

Vision problem meets learning challenge

Schoolwork

80% of traditional schoolwork is done via visual presentation. Good eyesight is thus critical in the process of learning. Poor vision can have a huge impact on how a child learns to read, to write and assimilate information.



Having a learning disability combined with a visual problem

It can be an extremely tough educational journey for a child who has both a visual problem and a learning disability. It can have long-term adverse emotional, psychological, social as well as economic consequences.

School attendance

Children may only start to show signs of a learning disability when they start school. Their teachers may notice that the child has **difficulty learning to read**, for example, or has little interest in the activity. The child may **battle in maths classes** and have difficulty **organising** their thoughts and information.

Another noticeability could be a change in their **personality or behaviour**. The child may become **anxious or even depressed** – sometimes even acting out their frustrations on those around them. These signs should never be ignored and could be important markers that may be pointing to a learning disability.

Did You Know?

Did you know that up to 17% of people in the population have a learning disability?



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Dyslexia

This is primarily a reading disorder. It is the result of a **written word processing abnormality** in the brain. A person suffering from dyslexia may reverse or skip words or lose their place while reading.

Although, easily assumed, **eye or eye-movement abnormalities do not** correlate with dyslexia, meaning that these errors do not result from distorted vision or from the inability of the eyes to follow or "track" the words in a sentence sequentially. Numerous studies have shown that children with dyslexia have the same ocular function as non-sufferers.

Computer Games

Interestingly, children who spend a lot of time playing computer games, are **unlikely to have visual problems**. Visual problems are one of the contributing factors to a learning disability. The reasoning behind this, is because playing computer games require **good vision, quick eye movements, rapid visual processing, and adept hand-eye coordination**.

Did You Know?

Children who become anxious when starting school may have a learning disability?

Conditions associated with or that can complicate a learning disability

- Refractive errors
- Problems with the movement or function of the eyes
- Perceptual visual problems

Since vision plays such a pivotal role in learning, a parent must ensure that their child does not have a problem with their eyesight that can be **easily treated**.



Refractive Error

Light entering the eye needs to be bent or refracted in such a way that it strikes the **back of the eye** (retina), perfectly. A patient is said to have a refractive error, if:

- The light is bent too forcefully (short sightedness)
- The light is bent not enough (long sightedness)
- The light is bent in different directions to the correct pathway (astigmatism)

If the above is true, your child will see **a blurry image** instead of a clear, crisp outline of the letters on a page or the picture on a computer screen.

Fortunately, correctly prescribing spectacles will, in most cases, treat this condition.

Movement or function of the eye problems

If the eyes do not move together as a **team**, the images sent from each eye to the brain are not the same. Not only does this confuse the brain but it may also affect the way in which certain visual adaptations develop, such as **three-dimensional vision**.

These visual issues need specialist care to diagnose and treat them.

Perceptual visual problems

This condition means that the eyes are seeing the images clearly, but the **brain cannot interpret** the signals from the eyes **coherently**.

Many areas and functions of the brain may be involved, making it a complex condition to untangle and diagnose. Perceptual visual problems require a **multi-disciplinary approach** for treatment.

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KIDS
EYES

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Treatment

To determine if visual issues might be contributing to or be the cause of your child's learning difficulties, it is important to have your child assessed by an **ophthalmologist**.

They will undertake a **comprehensive examination** of your child's eye structure and function to establish if there are any visual problems. They will then determine the best way forward in terms of treatment.

Remember that treating a child with a learning disability often requires the input from a wide range of **specialists**, because it is complex to understand and treat.

A large number of alternative therapies are now available. But beware of **any treatment modality** that is controversial or unsupported scientifically.

For example, there is no evidence indicating that eye exercises, (except in the treatment of convergence insufficiency) or "vision therapy" have any success in treating learning difficulties.

It takes **time and patience** to manage a learning disability effectively, but the effort can make a truly positive difference to your child's future and that is ultimately extremely rewarding.

Did You Know?

Dyslexia is not correlated with eye or eye-movement abnormalities.



References:

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