

The
International
DYSLEXIA
Association

Promoting literacy through research, education, and advocacy.

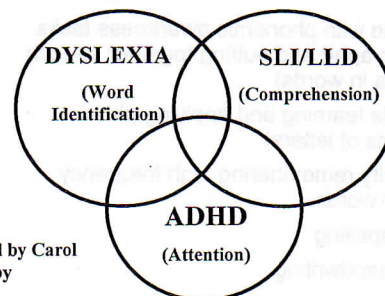
MASSACHUSETTS BRANCH

www.dyslexia-ma.org

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Types of reading disabilities



Model by Carol
Westby

What is dyslexia?

- A **specific learning disability** affecting reading that has a biological basis in the brain.

Learning Disability

Individuals with a learning disability are generally of average or above average intelligence, but their learning disability results in an unexpected gap between their potential and their performance in some academic areas.

Learning Disability (cont.)

A learning disability is caused by differences in brain structure and/or brain functioning. It interferes with the ability to process, store, or produce information.

Red flags for Dyslexia (Pre-school)

- Difficulty with rhyming and hearing beginning sounds in words
- Trouble naming letters

Red Flags for Dyslexia (Grades K-1)

- Trouble with phonemic awareness tasks (taking apart and putting together speech sounds in words)
- Trouble learning and applying phonics (sounds of letters)
- Difficulty remembering high frequency "sight" words
- Poor spelling
- Poor handwriting

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What is Phonemic Awareness?

- Rhyming
- Hearing sounds in words
- Blending sounds
- Segmenting sounds

Why is Phonemic Awareness Important?

Phonemic awareness is directly related to the ability to learn sound/symbol correspondence and thus apply phonics to reading words.

A child's level of phonemic awareness on entering school is widely held to be the strongest predictor of the success he or she will experience learning to read. (Adams and Bruck, 1995)

Developmental Milestones for Phonological Awareness Acquisition (Adapted from Crumrine, 2002)

Pre-school

- Rhyme: plays with words and nonsense words that rhyme
- Syllables: implicitly segments words into syllables as in chants and songs, claps to syllables

Developmental Milestones for Phonological Awareness Acquisition (cont.)

Kindergarten

- Rhyme: recognizes, completes, and produces rhyming words
- Concept of Words: identifies words in a sentence
- Syllables: blends, segments, counts, and deletes syllables
- Beginning Sounds: matches and isolates beginning sounds
- Onset and Rime: blends /t/ + /ake/
- Phonemes: (2 to 3 sounds) blends and segments

Developmental Milestones for Phonological Awareness Acquisition (cont.)

First grade

- Syllables: deletes final syllable
- Phonemes: (3 to 5 sounds) blends, segments, deletes initial or final, substitutes phonemes

Second grade

- Syllables: deletes middle syllable
- Phonemes/Blends: (5 to 6 sounds) blends, segments, deletes or substitutes embedded phoneme in a blend

What is involved in learning sight words?

Recognizing letter patterns that make up whole words or parts of words automatically by sight (orthographic reading).

Why can you read this?

According to research at Cambridge University, it doesn't matter in what order the letters in a word are, the only important thing is that the first and last letter be at the right place. The rest can be a total mess and you can still read it without problem.

This is because the human mind does not read every letter by itself, but the word as a whole.

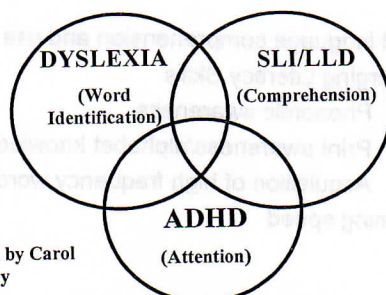
What else is involved in fast and accurate reading?

Rapid naming skills.

Rapid Letter Naming (CTOPP)

s t n a k c t s c
k a n c k t a n s
t k c s n a t c n
k a s n c k s t a

Types of reading disabilities



Model by Carol Westby

Specific Language Impairment (SLI)

Why is oral language important for reading?

