

Sight Matters

FAQ Sheets

Children's Vision Problems

Around one out of every five children has a vision problem. However, children will seldom complain because they think everybody else sees the way they do.

Rarely do these vision conditions threaten a child's sight but they can prevent their development into a normal, contributing adult member of society. This occurs as some vision problems interfere with learning; inhibit sport participation; or create general frustration.



Children's vision problems are not always easy to find as many cannot be detected by a standard school eye chart test. Those related to learning difficulties are often mistaken for other problems.

BABIES

Apart from routine examinations at birth, children do not usually need to be examined until they are two and a half years old. However, they should be examined at 6 months if there is any suspicion that a problem might be present.

The two most common problems are crossed-eyes (strabismus) affecting about 4% of children, and lazy eye (amblyopia) affecting about 1%.

Visual problems which might interfere with proper development can certainly be detected at any age. Early detection can then prevent future complications.

Strabismus:

It is quite normal for an infant's eyes to appear crossed for brief moments during the first six months of life. This occurs as they are learning to use the eyes together as a team. If by the age of 4 months the misalignment appears to be frequent or long-lasting or always with the same eye an examination is indicated.

Common causes of strabismus are poor eye muscle control or long-sightedness. It is then the underlying cause which must be treated.

Sometimes the distance between the nasal corners of the eyes is exaggerated in children, especially when the bridge of the nose is very low. Under these

circumstances, a turned eye is apparent during certain positions of gaze. In these cases a simple test can determine whether or not a true strabismus is present.

Amblyopia:

Lazy eye often affects children with crossed eyes or those who have one eye that for some reason does not see as well as the other eye.

The correct term is "amblyopia" and means the vision is reduced through disuse. This occurs when the brain is receiving such different images from the two eyes that it ignores one of them. Again, early treatment gives the best results.

Sometimes the better eye is covered with a patch to stimulate and strengthen the lazy eye. However, patching alone does not usually restore good vision. Unless something is done to correct the underlying cause of the condition, the vision will become poor again once the patching is stopped.

PRE-SCHOOLERS

One in ten pre-school children are affected by a clinically significant visual problem. As with all age groups, parents need to be alert for signs that may indicate their child's vision needs attention.



This is especially important as this age group will soon begin learning skills at school where being held back by a vision problem could be avoidable.

Signs of a possible vision problem in this age group include inability to sit still for a simple story; inability to express ideas with paint or pencils; short attention span for the child's age and poor performance in preschool or kindergarten.

SCHOOL CHILDREN

Children should be examined at 6 years of age as a follow up to their earlier vision examination at 3 years of age.

The prevalence of certain vision conditions increases significantly to 1 in 5 during the school years, yet changes in a child's vision are usually so gradual that most are unaware of them. Also, many children can easily pass a basic eye chart test and still have undetected near vision problems affecting their school work and some play activities.

Parents and teachers therefore need to be aware of possible vision problems and alert for the symptoms that may indicate them. A checklist of these is shown below and a summary of these observations will be helpful to the examining practitioner.

Remember that early diagnosis and treatment can aid in prevention, controlling, correcting or slowing vision problems that can interfere with a child's learning, recreation and self-attitude.

VISION PROBLEMS

Short-sightedness (Myopia)

This is the only refractive vision condition that does increase significantly in incidence throughout the school years. It affects only 3% of 5 to 9 year olds; increases to 8% of those aged 10 to 12 and then more than 17% of teenagers.

Short-sighted children can see clearly up close but not in the distance. Prescription lenses can provide good vision but periodic lens changes are often needed because this problem is usually progressive in the childhood years. Myopia will then tend to stabilise at about age 25.



Myopic people only have clear near vision

The cause of short-sightedness is not known for certain but the factors involved do include hereditary and visual stress.

To demonstrate hereditary causes, one study showed that 85% of all short-sighted children have at least one short-sighted parent. Illustrating visual stress, another study of Eskimos found that two-thirds of the children developed myopia after starting school, while their illiterate parents had no short-sightedness. This type of short-sightedness related to environmental stress factors is often controlled with specialty lens types such as bifocals or progressive lenses. Once again, early intervention is critical.

