

A guide to Developmental Disorders
Part 3
Learning and Communication disorders

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1.Introduction

Children acquire many skills as they grow. Some skills, such as controlling urine and stool, depend mainly on the level of maturity of the child's nerves and brain. Others, such as behaving appropriately at home and in school, are the result of a complicated interaction between the child's physical and intellectual (cognitive) development, health, temperament, and relationship with parents, teachers, and caregivers.

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2.Learning Disorders

2a.What Are They ?

A learning disability is a neurological disorder. In simple terms, a learning disability results from a difference in the way a person's brain is "wired." Children with learning disabilities are as smart or smarter than their peers. But they may have difficulty reading, writing, spelling, reasoning, recalling and/or organizing information if left to figure things out by themselves or if taught in conventional ways.

A learning disability can't be cured or fixed; it is a lifelong issue. With the right support and intervention, however, children with learning disabilities can succeed in school and go on to successful, often distinguished careers later in life.

Parents can help children with learning disabilities achieve such success by encouraging their strengths, knowing their weaknesses, understanding the educational system, working with professionals and learning about strategies for dealing with specific difficulties

Did you know that Albert Einstein couldn't read until he was nine? Walt Disney, General George Patton, and Vice President Nelson Rockefeller had trouble reading all their lives. Whoopi Goldberg and Charles Schwab and many others have learning disabilities which haven't affected their ultimate success.

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2b. Causes

Learning disorders are caused by abnormal brain function. Exactly what causes this abnormality is not always known, but can include factors such as heredity, head injury, inadequate nutrition, exposure to toxins such as lead, chronic illness, infections passed on by the mother during pregnancy, and the mother's abuse of drugs or alcohol during pregnancy.

Children who are born prematurely, experience a difficult birth, or are of low birth weight are also more likely to have learning disorders later in life.

Some causes of speech and language disorders include hearing loss, neurological disorders, brain injury, mental retardation, drug abuse, physical impairments such as cleft lip or palate, and vocal abuse or misuse.

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2c. Symptoms

Learning disorders can range from mild to severe. Symptoms are often first detected when a child begins school and has difficulty with typical early learning skills such as counting, letter and color names, and recognizing patterns.

Activities that require the use of fine motor skills, such as cutting and printing, are often challenging. The child may also have difficulties with physical activities that require coordination, such as tying shoes and buttoning clothes.

While people with learning disorders perform poorly in school, they are almost always of average to above-average intelligence. Learning disorders may be accompanied by behavioral and attention-deficit disorders.

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2d. Diagnosis

Poor school performance in a child of average or above-average intelligence may indicate a learning disorder.

The signs of learning disorders may be identified by parents or teachers when a child consistently has difficulty with any, or all, of the following:

- reading, spelling, writing, or completing math problems
- understanding or following directions
- distinguishing right from left
- reversing letters or numbers (confusing "b" and "d" or 12 and 21)

If your child is having difficulty in school, either you or the school can request an evaluation for a learning disorder. Your doctor should perform a physical examination and take a complete medical history in order to rule out any physical causes of the child's problems.

If a learning disorder is suspected, your child is evaluated through a series of tests to determine his or her learning needs. These tests can be administered by the school, or by a private evaluator. In performing this evaluation, it is important to have input from the child's parents and teachers.

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2e. Treatment

Specific treatment for learning disorders will be determined by the coordinated effort of your child's physician, and mental health and educational professionals based on:

- your child's age, overall health, and medical history
- extent of the disorder
- type of disorder
- your child's tolerance for specific medications or therapies
- expectations for the course of the disorder
- your opinion or preference

Learning disorders are treatable. A coordinated effort between parents, teachers, and mental health professionals provides the basis for individualized treatment strategies that may include individual or group remediation, and/or special classes or resources.

Prognosis

Preventive measures to reduce the incidence of learning disorders are not known at this time. However, early detection and intervention can reduce the severity of academic difficulties and improve the quality of life experienced by children with learning disorders.

