


DYSLEXIA DEMYSTIFIED: What It Is and How to Help


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WHO ARE WE?
School Psychologists
Board Certified Behavior Analysts (BCBA)
Licensed Educational Psychologists (LEP)
Licensed Psychologists (LP)




WHO DO WE SERVE?
Families
Schools (public/charter & private)
Greater Bay area & growing



WHAT DO WE DO?
Assessments
Intervention
Consultation

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LEARNING OBJECTIVES

Participants in this webinar will be able to:

- Define dyslexia and identify its common characteristics.
- Dispel common myths about dyslexia.
- Identify the various subtypes of dyslexia and useful interventions for each subtype.
- Identify areas of processing to test for dyslexia assessment.
- Identify areas of achievement to test for dyslexia assessment.

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WHAT IS DYSLLEXIA?

DSM-V classifies reading issues under broad term of specific learning disorder.

IDEA a learning disability is a basic disorder of a psychological process used in understanding oral, spoken, or written language and may manifest in the imperfect ability to listen, think, speak, read, write, spell, or do math. It may include conditions such as dyslexia.

IDA deficits in accurate and/or fluent word recognition, decoding, and spelling with secondary effects on reading comprehension.

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WHAT IS DYSLLEXIA?

CDE's guideline: <https://www.cde.ca.gov/ls/lr/nc/documents/cadydyslexiaguidelines.pdf>


In 2015, Assembly Bill 1369, Chapter 1369, Chapter 647 passed, which added sections 56334 and 56335 to California's Ed Code.

Ed Code 56334 - the term "phonological processing" was added to Title 5 3030 Specific Learning Disability

Ed Code 56335 - mandated the development of the guidance document linked above from the California superintendent.

Following dyslexia legislation, best practices in California is to evaluate for dyslexia if the reason for referral includes concerns with word reading and/or reading fluency.

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WHAT IS DYSLLEXIA?

CDE's DYSLLEXIA GUIDELINES:

"Dyslexia is an unexpected difficulty in reading for an individual who has the intelligence to be a much better reader, due most commonly to a difficulty in phonological processing – that is, in appreciating the individual sounds of spoken language – which affects the ability of an individual to speak, read, spell, and often learn a second language."


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MYTH: DYSLLEXIA IS A VISUAL-SPATIAL ISSUE (FEIFER, 2018)

- Dyslexia is a **linguistic issue**, not a visual-spatial issue.
- The left hemisphere is wired for linguistic skills.
- Flipping letters and skipping lines and words is a manifestation of the left hemisphere not taking command and control of the reading process.
- A dyslexic brain does not apply the linguistic value to the symbols of the English language.
- Through intervention, we want the left hemisphere to take command and control.

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MYTH: WORD RECOGNITION IS BASED ON VISUAL MEMORY (KILPATRICK, 2015, 2016)

- **Orthographic memory** is activated for instant and effortless retrieval, not visual memory.
- Word recognition is faster than visual recognition of objects.
- By 2nd grade, good readers need only one to five exposures to new words to learn them; once learned, they don't forget.
- Orthographic memory is our memory for the precise order of letters and occurs at two levels of precision:
 - Recognition (when we see the word *sent*, we do not confuse it with *set* or *send*).
 - Spelling (more difficult than recognition).


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MYTH: THERE IS ONLY ONE GOLD. STANDARD INTERVENTION FOR DYSLLEXIA

There is no one-size-fits-all intervention!


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DYSLEXIA DOES NOT DISCRIMINATE (GOSWAMI, 2007)

- Dyslexia manifests similarly across world languages. Children with dyslexia have difficulty recognizing and manipulating phonological units. However, the prevalence varies.


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DYSLEXIA IN ENGLISH (GOSWAMI, 2007)

- The English language is not solely phonological.
 - One letter may map to as many as five different sounds.
 - Approximately 25%-30% of English words are irregular (e.g., laugh, where, two, etc.), or are homonyms (one spelling with multiple meanings, such as right, band, bark, etc.).

