

VISION THERAPY

Calgary Vision Therapy

Dr. Brent W. Neufeld

403-242-1800

www.calgaryvisiontherapy.com

Issue 01

Vision and learning

You may think that vision is the same as sight. But, sight provides the input for a child's learning, while vision represents a complex system. When working efficiently, this system helps a person process, understand and relate new information to knowledge already gained.

When it's not working, a child's visual system can contribute to learning problems. Professionals have also found that often it's not "memory," "attention span" or "intelligence" that causes children problems in school. It is a lag in their ability to recognize what they see, relate it to what they already know and then use it as a base for future understanding.

Sound complicated? It is, a little. A child's ability to perform visual tasks (such as reading and studying) depends on the ability to synchronize thinking and seeing. These work together to give a perceptual and conceptual understanding of the material and therefore gain meaning from what is taught.

Visual skills such as focusing, following moving objects, aiming, turning the eyes as a team, depth perception, and other abilities can be inefficient or poorly integrated.

This can put great strain on a child. His attention is spread between trying to make the visual system work and understanding the material.

Experts have found that when anyone's attention is spread

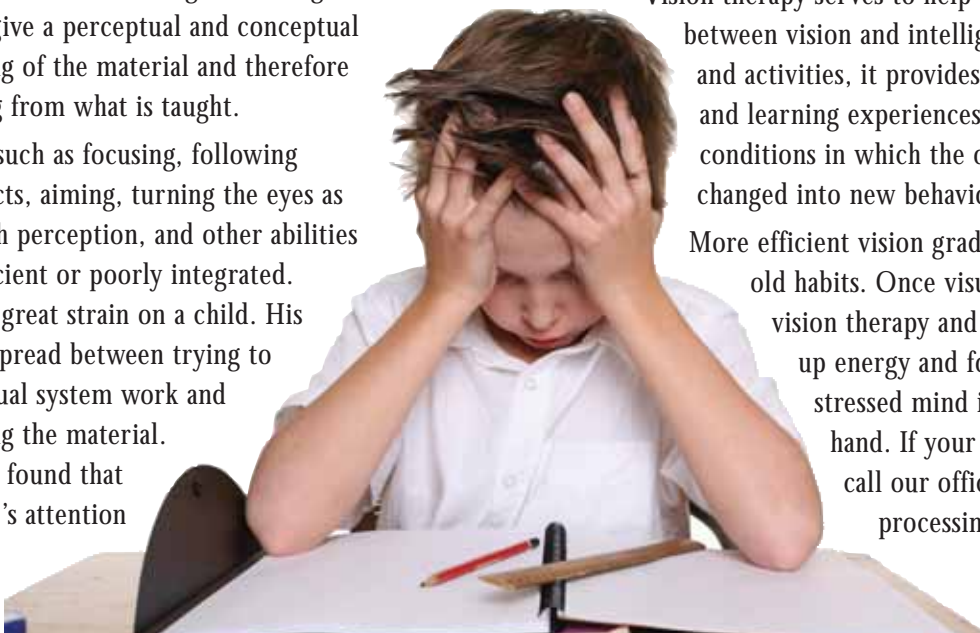
between a number of tasks, it reduces the efficiency of the tasks. Think of the last time you tried to do two things at once. Was it easy? Did you do both as well as you wanted to? Or did one (or both) tasks suffer?

The ability to gain knowledge from what is seen is reduced when energy is used to see. This energy would be spent "comprehending" the information instead. With an inefficient visual system, a person works harder to gain meaning from what he is trying to see or understand.

What behavioral optometrists know is that there is a very important relationship between vision and the brain. The two work together so closely that vision and intelligence and understanding are almost synonymous.

Vision therapy serves to help patients strengthen the link between vision and intelligence. Through the use of lenses and activities, it provides a patient with both development and learning experiences. The patient experiences conditions in which the old inefficient visual habits are changed into new behaviors.

