

# What are Learning Disorders?

Learning disorders affect the ability to use spoken or written language and/or do math calculations. The learning disordered child has difficulties with academic achievement and progress. There are discrepancies between a child's potential for learning and what the child actually learns. Children with learning disabilities show an uneven pattern of development (language, physical, academic and/or perceptual). A learning disorder is not due to environmental disadvantage, nor is it due to mental retardation or emotional disturbances. It is estimated that 5% of students in public schools in the United States may have some type of learning disorder.

## Learning Disorders and Intelligence

Learning disorders must be distinguished from academic difficulties arising from lack of opportunity, poor teaching, cultural factors, and vision and hearing problems. Receiving a diagnosis of a learning disorder does not imply low intelligence, behavioral difficulties, or sensory handicaps. On the contrary, children with learning disorders manifest difficulties in learning despite having average to above-average intelligence.

## What causes Learning Disorders?

Little is currently known about the causes of learning disorders. However, some general observations have been made: Some children develop and mature at a slower rate than others in the same age group. As a result, they may not be able to do the expected schoolwork. Injuries before birth or in early childhood might account for later learning problems. Children born prematurely and children who have had medical problems soon after birth sometimes have learning disabilities. Learning disorders tend to run in families, so some learning disorders may be inherited. Although the above observations are true in some cases, many people with learning disorders have no such history.

## Signs and Symptoms

Learning disabilities typically affect five general areas:

1. Spoken language: delays and deviations in listening and speaking.
2. Written language: difficulties with reading, writing, and spelling.
3. Arithmetic: difficulty in performing math calculations or understanding basic concepts.
4. Reasoning: difficulty in organizing and integrating thoughts.
5. Memory: difficulty in remembering information and instructions.

Children with learning disabilities exhibit a wide range of symptoms. These may include problems with reading, writing, using spoken language, comprehension, mathematics, or

reasoning abilities. The primary characteristic of a learning disorder is a significant difference between a child's school achievement in a particular area and his or her overall intelligence.

Signs and symptoms include:

- Poor short-term memory
- Speaking vocabulary more sophisticated than written vocabulary
  - Poor auditory memory
  - Difficulty learning math facts
- Difficulty completing written assignments
- Does poorly at tasks requiring computation
  - Refuses to do written work
  - Poor listening skills
- Has great difficulty with spelling and phonics
  - Often inattentive in class
  - Struggles with decoding words
- Weak in language mechanics such as grammar, punctuation, and capitalization
  - Performs poorly on timed tests
  - Cannot remember three-step directions
- Performs poorly in some classes, while performing very well in others

When considering these signs and symptoms, it is important to remain aware that:

1. No one will have all these symptoms.
2. Among people with learning disorders, some symptoms are more common than others.
3. Most people have at least two or three of these problems to some degree.

The number of symptoms seen in a child does not give an indication as to whether the disability is mild or severe. It is important to consider whether or not the behaviors appear to be chronic and are causing some degree of distress or impairment at school, home, etc.

## **What should parents do if they think their child has a learning disorder?**

1. Talk with your child's teacher, care-provider, or anyone who spends time with the child to ask if they have noticed any of the signs and symptoms.
2. Contact your child's school and arrange for testing and an evaluation. A series of individually administered, standardized tests in reading, mathematics, and/or written expression will be evaluated. If the scores are substantially below that expected for the child's age, schooling, and level of intelligence, federal law requires that the public school district provide special education and related services to any child who needs them. If tests indicate that the child requires special education services, the school evaluation team will meet to develop an individual education plan (IEP) geared to the child's needs.

3. Parents should take their child to the family pediatrician for a complete physical examination. The child should also be examined for hearing and vision problems that may cause difficulty in school.

## How does your child's learning disability affect you as a parent?

Research conducted by Eleanor Whitehead suggests that the parent of a child with a learning disorder may go through a series of emotions before truly accepting the child has a real problem. These stages are very unpredictable. A parent may move from stage to stage at random, stay in a particular stage for an extended period, or skip a stage (or stages) all together.

