

## DYSLEXIA AND RELATED DISORDERS

DISORDER	TEA DEFINITION	CHARACTERISTICS	ASSESSED BY	STRATEGIES
<b>DYSLEXIA</b>	<b>TEA:</b> <i>Disorder of constitutional origin manifested by a difficulty in learning to read, write, or spell, despite conventional instruction, adequate intelligence, and sociocultural opportunity.</i>	<ul style="list-style-type: none"> <li>• Difficulty reading words in isolation</li> <li>• Difficulty accurately decoding unfamiliar words</li> <li>• Difficulty with oral reading (slow, inaccurate, or labored)</li> <li>• Difficulty spelling</li> </ul>	Someone who is trained in dyslexia and the reading process. Subject to testing protocols used by district.	Refer to Dyslexia Handbook, Revised 2014.
<b>DEVELOPMENTAL AUDITORY IMPERCEPTION</b>	<p><b>TEA:</b> <i>The inability to receive and understand sounds and words.</i></p> <p><u>Additional Information:</u> Disturbance of auditory processing in children. Includes “speech and sound discrimination tasks varying in one or more dimensions, auditory figure-ground selection, and sound localization.” Generally referred to as central auditory processing disorder, congenital auditory imperception, word deafness (IDC10).</p> <p>From: <i>Developmental Neuropsychology, Language Disorders</i> – Oxford University Press, pg. 419</p>	<ul style="list-style-type: none"> <li>• Difficulty understanding spoken language in competing messages, noisy backgrounds, or in reverberant environments</li> <li>• Misunderstanding messages</li> <li>• Inconsistent or inappropriate responses</li> <li>• Frequent requests for repetitions</li> <li>• Taking longer than his/her average peers to respond in oral communication situations</li> <li>• Difficulty paying attention</li> <li>• Difficulty following complex auditory directions or commands</li> <li>• Difficulty localizing sound</li> <li>• Difficulty learning songs or nursery rhymes</li> <li>• Poor musical and singing skills</li> <li>• Associated reading, spelling, and learning problems</li> </ul>	Audiologists and Speech-Language Pathologists as per ICD10	<p>Refer to Speech Language Pathologist in district for suggestions.</p> <p>Possible interventions:</p> <ul style="list-style-type: none"> <li>• Direct skills remediation or auditory training</li> <li>• Strengthening higher-order central resources (language, memory, attention)</li> <li>• Metalinguistic strategies such as schema induction and discourse cohesion devices; context-derived vocabulary building; phonological awareness; and semantic network expansion</li> <li>• Metacognitive strategies including: self-instruction, cognitive problem solving and assertiveness training</li> <li>• Environmental strategies including: enhancement of the signal and listening environment; classroom and instructional management approaches designed to improve access to information presented in the classroom; preferential seating; use of visual aids; reduction of</li> </ul>