Parents should be alert for early warning signs of short-sightedness. These include squinting when looking at distant objects like road signs and movie screens; less clear vision at night; or constantly sitting close to the TV set.

Longsightedness (Hyperopia)

Most school-age children are in fact a little long-sighted. This means they can see better at a distance than up close. Therefore they must exert an extra effort to bring their vision into sharp, clear focus for both far and near seeing.

This is no problem for most of them, but some 6% with higher degrees of longsightedness or muscle imbalance will suffer symptoms of strain which begin to interfere with their schoolwork. These children will often be able to pass an eye chart test with 6/6 (20/20) distance vision but still have very real visual problems with close work.



A longsighted prescription is often mainly for eyestrain

Symptoms related to the strain of overcoming excessive long-sightedness include difficulty in concentrating when reading; fatigue and/or headaches after close work; aching or burning eyes; nausea; poor reading ability; very close reading distance; trouble maintaining a clear focus when doing sustained close work; difficulty adjusting focus and irritability after sustained concentration.

Prescription spectacles or contact lenses to alleviate longsightedness do so by relieving the excessive strain on the child trying to overcome the condition. Often,

children wearing them will not report clearer vision but rather a relief of the strain after sustained periods of concentrated close work.

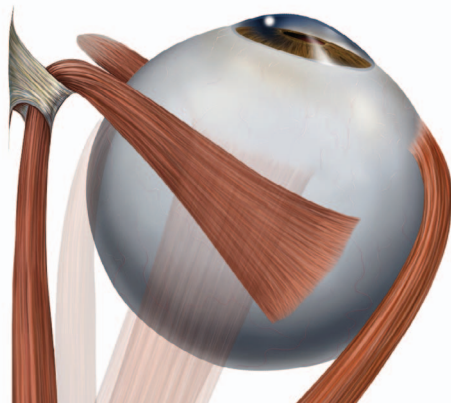
Astigmatism

Astigmatism is a distortion in the shape of the eye. Instead of being round like a marble, the affected eye is somewhat in the shape of a grape. This affects 2% of pre-schoolers and 3% of school-age children to a significant degree.

Small amounts may cause headaches, fatigue and discomfort. Higher degrees of astigmatism result in distorted or blurred vision. Again this condition can show inherited tendencies. Treatment is usually with prescription spectacles, or contact lenses, that correct the distorted focus. Apart from clearer vision and less visual stress, correction of astigmatism is sometimes critical in the treatment of amblyopia (“lazy eye”).

Muscle Inco-ordinations

There is a complex muscle system for co-ordinating the two eyes to work as a team. When this muscle system is not properly balanced, a number of treatment types may be used to correct or reduce the resulting strain.



Six small muscles control the movements of each eye

Muscle inco-ordinations frequently occur together with other optical vision problems. Symptoms are more often discomfort rather than a simple blur. If

left untreated muscle imbalance can contribute to the “worsening” of eye focusing difficulties. The types of treatment used for eye muscle imbalance difficulties include exercises, therapeutic spectacles, bifocals, progressive lenses and prisms.

Colour Vision

About 8% of boys and 0.5% of girls have colour vision deficiencies. These are almost always inherited although they may sometimes occur as a result of disease or injury.



Almost all colour deficient children see most colours but they will have difficulty identifying particular ones, confusing certain shades of red and green for example.

Few of these children will be aware that they have a colour vision deficiency but the detection of these problems is important, especially when career choices are affected.

CONCLUSION

Good times depend on good vision. Remember that 80% of what we learn comes through our vision.

Just as vision anomalies can have profound effects on school performance, so too can recreational activities be impaired. It’s very difficult to hit the ball if you can’t see it properly and it is unusual for children to notice or complain about their own vision problems. It therefore becomes the responsibility of caring adults to be aware.

All children should have their vision examined before the age of 3 years and at 3 yearly intervals thereafter. For those with specific problems, your optometrist will advise a schedule which is appropriate for the individual child. Regular eye examinations are important to ensure that problems have not developed at critical stages in a child’s growth and education.