

Department of Prevention of Communication Disorders (POCD)  
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# ABC's *of* Communication Disorders





Title : ABC's of Communication Disorders  
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### Preface

*Communication disorders can be seen in young as well as old individuals. An array of causative factors can lead to speech, language, hearing and communication deficits in individuals. Presence of communication disorders in individuals not only hampers the normal process of speaking, hearing and conversing adequately in the society, but also affects the individual's education, lifestyle and overall well being. They have vast impact not only on the individuals with the disorder, but also on the family and the society. Parents and caregivers, public in general are inquisitive, confused and interested to understand the "What's?", "Why's" and "How's?" of these disorders so that they can identify the disorders early and also take suitable measures to prevent these disorders in their near and dear ones. Numerous queries starting from, whom to consult? what are the probable causes? what are the recommended treatments? etc., are not widely found in a single capsule. This booklet on "ABC's of Communication Disorders" is an attempt to provide some preliminary information about the characteristics of the disorders, the risk factors and causes for the same and the recommendations for treatment and forthcoming consultations. This booklet will serve as a quick guide for people who want to know and learn about the communication disorders.*

*I hope you will find this booklet informative. If you have any suggestions on this booklet, please send your feedback to aish\_dir@yahoo.com with the subject: "ABC's of communication disorders"*

V. Basavaraj  
 Dr. Vijayalakshmi Basavaraj  
 Director

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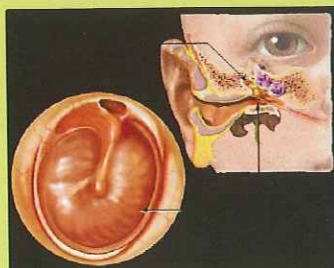


# HEARING IMPAIRMENT

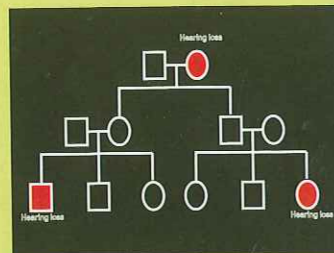
- Reduction in hearing capacity in either one or both the ears.
- Age of onset: Any time from conception to old age.
- Types of Hearing loss: → Conductive hearing loss → Sensorineural hearing loss  
→ Mixed hearing loss → Auditory processing disorders

## Causes

- Ear and other infections.



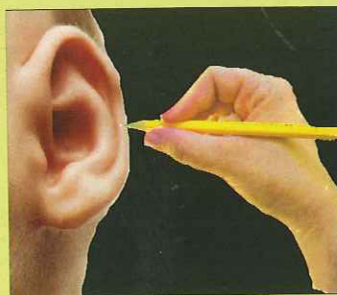
- Aging.



- Hereditary.



- Exposure to loud sounds.



- Injury or Physical blow to ear.



- Use of certain medicines (ototoxic).

## Symptoms

**1** Difficulty in hearing sounds.



**2** Ear pain or ear discharge.

**3** Ringing or buzzing sounds in the ear.



**4** Perception that people around are not speaking clearly.



**5** Difficulty in understanding conversation/speech in noise.

## Prevention



- Screening new born children for hearing loss.



- Using ear protective devices when working in noise.



- Taking prompt treatment for ear infections.



- Protecting ears & seeing that water does not enter the ears (while swimming and bathing).



- Not using any sharp objects like hairpin or matchstick for cleaning ears.
- Avoid pouring oil in ears for cleaning wax.

## Rx

## Recommendations

► **Medical and Surgical Management** will help clients with conductive & mixed hearing impairment (rarely helps clients with sensorineural hearing loss).

► **Audiological Management**  
Most of the language development takes place during first few years of life. So, use of hearing aid can be started as early as 3 months of age in children with hearing impairment. Older individuals with hearing impairment also benefit from hearing aids.

► **Types of hearing aids**  
Body level Behind the ear In the ear.



► **Cochlear implants**.



► **Listening training**.



► **Speech-language therapy**.