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3.Common learning disabilities

- **Dyslexia** – a language-based disability in which a person has trouble understanding written words. It may also be referred to as reading disability or reading disorder.

Two related disabilities are :

- **Dyscalculia** – a mathematical disability in which a person has a difficult time solving arithmetic problems and grasping math concepts.
- **Dysgraphia** – a writing disability in which a person finds it hard to form letters or write within a defined space.

- Auditory and Visual Processing Disorders – sensory disabilities in which a person has difficulty understanding language despite normal hearing and vision.

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For more information Please Visit

Medical university of South Carolina

<http://www.muschealth.com/gs/healthtopic.aspx?action=showpage&pageid=P02561>

Penn State Children's Hospital

<http://www.hmc.psu.edu/childrens/healthinfo/jkl/learningdisorders.htm>

Not My kid Organization

<http://www.notmykid.org/parentArticles/LearningDisorders/default.asp>

ahealth.com

<http://www.athealth.com/Consumer/disorders/Learning.html>

LD online

<http://www.ldonline.org/adhdbasics>

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4.Attention Deficit, Hyperactivity Disorder (AD/HD)

What is AD/HD?

Attention-deficit/hyperactivity disorder (ADHD) is one of the most common neurobehavioral disorders, characterized by problems with inattentiveness, over-activity, impulsivity, or a combination.

It is a condition that can make it hard for a person to sit still, control behavior, and pay attention. These difficulties usually begin before the person is 7 years old. However, these behaviors may not be noticed until the child is older.

For these problems to be diagnosed as AD/HD, they must be out of the normal range for the child's age and development. It is usually first diagnosed in childhood and often persists into adulthood.

Cause

Doctors do not know just what causes AD/HD. However, researchers who study the brain are coming closer to understanding what may cause AD/HD. They believe that some people with AD/HD do not have enough of certain chemicals (called *neurotransmitters*) in their brain. These chemicals help the brain control behavior. ADHD can be inherited.

Parents and teachers do **not** cause AD/HD. Still, there are many things that both parents and teachers can do to help a child with AD/HD.

Symptoms

There are three main signs, or symptoms, of AD/HD. These are:

- Problems with paying attention,
- Being very active (called hyperactivity), and
- Acting before thinking (called impulsivity).

More information about these symptoms is listed in a book called the *Diagnostic and Statistical Manual of Mental Disorders* (DSM), which is published by the American Psychiatric Association (2000). Based on these symptoms, three types of AD/HD have been found:

- **Inattentive** type, where the person can't seem to get focused or stay focused on a task or activity;
- **Hyperactive-impulsive** type, where the person is very active and often acts without thinking; and
- **Combined** type, where the person is inattentive, impulsive, and too active.

Inattentive type. Many children with AD/HD have problems paying attention. Children with the inattentive type of AD/HD often:

- Do not pay close attention to details;
- Can't stay focused on play or school work;
- Don't follow through on instructions or finish school work or chores;
- Can't seem to organize tasks and activities;
- Get distracted easily; and
- Lose things such as toys, school work, and books.

Hyperactive-impulsive type. Being too active is probably the most visible sign of AD/HD. The hyperactive child is "always on the go." (As he or she gets older, the level of activity may go down.) These children also act before thinking (called *impulsivity*). For example, they may run across the road without looking or climb to the top of very tall trees. They may be surprised to find themselves in a dangerous situation. They may have no idea of how to get out of the situation.

Hyperactivity and impulsivity tend to go together. Children with the hyperactive-impulsive type of AD/HD often may:

- Fidget and squirm;
- Get out of their chairs when they're not supposed to;
- Run around or climb constantly;
- Have trouble playing quietly;
- Talk too much;
- Blur out answers before questions have been completed;
- Have trouble waiting their turn;
- Interrupt others when they're talking; and
- Butt in on the games others are playing.

Combined type. Children with the combined type of AD/HD have symptoms of both of the types described above. They have problems with paying attention, with hyperactivity, and with controlling their impulses.