Different stages and an example of things a parent may say:

- Denial

"There really is nothing wrong." , "He'll grow out of it."

- Blame

"It's not from my side of the family." , "You baby her." , "You expect too much."

- Fear

"Is it as bad as I've heard?" "Will he have a normal life?"

- Mourning

"She could have been such a success, if not for her learning disability."

- Bargaining

"Maybe the problem will improve if we move, take him to camp, etc."

- Anger

"Those teachers don't know anything." , "I hate this neighborhood."

- Guilt

"I'm being punished for something and my child is suffering as a result." , "What did she do to deserve this?"

- Isolation

"No one else understands our problem."

- Flight

"I am going to find a doctor that tells me what I want to hear."

Remember, these stages are not predictable in terms of the sequence they follow. The situation can be made more difficult if the two parents are at different and conflicting stages, and are unable to support each other. This can make communication very difficult.

## Treatment

The good news is that with early intervention and proper help, many children with learning disorders can make very good progress. There are many successful adults such as attorneys, business executives, physicians, teachers, etc. who had learning disabilities but overcame them and became successful. Now, with special education and many special materials, children with learning disorders can be helped early.

The most common treatment for learning disabilities is special education. Specially trained educators perform a diagnostic educational evaluation assessing the child's academic and intellectual potential and level of academic performance. Once the evaluation is complete, the basic approach is to teach learning skills by building on the child's abilities and strengths, while correcting and compensating for disabilities and weaknesses. Some medications may be used to help the child with concentration and attention abilities. Psychological therapy might also be used, as many children may experience anxiety, depression, and low self-esteem in reaction to struggling with a learning disorder.

Some teachers reports that the following strategies are helpful with some students who have learning disabilities:

- Capitalize on the child's strengths.
- Provide a high level of structure and clear expectations
  - Use short sentences and simple vocabulary.
- Use computers for drill and practice and to teach word processing skills.
  - Provide positive reinforcement of appropriate skills at school.

## Helpful tips for Parents

- Get involved. Be involved. Stay involved.
- Don't ever hesitate to talk with your child's teachers or other specialists whenever you feel it may be necessary to better understand what can be done to help your child.
- Look for and encourage your child's strengths, interests, and abilities. Help her use these to compensate for any limitations she may have.

- Accept him for who he is and for his human potential for growth and development. But also be realistic in your expectations and demands.
  - Help her correct mistakes by showing/demonstrating to her what she should do.
- Read enjoyable stories with him. Encourage him to ask questions, discuss his ideas, retell the stories in his own words, and reread the stories.
- Don't get hung up on traditional school grades. It's more important for her to progress at her own pace.
- Talk with friends, family members, ministers, counselors, other parents of children with learning disorders, or anyone with whom you feel comfortable. Encourage your child to do so, as well -- in addition to talking with you. This can be difficult for many people; a little understanding and support sometimes goes a long way!

## Famous People with learning disorders

For a list of famous people with learning disorders, go to the Web site at <http://www.delphi.com/disable/famous.html>

## Reading Disorder

- What is Reading Disorder?

Reading Disorder is defined as a sub-average reading ability in the presence of average to above average intelligence. Reading accuracy, reading speed, and reading comprehension differs from the child's age expectancy or measured intelligence.

Reading Disorder is characterized by an impaired ability to recognize words, slow and inaccurate reading, and poor comprehension. Historically, several labels have been used to refer to Reading Disorder including dyslexia, learning disability, backwards reading, alexia, and developmental word blindness.

- What causes Reading Disorder?

No unitary cause has been identified for Reading Disorder; it is believed to have multiple causes. Reading Disorder tends to be more prevalent among family members of people affected by the disorder, which leads to the speculation that the disorder may be at least partially hereditary.

- Is Reading Disorder common?

Reading Disorder is a relatively common occurrence, affecting about 4% of school-aged children.

Three to four times as many boys as girls are reported to have a Reading Disorder in school. Yet, the rate for boys may be inflated because boys with Reading Disorder are apt to be noticed due to behavioral difficulties.

