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BEHAVIOURAL OPTOMETRY
CHILDREN'S VISION

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DEVELOPMENTAL VISUAL PERCEPTUAL ASSESSMENT

At **STRACHAN EYECARE** our Optometrists have a special interest in children's vision and visually related learning difficulties. When we examine a child who is under-achieving, we follow an examination protocol consisting of two parts:

1. PRIMARY OPTOMETRIC EXAMINATION: This is a *"visual efficiency examination"* to determine if the child has healthy eyes and can see *clearly and comfortably* without undue effort or stress for long periods of time.
This examination is an essential first step in our assessment of all children.

It is important for parents to realise that children with excellent clarity of eye-sight as measured on a distance letter chart can still have visual problems that may significantly affect their concentration and learning – for example, if excessive focusing effort is needed to stop the print from going blurry when reading, then it will be much harder to derive meaning from the words.

It should also be noted that the demands on a child's eyes increase markedly as the child proceeds through school whilst at the same time their eyes are growing and developing rapidly, and so routine review of the visual efficiency skills is recommended at least every two years for all children, regardless of academic performance.

2. DEVELOPMENTAL VISUAL PERCEPTUAL ASSESSMENT: This is a *"visual information processing evaluation"* which probes the child's ability to *understand, interpret and remember what they see*, together with the child's ability to *link vision to language*.

All tests used are well standardized, enabling us to determine whether your child's present visual perceptual development is at the expected level for their age or grade.
Such evaluation is recommended for primary school children who are experiencing learning difficulties, or who are not performing at the level it is felt they should be capable of. Perceptual evaluation can also help in assessing a pre-school child's *"readiness"* for school.

Screening tests of auditory skills, language and motor skills may also be included, and recommendations for referral to other appropriate specialists will be made on indication eg. *Educational Audiology, Speech/Language Pathology, Occupational Therapy, Educational Psychology, Behavioural Neurotherapy, Tutoring etc.*

A Developmental Visual Perceptual Assessment will investigate the following skills:

Eye-Tracking – Students must be able to track their eyes accurately across a row of print and from the end of one row to the start of the next when reading. Difficulty can cause students to lose place or skip words or lines which can affect reading speed, fluency and comprehension.

Visual Form Perception – This is the ability to gain meaning from visual symbols using the following skills:-
Visual Discrimination: This is the basic foundation skill for both of the essential elementary reading methods that children must master, phonics and sight word processing. *Visual discrimination* is awareness of how things look different, or attention to visual detail, and is particularly relevant to the child who mistakes words or letters that look similar (eg. hat/hut) in spite or having "normal sight" as measured on a letter chart.
Visual Spatial Skills: *Laterality* is the ability to know left and right on oneself; *directionality* is the ability to project these directions onto other objects out in space. Lack of confidence in these visual spatial skills may result in poor organization of work on the page, and is often associated with reversals and inversions of letters, numerals, and words (eg. b/d, was/saw).

Visual-Motor Integration *(eye-hand co-ordination)* – This is the skill in which the brain guides movement of the hands based on the information it receives from the visual system. If the child has poor *eye-hand co-ordination*, handwriting will very likely be messy, disorganized and slow. These problems can be compounded if fine-motor skills and/or pencil grip are poor. Visual-motor integration is also important to many sports and art/craft.

Visual Memory and Visualization – *Visual memory* is the ability to recall visual material well enough to recognize it when seen again, whilst *visualization* is the most highly developed form of visual memory, and is the ability to spontaneously form an image in one's mind. Difficulties with these skills may be associated with poor sight word recognition or poor comprehension, and can also cause problems with copying tasks, spelling (particularly with the many irregularly spelt words of the English language) and maths (tables, mental arithmetic and geometry).

Visual Attention Span – This is the number of letters or amount of visual information which the child can "take in" and process accurately in one glance. V*isual span* is closely related to sight word recognition and thus to reading fluency – if the span is limited, then the child will have to rely on slow letter-by-letter "sounding out" strategies or will make wild guesses at words based on only the first few letters, and thus will often mistake words with similar beginnings.

