

Dyscalculia (Child) Information Sheet

What is Dyscalculia?

Dyscalculia is a lifelong hidden condition that affects people in different ways, but it is fundamentally to do with how individuals understand and process numbers. Research into dyscalculia is relatively new and rapidly progressing, with a focus on how the brain processes number values and how some people can look at a group of objects and 'just know' how many there are or give a sensible estimate and for other people this is much more difficult.


Dyscalculia has a number of definitions which can cause confusion with identification.

6%
POPULATION

It is estimated have this sort of difficulty in one form or another.



As it is related to brain function, it tends to be hereditary and run in families.

 **1 in 4**
People are affected by **maths learning difficulties**

Children with dyscalculia share many characteristics with maths learning difficulties including:

- Retrieving and remembering maths facts such as multiplication facts or times tables
- Understanding maths language
- Remembering how to do calculations.
- Understanding maths concepts
- Reading and writing numbers, place value and decimals.
- Difficulty with telling the time and understanding money.
- Working memory and being able to process information before it is lost.
- Slow processing speed.

Dyscalculia in children

Children with dyscalculia struggle to see relationships between numbers and appreciate their values and magnitudes. This can make everyday tasks very tricky.

Signs and Indicators

The following may be signs of a child with dyscalculia:

- They took a long time to learn to count objects, especially if the objects are different and not in a row.
- They have difficulty matching a number to a quantity; if you show them a picture with six sweets, they don't automatically say 'six sweets' but want to count them.
- They use their fingers for counting.
- They always start counting from one, they cannot count forwards from another number or count backwards.
- When they do some adding up, they cannot see that the answer may be way too big.
- When arranging numbers along a number line, there are big gaps between numbers up to 20 and then all other numbers to 100 are crowded together at the end of the number line.
- They don't remember number facts and times tables.
- Numbers and maths upsets them.
- They don't have a good reference to numbers. For example, they would struggle to answer this question: "If a bag of 4 apples costs £3.00 what might a bag of 4 oranges cost? - £4.00, £20.00 or £100.00?"
- They have always struggled with maths but may not have problems with other subjects and love reading.

Assessment and Diagnosis

BDA recommends that an assessment for dyscalculia and maths learning difficulties should be carried out by a Specialist Teacher Assessor with a level 7 qualification in the assessment of dyscalculia or equivalent AMBDA dyscalculia award.

The assessment report should include recommendations for support and intervention which have been selected to address the individual needs of the child.

For further information on obtaining an assessment visit:
www.bdadyslexia.org.uk
for



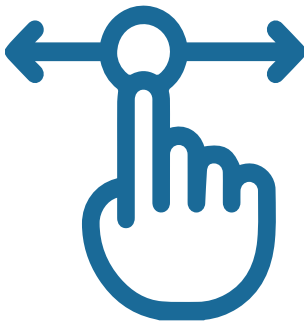
Scan the QR code for Assessment Information.

Support in School

Some schools use computer programmes to screen for dyscalculia. These screeners cannot diagnose dyscalculia, they can only suggest that a child is showing characteristics similar to dyscalculia. Only a formal diagnosis can confirm that they are dyscalculic.

A child does not need a diagnosis of dyscalculia to receive support in school. The school has a duty to make adjustments to improve their access to learning and provide some additional support for learning.

The sort of adjustments that the school may make:



- Use of a calculator
- Use of some concrete materials such as a number line or times table square
- Paper with larger squares to help recording of information.
- Extra time
- Working with a buddy
- Time with a teaching assistant to go over the work, perhaps in a small group
- Access to computer programmes to help consolidate learning.



If a child has a diagnosis of either dyscalculia or maths learning difficulty, you may be able to seek specialist tuition, but most schools do not have access to specialist teachers to provide this.



A pass at GCSE maths is a requirement for entry onto many post 16 courses and university. It may be possible to apply to the college or university for considerations under the Equality Act for an individual who has evidence of dyscalculia and cannot pass GCSE maths or Functional Skills Level 2 maths.

What is specialist provision?

Children with dyscalculia find learning about numbers hard because they cannot 'see them'. They need a visual image of a number and to be able to visualise where it sits on the number line.

Maths Theorists advocate that children need to establish conceptual understanding of a maths topic through the use of concrete manipulatives to build the concept and be able to visualise it before using abstract symbols. One of the main reasons that children struggle with understanding maths is because the abstract symbols have been introduced before they understand the concept and therefore have no meaning.

For example, children should not be taught 'times tables' by reciting them as they have no meaning. They should understand that the concept of multiplication is repetitive addition and that 4×3 means 4 lots of 3



Definition of Dyscalculia

The BDA uses the following definition of dyscalculia which recognises dyscalculia can be a disability under the Equality Act.

Dyscalculia is a specific and persistent difficulty in understanding numbers which can lead to a diverse range of difficulties with mathematics. It will be unexpected in relation to age, level of education and experience and occurs across all ages and abilities.

Mathematics difficulties are best thought of as a continuum, not a distinct category, and they have many causal factors. Dyscalculia falls at one end of the spectrum and will be distinguishable from other maths issues due to the severity of difficulties with number sense, including subitising, symbolic and non-symbolic magnitude comparison, and ordering. It can occur singly but often co-occurs with other specific learning difficulties, mathematics anxiety and medical conditions.

(BDA definition 2019)