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THE DEVELOPMENTAL PROCESS OF PHONEMIC AWARENESS (KILPATRICK, 2018)

WHEN SKILLS ARE ACQUIRED OR MASTERED

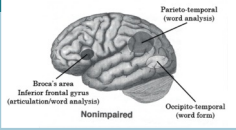
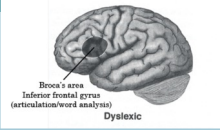
Phonological Awareness Level	Typically Achieving Readers	Low-Achieving Readers
SYLLABLE LEVEL e.g., /tɒp/laɪk — top	Pre-K to Kindergarten	Pre-K to 2nd Grade
ONSET-RHIME LEVEL (Onset — any consonant sounds that come before the vowel in that syllable; Rhime — part of the syllable that includes the vowel sound and any consonant sound that follows) e.g., /tʃat/ — at	Early Kindergarten to Early 1st Grade	Late Kindergarten to 2nd Grade
BASIC PHONEME LEVEL e.g., /sɔ:t/ — sort	Mid 1st Grade to Early 2nd Grade	Early 2nd to 4th Grade or never
ADVANCED PHONEME LEVEL e.g., /hɔ:l/ — hall	Late 1st Grade to 3rd Grade	Often Never

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THE NEUROBIOLOGY OF DYSLEXIA

(SHAYWITZ, 2003)

- Typical readers primarily activate the posterior portions of the left hemisphere as they read.
- Dyslexic readers underactivate posterior regions; the frontal lobes are overly involved in the decoding process.

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INTERVENTION CHANGES THE BRAIN!

(FEIFER, 2018)


- Interventions change the metabolic activity of the brain.
- As a result, the brain can either normalize or it can compensate and recruit other pathways.

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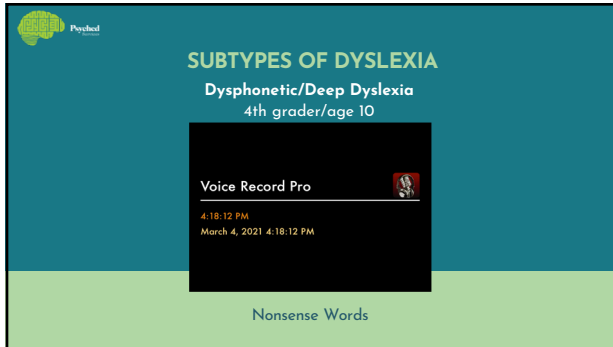
SUBTYPES OF DYSLEXIA

Dysphonetic/Deep Dyslexia
4th grader/age 10



Real Words

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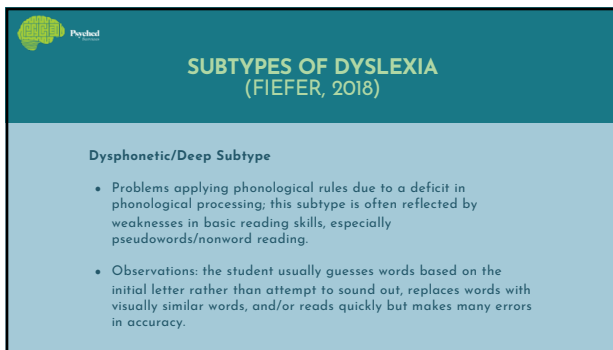


SUBTYPES OF DYSLEXIA
 Dysphonetic/Deep Dyslexia
 4th grader/age 10

Voice Record Pro
 4:18:12 PM
 March 4, 2021 4:18:12 PM

Nonsense Words

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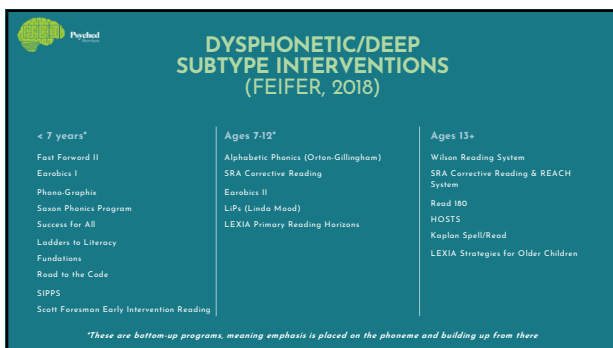


SUBTYPES OF DYSLEXIA
 (FIEFER, 2018)

Dysphonetic/Deep Subtype

- Problems applying phonological rules due to a deficit in phonological processing; this subtype is often reflected by weaknesses in basic reading skills, especially pseudowords/nonword reading.
- Observations: the student usually guesses words based on the initial letter rather than attempt to sound out, replaces words with visually similar words, and/or reads quickly but makes many errors in accuracy.