Of course, from time to time, all children are inattentive, impulsive, and too active. With children who have AD/HD, ***these behaviors are the rule, not the exception.***

These behaviors can cause a child to have real problems at home, at school, and with friends. As a result, many children with AD/HD will feel anxious, unsure of themselves, and depressed. These feelings are not symptoms of AD/HD. They result from having problems again and again at home and in school.

Diagnosis

Can be made reliably using well-tested diagnostic interview methods. Treatment may include medical, educational, behavioral, and/or psychological interventions. ADHD is a lifelong disorder that can negatively impair many aspects of daily life if not treated, including home, school, work, and interpersonal relationships.

Diagnosis

The diagnosis is based on the number, frequency, and severity of symptoms. Symptoms must be present in at least two separate environments (typically, home and school)—occurrence of symptoms just at home or just at school and nowhere else does not qualify as ADHD. Often, diagnosis is difficult because it depends on the judgment of the observer. There is no laboratory test for ADHD.

Questionnaires about various aspects of behavior can help the doctor make the diagnosis. Because learning disabilities are common, many children receive psychologic testing both to help determine if ADHD exists and to detect the presence of specific learning disabilities.

Treatment

There is no quick treatment for AD/HD. However, the symptoms of AD/HD can be managed.

To minimize the effects of ADHD, structures, routines, a school intervention plan, and modified parenting techniques are often needed. Some children who are not aggressive and who come from a stable and supportive home environment may benefit from drug treatment alone.

Behavior therapy conducted by a child psychologist is sometimes combined with drug treatment.

Psychostimulant drugs are the most effective drug treatment.

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For more information, please visit:

CH.A.D.D. (Children and Adults with Attention-Deficit/Hyperactivity Disorder)
8181 Professional Place, Suite 150
Landover, MD 20785
301.306.7070
800.233.4050
Web: www.chadd.org

Attention Deficit Disorder Association
P.O. Box 543
Pottstown, PA 19464
484.945.2101
EMail: mail@add.org Web: www.add.org

National Dissemination Center for Children with Disabilities
<http://www.nichcy.org/pubs/genresc/gr3.htm#categories>

Merck Manual online

<http://www.merck.com/mmhe/sec23/ch269/ch269i.html>

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5.Landau-Kleffner Syndrome

Landau-Kleffner Syndrome (LKS) is a childhood disorder that is characterized by a progressive loss of the ability to understand and use spoken language, following a period of normal speech development.

Landau Kleffner Syndrome (LKS) is a rare form of epilepsy that only affects children, and causes them to lose their understanding of language. The main epileptic activity happens during sleep and is usually not obvious to others. It can be seen on brain wave recordings (EEG, electroencephalography.). There may, however, also be visible seizures at night and/or during the day. LKS may also be referred to by a variety of [related terms](#) that describe its effects.

LKS occurs most frequently in typically developing children who are between 3 and 7 years of age.

As the condition is not well known and has complex effects on language and often also on behaviour, it can take some time before the whole picture is recognised both by parents and professionals and so it can take some time before LKS is diagnosed.

Symptoms

In most cases, the child has normal early development, including normal development of speech and language. Onset of the disease is usually between three and nine years and the child experiences deterioration in speech and language ability. This loss may be abrupt or gradual over a period of weeks or months and is often initially mistaken for deafness.

Many children compensate naturally for the loss of language by using visual cues and gesture, and may initially hide the extent of their difficulty. The deterioration in skills is often called a regression, as the child appears to have returned to an earlier stage in their development.

There are often associated behavioural changes including over-activity, reduced concentration span, irritability, tantrums and difficulties with social interaction. The child may also have problems with fine motor co-ordination and movement (for example, dribbling, messy eating, loss of speech clarity, clumsiness and tremor). These difficulties are thought to be a direct result of the disease process, and not simply an emotional reaction by the child to their loss of language.

Most of the children have clinically obvious seizures, and these often start before the initial regression.

