

# Dyscalculia

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## What is it?

Dyscalculia is usually perceived of a specific learning difficulty for mathematics, or arithmetic. Developmental Dyscalculia (DD) is a specific learning disorder that is characterised by impairments in learning basic arithmetic facts, processing numerical magnitude and performing accurate and fluent calculations. These difficulties must be quantifiably below what is expected for an individual's chronological age, and must not be caused by poor educational or daily activities or by intellectual impairments.

## How to identify?

- Has difficulty when counting backwards.
- Has a poor sense of number and estimation.
- Has difficulty in remembering 'basic' facts, despite many hours of practice/rote learning.
- Have no strategies to compensate for lack of recall, other than to use counting.
- Has difficulty in understanding place value and the role of zero in the Arabic/Hindu number system.
- Has no sense of whether any answers that are obtained are right or nearly right.
- Tends to be slower to perform calculations. (Therefore give fewer examples, rather than more time).
- Forgets mathematical procedures, especially as they become more complex, for example 'long' division.
- Addition is often the default operation. The other operations are usually very poorly executed (or avoided altogether).
- Avoids tasks that are perceived as difficult and likely to result in a wrong answer.
- Weak mental arithmetic skills.
- High levels of mathematics anxiety.

Because mathematics is very developmental, any insecurity or uncertainty in early topics will impact on later topics, hence to need to take intervention back to basics.

## Effective strategies to help?

A mixture of techniques will help with Dyscalculia. It is a good idea to identify the areas where the child has difficulty, and choose an intervention targeted at these areas. It is important to realise that difficulties might be very low level:

- Focus on understanding (especially of quantity)
- Use concrete materials to help link mathematical symbols to quantity
- Start at a level which the child is comfortable at, so that they experience some success, and slowly move to more difficult areas
- Provide a lot of practice for new skills/concepts
- Reduce the need for memorisation, especially initially
- Ask a lot of questions to get the child engaged and thinking about their own thinking
- Make learning as active and fun as possible - a positive experience

### Useful link

<http://www.dynamomaths.co.uk/> - Dynamomaths

<http://www.bdadyslexia.org.uk/dyslexic/dyscalculia> - British Dyslexic society

<http://www.aboutdyscalculia.org/teachers.htm> - about dyscalculia