



VISION THERAPY

What is Vision Therapy?

Vision Therapy is an individualized, supervised treatment program designed to improve or, develop visual skills we need for learning.

Through Vision Therapy, a child improves his or her ability to control:

- ◆ Eye alignment
- ◆ Eye teaming
- ◆ Focusing skills
- ◆ Eye movement accuracy and efficiency
- ◆ Visual processing and visual motor performance

Our eyes are an extension of the brain. They input visual information. That is the “sensory” part of the visual system. Our brain also controls where our eyes move to in order to see something. That is the “motor” part of the visual system.

Most eye doctors work on the principle that if there is reasonably good input of information (healthy eyes, no major eye turn, clear eye site

with any need for glasses addressed), then the individual has no visual concerns.

Developmental Optometrists, eye doctors who specialize in Vision Therapy, understand that vision is a highly sophisticated process that only begins with our eyes.

Our brain controls the ability to coordinate the two eyes and to integrate that information.

It enables us to:

- ◆ Fixate (lock our eyes on what we are looking at.
- ◆ Physically focus the lens in the eye so we can get a clear picture
- ◆ Fuse the 2 images together so we see 1 picture.
- ◆ Follow (pursuit) across a line of print, or follow a ball that is flying in the air, for example.

The brain analyzes visual information and enables us to think about what we see and also act on that. Some of the actions are “built in”, involuntary, or automatic, as a protective mechanism. Some actions are voluntary, meaning we can decide where to move or what we choose to act on.

Estimates are that as many as 1 in 4 children have problems in one or more of these areas, and this then results in a problem than affects learning. This is called a Learning Related Vision Problem.

THE GOOD NEWS IS THAT VISION THERAPY CHANGES BRAINS!!

Through a custom designed therapy program that consists of in-office and home procedures and activities, children improve their visual abilities. This then removes obstacles that block school success.

Who Needs Vision Therapy?

Sometimes vision problems are obvious. An example is when one eye turns in or out, or if a child squints to see the board in school.

Some doctors try to fix these problems with surgery, but that rarely solves the problem.

Most children who require Vision Therapy don't have obvious signs.

These children struggle in school or underachieve, and often the answer isn't found, even by the pediatrician, because it is not a physical problem or a medical problem.

Many parents say: "but my child never complained."

It is very unusual for a child to complain. The reason is that this is their normal. This is how they think EVERYONE sees.

Some important signs to look for that may indicate a child may have a problem we can treat with Vision Therapy are:

- ◆ Blurry vision especially at the reading distance
- ◆ Eye fatigue or strain
- ◆ Headaches
- ◆ Losing place or skipping lines reading
- ◆ Difficulty writing on a straight line or poor spacing
- ◆ Clumsiness
- ◆ Inability to complete assignments on time
- ◆ Poor comprehension
- ◆ Dislike reading
- ◆ Academic performance below that which would be expected
- ◆ Poor self-image or poor self-esteem
- ◆ Double vision

Consider taking our online quiz to see if your child might benefit from Vision Therapy. It can make a world of difference.

How Does Vision Therapy Work?

Many people think that Vision Therapy is about strengthening the eye muscles. That is not the case.

Your eye muscles are about 100 times stronger than they need to be.

They can usually move the eyes rapidly in all directions.

Focusing muscles usually are able to handle any demand.

So why do children have problems with eye coordination, eye movement and focusing?

The reason is that the BRAIN is the control center.

Our brains have millions of connections that work together to produce an efficient visual system. When we read, for example, there are many connections within the parts of the brain so we are able to use our eyes together as a team as we focus and move along a line or page. Other connection in the brain enable us to make sense of what we see in order to understand (comprehension). Being able to do this efficiently and automatically are key to a properly functioning visual process.

When the visual systems is not efficient, it often contributes to troublesome symptoms and difficulty learning.

What is the secret of success in Vision Therapy?



The answer lies in how our brains work. The old thinking is that are brains are "hard wired". Neuro-physiological research clearly refutes that.

The brain is changeable. With appropriate experience and sequential and repetitive activity, much as we can learn how to ride a bike, drive a car, play the piano, or learn to skate. This is best done by a doctor who understand the visual system. Vision Therapy uses lenses, prisms and other optical devices, along with specific individualized procedures to help the individual ultimately have the automatic, efficient visual function needed to maximize learning potential.

