

Condition:

Dyslexia and Dyscalculia

What is dyslexia?

Dyslexia is a symptom of a number of different information processing disorders in the brain. Because there are so many different possible problems (many of which have yet to be understood fully) dyslexia is hard to closely define because it affects children in many different ways. However, the basic problem is a difficulty learning to read, spell and write.

Causes Dyslexia is caused by differences in the areas of the brain that deal with language, which aren't yet fully understood.

Several areas in the brain find it difficult to coordinate the manipulation of words needed for reading, writing and spelling, so the features of any one person's dyslexia will depend on which areas are affected and how.

There may be problems such as, receiving sensory information through vision or hearing, holding it or structuring it in the brain, or retrieving it later or there may be problems with the speed of processing information.

Brain-imaging scans show that when dyslexic people try to process information their brains work differently to those without dyslexia. This has nothing to do with intellect - people with dyslexia show a normal range of intelligence.

Inherited or genetic factors are important in dyslexia and other family members are often affected.

What is dyscalculia?

The definition of dyscalculia is: 'A condition that affects the ability to acquire arithmetical skills'. Dyscalculia learners may have difficulty understanding simple number concepts and have problems learning number facts and procedures for example: Maths lessons. Even if they produce a correct answer or use a correct method, they may do so mechanically and without confidence.

Dyscalculia is like dyslexia for numbers. But unlike dyslexia, very little is known about its causes or treatment. Scientists say that it may be caused by the abnormal functioning of a specific area of the brain. People with dyscalculia experience great difficulty with the most basic aspects of numbers and arithmetic.

Possible causes of Dyscalculia

What causes dyscalculia? A genetic component would be the most possible cause of dyscalculia. Based on research about dyscalculia, evidence was discovered that dyscalculia is closely related to genetic material. For example, if one identical twin has dyscalculia there is a possibility around 70 percent that the other twin will be suffering from dyscalculia as well.

In the case for non-identical twins (non-identical twins have less genetic material in common than those of identical twins, yet they still share the same environment), they have a lower chance at approximately 55 percent.

About four per cent of the population have severe dyslexia, while a further six per cent experience mild to moderate problems.

Dyslexia should be diagnosed after testing by a psychologist or specialist dyslexia teacher.

Dyslexia comes from the Greek language meaning 'difficulty with words'.

Facts about dyscalculia:

- About 5% of the population is said to have dyscalculia (Bjorn Adler)
- About 15% of people with dyslexia also have dyscalculia
- Dyscalculia is seen in people where the mother was sick, took drugs or drank during pregnancy. Also those born early and where there were problems during delivery. But most of the time, there is NO explanation.

Useful information:

http://www.bbc.co.uk/health/physical_health/conditions/dyslexia2.shtml

<http://www.freewebs.com/dyscalculia/facts.htm>