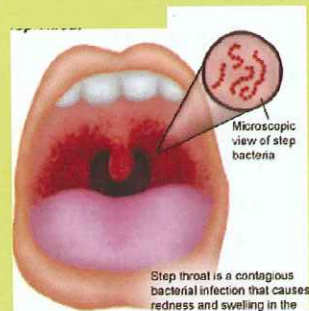


# VOICE DISORDERS

- Individuals with voice disorders will have abnormal pitch (either very high or very low), loudness (reduced) and quality (voice becomes harsh and hoarse) due to problems in the voice box.
- Age of onset: It may occur any time from childhood to old age.

## Causes

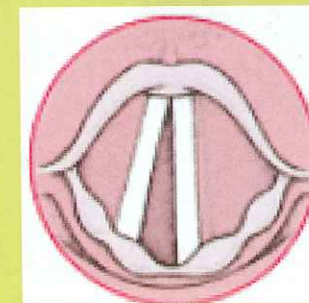
- Excessive talking, singing or shouting specially in noisy places.



- Throat infection.

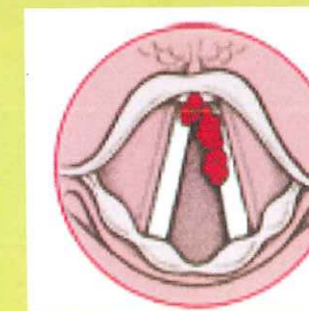
Strep throat is a contagious bacterial infection that causes redness and swelling in the

- Exposure to chemical fumes, dust, smoke.



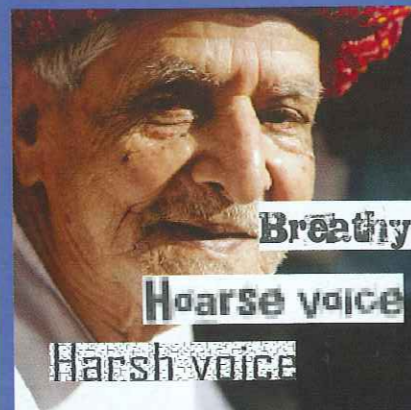
- Paralysis of vocal cords.

- Psychological causes.



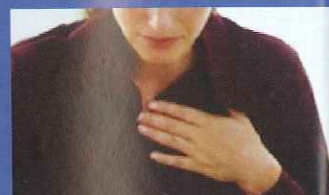
- Cancers of larynx.

## Symptoms

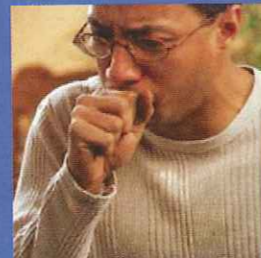


1 Hoarse/breathy/harsh voice.

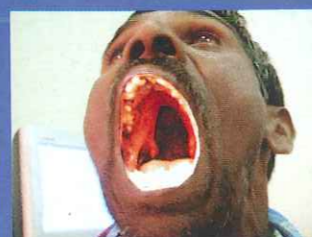
2 Pain and discomfort while speaking.



3 Frequent throat clearing and coughing.



4 Difficulty in swallowing.



5 Dryness of throat.

## Prevention

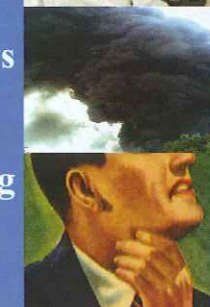
- Avoid excessive talking, shouting or singing specially where background noises are very high (in bus, at wedding parties, when head phones are on, music concerts, classrooms, stadiums).



- Give rest to throat, after at least 45 minutes of continuous speaking.



- Avoid inhaling dust, pollutants and chemical fumes.



- Avoid frequent throat clearing and whispering.



- Seek Prompt treatment for nose, throat and other infections.



- Take small sips of water as frequently as possible to avoid dryness in throat.



- Avoid smoking and alcohol.



## Rx

## Recommendations

- ▶ Voice therapy is provided to teach individuals with voice disorder to speak with less strain & in a clear voice.