				<p>competing signals; use of assistive listening systems; pause more often; emphasize key words</p> <ul style="list-style-type: none"> <li>• Technology that improves audibility and clarifies the acoustic signal <b>MAY</b> be indicated for some individuals</li> </ul> <p>From: <i>(Central) Auditory Processing Disorders – Intervention</i>, pgs. 19-23.  <a href="http://www.asha.org/docs/html/TR2005-0043.html">www.asha.org/docs/html/TR2005-0043.html</a></p>
<b>DYSPHASIA</b>	<p>TEA: <i>A delay in the development of comprehension and/or expression of oral language; terms commonly used to describe this condition include “developmental language disorder” and “specific language impairment.”</i></p> <p><u>Additional Information:</u>  One in a group of speech disorders in which there is impairment of the power of expression by speech, writing, or signs, or impairment of the power of comprehension of spoken or written language. A condition related to abnormal speech and language such as expressive or receptive speech difficulties. Common cause is damage or trauma to the brain.  From: <i>National Institute of Health – National Institute on Deafness and Other Communication Disorders</i>, March 2011.</p>	<ul style="list-style-type: none"> <li>• Difficulty remembering words</li> <li>• Difficulty naming objects and/or people</li> <li>• Difficulty speaking in complete and/or meaningful sentences</li> <li>• Difficulty speaking in any fashion</li> <li>• Difficulty reading or writing</li> <li>• Difficulty expressing thoughts and feelings</li> <li>• Difficulty understanding spoken language</li> <li>• Using incorrect or jumbled words</li> <li>• Using words in the wrong order</li> </ul>	Speech-Language Pathologist	<ul style="list-style-type: none"> <li>• Speak in short sentences</li> <li>• Use simple language</li> <li>• Speak slowly</li> <li>• Give the person extra time to answer</li> <li>• Speak in normal adult voice</li> <li>• Speak at normal volume</li> <li>• Repeat your message or say it another way if needed</li> <li>• Highlight the important words in your message</li> </ul> <p>From: <i>Dysphasia Brochure</i> by Speech Pathology Department of Western Health, 2010.</p>
<b>SPECIFIC DEVELOPMENTAL DYSLEXIA</b>	<p>TEA: <i>Another term for dyslexia.</i></p> <p><u>Additional Information:</u>  A disorder manifested by difficulty learning to read, despite conventional instruction, adequate</p>	Refer to Dyslexia	Someone who is trained in dyslexia and the reading process. Subject to testing protocols used by district.	Refer to Dyslexia Handbook, Revised 2014.

	<p>intelligence and sociocultural opportunity. It is dependent upon fundamental cognitive disabilities that are frequently of constitutional origin.                  From: <i>World Federation of Neurology</i>, 1968 as quoted in <i>Annals of Dyslexia</i>, Vol. 39, 1989.</p>			
<p><b>DEVELOPMENTAL DYSGRAPHIA</b></p>	<p><b>TEA:</b> <i>an inability to write legibly.</i>  <b>Additional Information:</b>                  The condition of impaired letter writing by hand, that is, disabled handwriting. Impaired handwriting can interfere with learning to spell words in writing and speed of writing text. Children with dysgraphia may have only impaired handwriting, impaired spelling (without reading problems), or both impaired handwriting and impaired spelling.                  From: <i>Understanding Dysgraphia Fact Sheet</i>, IDA, 2012.</p>	<ul style="list-style-type: none"> <li>• Unsure of handedness</li> <li>• Poor or slow handwriting</li> <li>• Messy and unorganized papers</li> <li>• Difficulty copying</li> <li>• Difficulty remembering the kinesthetic movements to form letters correctly</li> </ul>	<p>Someone who is trained in dyslexia and the reading process. Subject to testing protocols used by district.</p> <p>Data should include formal or informal assessment in the areas of legibility, automaticity, orthographic processing, spelling and optional keyboarding.</p>	<p>Learning to form letters by:</p> <ul style="list-style-type: none"> <li>• Playing with clay to strengthen hand muscles</li> <li>• Keeping lines within mazes to develop motor control</li> <li>• Connecting dots or dashes to create complete letter forms</li> <li>• Tracing letters with index finger or eraser end of pencil</li> <li>• Imitating the teacher modeling sequential strokes in letter formation</li> <li>• Copying letters from models</li> </ul> <p>Explicit instruction                  Strategies for composition including:</p> <ul style="list-style-type: none"> <li>• Planning, generating, reviewing/evaluating, and revising compositions of different genre including narrative, informational, compare and contrast, and persuasive</li> <li>• Self-regulation strategies for managing complex executive functions involved in composing</li> </ul> <p>From: <i>Understanding Dysgraphia Fact Sheet</i>, IDA, 2012.</p>