Visual-Verbal Integration – Visual-verbal testing gives an indication of expressive language ability and the speed of *"Rapid Automatic Naming"* (or RAN). Delayed RAN will result in slow disjointed reading as the child struggles to *"see and say"* quickly. This type of testing also gives useful insight to the child's "cognitive style" (ie. Impulsive vs reflective).

Auditory Skills – *Auditory analysis,* or *"phonemic awareness"*, is the ability to hear and analyse sounds and blends within words, a very important skill for reading and spelling. *Auditory memory* relates to how well we hear and retain verbal information. This relates closely to language development and in particular to the ability to follow oral instructions.

Visual-Auditory Integration – Reading demands the skill of matching visual symbols to their sounds or "knowing how a written word sounds out aloud". Spelling works the other way, requiring the child to match sounds to visual symbols or "knowing how a heard work looks down on paper". Testing will indicate whether the child uses a more visual or phonetic approach to reading and spelling, which can be helpful in developing appropriate remedial strategies.

Screening testing of reading with coloured overlays can also be arranged on indication ('Irlen Syndrome', 'Pattern Glare' or 'Scotopic Sensitivity Syndrome').

Following the assessment, recommendations appropriate to your child's needs will be given.
In many cases, informal recommendations regarding appropriate strategies and activities for home and school is all that is needed. However, should significant delays be found in any of the visual perceptual skill areas outlined above, then a **Vision Therapy Program** may be recommended for your child, as research and experience shows that appropriate daily Vision Therapy activities can help to develop and enhance visual perceptual skills, which in turn can make it easier for the child to learn. **Thus there can be a positive impact on school achievement.**

Parents must realise, however, that providing appropriate vision care, including developmental Vision Therapy, does not 'cure' learning problems, but it does provide a solid foundation of visual abilities that a learning team can build upon. It will make it easier for the child to learn visually, and thus the child's attention and concentration may also improve, *but the child may still need educational remediation to catch up in areas where they are academically behind.*

At **STRACHAN EYECARE** we now offer a variety of computer-based Vision Therapy Programs as well as our traditional individualized 'free space' Vision Therapy Programs. To be maximally effective, these Vision Therapy Programs generally require therapy to be done at home with a parent, 5 to 6 days per week, for about 30 minutes each day, with regular 4 to 6 weekly in-office reviews.

FEE STRUCTURE

The Primary Optometric Examination fee is claimable through **Medicare** and we will *bulk bill* whenever possible; time allowed for this examination is 30 minutes.

The Developmental Visual Perceptual Assessment fee for school-age children is $229 and includes preparation of a detailed written report. 90 minutes is generally allowed for this assessment and the fee is not covered by Medicare or the Private Health Funds.
For pre-school children 30 minutes is generally allowed, and the fee is $40, or $75 if a written report is required.

Should a perceptual assessment be scheduled for your child, you will be given a *'Parent Questionnaire'* and a *'Teacher Checklist'* to be completed *prior to the perceptual assessment.* We would appreciate if you could return these forms together with copies of any reports that are relevant, *prior to your child's appointment.* If this is not possible, please ensure that you bring the completed forms along with you on the day.

It is preferred that at least one parent attends the child's perceptual assessment, and it is recommended that other children are not brought along to avoid distraction for the child being assessed.

Vision Therapy Programs The fee for Vision Therapy programs is split, with an "up front" fee for the program being due at the time of delivery, and the balance being payable at the rate of $30 at each in-office review. Small additional fees may be charged for extra equipment on an 'as needs' basis.
The consultation fee for each in-office visit will generally be *bulk billed* through Medicare but the Vision Therapy program fees are not covered by Medicare or the Private Health Funds.

Computer-based programs:
The 'Vision and Rapid Automatic Naming trainer' or VRANt program costs $170 on delivery with $30 per in-office review.
The 'PTSII' and 'Dynamic Reader' programs cost $205 on delivery with $30 per in-office review.
The 'Vision Builder' program costs $205 on delivery with $30 per in-office review.
The 'Piggyback' program costs $255 on delivery with $30 per in-office review.

Non computer-based 'free space' Vision Therapy programs are also available.

Your Optometrist will advise regarding the most appropriate Vision Therapy option for your student.

Feel free to contact us if you would like any further information.