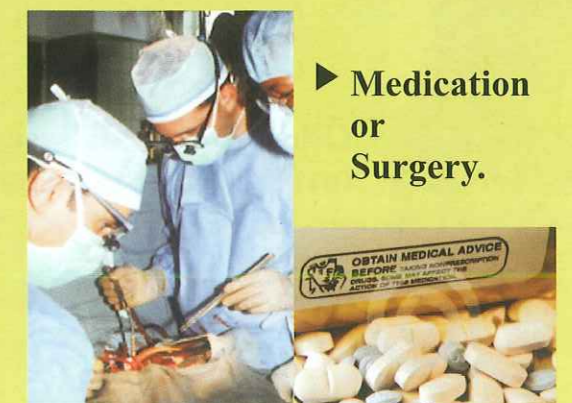


- ▶ Individuals are trained to use appropriate pitch & loudness.

- ▶ Giving complete rest to voice.



- ▶ Medication or Surgery.





# LARYNGECTOMEE

- Laryngectomees are individuals who have undergone surgery for removal of larynx (voice box) either in part or full. The extent of removal depends on the size of tumor.
- Age of onset: Frequently seen after 50 years.

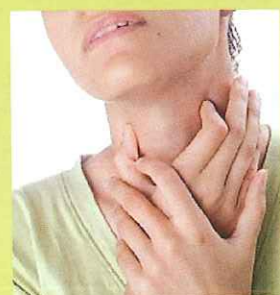
## Causes

- Laryngectomy surgery is done to treat cancer of the voice box.



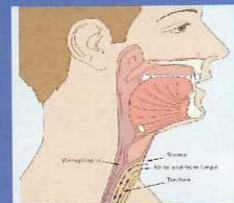
- Excessive smoking.

- Chewing tobacco.



- Other chronic diseases involving throat region.

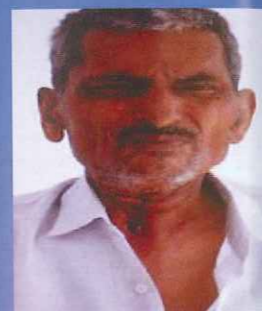
## Symptoms



- 1 External stoma.

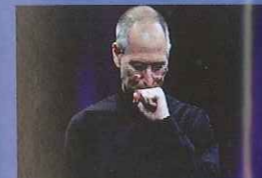
- 2

Breathing through a small opening in the neck.



- 3

Difficulty in speaking.



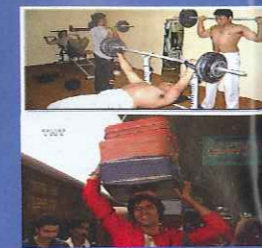
- 4

Loss of smell sensation.



- 5

Inability to lift, push and pull heavy objects.



- 6

Difficulty in swimming.



## Prevention

All the possible causes for developing throat cancers should be avoided.



- Avoid chewing tobacco.

- Avoid inhaling dust, pollutants.



- Seek prompt treatment for throat infections.



- Avoid smoking.

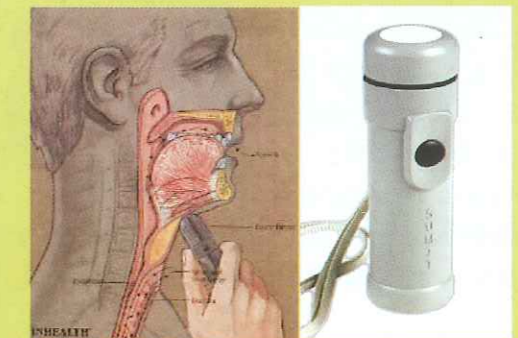


## Rx

## Recommendations

- ▶ Voice & Speech therapy is provided to restore speaking abilities or other means for communication.

\*The therapeutic approach depends on type of surgery and extent of structural removal.



- ▶ Individuals are trained to use artificial larynx.