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DYSPHONETIC/DEEP SUBTYPE INTERVENTIONS
 (FEIFER, 2018)

< 7 years*	Ages 7-12*	Ages 13+
Fast Forward II	Alphabetic Phonics (Orton-Gillingham)	Wilson Reading System
Earobics I	SRA Corrective Reading	SRA Corrective Reading & REACH System
Phono-Graphix	Earobics II	Read 180
Saxon Phonics Program	LiPs (Linda Ward)	HOSTS
Success for All	LEXIA Primary Reading Horizons	Kaplan Spell/Read
Ladders to Literacy		LEXIA Strategies for Older Children
Foundations		
Read to the Code		
SIPPS		
Scott Foresman Early Intervention Reading		

**These are bottom-up programs, meaning emphasis is placed on the phoneme and building up from there*

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DYSPHONETIC/DEEP SUBTYPE STRATEGIES
(RIEF, 2018)

Phonological Awareness Skills & Activities (from simple to complex)

- Segment words- differentiate individual words within a sentence (clap or count the number of words heard in a sentence).
- Rhyme recognition, completion, and production.
- Syllable segmentation, deletion, and substitution.
- Phoneme discrimination (e.g., which sound do you hear at the end of mop? /p/ or /b/?).
- Phoneme imitation (repeating sounds), phoneme isolation (what sound do you hear at the beginning of the word -----?).
- Phoneme blending, segmentation, and manipulation.

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DYSPHONETIC/DEEP SUBTYPE STRATEGIES
(RIEF, 2018)

Phonics

- Use multisensory techniques and associations that make letter-sound correspondence more tangible (e.g., short 'o' sound, the sound you make when the doctor asks you to open your mouth and say ahhhh).
- Teach high-frequency letter combinations before less common ones.
- Point out the visual features of letters (teach similar-looking letters at the same time; this forces the child to pay attention to detail).
- Use flash cards to reinforce letter-sound skills (use upper case, lower case, and cursive).

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DYSPHONETIC/DEEP SUBTYPE STRATEGIES
(RIEF, 2018)

Word Activities

- Use manipulatives, such as letter tiles or magnetic letters, to build or manipulate words (e.g., change open syllables to closed syllables).
- Make syllable cards and move them around to form real words.
- Use word sorts for analyzing words and determining similarities and differences (place into categories such as -sion/-tion words).
- Put word families (onsets/rimes) on charts.
- Write multisyllabic words on strips of paper, divide them into syllables, and cut the syllables apart; have the child put them back together to read.

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SUBTYPES OF DYSLLEXIA

Surface/Dyseidetic Subtype

2nd grader/age 8

Voice Record Pro

10:57:51 AM
May 17, 2019 10:57:51 AM


Voice Record Pro

11:01:10 AM
May 17, 2019 11:01:10 AM

Word List (Regular Words)

Passage

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SURFACE/DYSEIDETIC SUBTYPE

(FEIFER, 2018)

- Problems with the rapid and automatic recognition of words in print. This subtype demonstrates processing deficits in either rapid automatic naming, orthographic processing, and/or morphological awareness (word roots). Academically, surface dyslexia manifests in slow reading fluency, low sight word vocabulary, difficulties reading irregular words, and spelling errors.
- Observations: the student laboriously sounds out words, letter by letter, sound by sound; methodical reader; multiple errors on phonologically irregular words; tends to spell phonetically; letter-reversal errors past a developmentally appropriate age.

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SURFACE/DYSPHONETIC SUBTYPE INTERVENTIONS

(FEIFER, 2018)

<p>< 7 years</p> <p>Destination Reading</p> <p>Reading Recovery</p> <p>Early Success</p> <p>Fluency Formula</p>	<p>Ages 7-12</p> <p>Read Naturally</p> <p>Great Leaps Reading</p> <p>Quick Read</p> <p>RAVE-i</p> <p>Fast Track Reading</p>	<p>Ages 13+</p> <p>Wilson Reading System</p> <p>Laubach Reading Series</p> <p>Read 180</p>
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SURFACE/DYSEIDETIC SUBTYPE STRATEGIES (RIEF, 2018)

Fluency

- Repeated oral reading with monitoring and corrective feedback.
- Student-adult reading: The adult reads aloud first, providing a model of fluent reading; the child then re-reads the same passage with adult feedback.
- Partner reading: The stronger reader first reads the page aloud, pointing to the words while the partner follows along, then switch.
- Choral reading: Everyone looks at the text (projected). After the teacher reads a section, the children read the section in unison.
- Recording-assisted reading: The child reads along with a recorded passage or book until he/she can do so fluently.

