

# What are the benefits of vision therapy?

People who participate in vision therapy programmes report a wide range of benefits. These differ from person to person and depend upon each persons visual experience.

Younger patients notice that they get better school grades and that homework is less of a chore. Adults report that they are more productive. Patients of all ages find reading is easier, that reading is fun and that they have improved at sports and no longer have headaches.

Vision therapy can even affect things that you might not associate with vision. People have noticed that they are more confident and outgoing, have higher self esteem and are more confident about trying new experiences.

Each vision therapy patient has a list of things that they wish to improve and vision therapists work with patients to help them achieve those personal goals, whatever they may be.

## What kind of Optometrist do I need?

The Optometrist you need to visit is a professional interested in helping patients improve the functioning of their entire visual system. These specialists, spend years in post-graduate education learning how to best help their patients achieve their goals.

Not all Optometrists choose to become involved in providing extensive visual skill assessments. To help you make sure that your Optometrist is someone who promotes vision care, directed at your whole visual process, you may want to discuss the following questions with them or their reception staff:

- 1. Do you provide school or work-related visual perception tests?
- 2. Do you provide a full series of near point vision tests?
- 3. Do you provide full vision care and vision therapy in your practice or, will you refer me to someone else if necessary?
- 4. Will you see me again to determine my progress?

With this information, you can then feel confident that your vision needs will be addressed by your behavioural optometrist.

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Amblyopia 'So, you have a lazy eye!'



## **3D/Stereo Vision**

Stereo Vision or stereopsis is also referred to as 3D vision. Stereopsis, from stereo meaning solidity, and opsis meaning vision or sight, describes the sensation of depth attained from the successful merging of the two slightly different pictures seen in each eye into one 3D image. The condition of stereo blindness occurs when two eyes do not work together to see in 3 dimensions.

#### We need 3D vision to help:

- Understand the position of our bodies in space
- Compute the relationship between objects and ourselves
- Assess and compute the relationships between objects
- Understand objects in our environment
- Effectively use our vision to guide us through space
- Visually direct our reaching, grasping and manipulation of objects
- Contribute to the overall cognitive function

## Amblyopia

Lazy Eye is a common term used to describe a condition where one eye sees poorly, even with spectacles or contact lenses. The proper medical term for this condition is Amblyopia. The term "lazy eye" is also mistakenly used to describe an eye turn or crossed eyes, which is known as Strabismus. This is inaccurate.

A crossed eye can cause Amblyopia, but it is not necessarily a "Lazy Eye." Amblyopia can develop in childhood due to:

- An obstruction of vision within one eye due to injury or disease;
- Significant differences between the clarity of the images seen by each eye due to farsightedness, nearsightedness or astigmatism;
- Misaligned eyes or crossed eyes (Strabismus)

When the clarity or alignment of the images from the two eyes is very different, or if the child sees double, the brain may begin to ignore the vision in one eye. This can result in Amblyopia. The favoured eye compensates for the "lazy eye," so the child with Amblyopia may not be aware of the problem until the better eye is covered over. It is important to note that Amblyopia can be present when there is no physical problem with the eye itself. Disease or injury are just a few of the possible causes of Amblyopia. There are many reasons why a person may develop Amblyopia. It is important that a specialist determine the cause and provide the appropriate treatment.

Note that Amblyopia is a developmental problem in the brain, not an organic problem in the eye (although organic problems can give rise to Amblyopia which continue to exist after the organic problem has resolved). The part of the brain corresponding to the visual system of the affected eye is not stimulated properly and remains undeveloped. This has been confirmed by direct brain examination.

### Symptoms:

- Eyes that do not appear to work together
- Inability to judge depth correctly
- Poor vision in one eye

#### **Resulting in problems with:**

- Balance
- Distance judgement
- Eye hand coordination
- Object recognition
- Difficulties in manipulating objects
- Differentiating, analyzing, categorising, sequencing etc
- Inattention



## **Treatment of Amblyopia**

Amblyopia is generally treatable even after age eight, although the earlier the problem is found and treated, the more successful the outcome.

#### Treatment may include:

- Spectacles or contact lenses (proper lenses can help reduce stress so that the under-used eye can start to work more efficiently);
- Forcing the weaker eye to work by blocking or fogging the favoured eye with special lenses, an eye patch or eye drops;
- A program of vision therapy to help equalize vision in both eyes, improve eye coordination, and restore clear single vision.

"Vision is the brain's way of touching the world"

(Merleau-Ponty, 1964)