

vision
is more than 20/20

One of the results of the accident is that Tanya suffered from many visual problems. She was seen by an eye specialist at the hospital who told me that there was nothing that could be done for Tanya. Vision Therapy has helped with Tanya's balance, coordination and eye movement. I would strongly recommend Vision Therapy before listening to "nothing will help." -Mom of Tanya



About the Clinic

Founded in 1995 by Dr. Lori Mowbray, a Board Certified Developmental Optometrist and a Fellow with the College of Optometrists in Vision Development, the clinic specializes in working with children and adults with visual dysfunctions. A Board Certified Developmental Optometrist is an optometrist who has additional training in the testing, diagnosis and treatment of vision disorders. Board certification happens through comprehensive testing completed with the College of Optometrists in Vision Development.

Unsurpassed for its thorough evaluations and highly trained therapists, the clinic has helped people overcome visual disabilities with a 95% success rate after therapy. Our therapists receive training in the latest vision therapy procedures by board certified vision therapist training staff, as well as national leaders in the field of vision therapy.

Programs offered at Minnesota Vision Therapy Center include vision therapy for learning related problems, vision therapy for strabismus (eye turns) and amblyopia (lazy eye), post trauma therapy, special needs therapy and a guided preschool development program. We also offer educational services (many of which qualify for continuing education credits) at no cost as a public service to help you understand and help others with vision disorders.

Free Evaluations

The evaluation process takes place at our Bloomington clinic. Lasting approximately 1½ hours, the evaluation is followed by a consultation with a member of our consultation staff. During the consultation, the results of the evaluation will be discussed, along with any recommendations for treatment.

Clinic Locations:

Bloomington • Mankato • Owatonna • Osseo

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Call today for a free assessment or email at:
mvtc@minnesotavisiontherapy.com

POST TRAUMA VISION SYNDROME & VISUAL MIDLINE SHIFT SYNDROME

A REHABILITATION PROFESSIONAL'S GUIDE



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Vision is more than 20/20

There's more to healthy vision than meets the eye. While most people believe that good vision means simply having 20/20 acuity, or seeing clearly in the distance, vision – how the brain and eyes work together – has a tremendous impact on the learning process for both children and adults.

Visual Skills Needed for Learning.

Tracking skills: The ability of the eyes to simultaneously and smoothly follow words on a page or moving objects in space.

Eye teaming: The ability of both eyes to point at the same object at the same time.

Focusing: The ability to look quickly from distance to near or near to distance without experiencing blurry vision.

Perceptual skills: Visual memory, visual discrimination, spatial relationships, visual closure, visual/auditory integration, visual motor integration, directionality, laterality and bi-laterally are all perceptual skills

Following are brief descriptions of Post Trauma Vision Syndrome and Visual Midline Shift Syndrome. The symptoms listed are common to the syndromes and should indicate to you if the patient should be referred to a developmental optometrist for evaluation and possible neuro-optometric rehabilitation.

Post Trauma Vision Syndrome

The visual process is part of a sensorimotor feedback loop, which includes kinesthetic, proprioceptive and vestibular processes. Insults to the cortex produced by an acquired brain injury or stroke cause stress or interference in the central and autonomic nervous systems. As a result, a brain-injured person may experience diplopia, binocular dysfunction, or concentration difficulties. In the past, these symptoms were diagnosed as individual eye problems or muscle imbalances. We now know that these eye problems and other reported difficulties that result from a brain injury often occur because of the interference in the visual process. This, in turn, will cause sensorimotor spatial disorganization. This may also cause an eye to turn out or a strong tendency for both eyes to diverge. The resulting binocular problems are characteristic of Post Trauma Vision Syndrome.

Symptoms of Post Trauma Vision Syndrome

- Double vision
- Headaches
- Blurred vision
- Dizziness or nausea
- Light sensitivity
- Attention or concentration difficulties
- Staring behavior (low blink rate)
- Spatial disorientation
- Losing place when reading
- Can't find beginning of next line when reading
- Comprehension problems when reading
- Visual memory problems
- Pulls away from objects when they are brought close to them
- Exotropia or high exophoria
- Accommodative insufficiency
- Convergence insufficiency
- Poor fixations and pursuits
- Unstable peripheral vision
- Associated neuromotor difficulties with balance, coordination and posture
- Perceived movement of stationary objects

Visual Midline Shift Syndrome

Visual Midline Shift Syndrome is an unusual phenomenon that often occurs following a neurological event such as a TBI or CVA. The ambient visual process changes its orientation with regard to the midline of vision. Both lateral and transverse midlines can be affected. We use the parietal lobe to integrate all sensory input, including vision, and to be able to interpret information for functional use. Visual input from the left eye is processed in the right side of the brain and input from the right eye is processed in the left. When this process is altered after a neurological event or injury it can create a perceived amplification of space internally on one side and a compressed amplification of space on the other.



Symptoms of Visual Midline Shift Syndrome

- Dizziness or nausea
- Spatial disorientation
- Consistently stays to one side of hallway or room
- Bumps into objects when walking
- Poor walking or posture: leans back on heels, forward, or to one side when walking, standing or seated in a chair
- Perception of the floor being tilted
- Associated neuromotor difficulties with balance, coordination and posture

When should I assess?

Due to the major impact of the visual system on cognitive and motor function, the visual rehabilitative needs of the brain injured, stroke, or neurologically impaired patient must be addressed as early as possible.

Help with Assessment

These guides and checklists have been prepared to assist rehabilitation professionals in determining the appropriateness of referring patients who have sustained a traumatic brain injury, CVA or other neurological impairment. This information should be used as a first step in determining if visual difficulties are interfering with the rehabilitation progress of the individual.

How do I refer?

Either the patient or the referring specialist should contact our clinic to schedule a vision therapy evaluation.

The following items are required in our office prior to the evaluation appointment.

1. A copy of an eye exam from an optometrist or ophthalmologist (the exam must be no more than 12 months old).
2. Pertinent medical information or records.
3. Completed symptom checklist.
4. Completed initial evaluation packet provided by our clinic.

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