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One of the most common and yet misunderstood eye diseases amongst children is strabismus, a misalignment of the eyes that affects two to four per cent of the population. Depending on which way the eyes are misaligned, we have different names for the condition; patients with inward-turning eyes, for instance, are often described as "crossed-eyed", but there are all manner of misalignments ranging from upward, downward or outward turning eyes.

In Singapore, the most common misalignment is that of exotropia, or outward deviation. Contrary to popular belief, children do not outgrow true misalignment. If left untreated, strabismus can result in loss of vision, loss of depth perception, double vision or "lazy eye". The goal of strabismus treatment, therefore, is to straighten the eyes and allow the eyes to be used together to provide perfect binocular vision. This may take the form of special eye glasses, eye exercises and/or eye muscle surgery.

Amblyopia, or "lazy eye", occurs when the vision of one eye is significantly better than the other. When this happens, the brain begins to ignore the weaker eye, choosing instead to rely on the stronger one. This can happen as a result of strabismus (as described above), but can also occur if there is an uncorrected difference in degrees of the eye or if there is something blocking the visual axis of one of the eyes.

Infants are always born with poor vision, and as they grow up, their vision improves, usually at the same rate. In some babies, however, if one retina does not receive a clear image for some reason, or if the eyes are not properly aligned, the infant's eyes stop developing normally, causing the appearance of amblyopia.

Amblyopia affects about four per cent of the population and can usually be cured by training the brain to pay attention to the weaker eye. Depending on the cause of the lazy eye, this can take the form of having the child wear an eyepatch over the stronger eye (known as occlusion therapy), clearing the source of visual loss in the weaker eye or by having the child wear special glasses. It is important to have the condition treated as early as possible as the older the child is, the harder it becomes to treat the lazy eye.

Finally, there is myopia, or short-sightedness. Singapore is one of the myopia capitals of the world, with more than 25 per cent of primary school children developing myopia. Even more alarming is the fact that our children are becoming myopic at a younger age. The more myopic a person is, the more likely he or she will develop blinding complications such as retinal detachment, macular degeneration, cataracts or glaucoma in the future. To prevent this, once we discover a child is myopic, we must try to retard the progression through the use of eyedrops and eyeglasses.

Any child can develop eye problems. A positive family history puts the child at increased risk. Certain groups of patients - such as those born prematurely, those with disorders like Down's syndrome, cerebral palsy - may have increased risk of eye problems.

As long as the child's visual behaviour is not normal, the eye does not seem to be fixing well, the child needs to be evaluated by an eye specialist. Even when there is no problem, a child should have a detailed eye check before entering school. Children with risk factors should be evaluated earlier.



A proficient fencer and a linguist fluent in Mandarin, English, Bahasa, Japanese and several Chinese dialects, it is amazing that Dr Leo still has the time to be one of Singapore's top ophthalmologists. A self-described people's person, it was her love for children as well as her fascination with the human eye that led her to specialise in paediatric eye care.