- ▶ Individuals are trained to speak using:

- Esophageal speech
- Tracheo-Esophageal speech

- ▶ Psychological counselling is provided





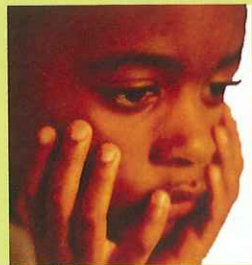
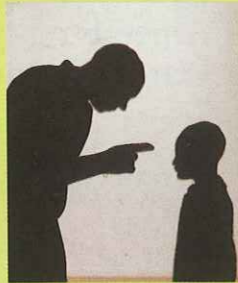
# STUTTERING

- Speech is frequently interrupted by repetitions, hesitations and prolongation of a sound, word or a phrase. Stuttering which is also called as Stammering varies widely in severity and type.
- Onset: 3-5years of age

## Causes

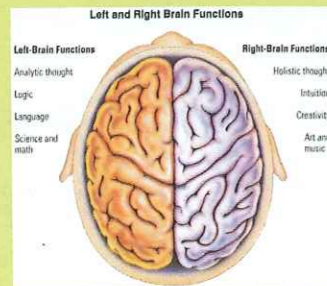
Stuttering is believed to be caused by one or many factors acting together.

- Less favorable parental responses like complaining, scolding or beating during an age (3-5 yrs) when minor speech errors are normal to occur in children (Stuttering begins not in child's mouth but in parent's ear).



- Psychological factors like stress, anxiety etc.

- Brain asymmetries.



- Genetic predisposition.

## Symptoms

- 1 Frequent sound repetitions.

Ma..Ma... Ma.. **My name is**  
Pa..Pa.Pa.. **Prakash**

- 2 Prolongation of sound.

Mmmummy  
ggggive **me**  
**ice cream**

- 3 Excessive use of fillers like well, uh, ah etc.



- 4 Avoiding speaking (instead try to point or use gesture).

- 5 Long pauses .

- 6 Fear in speaking certain sounds & also situations (talking to teacher or boss on phone).



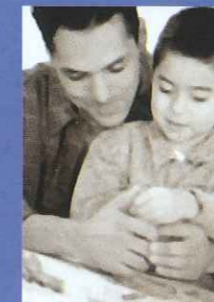
- 7 Facial grimacing (eye blinking, raising eyebrows while speaking etc).



## Prevention

Do's and don'ts for parents:

- Make the child relax and encourage to speak slowly.
- Always speak slowly with the child.
- Explain and train your child to speak slow.
- Respond to fluent and stuttered speech in the same manner.
- Never speak at a fast rate with child.



## Rx

## Recommendations

- Speech/Fluency therapy is provided  
Main focus is on:  
a) Modification of stuttering  
b) Maintaining fluency.



- Counseling and psychotherapy in case of depression and anxiety.



- Group therapy.





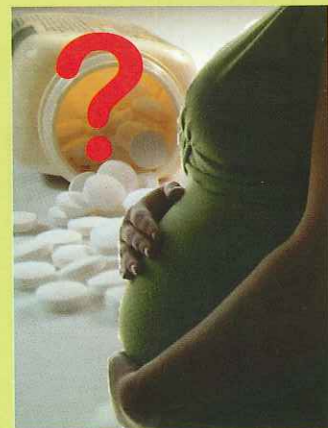
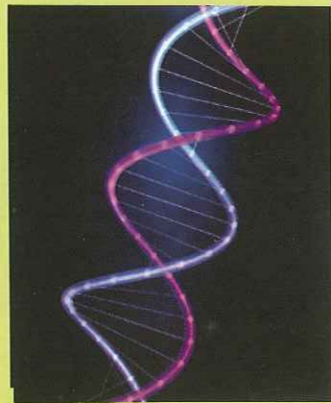
# CLEFT LIP & PALATE

- A cut in the lip or hole in the roof of the mouth is called as cleft lip and palate.
- Age of onset: At the time of growth within the womb.

## Causes

Though the main cause is not yet known the factors that may lead to this condition include:

- Genetic syndromes.