The course of the illness is very variable. It isn't usually life threatening, but can greatly affect a child's functioning. Some children may recover spontaneously, while others may recover with the use of anti-epilepsy drugs (AEDs) including corticosteroids, or even brain surgery. Recovery may be complete but more often,

children have some degree of persisting difficulties with language, behaviour or cognitive skills. The active phase of the disease often lasts some years until adolescence. During the active phase there may be repeated episodes of regression and recovery, and a child's understanding and performance may be highly variable even within the same day

Some children have the same EEG abnormality as in LKS, but lose skills in all areas (including general intelligence), not specifically in language. This broad group is usually referred to as Electrical Status Epilepticus during sleep (ESES) or continuous spike-and-wave discharges in sleep (CSWS). LKS (in which language is mainly affected) is effectively a specific type of ESES.

We recognise at least two variants of LKS:

- Those who had a mild degree of early (developmental) language delay but who showed typical LKS regression later
- Those with an abnormality on scan but otherwise a typical history

The diagnosis of LKS does not include children under the age of two years who regress as part of an autistic spectrum disorder, even if they have seizures or discharges on an EEG. This is because experience has shown that these children fit best within the autistic spectrum of disorders, and do not conform to the pattern of disorder seen in LKS.

Cause

All children with LKS can be shown to have seizure activity during the active phase, that usually affects both sides of the brain (although one side may seem more affected), and is often concentrated in areas known to be important for language (centro-temporal region). Some of this activity results in actual seizures but much of it does not, that is, it is 'sub-clinical'. EEG recordings show that there is a particularly high rate of subclinical epileptiform activity in sleep, which often amounts to nearly continuous spike-and-wave (CSWS) discharges (Electrical Status Epilepticus during sleep or ESES) during the active phase of the disease.

It is thought that regression and impairments are related to these epileptiform discharges during sleep, and that these electrical seizures 'short-circuit' the normal wiring so certain functions of the brain are prevented. This seizure activity, which is often-widespread, prevents the child from using his or her brain normally so they regress in abilities. Initially, the brain is not 'damaged' in the conventional sense, but rather caught up in an 'electrical storm' that blocks certain brain functions (especially language, attention, social functioning). Stopping seizure activity may restore these functions.

LKS mainly affects a child's language abilities, and this is probably related to the common location of recorded discharges over the key language areas (centro-

temporal region). It was initially thought to be specific to language, but certainly current experience is that other higher functions are also commonly affected, including attention, social interaction, behaviour and motor control. Non-verbal cognitive skills are usually relatively spared, although not always, and it is not unusual to have specific or more general learning difficulties.

Very little is known about the causes of LKS. The condition is twice as common in boys, and very occasionally runs in families. It may be that there is a genetically determined vulnerability, which becomes apparent in response to an environmental trigger, for example, infection, but there is as yet no scientific evidence for this.

Diagnosis

LKS is a clinical diagnosis, which means it is made on the basis of the child's history and assessment. The core features are a history of normal early development followed by loss of language skills, often in association with mild observed seizures and behavioural changes. There is no specific test, although EEG recordings can be very helpful, especially in the active phase of the disease. MRI scans are usually normal.

The condition is rare and may not be thought of initially. It is common for children to be investigated for deafness, autism, selective mutism, verbal dyspraxia or behavioural problems before the diagnosis is made.

Your child will have an initial medical assessment, including examination. The physical examination is usually normal apart from occasional mild co-ordination or other movement problems. The doctor may request tests to check for various alternative diagnoses. The tests are typically normal, apart from the EEG.

There will also be assessments of your child's development across different areas of learning, particularly language. It is important to record your child's current skills as a baseline, which can be used to gauge the effect of the disease and any medical treatment or therapy, in the future. This assessment will also allow the therapist to identify appropriate intervention(s) for your child (for example, speech and language therapy). Your child should then have regular assessments to monitor changes in skill profile. This information will be important for making decisions about medical, educational, behavioural and therapeutic management.