- Children's language skills at age 3 are related to reading abilities at age 6
- Children's language skills at 4 ½ related to 1st grade word recognition and to 3rd grade reading comprehension
- Orally tested vocabulary in 1st grade significantly predicts reading comprehension in 10th grade.

RED FLAGS SLI/LLD: Comprehension

- Difficulty understanding words assumed to be familiar
- Difficulty understanding word used in a definition
- Struggles with implicit learning of new vocabulary and concepts
- Difficulty understanding and using time-sequencing vocabulary words (*first, then, next, last*)
- Difficulty understanding lengthy or unfamiliar directions and struggles to internalize classroom routines
- Difficulty understanding the rules of games
- Difficulty following a storyline in a conversation, book, or movie

RED FLAGS SLI/LLD: Language formulation and Word retrieval

- Needs extended time to formulate ideas (starts, stops, restarts, etc.); stories have no beginning, middle, end
- Syntax and grammar errors – Mis-sequenced words in sentences
- Replaces related words for intended words
- Uses fillers and non-specific words (*um, thing, stuff*)
- Difficulty giving directions or explaining a process
- Points, rather than labels
- Difficulty formulating questions to clarify novel information

AGE 3-4

- Can tell a story (a few sequences in order)
- Has a sentence length of 4-5 words
- Understands relative concepts: "yesterday," "summer", "lunchtime", "tonight", "little-big"
- Begins to follow directions like "put the truck under the table"
- Tells 2 events in chronological order
- Consistently uses regular plurals, possessives, and simple past tense verbs

AGE 4-5

- Has sentence length of 4 - 7 words
- Uses past tense correctly
- Listens to short, simple stories & answers questions about them
- Points to colors red, blue, yellow and green
- Identifies shapes: triangles, circles and squares
- Understands "In the morning", "next", "noontime"
- Asks many questions: "who?" and "Why?"
- Accurately relays a long story
- Speech is usually intelligible to strangers

AGE 5-6

- Knows spatial relations like "on top", "behind", "far" and "near"
- Understands "same" and "different"
- Asks questions for information
- Uses all types of sentences, for example "let's go to the playground *after* we eat"
- Follows 3 part directions
- Asks *how* questions
- Uses appropriate grammar in most cases
- Can count to 30 and name days of the week
- Accurately relays a story

Assessment for Early Identification of Dyslexia and SLI

- Oral language comprehension and use
- Emerging Literacy Skills
 - Phonemic awareness
 - Print awareness/alphabet knowledge
 - Acquisition of high frequency words
- Naming speed

The good news is:

Early intervention increases the chance that children will develop automatic and fluent reading with good comprehension.

Intervention: Principles of Instruction

In general, the best instruction for children with dyslexia is:

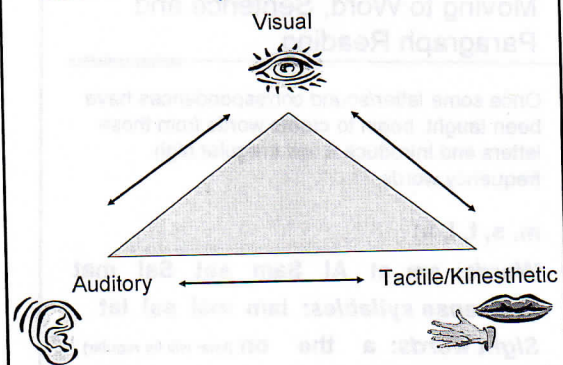
- Explicit
- Structured and sequential
- Repetitive: Opportunities for extensive review and practice
- Multisensory: Involves visual, auditory and tactile/ kinesthetic modalities

-Jennings, 1993

Multisensory Structured Language Approaches—Two Root Programs

- Orton Gillingham
- Lindamood Phoneme Sequencing Program (LiPS)

Multi-sensory Input



Segmentation

1. Clapping syllables (good for developing a sense of rhythm but hard for identifying number of syllables)
2. Counting (tokens, counting board, cards, etc.)
3. Use of whole body for larger segments (wrist, elbow, shoulder, head) and fingers for phonemes

Issues around the Alphabetic Principle

- there are approximately 44 sounds in the English language but only 26 letters
- sounds can be spelled in different ways and letters can have more than one sound

Alphabetic Principle

However, approximately **84%** of English words are regular for reading if you understand the structure of the language.