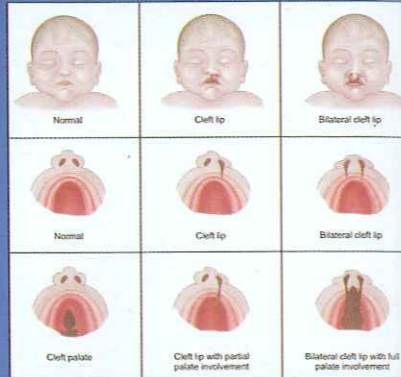
- Effects of medicines/poor diet consumed during pregnancy.

- Exposure to viral infections or chemicals during pregnancy.

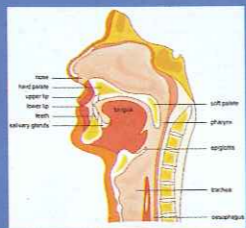


## Symptoms

- 1 The cut/hole is either in one or both sides of upper lip or palate.



- 2 Unclear speech which is difficult to understand.



- 3 Difficulty in eating and swallowing.

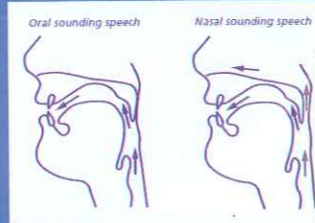


- 4 Middle ear infections.

- 5 Deformity in face and teeth.



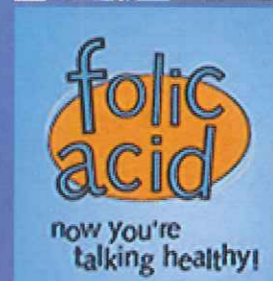
- 6 Speaking through nose or having nasal speech.



## Prevention

Following steps should be taken during pregnancy:

- Intake of Nutritious and balanced diet by mother.
- Avoid taking medicines without medical consultation.
- Undergo Genetic screening if family history of cleft lip/palate is present.
- Intake of folic acid supplements around conception in early pregnancy.



## Rx

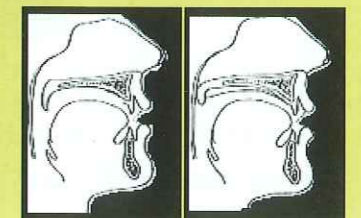
## Recommendations

- ▶ Plastic surgery for closing gap in lip/palate.

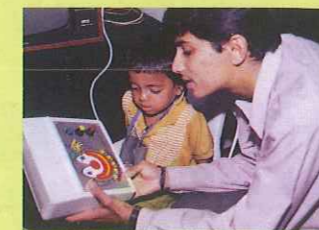


Recommended age for surgery  
For Cleft lip: 3-6 months  
For Cleft palate: 12-18 months

- ▶ Use of prosthesis if gap is left untreated/partially treated by surgery.



- ▶ Speech therapy for speech sound errors & language delay.



- ▶ Surgery or medication for ear infections.

- ▶ Dental surgery for teeth.



# ARTICULATION DISORDERS

- Articulation disorders are difficulties in the way sounds are uttered while speaking, usually characterized by substituting one sound for another, omitting a sound, distorting a sound, or adding a sound.
- Age of onset: At any age from childhood to older age.

## Causes

- Oral structural deformities.

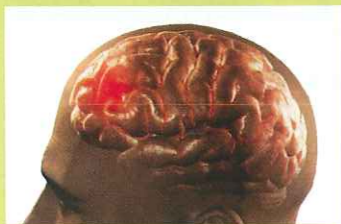


- Weak oral & face muscles.



- Hearing Impairment.

- Brain damage or neurological dysfunction (Also read the section on Dysarthria).



- Imitating others having articulatory errors.

## Symptoms

- 1 Speech is unintelligible & difficult to understand.
- 2 Mostly errors on production of sounds. For example [s] [l] and [r]
- 3 Errors such as Omission/ Substitution/Addition/Distortion on production of sounds or words.
- 4 Air escapes through nose while speaking.
- 5 Weakness in oral structures.



- 6 Difficulty in speaking long sentences.

## Prevention

- Good prenatal care and nutrition should be given during pregnancy.



