

How fast can your child read?

Vision Therapy shows results

Reading speed can improve when visual stress is treated.¹ Nearly 10% of children face difficulties in reading, spelling and writing, even if they are highly intelligent and articulate. Their learning process may be hampered by other weaknesses including speed of processing, short-term memory, organisation, sequencing, spoken language and motor skills; and they may also have difficulties with their visual perception.

"Vision is a core component of the process of reading and learning and it involves a very wide range of cognitive and visual processing skills," said senior consultant optometrist Yap Tiong Peng from IGARD Group. He explained, "Certain vision problems are particularly prevalent and can contribute to a child's reading difficulties. Hence, any child facing difficulties in reading, or who reads competently but reluctantly, or who reads less accurately than would be expected from their other abilities, should consult a specialist in vision."

"Optometrists and ophthalmologists are generally able to prescribe spectacles to improve a child's blurred vision, but spectacles alone do not resolve reading difficulties," explained Yap. He pointed out that the difficulty can be related to complex issues, such as the child's poor alignment of the two eyes, eye focusing problems and visual tracking issues. Interventions for these issues range from special ophthalmic prisms, vision therapy to precision coloured filters.

His recommendations was echoed by Professor Arnold Wilkins, Head of Visual Perception Unit, Department of Psychology at the University of Essex in England, U.K., in his book *Vision and Reading Difficulties* that is co-authored by Dr Peter Allen (Anglia Ruskin University, Cambridge) and Professor Bruce Evans (City University, London). The latter visited Singapore last year and jointly lectured together with Yap on the topic 'Vision and Learning'.

According to them, crossed or lazy eyes do not directly result in reading difficulties, but they can adversely affect other functional aspects of vision, visual perception and the child's fine eye-hand coordination skills. Because the symptoms are not acute, kids tend to brush them off as normal, and therefore teachers and parents must play an important role in noting the tell-tale signs.

Vision Therapy

"There are specialised tests to determine if your child

has problems focusing, or have poor or unstable coordination of the two eyes. This is broadly known as Orthoptics or Binocular Vision," said Yap who is both a clinician and lecturer in this field and has a special interest in Behavioural Optometry. He taught the courses 'Advanced Visual Neurophysiology' and 'Binocular Vision' at the University of Manchester and Singapore Polytechnic.

Once diagnosed, your child may undergo vision therapy, which involves a non-surgical and customised program of visual activities designed to correct binocular vision problems and/or improve visual skills. It is like 'physiotherapy' for the visual system, including the eyes and the parts of the brain that control vision.² Kids who have completed the therapy reported improvements in reading speed and concentration.

A recent scientific review article by Yap reported that nearly 50% of dyslexic children have some complaints of their vision, and for some of them, their symptoms are quite severe.³ Children have reported perceiving words 'moving', 'shimmering', 'blurring' and 'doubling', while some kids complain about headaches, migraines and tired eyes. But very often, they do not have any complaints at all, because the problem only get more obvious when the child is reading a text on a white background.

"Visual Stress is also a possible explanation," said Yap. The photosensitivity condition is also known as 'Meares Irlen Syndrome' and it can affect the visual cortex and hinder reading. Research by the British Medical Research Council showed that Visual Stress may derive from hyper-excitability of neurons in the brain, and it is possible to tint lenses carefully to a very precise colour to help alleviate these symptoms.

The therapy using colour filters has been reported to remediate the Visual Stress and can even improve reading speed¹, but Yap warned that this may not be for everyone, and parents should not be quick in letting children wear colour lenses without first undergoing a proper diagnostic test. "Mild visual distortions arising from visual conditions may slow reading and may also discourage children from prolonged reading. Even good readers and those with 'mild' learning difficulties can also unknowingly suffer from Visual Stress", Yap shares with Ezyhealth magazine.

References:

- 1 www.essex.ac.uk/psychology/overlays/
- 2 www.allaboutvision.com/parents/vision_therapy.htm
- 3 www.optometry.co.uk/visionbook



Yap Tiong Peng is a Senior Consultant Optometrist at IGARD Group. Trained in Manchester, England, he is adept in assessing children with learning difficulties and behavioural issues, as well as the provision of therapeutic interventions for Myopia, Amblyopia, Strabismus and functional deficits in vision for both children and adults.

Paediatric Optometry (IGARD Group)

eyecentre@igard.com.sg | 67323233

Locations in Singapore:

- Orchard Road (51 Cuppage Road) • Corporate Project Division (Eye Care Programme)

