



Dyslexia: Myths and Facts

What is dyslexia?

According to the definition adopted by the International Dyslexia Association Board in 2002...

Dyslexia is a specific learning disability that is neurobiological in origin. It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction. Secondary consequences may include problems in reading comprehension and reduced reading experience that can impede growth of vocabulary and background knowledge.

A core deficit in phonological processing is considered a hallmark of dyslexia. Other problems, such as difficulties with working memory and comprehension, are often associated with dyslexia, but many question whether these problems are part of the underlying weaknesses or a result of the phonological challenges.

Myths about Dyslexia

Although much has been learned about dyslexia in recent years, there is also quite a bit of inaccurate information out there. In fact, many myths about dyslexia are widespread and persist over time. Here are a few of the most common myths, along with the facts that refute them.

Myth #1: Reversals of letters and words are symptoms of dyslexia.

Reversals are common in the early stages of learning to read and write among average and dyslexic children alike. It is a sign that representations of letters and spellings of words have not been firmly established, not that a child necessarily has a reading disability (Adams, 1990).

Myth #2: Dyslexia is caused by problems in visual perception.

The consensus based on a large body of research (e.g., Rayner et al., 2001; Lyon et al., 2003; Vellutino, Fletcher, Snowling, & Scanlon, 2004) is that dyslexia is best characterized as a problem with processing the sounds of language, not a problem with vision.

Myth #3: Dyslexia is a sign of low intelligence.

Dyslexia occurs in individuals with high, average, and low intelligence. The neurological basis of phonological processing difficulties in individuals with dyslexia is independent of IQ (Tanaka et al., 2011).

Myth #4: Dyslexia is more common among boys than girls.

Although boys with dyslexia are more frequently identified in schools, dyslexia affects boys and girls at almost identical rates (Shaywitz, Shaywitz, Fletcher, & Escobar, 1990). Apparently, girls more often than boys tend to struggle quietly and, therefore, their difficulties may go unnoticed.

Myth #5: Dyslexia is curable.

Dyslexia is a neurological condition that presents lifelong challenges, but effective intervention generally has a significant positive effect on reading skills, and accommodations can minimize the impact of dyslexia on daily life (McNulty, 2003).

Myth #6: If you give them enough time, children will outgrow dyslexia.

Dyslexia is not a problem that can be outgrown, but there is strong evidence that children with dyslexia continue to persist in their reading difficulties, rather than just developing later than average children (Francis, Shaywitz, Stuebing, Shaywitz, & Fletcher, 1996). More strong evidence shows that children with dyslexia continue to experience reading problems into adolescence and adulthood (Shaywitz et al., 1999; 2003).

Myth #7: Dyslexia only affects people who speak English.

Dyslexia occurs in all countries in the world with written language, including both alphabetic and logographic languages (Pugh & Verhoeven, 2018). While in English, the primary difficulty is accurate decoding of unknown words, in languages with more transparent orthographies, the bigger problem tends to be with automaticity (Ziegler & Goswami, 2005).

Myth #8: Individuals with dyslexia will benefit from colored text overlays or lenses.

Because dyslexia is not a problem with visual perception (American Academy of Pediatrics, 2009), there is no evidence to support the idea that colored overlays or special lenses have any effect on the word reading or comprehension of children with dyslexia (American Academy of Ophthalmology, 2001; Lovino, Fletcher, Breitmeyer, & Foorman, 1998).

Myth #9: Because people with dyslexia think differently, their difficulties in reading leads to gifts in other areas.

While some individuals with dyslexia are indeed gifted in other areas, their gifts are likely not caused by their dyslexia. Furthermore, not all people with dyslexia show signs of giftedness (Berninger & Abbott, 2013).

Myth #10: A person with dyslexia will never learn to read.

This is simply not true. The earlier children are identified and provided systematic, intense instruction, the less severe their problems are likely to be (National Reading Panel, 2000; Torgesen, 2002). Importantly, however, with adequately intensive instruction, even older children with dyslexia can become accurate, albeit slow readers (Fletcher, Lyon, Fuchs, & Barnes; 2019).

Manifestations of Dyslexia

Manifestations of dyslexia change over time, so instructional needs change over time. “Eligibility” for special education and the presence of a disorder are different diagnostic concerns.

Grades K-2

- Trouble segmenting and blending speech sounds (phonological skill)
- Inaccurate letter-sound association
- Poor application of phonics in word recognition (inaccurate and/or slow)
- Inconsistent memory for words & lists
- Inability to spell; trouble tracking speech sounds and recalling symbol sequences
- Mispronunciation of words

Grades 3-4

- Oral reading rate is too slow
- Phonetic decoding is a struggle
- Word recognition is inconsistent
- Difficulties with spelling, phonological and orthographic processing persist
- Child is over-reliant on context and guessing
- Similar words are confused
- Other written symbols are difficult to learn

Grades 5-6

- Oral and silent reading are too slow
- Spelling and written expression lag behind reading and indicate language processing weaknesses
- Child reverts to manuscript from cursive
- Needs help with organization of writing and study skills
- Decoding of new words remains a problem
- Avoids reading, vocabulary declines

Grades 7-8

- Slow reading, loses the meaning
- Persistent phonological weaknesses, less obvious
- Poor spelling and writing
- Confusion of similar words
- Structured, explicit teaching of language is very helpful
 - *“Why didn’t they teach me this way before?”*

Grades 9+

- Foreign language study may be difficult
- Writing and spelling problems persist
- Reading is slow and labored, can’t sustain the effort
- Longer writing assignments very difficult
- Can cope when given extra time, study strategies, and structured language teaching

(Moats, 2003)

Intervention for Students with Dyslexia

Most experts agree that intervention for students with dyslexia should be explicit, systematic, intensive, and focused on the structure of language. Some experts also believe that intervention should be multisensory.

Explicit

Explicit instruction includes clear, unambiguous explanations and demonstrations, carefully designed guided practice, sufficient independent practice to ensure mastery, and periodic review to promote retention.

Systematic

Systematic instruction is carefully sequenced to ensure that the student has the prerequisite knowledge and skills to understand the new concept or acquire the new skill. This includes moving carefully and deliberately from easier to more complex skills.

Intensive

Intensive instruction is usually provided in small groups or one-on-one, is of sufficient duration to ensure learning occurs, and is provided by knowledgeable, skilled professionals.

Multisensory

Coordinates the simultaneous use of multiple sensory pathways to enhance memory and learning of written language:

- **Visual**
- **Auditory**
- **Kinesthetic**
- **Tactile**

Connections are consistently reinforced between the symbols the student sees, the sounds the student hears, and the movements the student feels.

Macro-level multisensory techniques use large muscles (usually the arms and fingers).

- ✓ Saying a sound while looking at and tracing a letter
- ✓ Skywriting
- ✓ Tracing letters in sand or shaving cream
- ✓ Manipulative letters

Micro-level multisensory techniques use the small muscles of the vocal tract.

- ✓ Saying a sound, watching the mouth in a mirror, and attending to the placement of lips and tongue
- ✓ Distinguishing among sounds based on their mouth movements

Effective intervention also employs readily blendable sounds.

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