

Common Risk Factors Associated with Dyslexia and Characteristics of Effective Intervention

Information from “The Dyslexia Handbook” published by the Texas Education Agency and *Overcoming Dyslexia* by Sally Shaywitz

If the following behaviors are unexpected for an individual’s age, educational level, or cognitive abilities, they may be risk factors associated with dyslexia. A student with dyslexia usually exhibits several of these behaviors that persist over time and interfere with his/her learning. A family history of dyslexia may be present; in fact, recent studies reveal that the whole spectrum of reading disabilities is strongly determined by genetic predispositions (inherited aptitudes) (Olson, Keenan, Byrne, & Samuelsson, 2014).

Clues to Dyslexia in Preschool

- Delay in learning to talk
- Difficulty with rhyming and lack of appreciation for rhyming
- Difficulty pronouncing words and mispronounced words (e.g., “pusgetti” for “spaghetti,” “mawn lower” for “lawn mower,” “eatmote” for “oatmeal”)
- Poor auditory memory for nursery rhymes and chants like “Jack and Jill” and “Humpty Dumpty”
- Difficulty in adding new vocabulary words
- Inability to recall the right word (word retrieval)
- Trouble learning and naming letters and numbers and remembering the letters in his/ her name
- Aversion to print (e.g., doesn’t enjoy following along if book is read aloud)

Clues to Dyslexia in Kindergarten and First Grade

- Failure to understand that words come apart; for example, that batboy can be pulled apart into bat and boy, and later on, that the word bat can be broken down still further and sounded out as “b” “aaa” “t”
- Inability to learn to associate letters with sounds, such as being unable to connect the letter b with the “b” sound
- Reading errors that show no connection to the sounds of the letters; for example, the word big is read as goat
- The inability to read common one-syllable words or to sound out even the simplest of words, such as mat, cat, hop, nap, especially when presented in isolation from other words/contexts
- Difficulty remembering letter sequences in very common words seen often in print (“sed” for “said”)
- Complaints about how hard reading is, or running and hiding when it is time to read
- A history of reading problems in parents or siblings. From ¼ to ½ of children born to a dyslexic parent will be dyslexic. If one child in a family is dyslexic, almost half of his sisters and brothers are also likely to be dyslexic

Further clues of a diagnosis of dyslexia in K-1 could include strengths in these areas:

- Curiosity
- A great imagination
- The ability to figure things out
- Eager embrace of new ideas
- A good understanding of new concepts
- Surprising maturity
- A large vocabulary for the age group
- Enjoyment in solving puzzles
- Talent at building models
- Excellent comprehension of stories read or told to him

Clues to Dyslexia in Second Grade On

- Problems in Speaking: Mispronunciation of long, unfamiliar, or complicated words; the fracturing of words—leaving out parts of words or confusing the order of the parts of words; for example, aluminum becomes amulium
- Speech that is not fluent—pausing or hesitating often when speaking, lots of um’s during speech, no glibness
- The use of imprecise language, such as vague pronoun references to stuff or things instead of the proper names of objects
- Not being able to find the exact word, such as confusing words that sound alike: saying tornado instead of volcano, substituting lotion for ocean, or humanity for humidity
- The need for time to summon an oral response or the inability to come up with a verbal response quickly when questioned
- Difficulty in remembering isolated pieces of verbal information (rote memory)—trouble remembering dates, names, telephone numbers, random lists
- Problems in Reading:
 - Very slow progress in acquiring reading skills
 - The lack of a strategy to read new words
 - Trouble reading unknown (new, familiar) words that must be sounded out; making wild stabs or guesses at reading a word; failure to systematically sound out words
 - The inability to read small “function” words and common sight words such as that, an, in
 - Stumbling on reading multisyllable words, or the failure to come close to sounding out the full word
 - Omitting parts of words when reading; the failure to decode parts within a word, as if someone had chewed a hole in the middle of the word, such as conible for convertible
 - A terrific fear of reading out loud; the avoidance of oral reading
 - Oral reading filled with substitutions, omissions, and mispronunciations
 - Oral reading that is choppy and labored, not smooth or fluent
 - Oral reading that lacks inflection and sounds like the reading of a foreign language
 - A reliance on context to discern the meaning of what is said
 - A better ability to understand words in context than to read isolated single words
 - Disproportionately poor performance on multiple choice tests
 - The inability to finish tests on time

- The substitution of words with the same meaning for words in the text he can't pronounce, such as car for automobile
- Disastrous spelling, with words not resembling true spelling: some spellings may be missed by spell check
- Trouble reading mathematics word problems
- Reading that is very slow and tiring
- Homework that never seems to end, or with parents often recruited as readers
- Messy handwriting despite what may be an excellent facility at word processing—nimble fingers
- Extreme difficulty learning a foreign language
- A lack of enjoyment in reading, and the avoidance of reading books or even a sentence
- The avoidance of reading for pleasure, which seems too exhausting
- Reading whose accuracy improves over time, though it continues to lack fluency and is laborious
- Lowered self-esteem, with pain that is not always visible to others
- A history of reading, spelling, and foreign language problems in family members
- Difficulty recalling the correct sounds for letters and letter patterns in reading
- Difficulty connecting speech sounds with appropriate letter or letter combinations and omitting letters in words for spelling (e.g., “after” spelled “eftr
- Difficulty decoding unfamiliar words in sentences using knowledge of phonics
- Reliance on picture clues, story theme, or guessing at words
- Difficulty with written expression
- Using less complicated words in writing that are easier to spell than more appropriate words (e.g. “big” instead of “enormous”)
- Reliance on listening rather than reading for comprehension
- High Auditory Comprehension scores on CTP and low Reading Comprehension scores

Further clues of a diagnosis of Dyslexia in Second Grade and up could include strengths in these areas:

- Excellent thinking skills: conceptualization, reasoning, imagination, abstraction
- Learning that is accomplished best through meaning rather than rote memorization
- Ability to get the “big picture”
- A high level of understanding of what is read to him
- The ability to read and to understand at a high level overlearned (that is, highly practiced) words in a special area of interest; for example, if his hobby is restoring cars, he may be able to read auto mechanic magazines
- Improvement as an area of interest becomes more specialized and focused, when he develops a miniature vocabulary that he can read
- A surprisingly sophisticated listening vocabulary
- Excellence in areas not dependent on reading, such as math, computers, and visual arts, or excellence in more conceptual (versus factoid-driven) subjects such as philosophy, biology, social studies, neuroscience, and creative writing

Characteristics of Effective Intervention

Early
Often
Intensive
High Quality Instruction
Sufficient Duration
Progress Monitoring

Essential Content Areas in Intervention

Highly structured, systematic, sequential, engages the senses (VAK)
Explicit, Direct Instruction
Phonemic Awareness
Fluency
Vocabulary
Comprehension
Handwriting
Spelling