<p><b>DEVELOPMENTAL SPELLING DISORDER</b></p>	<p><b>TEA:</b> <i>Significant difficulty learning to spell. This occurs in the absence of reading or other written-language difficulties.</i>  <u>Additional Information:</u>                  Most resources use the term Specific Spelling Disorder. A specific developmental disorder characterized by a significant impairment in the development of spelling skills without any history of a reading disorder, the deficit <b>NOT</b> being attributable to neurological or sensory impairment, mental retardation, or environmental deprivation.                  From: <i>A Dictionary of Psychology – 2<sup>nd</sup> Edition</i> by Andrew M. Colman, Oxford University Press, 2008.</p>		<p>Someone who is trained in dyslexia and the reading process. Subject to testing protocols used by district.</p>	<ul style="list-style-type: none"> <li>• Practice segmenting words into sounds and linking them to symbols</li> <li>• Work on acquiring the rules for conventional spelling and understanding word structure</li> <li>• Dictation should begin at sound level, continue words and end with words in sentences</li> <li>• Provide immediate feedback and link back to sound patterns and rules</li> <li>• Introduce irregular words only one or two at a time</li> <li>• Homophones should <b>NOT</b> be taught together – allow student to master one before introducing the second or third</li> <li>• Teach atypical spellings by using VAKT techniques</li> <li>• Have student develop spelling notebooks to provide an organized system for reviewing spelling patterns and irregular words</li> <li>• Do <b>NOT</b> use word walls or lists of words posted in the classroom that are based on letter symbols</li> </ul> <p>From: <i>Reading Assessment – Linking Language, Literacy, and Cognition</i> by Melissa Lee Farrall, 2012, pgs. 302-303.</p>
-----------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	-------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

**Questions that must be considered in addressing related disorders are:**

- Is the related disorder language-based at the level of phonology, word reading and/or spelling?
- If the related disorder is language-based at the level of phonology, word reading and/or spelling, does the related disorder manifest in *“unexpectedness”* when compared to the student’s other cognitive abilities, age and grade? If yes...
- Does the student *need* instruction/intervention as a direct result of their related disorder?

**Related disorders** are not the same as associated academic difficulties and other conditions (co-occurring disorders). Students can have two different disorders, but they may not be related to each other. The most common co-occurring disorders with dyslexia are attention deficit hyperactivity disorder (ADHD) and specific developmental language disorders. *“Besides academic struggles, some students with dyslexia may exhibit other complex conditions and/or behaviors. Some, though not all, students with dyslexia **may** also experience symptoms such as anxiety, anger, depression, lack of motivation, or low self-esteem. In such instances, appropriate instructional/referral services need to be provided. These additional conditions can have significant impact on the effectiveness of instruction provided to students with dyslexia.”*<sup>1</sup> In other words, while a student may also have ADHD, Tourette’s, specific developmental language disorders, etc., they are **NOT** considered to be related to dyslexia but may co-occur with dyslexia.

*“Besides academic struggles, some students with dyslexia may exhibit other complex conditions and/or behaviors.”*<sup>1</sup>

*“It is not unusual for students to be diagnosed with dyslexia and another condition. There are also conditions that can look like dyslexia because they have some of the same symptoms. Here are some conditions that can coincide with or be mistaken for dyslexia: ”*<sup>2</sup>

- ADHD<sup>1, 2, 3</sup>
- Specific Developmental Language Disorders<sup>1</sup>
- Executive Functioning Disorders<sup>2</sup>
- Auditory Processing Disorders<sup>2</sup>
- Dyspraxia<sup>3</sup>

<sup>1</sup>*The Dyslexia Handbook – Revised 2014 – Procedures Concerning Dyslexia and Related Disorders*, pg. 11.

<sup>2</sup>*LD Online -Understood – Understanding Dyslexia: What conditions are related to dyslexia?*, by Emily Lapkin.

[www.understood.org/en/learning-attention-issues/child-learning-disabilities/dslexia/understanding-dyslexia](http://www.understood.org/en/learning-attention-issues/child-learning-disabilities/dslexia/understanding-dyslexia)

<sup>3</sup>*Just the Facts – Dyslexia and Related Disorders*, Fact Sheet #63 International Dyslexia Association by Suzanne Carreker, 2003.