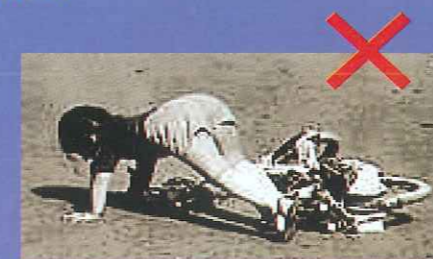
- Good model of interactions should be given during the initial speech development.



- Parents and care givers should provide good model of articulation.



- Injuries to face and oral structures should be avoided.



## Rx

## Recommendations

- ▶ Treatment for Articulation disorders is based on the causative factor.
- ▶ If the causative factor is structural abnormality, medical treatment followed by Speech therapy is given.



- ▶ If the causative factor is Hearing Impairment, listening training will be helpful.



- ▶ Speech therapy  
The following are focused in speech therapy:
- ▶ Improve sound discrimination and identification abilities.
- ▶ Correct placement of articulatory movements to improve the performance.



# DYSARTHRIA

- It is a disorder in which speech is unintelligible because of paralysis, weakness or stiffness and inability to control and coordinate the muscles used for speaking due to insult to the brain.
- Age of onset: It can occur anytime from childhood to old age.

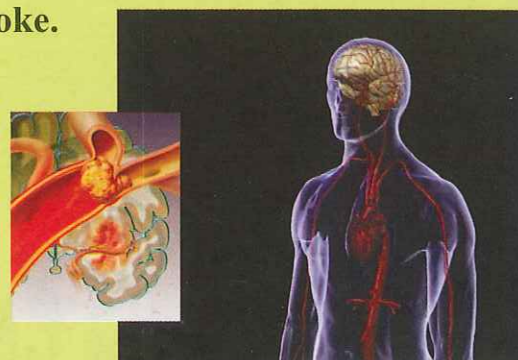
# Rx

## Prevention

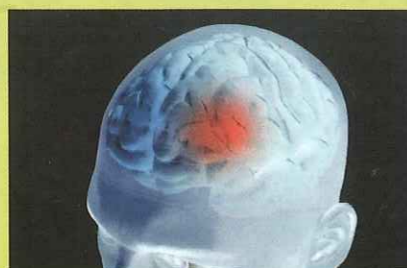
## Recommendations

## Causes

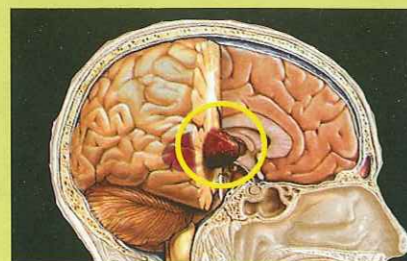
- Stroke.



- Head injuries.



- Brain tumors.



- Neurological disorders like Parkinsonism, Multiple Sclerosis etc.

- Excessive intake of alcohol and drugs etc.



## Symptoms

- 1 Slurred & unintelligible speech.

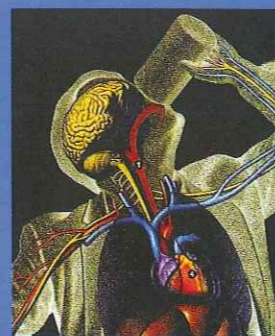


GIVE ME SOMM WATER

- 2 Slow rate of speech

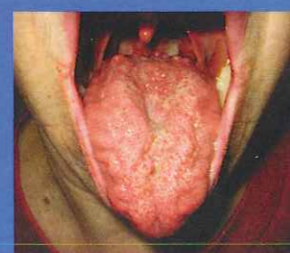
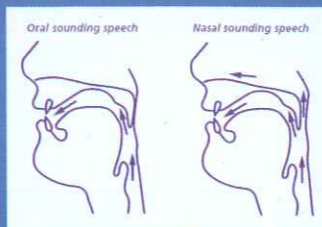
sl o w r a t e  
o f s p e e c h

- 3 Difficulty in chewing and swallowing.



- 4 Lack of clarity in speech.

- 5 Nasality while speaking.