It is important that your child is assessed at an early stage by a multidisciplinary team including medical, speech and language and clinical psychology services. This enables your child's full profile to be assessed and considered in the management programme, and a co-ordinated approach to be adopted by all people working with you and your child.

The process of diagnosis of LKS may include various tests, such as:

- [MRI \(Magnetic Resonance Imaging\)](#)
- [CT \(Computer Tomography\)](#)
- [EEG \(Electroencephalogram\)](#)
- [MEG \(Magnetoencephalography\)](#)
- [SPECT \(Single Photon Emission Computed Tomography\)](#)

Treatment

Treatment can be divided into two categories:

1. Treating the seizures and seizure activity, thereby trying to change the disease process and reduce its effect on your child
2. Providing functional support to optimise recovery

The first category is described in the Medical Treatment section, in terms of:

- [Non-surgical treatment](#)
- [Surgical treatment](#)
- [Clinical care](#)

Strategies from the second category are various therapies for

- Language and communication skills
- Other cognitive abilities
- Behaviour
- Motor difficulties

Non-Surgical Treatment

There are two aspects to the seizures in LKS

- The observable 'clinical' seizures which do NOT appear to correlate with severity of the developmental impairment
- The electrical seizure activity that occurs in sleep and is thought to cause the regression

Anticonvulsants are drugs that are used to stop seizures. They are usually very effective for the visible seizures but their effect on the sub-clinical seizure activity, which is characteristic of LKS and typically occurs in sleep, is often disappointing.

<http://www.friendsoflks.com/medical.htm>

Surgical Treatment

Brain surgery is occasionally used in LKS to limit the effect of the seizures.

Brain surgery may be used for children who have active disease with poor recovery of skills and EEG evidence of continuous seizures in sleep, or for those who require unacceptably high doses of steroids to maintain their recovery. It does not aim to cure the child, but to limit any further loss of skills and allow some recovery.

<http://www.friendsoflks.com/medical.htm>

Clinical Care

The NICE (National Institute for Clinical Excellence) Epilepsy guidelines (Oct 2004) recommend:

- Early referral to a paediatrician with special responsibility for epilepsy (within 2 weeks of first seizure)
- Development of a comprehensive care plan
- Regular review
- Referral to tertiary services if there is diagnostic uncertainty or treatment failure

For more information, please visit:

[NIDCD Health Information Page - Landau-Kleffner Syndrome](#)

<http://www.nidcd.nih.gov/health/voice/landklfs.asp>

Friends of Landau Kleffner Syndrome!

<http://www.friendsoflks.com/>

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6.Expressive Language Disorder

Expressive language disorder is a developmental disorder where a child will have problems expressing him or herself in speech.

Characteristics may include limited vocabulary, difficulty recalling words and producing complex or lengthy sentences. Children with expressive disorder often start speaking late and experience delays acquiring expressive language.

Standardized expressive language and non-verbal intellectual tests, and in certain cases functional assessments, should be conducted if an expressive language disorder is suspected. Expressive language disorders may interfere with academics and social communication.

Speech therapy and social skills therapies may benefit children affected by this disorder.

For more information, please visit:

[Medline Expressive Language](#)

[Disorder.http://www.nlm.nih.gov/medlineplus/ency/article/001544.htm](http://www.nlm.nih.gov/medlineplus/ency/article/001544.htm)

kid source online

http://www.kidsource.com/kidsource/content2/language_disorders.html

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7. Childhood Apraxia of Speech

Childhood apraxia of speech is a disorder of the nervous system that affects the ability to sequence and say sounds, syllables, and words. It is not due to muscular weakness or paralysis. The problem is in the brain's planning to move the body parts needed for speech (e.g., lips, jaw, tongue). The child knows what he or she wants to say, but the brain is not sending the correct instructions to move the body parts of speech the way they need to be moved.

