



DYSCALCULIA

Dyscalculia affects a person's ability to understand, learn, and apply mathematical concepts. It is not related to intelligence or effort but rather stems from how the brain processes numerical information differently. Individuals with dyscalculia may struggle with number sense, arithmetic operations, mathematical reasoning, and recognizing patterns. Common signs and challenges include:

NUMBER SENSE

- Difficulty understanding quantities or estimating numbers
- Trouble grasping basic number concepts like "more" or "less"
- Challenges comparing numbers (e.g., knowing that 7 is more than 5)

ARITHMETIC SKILLS

- Struggles with memorizing math facts such as addition, subtraction, multiplication, and division tables
- Makes frequent errors in calculations despite appearing to understand the concept
- Difficulty solving multi-step problems

MATHEMATICAL REASONING

- Trouble applying math concepts to real-life situations (e.g., handling money, telling time)
- Difficulty understanding symbols (+, -, ×, ÷) and word problems
- Problems organizing numbers logically or aligning them properly in columns

MATH ANXIETY

- Experiences heightened stress or fear when faced with math-related tasks, which can interfere with performance
- May avoid math activities altogether due to feelings of frustration or embarrassment

SPATIAL AND VISUAL-MOTOR SKILLS

- Trouble reading graphs, charts, or maps
- Difficulty distinguishing left from right or organizing written work neatly

MEMORY AND PROCESSING

- Trouble understanding what has been read, particularly if so much effort is spent decoding words that little mental energy remains for comprehension

Despite these challenges, many individuals with dyscalculia also demonstrate strengths in areas such as verbal reasoning and storytelling, creative thinking and imagination, strong visual-spatial awareness in other contexts (e.g., art, design), and problem-solving using non-mathematical logic.

With the right support, understanding, and tailored approaches, individuals with dyscalculia can succeed and flourish.



SUPPORTING PEOPLE WITH DYSCALCULIA

There cannot be a blanket approach to supporting someone with dyscalculia. Each person has unique needs, strengths, and learning styles. However, the following strategies can be used as guiding principles when working with a student who has dyscalculia:

USE STRUCTURED, MULTISENSORY INSTRUCTION

Teach math using methods that engage multiple senses (visual, auditory, tactile). Incorporate manipulatives, visuals, and real-life examples to build number sense and conceptual understanding.

INTEGRATE MOVEMENT AND BREAKS

Use hands-on activities like counting objects, making physical number lines with objects, or using physical movement to explore patterns. Allow frequent, short breaks to reset focus and reduce frustration.

DEVELOP NUMBER SENSE AND CONCEPTUAL UNDERSTANDING

Focus on building foundational skills such as counting, comparing, and estimating. Teach math concepts through concrete experiences before moving to abstract representations.

FOSTER A SUPPORTIVE LEARNING ENVIRONMENT

Create a space where mistakes are seen as part of learning. Encourage self-advocacy and confidence-building by allowing students to ask questions and express concerns.

LEVERAGE STRENGTHS

Identify cognitive or creative strengths — such as strong verbal reasoning, storytelling, or spatial skills. Use these strengths to reinforce math concepts (e.g., creating stories around math problems or using diagrams).

OFFER ACCOMMODATIONS

Provide tools such as number lines or multiplication charts to support learning. Offer extra time for math-related tasks.

PROMOTE SELF-ESTEEM AND EMOTIONAL WELL-BEING

Celebrate progress and understanding, not just correct answers. Help individuals identify when they may be getting frustrated and employ strategies to self-regulate.

WORK COLLABORATIVELY WITH FAMILIES AND EDUCATORS

Share strategies between home and school to provide consistent support. Keep open lines of communication to ensure the student receives the help they need.

While dyscalculia presents obstacles in navigating numbers, it also opens the door to creative problem-solving, resilience, and alternative thinking. With support, tailored strategies, and a community that understands and champions individuality, people with dyscalculia can succeed and shine in ways that defy conventional expectations.

Embracing neurodiversity isn't just about inclusion. It's about reimagining what's possible when we celebrate different kinds of minds.