

# Virginia Vision Therapy Center

Developmental Optometry - NeuroOptometry - Low Vision Services



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[www.VirginiaVisionTherapyCenter.com](http://www.VirginiaVisionTherapyCenter.com)

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## What is Vision Therapy?

### INTRODUCTION

Society places a premium on efficient vision. Schools and most occupations require increasing amounts of printed and computer information to be handled accurately and in shorter periods of time. Vision is also a major factor in sports, crafts, and other pastimes. The efficiency of our visual system influences how we collect and process information. Repetitive demands on the visual system tend to create problems in susceptible individuals. Inefficient vision may cause an individual to slow down, be less accurate, experience excessive fatigue, or make errors.

When these types of signs and symptoms appear, the individual's conscious attention to the visual process is required. This, in turn, may interfere with speed, accuracy, and comprehension of visual tasks. Many of these visual dysfunctions are effectively treated with vision therapy.

### PERTINENT ISSUES

Vision is a product of our inherited potentials, our past experiences, and current information. Efficient visual functioning enables us to understand the world around us better and to guide our actions accurately and quickly. Age is not a deterrent to the achievement of successful vision therapy outcomes.

#### **Vision is the dominant sense and is composed of three areas of function:**

- Visual pathway integrity including eye health, visual acuity, and refractive status.
- Visual skills including accommodation (eye focusing), binocular vision (eye teaming), and eye movements (eye tracking).
- Visual information processing including identification, discrimination, spatial awareness, and integration with other senses.

Learning to read and reading for information require efficient visual abilities. The eyes must team precisely, focus clearly, and track quickly and accurately across the page. These processes must be coordinated with the perceptual and memory aspects of vision, which in turn must combine with linguistic processing for comprehension. To provide reliable information, this must occur with precise timing. Inefficient or poorly developed vision requires individuals to divide their attention between the task and the involved visual abilities. Some individuals have symptoms such as headaches, fatigue, eyestrain, errors, loss of place, and difficulty sustaining attention. Others may have an absence of symptoms due to the avoidance of visually demanding tasks.

## More About Vision Therapy...

The human visual system is complex. The problems that can develop in our visual system require a variety of treatment options. Many visual conditions can be treated effectively with spectacles or contact lenses alone; however, some are most effectively treated with vision therapy.

Vision therapy is a sequence of activities individually prescribed and monitored by the doctor to develop efficient visual skills and processing. It is prescribed after a comprehensive vision examination has been performed and has indicated that vision therapy is an appropriate treatment option. The vision therapy program is based on the results of standardized tests, the needs of the patient, and the patient's signs and symptoms. The use of lenses, prisms, filters, occluders, specialized instruments, and computer programs is an integral part of vision therapy. Vision therapy is administered in the office under the guidance of the doctor. It requires a number of office visits and depending on the severity of the diagnosed conditions, the length of the program typically ranges from several weeks to several months. Activities paralleling in-office techniques are typically taught to the patient to be practiced at home to reinforce the developing visual skills.

### **Research has demonstrated vision therapy can be an effective treatment option for:**

- Ocular motility dysfunctions (eye movement disorders)
- Non-strabismic binocular disorders (inefficient eye teaming)
- Strabismus (misalignment of the eyes)
- Amblyopia (poorly developed vision)
- Accommodative disorders (focusing problems)
- Visual information processing disorders, including visual-motor integration and integration with other sensory modalities

### **SUMMARY**

Vision therapy is prescribed to treat diagnosed conditions of the visual system. Effective therapy requires visual skills to be developed until they are integrated with other systems and become automatic, enabling individuals to achieve their full potential. The goals of a prescribed vision therapy treatment regimen are to achieve desired visual outcomes, alleviate the signs and symptoms, meet the patient's needs, and improve the patient's quality of life.

