

Behavioural Optometry

Behavioural Optometry involves understanding the difference between vision and eyesight. Eyesight is the ability to 'see', whereas vision is the result of the brain interpreting the information from the eyes, as well as information from our other senses, to comprehend the world around us. For example, eyesight is being able to see a car on the road, but vision gives us the ability to interpret the information needed to cross the road without being run over.

Traditional Optometry is more focussed on eyesight, while Behavioural Optometry is interested in vision.

What is tested during a Behavioural Optometry appointment?

Refraction

As with a general eye examination a Behavioural examination begins with a refraction check to measure the clarity of vision. A small percentage of vision problems in primary school age children are due to an undiagnosed refractive errors meaning they are myopic (short sighted), hyperopic (long sighted) or astigmatic (astigmatism causes blurry vision at any distance). Left untreated, refractive errors can impair development and greatly hinder a child's ability to learn.

Binocular Vision

For the visual system to function well, the brain must be able to co-ordinate both eyes to see together, looking straight ahead for distance viewing and converging them for close tasks. This is mostly a natural process, but if the eyes do not coordinate well, it can severely hamper how well the visual system works. If not treated, this type of strain in the visual system can lead to other problems, such as myopia (short-sightedness).

The symptoms of binocular vision issues vary dependent on the severity, but can include:

- General fatigue after performing focussed tasks
- Difficulty with tracking words across a page when reading
- Difficulty following a ball to catch it
- Intermittent double vision
- Turned eye

Visual Fatigue

If there are inefficiencies in the visual focusing system it means a lot more energy must be used to maintain focus to complete tasks. This is visual fatigue and it is the greatest threat to effective school performance. Treating visual fatigue is important to ensure the child can apply themselves to their work and continue to make progress and acquire new skills.

Indicators of visual fatigue include:

- Giving up or avoiding homework or classroom tasks
- Rushing tasks to get them done before they tire, resulting in poor accuracy
- Declining performance, e.g. making more mistakes, reading better in the morning than the afternoon, etc.
- Getting headaches and sore eyes (only in those children that persist despite the fatigue)
- Holding books closer than normal – usually the longer time reading, the closer the book is held

Tracking - Eye control

Tracking is the skill of following words or numbers across page and down to the next line quickly and accurately. It is important to note that the skill of tracking must be learnt, we are not born with it. Tracking skills can be reduced due to several causes; some people have poor eye coordination, or an over tense visual system, but more commonly it is due to a visual fatigue issue.

We measure tracking using the Developmental Eye Movement (DEM) test, with which we can identify if a child has tracking skills below their age level. This test also allows us to measure the progress of tracking skills after treatment to monitor improvement.

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Once diagnosed, how are these problems treated?

Glasses or Contact Lenses

Glasses or contact lenses may be used to correct a refractive error. Eye wear prescribed for this reason provides increased clarity of sight.

Glasses or contact lenses may also be used to treat visual fatigue. Eyewear prescribed specifically for fatigue issues won't necessarily make the vision clearer, rather they make it easier. With any learned skill, the more you practice, the better you become, so if visual fatigue is reduced and the child can focus better and for longer on classroom tasks, naturally their tracking skills will develop and improve.

Vision Therapy

Vision Therapy is used to treat binocular vision and tracking issues. Vision Therapy is a program of activities prescribed by a Behavioural Optometrist, conducted and managed by an accredited Vision Therapist with the aim of improving the function of the visual system. Eye control is essentially a subconscious process, but vision therapy makes it a conscious process in order to gain control and train the system. Ultimately these skills will again become subconscious, but will maintain the greater efficiency learnt throughout the program.

To determine which aspect/s of the visual system is not functioning efficiently, we perform a Visual Perception Test. The results of this test are then used by our Vision Therapist to create individual programs for each patient. The areas assessed are:

- Visual Spatial Skills - The ability to understand and use direction.
- Visual Motor Integration - Visual control over a pencil, e.g. the ability to write or draw accurately.
- Visual Analysis Skills - The ability to see the detailed parts of the whole view.
- Visual Memory - The ability to recall what we have seen, e.g. sight words.
- Visual Sequential Memory - The memory of groups/sequences of letters, i.e. remembering words as a group of letters.
- Auditory Analysis Skills - Identifying the sounds that make up the word, breaking words down to syllables.

The importance of vision

Ninety percent of information we use to perceive and understand the world around us comes to us through our eyes. As such, vision problems have great potential to hamper a child's development and learning. There are numerous conditions that can affect visual performance, and it is our aim to diagnose and treat these conditions through Behavioural Optometry to ensure you and your children have great vision now and into the future.

To book a behavioural examination with one of our Behavioural Optometrists, please call either of our practices.

**1 in 5
children
have an undetected
vision problem**

Tick an eye exam off
your checklist. Book today.



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&
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