

Definition: The DfE defines dyscalculia as: '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, and 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.'

Dyscalculia is like dyslexia for numbers. But unlike dyslexia, very little is known about its prevalence, causes or treatment. Current thinking suggests that it is a congenital condition, 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. (British Dyslexia Association)

Dyscalculia is a specific learning difficulty in mathematics, where the individual has a difficulty processing numerical/mathematical information with deficits in various aspects of the subject, causing difficulties in some, or all, areas of it. (Jan Poustie 1997)

Characteristics seen in the classroom:

- Difficulty counting forwards and backwards
- An inability to read mathematical symbols
- An inability to understand the meaning of symbols
- An inability to learn/apply a set of rules for mathematical operation
- An inability to learn and recall number facts
- Difficulty memorising and using multiplication tables
- Difficulty with place value – including regrouping, exchange, decomposition
- Difficulty with direction
- Difficulty with rules, formulae and notation
- An inability to relate shape, sizes, part/whole relationships and spatial details

Where to go for help:

- Educational Psychology Service
- LAB 21 – LSAT Service
- Woodlands Outreach Service

Cognition and Learning Difficulties Specific Learning Difficulties Dyscalculia

Assessment and Diagnosis:

As research into dyscalculia is still in its early stages, there is no general agreement as to what the best means of testing for it is. However, when children consistently fail to make progress in maths in comparison with their peers, yet perform well in other areas of the curriculum, it is worth trying to establish where the pupil's difficulties and misconceptions lie. The best way of doing this is to sit with the pupil while they work through a calculation, listening to them as they explain their working. The pack 'Supporting Children with Gaps in their Mathematical Understanding' (National Strategies) will help to provide calculations to work through.

There are screeners available, the most commonly used are:
The Dyscalculia Screener – GL Assessment (developed by Brian Butterworth)
The Dyscalculia Assessment – Jane Emerson and Patricia Babbie – Continuum International Publishing

Frequently used Interventions:

- Supporting Children with Gaps in their Mathematical Understanding (National Strategies Wave 3 Maths Pack)
- Springboard
- My Maths (MyMaths.co.uk)
- Numicon intervention materials
- Catch up Wave 3 maths
- Rapid Maths Intervention (Pearson)
- What Works for Children with Mathematical Difficulties – Anne Dowker (2009, National Strategies)
- Plus 1, Power of 2 and Times Tables – David Joseph Sharp (Power of 2 publishing)