FROM:

**A Joint Organizational Policy Statement of the American Academy of Optometry and the American Optometric Association**

# Visual Skills & Identification Of Visual Problems

**EYE MOVEMENTS:** *The ability to accurately follow moving objects, shift rapidly from one object to another and steadily fixate a non-moving object.*

Problems in this visual function are:

- Skipping lines while reading
- Slow reading
- Word movement or “shimmer”

**EYE TEAMING (BINOCULARITY):** *The ability to use both eyes equally, smoothly, and accurately.*

Problems in this visual function are:

- Eye turns, especially when tired
- Light sensitivity
- Double vision/crowding of sentences
- Inaccurate judgment of distances
- Head tilted at an angle when reading
- Frequent eye rubbing/blinking

**VISUALLY-GUIDED BODY MOVEMENT:** *The ability to move in a stable and coordinated fashion with vision guiding. It depends on integration of vision with balance and other movement systems such as kines thesis and proprioception.*

Problems in this visual function are:

- Poor coordination, “clumsy”
- Frequent nausea in rear seat of car
- Motion sickness/loss of balance
- Anxiety in crowded areas and panic attacks
- Poor or inconsistent sports abilities

**EYE-HAND COORDINATION:** *The ability depends on the integration of eye & hands as paired learning tools.*

Problems in this visual function are:

- Lack of skill in drawing and writing
- “Can’t stop putting hands on everything” especially after age 6
- Poor orientation of words/drawings

**FOCUS (ACCOMMODATION):** *The ability to clearly identify details of a person or an object.*

Problems in this visual function are:

- Blurring of vision while reading and/or looking far away
- Slow focus changes between far and near distances
- Poor participation in the classroom
- Head close to books or writing tasks
- Stomach complaints after reading/computer use

# Visual Skills & Identification Of Visual Problems Continued...

**VISUAL FORM PERCEPTION:** *The ability to form mental images in the “mind’s eye”.*

Problems in this visual function are:

- Reversal of letters/numbers, especially after 7 1/2 years of age
- Spelling/writing difficulties
- Drawings lack consistent size
- Failing to visualize what is read

**POST TRAUMA VISION SYNDROME:** *This can result from an insult to the brain from an acquired brain injury, neurological dysfunction or chronic disease. The problems associated with post trauma vision syndrome are frequently overlooked during the initial treatment of the trauma.*

Problems in this visual function are:

- Difficulties with: reading, comprehension, attention, concentration, and memory
- Visual midline shift (altered perception of space)
- Spatial disorientation
- Difficulties with: balance, coordination and posture
- Blurred vision
- Sensitivity to light
- Double vision
- Headaches
- Loss of visual field
- Dizziness

**LOW VISION:** *These are vision disorders which cannot be fully corrected using standard lenses, and as a result need additional tools in order to function in certain activities such as driving a vehicle, reading, watching TV, or even occupational tasks.*

Problems in this visual function are:

- Blurred/missing area of vision
- Difficulty recognizing faces
- Struggle to read mail, street signs, cooking and sewing

**MISCELLANEOUS:**

- Eyes itch, burn, red or water
- Headaches and/or stomachaches, especially in the afternoon
- Avoidance of reading for fun
- Academics below potential

## Meet Dr. Tod R. Davis OD, FCOVD:



Dr. Tod R. Davis earned a Bachelor of Science, pre-med biology, University of Oregon, a Doctor of Optometry, Southern California College of Optometry, and a post-doctoral fellowship with the Gesell Institute of Child Development, (formerly of Yale University). He continues his post-doctoral education with up to 50 classroom hours per year. He has lectured on visual processing disorders with a number of organizations including Society of European Optometry, Brussels, Belgium, National University, Irvine, CA., masters program in Special Education, and Loma Linda University, CA., masters program, School of PT. He regularly provides in-services to parent groups, educators, and other professionals. He is a member of the College of Optometrists in Vision Development, the Optometric Extension Program, Neuro-Optometric Rehabilitation Association. Dr Davis lives in the beautiful Shenandoah Valley where he enjoys horseback riding and hiking with his family.

### Education

**Bachelor of Science:** Pre-med biology, University of Oregon

Full scholarship – Division 1 football.

**Doctor of Optometry:** Southern California College of Optometry

**Fellowship in Developmental Optometry:**

Gesell Institute of Child Development, (formerly of Yale University).

