

## What is Dyscalculia?

Developmental Dyscalculia, like dyslexia, is one of a family of specific learning difficulties.



Co-occurrence of learning difficulties (or disorders) appears to be the rule rather than the exception, and it can often occur with one or more conditions such as dyslexia, dyspraxia or ADHD/ADD.

Although this may be as a result of sharing characteristic factors such as working memory, research is ongoing into the likely interaction between any individual's cognitive, biological and environmental factors.

What all definitions have in common is:

- a presence of difficulties in mathematics
- the mathematical difficulties are not caused by lack of educational opportunities
- the degree of difficulty is evidenced to be below expectations for the individual's age.

### How common is it?

Dyscalculia is under studied and under resourced in comparison with dyslexia. However, it is estimated that dyscalculia is likely to occur in 3% – 6% of the population, and, unlike some other specific learning difficulties, is as likely to affect females as males.

### Definition one

Dyscalculia is a condition that affects the ability to acquire arithmetical skills.

Dyscalculic learners may have difficulty:

- Understanding simple number concepts
- Lack an intuitive grasp of numbers
- Have problems learning number facts and procedures
- Even if they produce a correct answer or use a correct method, they may do so mechanically and without confidence.

## Definition two

Dyscalculia as a specific learning disorder, an impediment in mathematics, evidencing problems with:

- Number sense
- Memorisation of arithmetic facts
- Accurate and fluent calculation
- Accurate math reasoning.

## What are the signs of Dyscalculia?

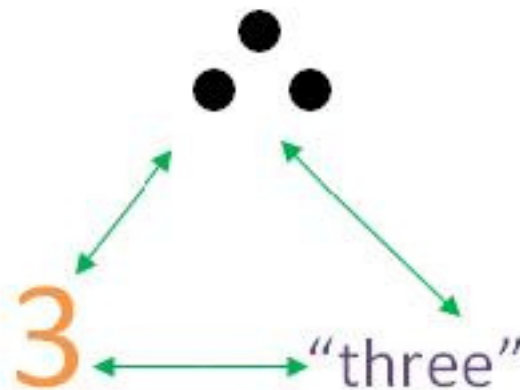
Dyscalculia is not the same as maths anxiety, but people with dyscalculia can react strongly to activities involving mathematics, for instance they may get upset or frustrated when playing board games.

Keep in mind that all people can occasionally struggle with maths. Those with dyscalculia will struggle to a greater extent than their peers, and their difficulties will continue over time.

Use the following checklists to keep an eye on any potential signs of dyscalculia and then discuss your concerns with your child's teacher/school and get professional help:

### Pre-school

- Has trouble learning to count
- Struggles to connect a number to an object, such as knowing that "3" applies to groups of things like 3 cakes, 3 cars, or 3 friends
- Struggles to recognize patterns, like smallest to largest or tallest to shortest



### Primary School

- Has difficulty learning and recalling basic number facts such as number bonds, e.g.  $6 + 4 = 10$ .
- Still uses fingers to count instead of using more advanced strategies (like mental maths)
- Poor understanding of the signs  $+$ ,  $-$ ,  $\times$  and  $\div$  or may confuse these mathematical symbols

- Struggles to recognise that  $3 + 5$  is the same as  $5 + 3$  or may not be able to solve  $3 + 26 - 26$  without calculating
- Has trouble with place value, often putting numbers in the wrong column.
- May not understand maths language or be able to devise a plan to solve a maths problem.
- Finds it difficult to understand maths phrases like *greater than* and *less than*
- Has trouble keeping score in sports or games
- Has difficulty working out the total cost of items and can run out of money
- May avoid situations that require understanding numbers, like playing games that involve maths.

### **Secondary School**

- Struggles to understand information on charts and graphs.
- Has trouble finding different approaches to the same maths problem, such as adding the length and width of a rectangle and doubling the answer to solve for the perimeter (rather than adding all the sides).
- Struggles to learn and understand reasoning methods and multi-step calculation procedures
- Has trouble measuring items like ingredients in a simple recipe or liquids in a bottle.
- Lacks confidence in activities that require understanding speed, distance and directions, and may get lost easily.
- Has trouble applying maths concepts to money, such as calculating the exact change.



***IF YOU SUSPECT THAT YOUR CHILD HAS THIS DISORDER DISCUSS IT WITH THEIR TEACHER AND PLEASE GET PROFESSIONAL HELP:***

#### **Contact**

#### **SPELD Qld - SUPPORTING PEOPLE EXPERIENCING LEARNING DIFFICULTIES**

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