More efficient vision gradually develops by replacing old habits. Once visual skills are improved through vision therapy and become subconscious, it frees up energy and focus for actual learning. The less stressed mind is freed to focus on the task at hand. If your child is having trouble learning, call our office to book a visual information processing evaluation. VT



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Myth: "20/20" means you have perfect vision

Even though your eyesight is "20/20," your vision may still need improvement. Eyesight ability is not the same as total vision skills ability. Vision involves two simultaneous actions: each eye focusing an image sharply on the retina and both eyes turning simultaneously so as to point to exactly the same spot. When the two eyes coordinate exactly, a mental process called "fusion" takes place and you see a clear image:

"20/20" eyesight represents only a small part of this process. The term "20/20" vision was established in 1860, when a Dutch ophthalmologist, Hermann Snellen, originated a scheme of letter sizes for testing visual acuity. The scheme (in the form of the Snellen Chart) is widely used today as the basis for testing vision. When your optometrist says you have "20/20 vision," he or she is referring to your ability to see an object 20 feet away. The first figure in the symbol "20/20" refers to the distance in feet at which testing is done. The second figure indicates the distance at which most people can distinguish the letters of a size considered standard for that distance. So, if you have "20/20 vision," it means you can distinguish at a distance of 20 feet the letters most people make out at this distance. If your vision is "20/30," it means that you see the same size letters at 20 feet away that the average person would see at 30 feet.

20/20 does not tell you:

- how long you can read that letter for clearly
- how comfortably you can read that letter
- how well you can transfer from working on a near task to a distance task and back
- whether your two eyes are tracking a target efficiently
- how your brain interprets the information
- how efficient your visual perceptual skills are
- how efficient your binocular coordination is
- that you will be able to perform well in sports

An individual can have 20/20 sight and still have a visual perceptual problem or a learning difficulty that has a major visual roadblock contributing (if not creating) the problem.

Even if you have been told that you have 20/20 eyesight, but you are not achieving to your potential, perhaps you are coded with a learning difficulty, or you tend to do visual tasks primarily with another sense (e.g. auditory learner), or you have to exert significant more effort to achieve the success you have achieved (e.g. you may be a straight A student but it takes you 2 hours to do homework that takes most people 30 minutes), you may benefit from our visual information processing evaluation to see whether vision therapy may be beneficial in improving your visual skills. [vT](#)

Perception and learning

Among many other things, learning requires the ability to distinguish small differences in form, yet many children are very poor at form perception. How can you tell if your child needs help in building this visual ability?

Here are some common signs of form perception problems:

- Mistaking words with same or similar beginnings
- Failure to recognize the same word in the next sentence
- Reversing letters/words in writing or copying
- Confusing likenesses and minor differences
- Confusing similar beginnings and endings of words
- Confusing the same word in the same sentence
- Failure to visualize what is read
- "Drawing" with fingers to decide similarities and differences

Substandard form perception is only one of a number of visual problems that may be present in someone who still has 20/20 eyesight, and optometric visual training can be very helpful in dealing with these form perception problems.

Questions and answers about vision training

Q. What is visual training?

A. Visual training is a sequence of procedures (determined according to the needs of the individual) designed to help the trainee learn to see things accurately, rapidly, completely—with understanding. These procedures can resemble games or drills, or may even appear to be physical exercise. However, they all have one purpose, to “arrange proper conditions for learning.”

Q. What is a vision or perception problem?

A. It is a problem in the complex, learned process of vision where a child, or an adult, does not acquire the information he needs to function efficiently. These problems often become apparent in the child’s poor school performance or in an adult’s difficulty in reading.

Q. Are the problems addressed by visual training known by other names?

A. Yes. Some of these labels include perceptual handicap, minimal brain dysfunction, dyslexia, learning disability, under-achiever, slow learner, perceptual-motor and visual-motor problems.

Q. Doesn’t the conventional eye examination performed at school uncover these problems?

A. Unfortunately, no! Most of these children do not have an eye problem (most have 20/20 acuity) but rather a visual problem which interferes with learning. Vision means, “I understand.” Optometry stresses the dominance of vision as the unifying process of all the senses.