What are some Common Visual Conditions Requiring Vision Therapy?

- ◆ CONVERGENCE INSUFFICIENCY - patients with Convergence Insufficiency have difficulty bringing their eyes in together as a team while reading. They may actually have a frank outward eye turn or they may be able to hold the eyes together but with excessive effort.
- ◆ CONVERGENCE EXCESS - patients with Convergence Excess have their eyes turn in too much when reading. Their may have an obvious eye turn inward, or may hold their eyes together as a team but with extra effort.
- ◆ ACCOMMODATIVE (FOCUSING) INSUFFICIENCY/ EXCESS - patients with focusing deficiencies can not sustain physical focus for long periods at the reading distance or they may have difficulty changing focus when looking from the board and their desk.
- ◆ OCULOMOTOR (EYE MOVEMENT) DYSFUNCTION - patients with this have difficulty moving their eyes along a line of print without losing their place or skipping lines when reading.



Patients with the above problems may have double or blurred vision, headache or eye strain. They may have difficulty maintaining themselves on a line when reading or writing, or simply underperform academically.

What are some other Visual Conditions we can help through Vision Therapy?

◆ **VISUAL PERCEPTUAL and VISUAL MOTOR DEFICIENCIES** - patients with problems in this area have difficulty analyzing and understanding what they see, in order to use that information to draw, copy or perform any other visually guided behavior. These children often struggle in school without a cause having been found.

◆ **STRABISMUS (EYE TURN)** - patients with Strabismus may have a turn at distance, at near or at all distances. The turn may be outward, inward or upward/downward. It may be intermittent (some of the time) or constant (all of the time). When a turn is constant or occur most of the time, it may cause **AMBLYOPIA** or "lazy eye". Patching is often suggested, but it rarely solves the problem. Those patients with large eye turn may consider surgery. The problem is that surgery usually results in a short term cosmetic benefit in how the person looks to others. Often the turn comes back after surgery. The reason is that surgery does not address how the brain controls the eyes, and it usually makes the problem worse ultimately. It does not produce the visual success most people are looking for. Vision Therapy should always be considered when dealing with a patient with Strabismus. Eye surgeons (ophthalmologists) do not offer Vision Therapy. They try to offer a surgical answer for a problem that is not surgical.

◆ **AMBLYOPIA** - Patients with Amblyopia have reduced eyesight and general visual function in all areas in the affected eye. Amblyopia is not a problem in visual acuity. It is a problem in visual function. It takes effort to turn off the lazy eye and that draws energy. It is more than just ignoring the vision from the affected eye. It also affects depth perception and can impact the ability to ultimately drive a car, for example. Patching rarely works because it assumes that it is a one-eye problem. Patching one eye never teaches the person to use the 2 eyes together

as a team and that is why it rarely works. Vision is a learned skill. Vision Therapy that includes the use of lenses and filters yields much better results.

◆ **COMPUTER VISION SYNDROME (CVS)** - we, both children and adults spend much of our day on computer for both school, work and pleasure. If someone has the conditions above, then working on computer is even more challenging. It often causes symptoms such as headache, fatigue, blurred vision, double vision. Vision therapy addresses and solves the underlying problem.

◆ **TRAUMATIC BRAIN INJURY AND CONCUSSION** - Neuro-Optometric Rehabilitation has developed over the past 20 years. Many people who have suffered a brain injury and have had less than a full recovery, have symptoms similar to the ones described above, as well as some others as a function of disruption within the brain. They often feel that they can't concentrate, have difficulty remembering what they read. They feel uncomfortable walking down stairs and describe they feel foggy. Sometimes they become depressed. Often these individuals had the visual skills but lost them because of one or several concussions or brain injuries. Fortunately, we can help them through Vision Therapy.

◆ **ADD, ADHD, AUTISM, DYSLEXIA** - Many children who have been diagnosed with these, actually have a vision problem that is at the root. Often vision problems produce difficulty in attention rather than the other way around. Solving the underlying problem then enables the person to concentrate.

◆ **DEVELOPMENTAL DELAYS and AUTISM** - many individuals who have these issues, also have visual problems. Helping them gain visual skills then enables them to become more accessible to their teachers and to learning.

All children, and especially children who have the problems described above, should have a complete visual evaluation by a Developmental Optometrist to determine if Vision Therapy can help them solve their problem.