**Annual post-doctoral education:** 30 to 50 hours per year

**Post-doctoral fellowship: Completed October, 2012**

### Professional Experience

**Lecturer,** Society of European Optometry, Brussels, Belgium.

Topics: Diagnosis and management of visual processing disorders.

**Lecturer,** National University, Irvine, California. *Masters program, Special Education.*

Topics: Vision and learning in the classroom.

**Lecturer,** Loma Linda University, Loma Linda, California. Masters program, School of Physical Therapy.

**Topics:** Post-head injury and stroke vision difficulties. In-service provider to parent groups, educators, and other professionals. Private practice specializing in Developmental Optometry and Vision Therapy

Gainesville, Winchester, and Fredericksburg VA

### Memberships

- College of Optometrists in Vision Development
- Optometric Extension Program.
- Neuro-Optometric Rehabilitation Association

## Meet Dr. Amy Carlyle OD, FAAO:



Dr. Amy Carlyle, formerly Dr. Warren, completed a one-year residency in ocular disease at Capital Eye consultants in Springfield, VA. This intensive training program gave her the skills and comfort level to manage a wide variety of eye diseases. Dr. Carlyle has chosen to specialize in the examination of partially sighted individuals and has been certified as a Low Vision Examiner by the Virginia Department for the Blind and Vision Impaired (DBVI). In addition to onsite training and almost 15 years of experience in private practice, Dr. Carlyle has recently completed an intense education program in Vision Therapy and Vision Dysfunction given by the Optometric Extension Program. Dr. Carlyle has served as a guest lecturer and is an active member of her regional Battlefield Optometric Society. She is also a member of the Virginia Optometric Association and

the American Optometric Association, where she participates in the AOA's Infant See Program which provides complimentary eye examinations to infants 6-12 months. Outside of optometry, she has been a children's volunteer in her church for many years. She is a fan of outdoor recreation and met her love of a husband playing on a local co-ed softball team. God has given them four wonderful young children, so they have no problem staying active! A native of the New Jersey Shore and a beach bum at heart, Dr. Carlyle is blessed to be settled here in Virginia and have the opportunity to work alongside Dr. Davis in caring for the eye care needs of both children and adults.

### Education & Honors:

- Fellow, American Academy of Optometry. 2000.
- O.D. New England College of Optometry. Boston, Mass. 1997.
- B.S. Honors Program, University of Miami. Miami, Fla.
- Residency at Capital Eye Consultants, Fairfax VA

## [Our Success Stories – Warning: May Cause Tears of Joy.](#)

### **Double Vision Success Story**

At 21 years old, you think you're invincible...until a horse flips over on you and lands you in the hospital. On October 27, 2012, I sustained a severe concussion from horseback riding when the horse I was riding reared up and fell over backwards. I was released from the hospital the next day, but I was pretty out of it for a long time. The most persistent symptom from my concussion was double vision.

The double vision refused to go away. A few days after the accident I had another CAT scan, which did not turn up any residual brain damage. I went to my eye doctor in December 2012, who insisted that the double vision would simply go away after a time (it didn't). I went to a chiropractor in the spring of 2013 who adjusted the vertebrae in my neck, which made the double vision go away except for a corner in my right field of vision. After that, I assumed that I would always have it, which affected my ability to work in my chosen field – training horses and working in a barn – in such a negative way that I was starting to think that I would have to quit riding altogether.

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### **Success Story of “Kira”**

Dear Dr. Carlyle:

Thank you so much for your extremely effective work with our daughter, Kira, to significantly improve her Eye Tracking and Convergence vision issues.

When Kira was in 1st Grade, she could not learn to read, and we did not know why. She would cry during homework. Her eyes hurt and watered everyday at school. She began to not like school.

It was so puzzling, because Kira is a bright and happy child who loves to learn. The situation made Kira very sad, and it impacted the whole family. We didn't know what to do.

Luckily, Kira's teacher recommended that we see a Developmental Optometrist. So we came to your office for an evaluation.

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## Success Stories Continued...