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SUBTYPES OF DYSLLEXIA


Mixed Dyslexia
2nd grader/age 7

Voice Record Pro

10:33:52 AM

November 2, 2020 10:33:52 AM


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MIXED DYSLLEXIA SUBTYPE

- Most severe form of dyslexia and the hardest to remediate. Multiple reading deficits characterized by impaired phonological and orthographic processing. Problems are usually reflected in poor basic reading skills, poor reading fluency, and unusual spelling errors. Secondary reading comprehension challenges may also be present.
- Observations: Student exhibits a mix of both visual and phonological errors in reading, exhibits bizarre spelling errors that are not phonetically readable or visually recognizable.

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MIXED DYSLLEXIA REMEDIATION (FEIFER, 2018)

REMEDATION STRATEGIES:

<p>Balanced Literacy= An eclectic approach. Use the child's strengths to improve reading skills. Couple phonics and fluency programs together.</p>	<p>Top-Down Strategies= Place less emphasis on the phoneme and more focus on the morpheme.</p>	<p>Increase the Amount of Reading Opportunities= Home literacy opportunities make a difference. Low SES → needs more access and exposure to text.</p>	<p>Boost Motivation and Confidence= Provide incentives to increase motivation. Show students their progress. Use programs that give immediate feedback.</p>
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ASSESSMENT OF DYSLLEXIA

Assess for dyslexia when concerns include one or more of the following:

- Poor phonemic awareness
- Decoding issues
- Poor sight word recognition
- Slow reading fluency and/or accuracy
- Poor spelling
- Letter reversals beyond 2nd grade

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COGNITIVE AREAS TO ASSESS

- Phonemic/Phonological Awareness
- Rapid Naming
- Verbal Working Memory
- Long-Term Recall
- Orthographic Skills

**Should get at least two measures (or one composite) under each area; if subtest scores are discrepant, then be sure to follow up with a third test in that area.*

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ACHIEVEMENT AREAS TO ASSESS

- Basic Reading
 - Word recognition in isolation
 - Nonsense word decoding
- Reading Fluency
- Spelling

*Should get at least two measures (or one composite) under each area; if subtest scores are discrepant, then be sure to follow up with a third test in that area.


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TESTS TO CONSIDER

- Feifer Assessment of Reading (FAR)
- Comprehensive Test of Phonological Processing, 2nd Edition (CTOPP-2)
- Dynamic Indicators of Basic Early Literacy Skills (DIBELS 8th Edition)
- Kaufman Test of Educational Achievement, 3rd Edition (KTEA-3)
- Woodcock-Johnson IV Tests of Cognitive Abilities (WJ-IV Cog)
- Woodcock-Johnson IV Tests of Oral Language (WJ-IV OL)
- Woodcock-Johnson IV Tests of Achievement (WJ-IV Ach)


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DYSLEXIA ONLINE RESOURCES

www.bookshare.org	https://orton-gillingham.com
www.lidoamerica.org	http://slingerland.org
www.dys-add.com	https://dyslexiaida.org
www.ldonline.org	www.learningally.org
www.decodingdyslexia.net	www.dyslexia.yale.edu
www.ncld.org	https://www.de.ca.gov/sp/se/ac/documents/cadyslexia-guidelines.pdf
www.dyslexiahelp.umich.edu	https://tea.texas.gov/academics/dyslexia
www.readingrockets.org	www.scottishrithospital.org/research-and-education/education/dyslexia-educator-center
www.dyslexiatraininginstitute.org	
www.fcrr.org	

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Shaywitz, S. (2003). *Overcoming dyslexia: A new and complete science-based program for reading problems of any level*. Alfred A. Knopf.

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THANK YOU

Questions, email:
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