Techniques for Teaching *Sound-Symbol* Correspondence

- Key Words
- Story/Picture Associations
- Mouth Placement Cues
- Multi-sensory Techniques

Moving to Word, Sentence and Paragraph Reading

Once some letter/sound correspondences have been taught, begin to create words from those letters and introduce a few irregular high frequency words.

m, s, t, l, a:

Words: am at Al Sam sat Sal mat

Nonsense syllables: lam mal sal lat

Sight words: a the on (later will be regular)

Moving to Word, Sentence and Paragraph Reading (cont.)

Phrases and sentences for reading:

the mat

a mat

at the mat

sat on the mat

Sam sat on the mat.

Henry & Redding, *Patterns for Success*

Decodable Text

Jane went for a long drive. She **was** lost, but she did not care. She went down a small street. At the end, **there was** an old stucco home for sale. Jane got out to inspect it. It was such a tranquil spot!

Wilson, *Student Reader 5*, 1996

Versus Text that is **Not** Decodable

Morty **the bear was always breaking** things in his **house**. He **was** so big, he **couldn't** help it. He broke his chair. He broke his table. He broke his **door**.

Guided Reading Program, Level 1

Intervention: How much instruction is recommended?

Depends on severity of the reading problem but children who struggle need both more intense (more time in the day and more days in the week) and more individualized instruction to **accelerate** their learning to close the gap

How often?

Programs vary but most recommend at least 1 hour daily, 5 days a week (**minimum** of 2 times a week)—some such as Lindamood Bell (LiPS) recommend as much as 4 hours a day, 5 days a week

Group Size

- Small **homogenous** group (not more than 3-4).
- One-on-one instruction for individuals with the most severe reading problems

Related Characteristics of Dyslexia

- Difficulty with other aspects of oral language involving vocabulary and grammar (significantly effects reading comprehension) **or strong** underlying oral language
- **Special talents** in mechanical abilities, music, art, drama, sports or creative writing
- Difficulty with math **or strengths** in math discrepant with reading problems
- Difficulty making and keeping friends **or strong** social skills

Related Characteristics of Dyslexia (cont.)

- Left/right confusion and difficulty with concepts related to time and space **or very strong** visual spatial abilities
- Difficulty with handwriting
- Difficulty with attention and organization
- Difficulty learning a foreign language or learning English as a second language

Some Famous Individuals with Dyslexia

Musicians & Vocalists: Cher John Lennon Nigel Kennedy, Violinist	Actors & Entertainers: Harry Belafonte Tom Cruise Danny Glover Whoopi Goldberg Jay Leno Keanu Reeves. Robin Williams Henry Winkler Loretta Young	Political Leaders: Winston Churchill Andrew Jackson Thomas Jefferson Nelson Rockefeller Woodrow Wilson George Washington
Athletes: Muhammad Ali Bruce Jenner Magic Johnson Greg Louganis Nolan Ryan	Inventors & Scientists: Alexander Graham Bell Thomas Edison Albert Einstein	Artists, Designers, & Architects: Ansel Adams Leonardo da Vinci Tommy Hilfiger Pablo Picasso Auguste Rodin Andy Warhol

What are common myths about dyslexia?

- Children with dyslexia see letters and words backwards.
- Children outgrow dyslexia.
- Dyslexia affects four times as many boys as girls.
- Children with dyslexia will never learn to read well.

Resources

The International Dyslexia Association
www.interdys.org
The Massachusetts branch of IDA
www.dyslexia-ma.org
All Kinds of Minds
www.allkindsofminds.org
Schwab Learning
www.schwablearning.org
Learning Disabilities Association of America
www.ldanatl.org

Resources

Learning Disabilities Worldwide
www.ldam.org
Wrightslaw—special education and advocacy
www.wrightslaw.com
Onion Mountain Technology
www.onionmountaintech.com
Recording for the Blind and Dyslexic
www.rfbd.org
Home School Legal Defense Association
www.hsllda.org