Symptoms

In Very Young Children the child:

- Does not coo or babble as an infant
- Produces first words after some delay, but these words are missing sounds
- Produces only a few different consonant sounds
- Is unsuccessful at combining sounds
- Simplifies words by replacing difficult sounds with easier ones or by deleting difficult sounds (Although all children do this, the child with developmental apraxia of speech does so more often).
- May have feeding problems.

In Older Children the child:

- Makes inconsistent sound errors that are not the result of immaturity
- Can understand language much better than he or she can produce it
- Has difficulty imitating speech
- May appear to be groping when attempting to produce sounds or to coordinate the lips, tongue, and jaw for purposeful movement
- Has more difficulty saying longer phrases than shorter ones
- Appears to be worse when he or she is anxious
- Is hard for listeners to understand.

Some children may have other problems as well. These problems can include weakness of the lips, jaw, or tongue; delayed language development; other expressive language problems; difficulties with fine motor movement; and problems with oral-sensory perception (identifying an object in the mouth through the sense of touch).

Treatment

Intervention for the child diagnosed with apraxia of speech often focuses on improving the planning, sequencing, and coordination of motor movements for speech production. Exercises that strengthen the oral muscles will not help. Childhood apraxia of speech is a disorder of speech coordination, not strength. To improve speech, the child must practice speech.

For more information, please visit:

[Apraxia-Kids information site](#)

Site of the Childhood Apraxia of Speech Association

[National Center for Voice and Speech](#)

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8. Dyslexia

Language-based learning disabilities interfere with age-appropriate reading, spelling, and/or writing. This disorder does not impair intelligence; in fact, most people diagnosed with learning disabilities possess average to superior intelligence. Learning disabilities are caused by a difference in brain structure that is present at birth, is often hereditary, and often related to specific language problems.

The term *dyslexia* has been used to refer to the specific learning problem of reading. Because of the increased recognition of the relationship between spoken and written language, and the frequent presence of spoken language problems in children with reading problems, the term language-based learning disabilities, or just learning disabilities, is more accurate

Other Language Problems

The child with dyslexia has trouble almost exclusively with the written (or printed) word. The child who has dyslexia as part of a larger language learning disability has trouble with both the spoken and the written word. These problems may include:

- Expressing ideas coherently, as if the words needed are on the tip of the tongue but won't come out Consequently, utterances can be vague and difficult to understand (e.g., using unspecific vocabulary, such as "thing" or "stuff" to replace words that cannot be remembered). Filler words like "um" may be used to take up time while a word is being retrieved from memory
- Learning new vocabulary that the child hears (e.g., taught in lectures/lessons) and/or sees (e.g., in books)
- Understanding questions and following directions that are heard and/or read
- Recalling numbers in sequence, e.g., telephone numbers and addresses
- Understanding and retaining the details of a story's plot or a classroom lecture
- Slow reading and reduced comprehension of the material
- Learning words to songs and rhymes
- Telling left from right, making it hard to read and write since both skills require this directionality
- Letters and numbers
- Learning the alphabet
- Identifying the sounds that correspond to letters, making learning to read a formidable task
- While writing, mixing up the order of letters in words
- Mixing up the order of numbers that are a part of math calculations
- Poor spelling
- Memorizing the times tables
- Telling time

Treatment

The goals of speech and language treatment for the child with a reading problem target the specific aspects of reading and writing that the student is missing. For example, if the student is able to decode text but is unable to understand the details of what has been read, comprehension is addressed. If a younger student has difficulty distinguishing the different sounds that make up words, treatment will focus on activities that support growth in this skill area (rhyming, tapping out syllables, etc.).

