What is dyscalculia?

Research into dyscalculia is still in the early stages compared with dyslexia. It is estimated that dyscalculia affects 4% to 6% of the population and it can co-occur alongside other specific learning difficulties such as dyslexia and dyspraxia. There are a number of areas that can cause dyscalculic difficulties such as written number problems and difficulties caused by poor working memory.

In general, people with dyscalculia have poor 'number sense'. Number sense is an intuitive understanding of how numbers work. Number sense is at the core of maths learning. In a similar way that a lack of phonemic awareness causes people with dyslexia to struggle with reading, a lack of number sense causes people with dyscalculia to struggle with maths concepts. If individuals don't understand the basics about how numbers work, learning maths and using it every day can be very frustrating.

In 2020 the Scottish Working Definition of Dyscalculia was developed collaboratively to provide a nationally agreed description of the range of indicators and associated difficulties of dyscalculia. Find out more and read the definition at https://addressingdyslexia.org/what-is-dyslexia/what-is-dyscalculia/.

Signs of dyscalculia in pre-school children

- Has trouble learning to count, especially when it comes to assigning a number to objects in a group.
- Struggles to connect a number to a real-life situation, such as knowing that '3' can apply to any group that has three things in it - 3 biscuits, 3 cars, 3 toys.
- Has trouble remembering numbers and skips numbers when other children of the same age can count and remember numbers in the right order.

- Finds it hard to recognise patterns and sort items by size, shape or colour.
- Avoids playing games that involve things like numbers and counting.

Signs of dyscalculia in primary school

- Has trouble recognising numbers or, for example, making the connection between '7' and 'seven'.
- Has trouble putting numbers in the correct order or column.
- Has trouble coming up with a plan to solve a maths problem.
- Struggles to understand words related to maths such as 'greater than' and 'less than'.
- Can have trouble telling left from right and has a poor sense of direction.
- Has difficulty remembering phone numbers and game scores.
- Avoids playing games that involve number strategies.
- Has difficulty learning and recalling basic maths facts. Struggles to identify symbols such as +, -, x, ÷ and use them correctly.
- May still use fingers to count instead of using more sophisticated strategies.
- Has trouble telling the time.

Signs of dyscalculia in high school and adults

- Anxiety when it comes to numbers.
- Struggles to apply maths concepts to everyday life. This includes money matters such as estimating a total cost, or the correct change.
- Has trouble measuring things like ingredients in a recipe. Would struggle to double or halve quantities .
- Struggles with finding their way around and worries about getting lost.

- Has a hard time grasping information shown on graphs or charts.
- Has trouble finding different approaches to the same maths problem.
- Lacks confidence in some activities that require estimating speed and distance, such as playing sports and learning to drive.
- Struggles to read scales such as thermometers.

It is important to note that these are just indicators and are not the same as an assessment of dyscalculia.

Further information

Find links to more resources
dyslexiascotland.org.uk/dyscalculia

Dyslexia Scotland Helpline
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