?



OTHER ADAPTATIONS

- Enlarge
- Allow Visual Breaks
- Allow Additional Time
- Visualization
 - Powerful for spelling and comprehension
 - Teach to see the word "on the chalkboard in their mind"
 - Good preparation for sports and tests
 - Useful for creative writing
- Chunk it down
 - Set up a reasonable contract to go out to recess
- Markers
- Reduce demand
 - Do ¾ of the page
- Reinforce with multi-sensory input

CORRECT READING DISTANCE



LIGHTING AND CONTRAST


- Observe your blackboard or dry erase board from different angles in the classroom to see if there is glare
- Avoid having students sit on the far edges so they have look at the board from the side
- Take into account the of your writing on an overhead projector
- Be aware that some of markers are hard to for some students
- Avoid the lighter color markers like yellow and orange

Vision and Learning

CONCLUSION:

- An inefficient visual system may contribute to inattention, reduced classroom performance, and learning problems.
- I do not remediate learning problems in my office. I remediate visual problems that interfere with the learning process. This is clearly stated in all reports that I send to patients.
- I refer many of my patients to tutors, occupational therapists, physical therapists, auditory processing therapists, chiropractors, educational psychologists, and pediatricians.
- Many of the children I treat no longer require special education services.

ABC's



References and Resources

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