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For more information, please visit:

Medical university of South Carolina

<http://www.muschealth.com/gs/healthtopic.aspx?action=showpage&pageid=P02561>

Penn State Children's Hospital

<http://www.hmc.psu.edu/childrens/healthinfo/jkl/learningdisorders.htm>

Not My kid Organization

<http://www.notmykid.org/parentArticles/LearningDisorders/default.asp>

ahealth.com <http://www.athealth.com/Consumer/disorders/Learning.html>

LD online <http://www.ldonline.org/adhdbasics>

Learning Disabilities Association www.ldanatl.org

British Dyslexia Association www.bda-dyslexia.org.uk

Dyslexia Research Institute www.dyslexia-add.org

Dyslexia Awareness and Resource Center www.dyslexia-center.com

International Dyslexia Organization www.interdys.org

Maharashtra Dyslexia Association,
003, Amit Park,
423, Lala Jamnadas Gupta Marg,
Deonar Farm Road,
Mumbai 400 088.
Phone: +91-022- 2556 5754
E-mail to: - mda@dyslexiaindia.com
www.mdamumbai.com

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9. Communication disorders

What are Communication Disorders ?

These are disorders that do not permit normal communication pattern.

The term COMMUNICATION DISORDERS encompasses a wide variety of problems in language, speech, and hearing.

There are two main types of communication disorders :

- Expressive language disorder - identifies developmental delays and difficulties in the ability to produce speech.
- Mixed receptive-expressive language disorder - identifies developmental delays and difficulties in the ability to understand spoken language and produce speech.

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Causes

Communication disorders may be developmental or acquired. The cause is believed to be based on biological problems such as abnormalities of brain development, or possibly by exposure to toxins during pregnancy, such as abused substances or environmental toxins such as lead. A genetic factor is sometimes considered a contributing cause in some cases.

Speech and language delays may be due to many factors, including environmental factors or hearing loss.

For unknown reasons, boys are diagnosed with communication disorders more often than girls. Children with communication disorders frequently have other psychiatric disorders as well.

Many communication disorders result from other conditions such as learning disabilities, cerebral palsy, mental retardation, or cleft lip or cleft palate.

Symptoms

The following are the most common symptoms of communication disorders. However, each child may experience symptoms differently.

Young children with communication disorders may not speak at all, or may have a limited vocabulary for their age. Some children with communication disorders have difficulty understanding simple directions or are unable to name objects. Most children with communication disorders are able to speak by the time they enter school, however, they continue to have problems with communication.

School-aged children often have problems understanding and formulating words. Teens may have more difficulty with understanding or expressing abstract ideas.

The symptoms of communication disorders may resemble other problems or medical conditions. Always consult your child's physician for a diagnosis.

Speech and language impairments include articulation problems, voice disorders, fluency problems (such as stuttering), aphasia (difficulty in using words, usually as a result of a brain injury), and delays in speech and/or language. Hearing impairments include partial hearing and deafness. Deafness may be defined as a loss sufficient to make auditory communication difficult or impossible without

amplification. There are four types of hearing loss. Conductive hearing losses are caused by diseases or obstructions in the outer or middle ear and can usually be helped with a hearing aid. Sensorineural losses result from damage to the sensory hair cells of the inner ear or the nerves that supply it and may not respond to the use of a hearing aid. Mixed hearing losses are those in which the problem occurs both in the outer or middle ear and in the inner ear. A central hearing loss results from damage to the nerves or brain.

Diagnosis

Most children with communication disorders are first referred for speech and language evaluations when their delays in communicating are noted. A child psychiatrist is usually consulted, especially when emotional or behavioral problems are also present. A comprehensive evaluation also involves psychometric testing (testing designed to assess logical reasoning abilities, reactions to different situations, and thinking performance; not tests of general knowledge) and psychological testing of cognitive abilities.

Treatment

Specific treatment for communication disorders will be determined by your child's physician, special education teachers, and speech/language and mental health professionals based on:

- your child's age, overall health, and medical history
- extent of the disorder
- type of disorder
- your child's tolerance for specific medications or therapies
- expectations for the course of the disorder
- your opinion or preference

A coordinated effort between parents, teachers, and speech/language and mental health professionals provides the basis for individualized treatment strategies that may include individual or group remediation, special classes, or special resources. Two approaches are usually considered. Remedial techniques are used to increase communication skills in the areas of the deficit. A second approach helps the child build on his/her strengths to circumvent his/her communication deficit.