### Success Story of “Elliot”

My son Elliot has worn glasses since 1st grade. Every six months, we would go to the Ophthalmologist because Elliot failed another eye exam at school. He often complained that he could sometimes see the board, but other times it was all a blur. His school grades were good, but his performance was inconsistent. Sometimes he would come home and get all his homework done quickly and other times his homework took hours, often we would just send him to bed without it complete. He was very frustrated and often ended up sleeping over his books.

We were at Tae Kwon Do and another VT mom asked me if I had considered Vision Therapy for Elliot. Both of her sons had worked with Dr. Davis and had amazing results. Initially we were skeptical, but after 30 minutes Dr. Davis accurately described Elliot based on the eye exam. He had a clear understanding of Elliot’s difficulties with anxiety, focus, reading, and comprehension.

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### Success Story of “Courtney”

We started off like most parents when their children are having problems asking the questions ”What the heck can I do?” and “Why does no one know what is wrong with my child?” Looking back now, the solution was so easy but no one in the school or any of our friends knew anything about Vision Therapy.

The problems started compiling in 3rd Grade. We already knew that Courtney learned differently. We had to make up silly rhymes, sayings and games to have her remember facts. My favorite was and still is; It isn’t my rope it’s your-rope = Europe. After several meetings with teachers, vice principals and the school psychologist, who were all frustrated, we could all agree there was a “disconnect”, but no one knew how to fix it. That disconnect meant what she saw with her eyes, didn’t translate to her brain, or come out of her mouth correctly. If I asked her to spell the word “really” out loud, it came out correctly but asking her to write it came out “rilly”. She was consistent in her screw ups but still no answers.

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## Success Stories Continued...

### Success Story of “Luke”

Luke was diagnosed with a learning disability the summer after his first grade year. The fortunate part about Luke is his work ethic! School has not been easy for him, but he would give 110% in school. By the time he came home he was drained! Homework was a disaster. Luke is your typical middle child who wants to please everyone! Homework was a different story and I saw a whole new side of him. He was frustrated and exhausted! We had so many battles and there were plenty of tears shed!

Luke is and was an extremely outgoing child who is friendly with both children and adults alike. People are drawn to him with his kindness and humor. There is not a shy bone in his body. With that being said, previous to Luke starting vision therapy, the one area he lacked confidence in was academics!

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### Success Story of “Heather”

“If it wasn’t for vision therapy, I would be bedridden.”

My name is Heather. I am twenty seven years old and I am several months into my vision therapy program.

My health problems started when I was fifteen. I suddenly started to have severe attacks of vertigo almost daily. Before I knew it, I felt extremely dizzy and off balance *every second of every day*. My head felt like it was going to explode all the time. After several months I could no longer keep up with high school. I had gone from being an honor roll student to having report cards full of Ds and Fs. No matter how hard I tried, I could no longer track the lines I was reading. If I managed to read something, I could no longer remember it.

During my teenage years, my parents took me to many specialists. I went through extensive testing, including MRIs and inner ear testing. I was diagnosed with an inner ear virus and then with migraine associated vertigo. I tried medications and dietary changes. Nothing worked.

[Read More...](#)

# Vision Therapy Videos:





## Vision Library:

- [Primitive Reflexes](#)
- [Vestibular Dysfunction](#)
- [How's My Posture?](#)
- [Prisms](#)
- [Exam Frequency for kids](#)
- [Vision development](#)
- [Dizziness](#)
- [Computer Vision Syndrome](#)
- [Hyperopia](#)
- [Cataracts](#)
  
- [Dry Eye Syndrome](#)
- [Importance of Binocularity](#)
- [Double Vision](#)
- [Lazy Eye](#)
- [Convergence Insufficiency](#)
- [Brain Injury Vision Disorders](#)
- [ADHD Drugs Don't Boost Grades](#)
- [ADHD](#)
  
- [Benefits of Vision Therapy](#)
- [Lazy Eye: Surgery or Therapy?](#)
- [Gifted Children & Vision Disorders](#)
- [Helen Keller Had Good Vision; Ask Me How!](#)
- [3D Films](#)
- [Reading Fun to Reading Nightmares](#)
- [3D Technology](#)
- [Vision Related Learning Difficulties](#)
- [Reversal Frequency](#)
- [ASD Patients](#)