- Signs and Symptoms

Although symptoms of reading difficulty may occur as early as kindergarten, Reading Disorder is seldom diagnosed before the end of kindergarten or the beginning of first grade because formal reading instruction usually does not begin until this point. Particularly when Reading Disorder is associated with high IQ, the child may function at or near grade level in the early grades, and the Reading Disorder may not be fully apparent until the fourth grade or later.

Signs of Reading Disorder include:

- Inability to distinguish among common letters or to associate common phonemes with letter symbols
  - Speaking vocabulary more sophisticated than written vocabulary
    - Has great difficulty with spelling
    - Struggles with decoding words
  - Often inattentive in class, especially during reading times
    - Has difficulty taking notes in class.
- Easily learns by oral presentation or directions, but struggles with written presentation or assignment.
  - Reading speed is below expectations for that age child
  - Makes many errors in oral reading; omits or distorts words
- Child's reading comprehension is below expectations for that age child
  - Co-existing Disorders

Many children with Reading Disorder have a sense of shame and humiliation because of their continuing failure and subsequent frustration. These feelings can grow more intense as time proceeds. Older children tend to be angry and depressed, and they exhibit poor self-esteem.

Reading Disorder is often found in children with other disorders such as Attention Deficit Hyperactivity Disorder (ADHD), and Disorder of Written Expression. Reading Disorder can also accompany emotional and behavioral disorders, such as various Mood Disorders and Oppositional Defiant Disorder.

- Treatment

The treatment of choice for Reading Disorder is, first, an accurate assessment of the child's specific deficits and weaknesses and, second, a well-conceived educational approach.

Coping strategies include small, structured reading groups that offer individual attention and make it easier for the child to ask for help.

Coexisting emotional or behavioral problems should be treated by appropriate psychotherapeutic means. Family counseling may also be helpful in some circumstances.

# Mathematics Disorder

- What is Mathematics Disorder?

Mathematics Disorder is essentially a disability in performing arithmetic skills expected for the child's intellectual capacity and educational level, as measured by individually administered tests. Mathematics Disorder has been identified in four groups of skills:

1. Linguistic skills: those related to understanding math terms and to converting written problems into mathematical symbols.
2. Perceptual skills: the ability to recognize and understand symbols and to order clusters of numbers.
3. Mathematical skills: basic addition, subtraction, multiplication, division, and following sequences of basic operations.
4. Attentional skills: copying figures correctly and observing operational symbols correctly.

Many terms have been applied to Mathematics Disorder, including Gertsman's syndrome, dyscalculia, acalculia, and developmental arithmetic disorder.

- What causes Mathematics Disorder?

The cause of Mathematics Disorder is unknown. Currently, its origins are thought to be multifactorial, meaning that intellectual, emotional, educational, and socioeconomic factors account in varying degrees for the disorder.

Compared with reading, arithmetic ability seems to be more dependent on the amount and quality of education. Inadequate schooling can often affect a child's poor math performance on standardized tests.

- Is it common?

It is roughly estimated that 1-5% of school-age children have a Mathematics Disorder.

The sex ratio for this disorder suggests that it is more common in girls than boys, but this is still being researched.

- Signs and Symptoms

A child usually shows signs of Mathematics Disorder by the age of 8 years (3rd grade). In some children the disorder is apparent as early as 6 years (1st grade); in others, it may not occur until age 10 (5th grade) or later.

Children with this disorder may have difficulties in associating auditory and visual symbols, remembering sequences of arithmetic steps, and choosing principles for problem-solving activities.

Other symptoms include:

- Poor short-term memory
  - Performs poorly on timed tests
  - Does poorly at computation tasks
    - Often inattentive in class
  - Struggles with easy, sequential material
  - Has difficulty learning math facts
- Co-existing disorders

Mathematics Disorder often co-exists with other disorders affecting reading, expressive writing, coordination, or expressive and receptive language. Spelling problems, deficits in memory, and attentional, emotional, or behavioral problems may be present.

Like the other learning disorders, Mathematics Disorder is often accompanied by a sense of shame and humiliation because of the child's continuing failure and subsequent frustration. These feelings can grow more intense as time proceeds. Older children tend to be angry and depressed, and they exhibit poor self-esteem.