Prevention

Specific preventive measures to reduce the incidence of communication disorders are not known at this time. However, early detection and intervention can address the developmental needs and academic difficulties to improve the quality of life experienced by children with communication disorders.

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For more information, please visit:

[National Center for Learning Disabilities](http://www.ncl.org/) <http://www.ncl.org/>

[Online Resources](#) of Child & Adolescent Mental Health

American Speech/Language and Hearing Association (ASHA)
10801 Rockville Pike, Rockville, MD 20852
301/897-5700, 800/638-8255

<http://www.asha.org/public/speech/disorders/childhood-apraxia.htm>

Cleft Palate Foundation
104 South Estes Drive, Suite 204
Chapel Hill, NC 27514
(919) 933-9044
1-800-242-5338

E-mail: cleftline@aol.com

Web: www.cleft.com

Easter Seals--National Office
230 West Monroe Street, Suite 1800
Chicago, IL 60606
312-726-6200
312-726-4258 (TDD)
800-221-6827 (For information about services for children and youth.)

E-mail: info@easter-seals.org

Web: www.easter-seals.org

Learning Disabilities Association of America (LDA)
4156 Library Road
Pittsburgh, PA 15234
412-341-1515; 412-341-8077; (888) 300-6710
E-Mail: ldanatl@usaor.net

Web: www.ldanatl.org

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10. Central Auditory Processing Disorder (CAPD)

Central Auditory Processing Disorder (CAPD) is a complex and often misunderstood neurological disorder that occurs in individuals with normal hearing who have a reduced or impaired ability to discriminate, recognize, or understand sounds. The symptoms are highly

individual, ranging from mild to severe with many different causes and expressions. Children with CAPD cannot fully process auditory information passed between the ear and the brain. They may have difficulties hearing amidst distracting background noise, remembering information, discriminating between similar sounds or words, or listening long enough to complete a task. CAPD may affect their ability to develop normal language skills, succeed academically, or communicate effectively.

Trained specialists, such as speech-language pathologists and audiologists, can assess CAPD using auditory tests such as behavioral and electrophysiologic tests. Speech-language pathologists and other educational specialists can provide a variety of treatment strategies to help children with CAPD work around many of the receptive, organizational and retention challenges caused by this disorder. Some children's auditory processing skills may well mature developmentally to the point where they become indistinguishable from other children. Others may have more chronic symptoms throughout their lives.

For more information, please visit:

[American Speech-Language Hearing Association](http://www.asha.org/default.htm) (ASHA)
<http://www.asha.org/default.htm>

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11. Tourette Syndrome

What is it ?

TS is an inherited neurological disorder characterized by involuntary motor and/or verbal tics and sometimes accompanied by other disorders (e.g., ADHD and Obsessive Compulsive Disorder - OCD.).

While the average age of onset of Tourette Syndrome is 6-7 years old, there are many cases where parents later realized that their child's tics had actually started much younger. In almost all cases, Tourette Syndrome emerges before age 18, but there are exceptions.

Diagnosis

The diagnosis is based on patient history, observation, and testing to rule out other conditions. Most cases of TS are thought to be "mild," meaning that the individual does not seek treatment and/or does not experience significant interference in their life from their tics.

If tics become problematic, treatment options are available. There are a variety of medications that may provide some relief from the tics and at least one empirically validated non-medication treatment for tics.

Treatment

The good news for many TS patients is that their tics can often be controlled or minimized by medication. It's important to find a physician that has experience in treating Tourette Syndrome patients when considering any treatment for the disorder, because caution must be taken in determining the proper dosage levels. To date, no one medicine has been invented specifically for TS. The pharmaceuticals that have been found to minimize tics are normally used to treat other serious illnesses (i.e., high blood pressure). Hence, these drugs can often cause side effects or present risks serious enough to cause some TS patients to opt for living with the tics rather than take medication.

For more information, please visit:

<http://www.tsa-usa.org/>

<http://www.tourette-syndrome.com/>

<http://www.tourettesyndrome.net/>

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