

DYSLEXIA

Description

Dyslexia is a learning disorder that involves difficulty reading due to problems identifying speech sounds and learning how they relate to letters and words (decoding). Also called reading disability, dyslexia affects areas of the brain that process language.

People with dyslexia have normal intelligence and usually have normal vision. Most children with dyslexia can succeed in school with tutoring or a specialized education program. Emotional support also plays an important role.

Though there's no cure for dyslexia, early assessment and intervention result in the best outcome. Sometimes dyslexia goes undiagnosed for years and isn't recognized until adulthood, but it's never too late to seek help.

Causes

The condition stems from differences in parts of the brain that process language. Imaging scans in people with dyslexia show that areas of the brain that should be active when a person reads don't work properly.

When children learn to read, they first figure out what sound each letter makes. For example, "B" makes a "buh" sound. "M" makes an "em" sound. Then, they learn how to put those sounds in order to form words ("C-A-T" spells "cat"). Finally, they have to figure out what words mean ("Cat" is a furry animal that meows).

For kids who have dyslexia, the brain has a hard time connecting letters to the sounds they make, and then blending those sounds into words. So to someone with dyslexia, the word "cat" might read as "tac." Because of these mix-ups, reading can be a slow and difficult process.

Dyslexia is different for everyone. Some people have a mild form that they eventually learn how to manage. Others have a little more trouble overcoming it. Even if children aren't able to fully outgrow dyslexia, they can still go to college and succeed in life.

Dyslexia tends to run in families. It appears to be linked to certain genes that affect how the brain processes reading and language, as well as risk factors in the environment.

Dyslexia risk factors include:

- A family history of dyslexia or other learning disabilities
- Premature birth or low birth weight

- Exposure during pregnancy to nicotine, drugs, alcohol or infection that may alter brain development in the baby
- Individual differences in the parts of the brain that enable reading

Symptoms

Signs of dyslexia can be difficult to recognize before your child enters school, but some early clues may indicate a problem. Once your child reaches school age, your child's teacher may be the first to notice a problem. Severity varies, but the condition often becomes apparent as a child starts learning to read.

Before school

Signs that a young child may be at risk of dyslexia include:

- Late talking
- Learning new words slowly
- Confusion in words that sound alike
- Problems remembering or naming letters, numbers and colors
- Difficulty learning nursery rhymes or playing rhyming games

School age

Once your child is in school, dyslexia signs and symptoms may become more apparent, including:

- Reading well below the expected level for age
- Problems processing and understanding what he or she hears
- Difficulty finding the right word or forming answers to questions
- Problems remembering the sequence of things
- Difficulty seeing (and occasionally hearing) similarities and differences in letters and words
- Inability to sound out the pronunciation of an unfamiliar word
- Difficulty spelling
- Spending an unusually long time completing tasks that involve reading or writing
- Avoiding activities that involve reading

Teens and adults

Dyslexia signs in teens and adults are similar to those in children. Some common dyslexia signs and symptoms in teens and adults include:

- Difficulty reading, including reading aloud
- Slow and labor-intensive reading and writing
- Problems in spelling
- Avoiding activities that involve reading
- Mispronouncing names or words
- Trouble understanding jokes or expressions that have a meaning not easily understood from the specific words (idioms), e.g. "piece of cake" meaning "easy"
- Spending an unusually long time completing tasks that involve reading or writing
- Difficulty summarizing a story
- Trouble learning a foreign language
- Difficulty memorizing
- Difficulty doing math problems

Treatment

Before any treatment is started, an evaluation must be done to determine the child's specific area of disability. While there are many theories about successful treatment for dyslexia, there is no actual cure for it. The school will develop a plan with the parent to meet the child's needs. The plan may be implemented in a special education setting or in the regular classroom. An appropriate treatment plan will focus on strengthening the child's weaknesses while utilizing the strengths. A direct approach may include a systematic study of phonics (*sounds*). Techniques designed to help all the senses work together efficiently can also be used. Computers are powerful tools for these children and should be utilized as much as possible. The child should be taught compensation and coping skills. Attention should be given to optimum (*best/most favorable*) learning conditions and alternative ways for student performance.

In addition to what the school has to offer, there are alternative treatment options available outside the school setting. Although alternative treatments are commonly recommended, there is limited research supporting the effectiveness of these treatments. In addition, many of these treatments are very costly.

Perhaps the most important aspect of any treatment plan is attitude. Children will be influenced by the attitudes of the adults around them. Dyslexia should not become an excuse for a child to avoid written work. Because the academic demands on a child with dyslexia may be great and the child may tire easily, work should be broken down into appropriate parts. Frequent breaks should be built into class and homework time. Reinforcement should be given for efforts as well as achievements. Alternatives to traditional written assignments should be explored and used. Teachers are learning to deliver information to students in a variety of ways that are not only more interesting but helpful to students who may learn best by different techniques. Interactive technology is providing interesting ways for students to get feedback on what they have learned, in contrast to traditional paper-pencil tasks.

Teaching Methods and Accommodations

Later in school life, and in adulthood, the focus is on accommodations (*settlements*). This means that reasonable attempts must be made to adapt the curriculum and method of instruction to allow the individual with dyslexia to use alternative strategies for a given task.

Some types of accommodations include:

- instructional
- environmental
- testing
- assignment/homework
- assistive technology

There are excellent resources online and in print regarding details of the above, but a few examples are provided here:

Instruction

- Adjust reading level
- Allow student to tape lectures
- Allow typewritten or MS Word assignments
- Provide a written outline

Classroom Environment

- Seat student near teacher
- Provide a structured routine in written form
- Provide organizational strategies such as charts, timelines, binders for materials etc.

Testing

- Allow open book tests
- Give multiple choice instead of short answer questions
- Allow use of dictionary or calculator during test
- Provide extra time to finish
- Allow testing in a distraction-free environment

Homework

- Allow student to work on homework while at school
- Give frequent reminders about due dates
- Give short assignments
- Develop reward system for homework completed
