

# THE DYSLEXIA HANDBOOK

2018 Update

Procedures Concerning  
Dyslexia and Related  
Disorders

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The reading/spelling characteristics are most often associated with the following:

- Segmenting, blending, and manipulating sounds in words (phonemic awareness)
- Learning the names of letters and their associated sounds
- Holding information about sounds and words in memory (phonological memory)
- Rapidly recalling the names of familiar objects, colors, or letters of the alphabet (rapid naming)

Consequences of dyslexia may include the following:

- Variable difficulty with aspects of reading comprehension
- Variable difficulty with aspects of written language
- Limited vocabulary growth due to reduced reading experiences

### *Sources for Characteristics and Consequences of Dyslexia*

Branum-Martin, L., Fletcher, J. M., & Stuebing, K. K. (2013). Classification and identification of reading and math disabilities: The special case of comorbidity. *Journal of Learning Disabilities, 12*, 906–915.

Fletcher, J. M., Lyon, G. R., Fuchs, L. S., & Barnes, M. A. (2007). *Learning disabilities: From identification to intervention*. New York, NY: The Guilford Press.

The International Dyslexia Association. (2018). *Knowledge and practice standards for teachers of reading*, (2nd ed.). Retrieved from <https://app.box.com/s/21gdk2k1p3bnagdfz1xy0v98j5ytl1w>.

Moats, L. C., & Dakin, K. E. (2008). *Basic facts about dyslexia and other reading problems*. Baltimore, MD: The International Dyslexia Association.

## Connecting Research and Practice

Research in understanding dyslexia as a neurodevelopmental disorder is ongoing. Future research will assist in learning more about the phonological awareness deficit and how this deficit interacts with other risk factors related to dyslexia. Research is now also focusing on the developmental cause of neural abnormalities and how these predict treatment response.

Pennington, B. F. (2009). *Diagnosing learning disorders: A neuropsychological framework* (2nd ed.). New York, NY: The Guilford Press.

Peterson, R. L., & Pennington, B. F. (2012). Developmental dyslexia. *The Lancet, 379*(9830), 1997–2007.

## Common Risk Factors Associated with Dyslexia

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).

The following characteristics identify risk factors associated with dyslexia at different stages or grade levels.

### **Preschool**

- Delay in learning to talk
- Difficulty with rhyming

- Difficulty pronouncing words (e.g., “pusgetti” for “spaghetti,” “mawn lower” for “lawn mower”)
- Poor auditory memory for nursery rhymes and chants
- Difficulty 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 a book is read aloud)

### Kindergarten and First Grade

- Difficulty breaking words into smaller parts, or syllables (e.g., “baseball” can be pulled apart into “base” “ball” or “napkin” can be pulled apart into “nap” “kin”)
- Difficulty identifying and manipulating sounds in syllables (e.g., “man” sounded out as /m/ /ă/ /n/)
- Difficulty remembering the names of letters and recalling their corresponding sounds
- Difficulty decoding single words (reading single words in isolation)
- Difficulty spelling words the way they sound (phonetically) or remembering letter sequences in very common words seen often in print (e.g., “sed” for “said”)

### Second Grade and Third Grade

Many of the previously described behaviors remain problematic along with the following:

- Difficulty recognizing common sight words (e.g., “to,” “said,” “been”)
- Difficulty decoding single words
- 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 reading fluently (e.g., reading is slow, inaccurate, and/or without expression)
- Difficulty decoding unfamiliar words in sentences using knowledge of phonics
- Reliance on picture clues, story theme, or guessing at words
- Difficulty with written expression

### Fourth Grade through Sixth Grade

Many of the previously described behaviors remain problematic along with the following:

- Difficulty reading aloud (e.g., fear of reading aloud in front of classmates)
- Avoidance of reading (particularly for pleasure)
- Difficulty reading fluently (e.g., reading is slow, inaccurate, and/or without expression)
- Difficulty decoding unfamiliar words in sentences using knowledge of phonics
- Acquisition of less vocabulary due to reduced independent reading
- Use of 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

### Middle School and High School

Many of the previously described behaviors remain problematic along with the following:

- Difficulty with the volume of reading and written work
- Frustration with the amount of time required and energy expended for reading
- Difficulty reading fluently (e.g., reading is slow, inaccurate, and/or without expression)
- Difficulty decoding unfamiliar words in sentences using knowledge of phonics
- Difficulty with written assignments
- Tendency to avoid reading (particularly for pleasure)
- Difficulty learning a foreign language