Mathematics Disorder is often found in children with other disorders such as Attention Deficit Hyperactivity Disorder (ADHD), and Disorder of Written Expression. Mathematics Disorder can also accompany emotional and behavioral disorders, such as various Mood Disorders and Oppositional Defiant Disorder.

#### Treatment

Currently, the most effective treatment for Mathematics Disorder is remedial education. The consensus is that the treatment methods and materials are useful when they fit the particular child, the disorder, and its severity. It has been reported that math instruction is more helpful when the focus is on problem-solving activities, including word problems, rather than only on computational skills.

Computer programs can also be helpful and can increase educational efforts.

## Disorder of Written Expression

- What is Disorder of Written Expression?

Disorder of Written Expression is characterized by writing skills that are significantly below the expected level for a child's age, intellectual capacity, and education as measured by standardized testing. Disorder of Written Expression has also historically been called spelling disorder and spelling dyslexia.

- What causes it?

The exact causes of the disorder are unknown. However, it has been observed that people with this disorder are more likely than the norm to have a close relative that also has it, suggesting that the disorder might be at least partially hereditary. Other plausible explanations include neurological defects stemming from adverse environmental events during pregnancy or early infancy.

- Is it common?

The exact prevalence of this disorder is unknown, but it has been estimated that 3 to 10 percent of school-aged children may have a Disorder of Written Expression. The male-to-female ratio is also unknown at this point.

- Signs & Symptoms

Children with Disorder of Written Expression have difficulties early in grade school with spelling words and in expressing their thoughts according to age appropriate norms. Their spoken and written sentences contain an unusually large numbers of grammatical errors and poor paragraph organization. These children usually make errors in writing even a short sentence. For example, they frequently fail, despite many reminders, to start the first letter of the first word in a sentence with a capital letter and to end the sentence with a period.

Common features of this disorder are:

- Spelling errors
- Grammatical errors
- Punctuation errors
- Poor paragraph organization
  - Poor handwriting
- Co-existing disorders

Many children with Disorder of Written Expression become frustrated and angry due to feelings of inadequacy and failure in their academic performance. They also may be depressed as a result of their low self-esteem and growing sense of being different from others.

Disorder of Written Expression is often found in children with other disorders such as Attention Deficit Hyperactivity Disorder (ADHD) and Mathematics Disorder. Disorder of Written Expression can also accompany emotional and behavioral disorders, such as various Mood Disorders and Oppositional Defiant Disorder.

- Treatment

The most effective mode of treatment has been found to be individually tailored, one-to-one expressive and creative writing therapy. Teachers in some special schools devote as much as two hours a day to such writing instruction. Success or failure in sustaining the child's motivation is essential and will greatly affect the long-term outcome of treatment.

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## Related Articles - Learning Disorders

### [Advocating for your child.](#)

When parents or teachers suspect that a child may have an emotional problem, they should seek a comprehensive evaluation by a mental health professional specifically trained to work with children and adolescents.

### [Children with learning disabilities.](#)

Parents are often worried when their child has learning problems in school. There are many reasons for school failure, but a common one is a specific learning disability. Children with learning disabilities usually have a normal range of intelligence. They try very hard to follow instructions, concentrate, and "be good" at home and in school. Yet, despite this effort, he or she is not mastering school tasks and falls behind. Learning disabilities affect at least 1 in 10 schoolchildren.

# Support Organizations - Learning Disorders

National Center for Learning Disabilities (NCLD)

381 Park Avenue South, Suite 1401  
New York, NY 10016  
Phone Number: (212) 545-7510 or (888) 575-7373  
<http://www.ld.org/>

National non-profit organization that offers a free Information & Referral Service, conducts educational programs, raises public awareness of LD, and advocates for improved legislation and services for those with LD.

Learning Disabilities Association of America (LDA)

4156 Library Road  
Pittsburgh, PA 15234  
Phone Number: (412) 341-1515 or (888) 300-6710  
<http://www.ldaamerica.org/>

National non-profit membership organization, with state and local chapters, that conducts an annual conference and offers information and various publications.