Q. Can a vision problem manifest itself in other ways?

A. Yes, it can, and in ways seemingly unrelated to vision. Short attention span, daydreaming,

impaired directionality, mixed laterality, clumsy or uncoordinated movement, surly, hostile or even belligerent behavior may be symptoms. With adequate evaluation, these can often be “pegged” as visual/perceptual dysfunctions in disguise.

Q. How many youngsters are affected?

A. Studies show that 17 million school children are achieving much below their potential. (Ten percent are so severely disadvantaged that they are literally unable to learn.)

Q. Can a regular basic eye exam catch vision or visual perceptual problems?

A. Unfortunately, most regular basic eye exams check only for 20/20 sight, basic binocular coordination testing and eye health testing. Areas of visual perceptual skills, eye tracking skills, visual motor difficulties, learning related visual difficulties, dyslexia type testing, laterality/directionality are rarely addressed. If your regular eyecare professional does not provide this testing and therapeutic services, ask them to refer you to Calgary Vision Therapy. [VT](#)

Eyesight vs. vision

Eyesight and vision are not the same thing. Eyesight is the ability of the eyes to see what is there.

Vision is the ability to get meaning out of what has been seen as we relate it to all our other senses and to our past experience.

Vision is developed in a sequence of predictable stages, therefore, it is trainable. Sight is what we see; vision is what we do with what we see. [D](#)

Success stories

R. R. 12 years old

"School work has become easy. Her grades have increased a minimum of a full grade. She rarely needs help with her homework and she comprehends what she reads. She now enjoys reading for the first time in her life..." *(written by R.R.'s father)*

L. R. 9 years old

"I am absolutely convinced eye therapy has contributed to his success. Moving from a grade 1 to a grade 4 level in reading is incredible and I could not be more thrilled!" *(written by L.R.'s mother)*

For more success stories visit our website,
www.calgaryvisiontherapy.com

Dr. Brent W. Neufeld
Optometrist

Calgary Vision Therapy

Suite 130 - 2880 Glenmore Trail SE
Calgary, Alberta
T2C 2E7

Ph. (403) 242-1800

Fx. (403) 242-3833

www.calgaryvisiontherapy.com

What is vision therapy?

When you first walk into a vision therapy room in your optometrist's office, you may find many interesting activities—some of them may even look like games. But vision therapy is not "eye-muscle exercises" and it is not a random selection of games.

Most people are born with healthy eyes. But, in the process of growing up, there may have been some gaps in the development of their visual systems. Vision therapy, also known as "visual training," (VT) is a careful selection of tasks that provide the visual system with the learning experiences it needs to fill in those gaps.

Efficient visual skills include using both eyes together effectively. When both eyes move, align, fixate and focus as a team, it helps you to interpret and comprehend what you see. It is the goal of your optometrist to help you achieve your highest visual performance. And vision therapy provides the opportunity.

It has been estimated that of all optometric patients, 21% would significantly benefit from vision therapy. However, patients may need treatment for different reasons, so there are different kinds of vision therapy.

- First, **Developmental VT** is used for the guidance and development of visual abilities in young children. It helps them grow into the visual tasks required of them in school.
- **Preventive VT** is used to help the development of children with potential visual disorders that are preventable, such as some early forms of focus and eye teaming problems and conditions in which the two eyes see and measure differently.
- **Rehabilitative VT** is designed to remediate specific diagnosed visual disorders such as amblyopia, strabismus, some focusing difficulties, visual-motor dysfunctions, and visual perceptual difficulties.
- **Enhancement VT** is visual fitness training and aims to enhance the efficiency and stamina of visual abilities so that the patient can more efficiently and comfortably apply such function to desired areas. These areas may include sports involvement, work demands or academic areas. So, whatever your need, vision therapy might be the answer. Contact Calgary Vision Therapy for more information about vision therapy. [vt](#)

