

WHAT IS DYSCALCULIA?

- > Often used interchangeably with "math learning disorder"
- > Likely as common as dyslexia (5 to 15%; half have both)
- > 50% to 70% likely genetic factors (Krasa & Shunkwiler, 2009)
- Strictly speaking, refers to math facts, calculations, and processing numerical information
- Many people now include math reasoning and applied problem solving under this term

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MATH FACT FLUENCY



- > Emerges from serial counting
- > It is possible to learn math facts through purely verbal coding, independent of magnitude

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EXECUTIVE FUNCTIONING

- > Working Memory
- > Attention
- > Quantitative Reasoning
- > Self-Monitoring
- > Inhibition
- > Planning
- > Shifting



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- > Frequent errors in the execution of procedures
- > Potential delay in the understanding of concepts underlying procedural use
- > A breakdown in the ability to count, order, or sequence numbers or mathematical procedure
- > Difficulty remembering problem solving algorithms
- > Poor counting/sequencing/ordering numbers (i.e., moving up and down the internal number line)

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- > Weak visual-spatial reasoning
- > Difficulty visualizing verbal story problems
- Weak symbolic working memory (i.e., holding digits in mind) and representation of numbers (e.g., magnitude representations between numbers)
- Weak number sense and understanding of math concepts (e.g., implausible answers; difficulty transcoding)

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