International Dyslexia Association

Chester Building  
8600 La Salle Road, Suite 382  
Baltimore, MD 21204  
Phone Number: (410) 296-0232 or (800) ABC-D123  
<http://www.interdys.org/>

International non-profit membership organization that offers training in language programs and provides publications relating to dyslexia. Chapters are located in most states.

Division for Learning Disabilities (DLD) of the Council for Exceptional Children (CEC)

1920 Association Drive  
Reston, VA 22091-1589  
Phone Number: (703) 620-3660 or (800) 328-0272  
<http://www.dldcec.org/> Division for Learning Disabilities (DLD)  
<http://www.cec.sped.org/> Council for Exceptional Children (CEC)

CEC is a non-profit membership organization that has seventeen specialized divisions. DLD is the division dedicated to LD. Both CEC and DLD provide free information and hold conferences.

Council for Learning Disabilities (CLD)

P.O. Box 40303  
Overland Park, KS 66204  
Phone Number: (913) 492-8755  
<http://www.cldinternational.org/>

National membership organization dedicated to assisting professionals who work in the field of learning disabilities. The Learning Disabilities Quarterly, a professional publication is available through CLD.

Learning Disabilities Association of Canada (LDAC)

323 Chapel Street, Suite 200  
Ottawa, Ontario, Canada  
K1N 7Z2  
Phone Number: (613) 238-5721  
<http://www.ldac-taac.ca/>

Non-profit membership organization with provincial and territorial offices that conducts programs and provides information for LD children and adults. Resources include books and pamphlets that may be useful to U.S. residents.

National Information Center for Children and Youth with Disabilities (NICHCY)

P.O. Box 1492  
Washington, DC 20013-1492  
Phone Number: (800) 695-0285  
<http://www.nichcy.org/>

Information clearinghouse that provides free information on disabilities and disability-related issues.

Schwab Foundation for Learning

1650 South Amphlett Boulevard, Suite 300  
San Mateo, CA 94402-2516  
Phone Number: (650) 655-2410 or (800) 230-0988  
<http://www.schwablearning.org/>

Non-profit organization that provides information and referral to national and local resources as well as research and guidance for parents, teachers, clinicians, and others who work with children who have learning differences.

National Institute of Child Health And Human Development (NICHD)

Bldg. 31, Rm. 2A32  
Bethesda, MD. 20982

National Center for Learning Disabilities

381 Park Ave. South  
New York, NY 10016  
Phone Number: (212) 545-7510  
Web: <http://www.nclld.org>  
(301) 496-5733

Learning Disorders Association of America

4156 Library Road  
Pittsburgh, PA. 15234

## Learning Disorders Related Web Links

National Institute of Neurological Disorders and Stroke

<http://www.ninds.nih.gov>

LD Online

<http://www.ldonline.org>

Child Development Institute

<http://www.cdipage.com>

## Learning Disorders Related Books and References

[How To Reach and Teach Children and Teens with Dyslexia : A Parent and Teacher...](#)

by Cynthia M. Stowe

Provides parents and teachers with everything that's needed to help students with dyslexia flourish in school and in their everyday lives, and to prepare them for their careers. Included are over 50 full-page activity sheets.

[Understanding Dyslexia and the Reading Process: ...](#)

by Marion Sanders

Understanding Dyslexia and the Reading Process presents dyslexia against a background of normal reading development, and in the context of child development, taking into account multiple factors that affect how well a child overcomes or compensates for dyslexia. Case examples are presented throughout to illustrate specific skill weaknesses. Dyslexia research provides considerable knowledge about how to help all children who do not learn to read on schedule.

[The Upside-Down Kids: Helping Dyslexic Children Understand ...](#)

by Harold N. Levinson, Addie Sanders

Dr. Levinson, a psychiatrist and clinician, is one of the country's foremost practitioners in the field of dyslexia. Upside Down Kids is a book that for the first time will explain this very complex condition to the children who suffer from it.

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