



## DYSLEXIA BASICS

### **What is dyslexia?**

Dyslexia is a language-based learning disability. Dyslexia refers to a cluster of symptoms, which result in people having difficulties with specific language skills, particularly reading. Students with dyslexia usually experience difficulties with other language skills such as spelling, writing, and pronouncing words. Dyslexia affects individuals throughout their lives; however, its impact can change at different stages in a person's life. It is referred to as a learning disability because dyslexia can make it very difficult for a student to succeed academically in the typical instructional environment, and in its more severe forms, will qualify a student for special education, special accommodations, or extra support services.

### **What causes dyslexia?**

The exact causes of dyslexia are still not completely clear, but anatomical and brain imagery studies show differences in the way the brain of a dyslexic person develops and functions. Moreover, most people with dyslexia have been found to have problems with identifying the separate speech sounds within a word and/or learning how letters represent those sounds, a key factor in their reading difficulties. Dyslexia is not due to either lack of intelligence or desire to learn; with appropriate teaching methods, dyslexics can learn successfully.

### **How widespread is dyslexia?**

About 13–14% of the school population nationwide has a handicapping condition that qualifies them for special education. Current studies indicate that one-half of all the students who qualify for special education are classified as having a learning disability (LD) (6–7%). About 85% of those LD students have a primary

learning disability in reading and language processing. Nevertheless, many more people—perhaps as many as 15–20% of the population as a whole—have some of the symptoms of dyslexia, including slow or inaccurate reading, poor spelling, poor writing, or mixing up similar words. Not all of these will qualify for special education, but they are likely to struggle with many aspects of academic learning and are likely to benefit from systematic, explicit, instruction in reading, writing, and language.

Dyslexia occurs in people of all backgrounds and intellectual levels. People who are very bright can be dyslexic. They are often capable or even gifted in areas that do not require strong language skills, such as art, computer science, design, drama, electronics, math, mechanics, music, physics, sales, and sports.

In addition, dyslexia runs in families; dyslexic parents are very likely to have children who are dyslexic. Some people are identified as dyslexic early in their lives, but for others, their dyslexia goes unidentified until they get older.

### **What are the effects of dyslexia?**

The impact that dyslexia has is different for each person and depends on the severity of the condition and the effectiveness of instruction or remediation. The core difficulty is with word recognition and reading fluency, spelling, and writing. Some dyslexics manage to learn early reading and spelling tasks, especially with excellent instruction, but later experience their most debilitating problems when more complex language skills are required, such as grammar, understanding textbook material, and writing essays.

People with dyslexia can also have problems with spoken language, even after they have been

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exposed to good language models in their homes and good language instruction in school. They may find it difficult to express themselves clearly, or to fully comprehend what others mean when they speak. Such language problems are often difficult to recognize, but they can lead to major problems in school, in the workplace, and in relating to other people. The effects of dyslexia reach well beyond the classroom.

Dyslexia can also affect a person's self-image. Students with dyslexia often end up feeling "dumb" and less capable than they actually are. After experiencing a great deal of stress due to academic problems, a student may become discouraged about continuing in school.

### **How is dyslexia diagnosed?**

Schools may use a new process called Response to Intervention (RTI) to identify children with learning disabilities. Under an RTI model, schools provide those children not readily progressing with the acquisition of critical early literacy skills with intensive and individualized supplemental reading instruction. If a student's learning does not accelerate enough with supplemental instruction to reach the established grade-level benchmarks, and other kinds of developmental disorders are ruled out, he or she may be identified as learning disabled in reading. The majority of students thus identified are likely dyslexic and they will probably qualify for special education services. Schools are encouraged to begin screening children in kindergarten to identify any child who exhibits the early signs of potential reading difficulties.

For children and adults who do not go through this RTI process, an evaluation to formally diagnose dyslexia is needed. Such an evaluation traditionally has included intellectual and academic achievement testing, as well as an assessment of the critical underlying language skills that are closely linked to dyslexia. These include receptive (listening) and expressive language skills, phonological skills including to

phonemic awareness, and also a student's ability rapidly name letters and names. A student's ability to read lists of words in isolation, as well as words in context, should also be assessed. If a profile emerges that is characteristic of dyslexic readers, an individualized intervention plan should be developed, which should include appropriate accommodations, such as extended time. The testing can be conducted by trained school or outside specialists. (See the Testing for Dyslexia Fact Sheet for more information.)

### **What are the signs of dyslexia?**

The problems displayed by individuals with dyslexia involve difficulties in acquiring and using written language. It is a myth that dyslexic individuals "read backwards," although spelling can look quite jumbled at times because students have trouble remembering letter symbols for sounds and forming memories for words. Other problems experienced by dyslexics include the following:

- Learning to speak
- Learning letters and their sounds
- Organizing written and spoken language
- Memorizing number facts
- Reading quickly enough to comprehend
- Persisting with and comprehending longer reading assignments
- Spelling
- Learning a foreign language
- Correctly doing math operations

Not all students who have difficulties with these skills are dyslexic. Formal testing of reading, language, and writing skills is the only way to confirm a diagnosis of suspected dyslexia.

### **How is dyslexia treated?**

Dyslexia is a life-long condition. With proper help, many people with dyslexia can learn to read and write well. Early identification and treatment is the key to helping dyslexics achieve in school and in life. Most people with dyslexia need help from a teacher, tutor, or therapist specially trained

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in using a multisensory, structured language approach. It is important for these individuals to be taught by a systematic and explicit method that involves several senses (hearing, seeing, touching) at the same time. Many individuals with dyslexia need one-on-one help so that they can move forward at their own pace. In addition, students with dyslexia often need a great deal of structured practice and immediate, corrective feedback to develop automatic word recognition skills. When students with dyslexia receive academic therapy outside of school, the therapist should work closely with classroom teachers, special education providers, and other school personnel.

Schools can implement academic accommodations and modifications to help dyslexic students succeed. For example, a student with dyslexia can be given extra time to complete tasks, help with taking notes, and work assignments that are modified appropriately. Teachers can give taped tests or allow dyslexic students to use alternative means of assessment. Students can benefit from listening to books on tape and using the computer for text reading programs and for writing.

Students may also need help with emotional issues that sometimes arise as a consequence of difficulties in school. Mental health specialists can help students cope with their struggles.

## **What are the rights of a dyslexic person?**

The Individuals with Disabilities Education Act 2004 (IDEA), Section 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Act (ADA) define the rights of students with dyslexia and other specific learning disabilities. These individuals are legally entitled to special services to help them overcome and accommodate their learning problems. Such services include education programs designed to meet the needs of these students. The Acts also protect people with dyslexia against unfair and illegal discrimination.

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Fact sheet revised May 2008.