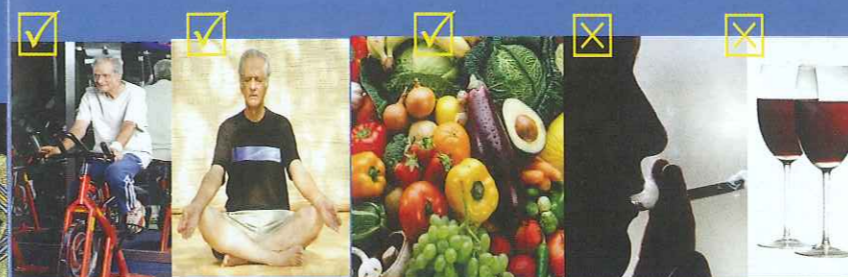


- 6 Weakness of tongue.

- 7 Limited lip, tongue and jaw movements.



- Live healthy life.
- Exercise regularly.
- Take balanced and healthy diet.
- Avoid smoking and alcohol.



- Undergo regular health check up.



- Keep blood pressure, diabetes under control.



### ► Speech therapy

- Treatment depends on cause and severity of symptoms.
- Speech muscles are exercised to make speech sound clear.
- Compensatory strategies are taught to improve communication.





# AUTISM

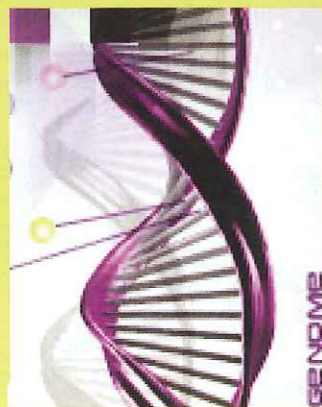
- It is a disorder where in a person's intent to communicate and interact with others is affected. It varies widely in severity and hence it is called as a 'spectrum disorder'.

## Causes

Not much is known about the exact cause for autism but some likely causes are:



- Viral infections leading to brain dysfunction during pregnancy.



- Genetic factors.

- Biochemical imbalances.

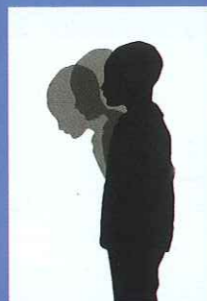
## Symptoms

- 1 Insistence on sameness. (For e.g. wanting to wear a particular color of cloths everyday).



- 2 Inappropriate response to sensory stimuli.

- 3 Impaired ability to make friends with peers.



- 4 Repetitive body movements like rocking head.



- 5 Fixation on any one object. (Toy train or doll).

- 6 Repetitive, stereotyped and unusual use of objects & body parts.

- 7 Unusual play habits.

## Prevention

Though exact measures to prevent autism are not known, general precautions may help.

During pregnancy:

- Avoid taking medicines with out medical consultation.
- Avoid tobacco, alcohol and drug abuse.
- Undergo immunization against infections like Rubella etc.,
- Initiate Speech-language therapy as soon as the disorder is identified. This goes a long way in improving the communication skills.



If speech is difficult for the child to acquire, encouraging communication in different modes like pointing, typing, and drawing as per the needs of the child.



## Rx

## Recommendations

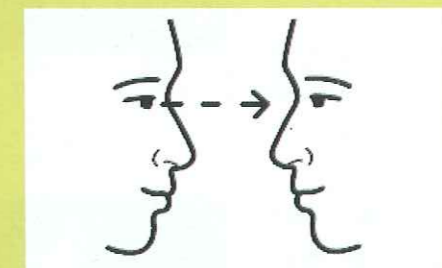
- ▶ Sensory integration therapy.



- ▶ Speech and language therapy.



- ▶ Promoting socialization beginning with eye contact



- ▶ Using nutritional supplements rich in vitamins and minerals.



- ▶ Encouraging the unusual talents present in autistic children



# ATTENTION DEFICIT HYPERACTIVITY DISORDER

- An individual with Attention Deficit Hyperactivity Disorder (ADHD) will have hyperactive-impulsive and/or inattentive behaviors, in presence of normal intellectual abilities.
- Age of onset: Predominantly beginning in childhood and also seen among adults.

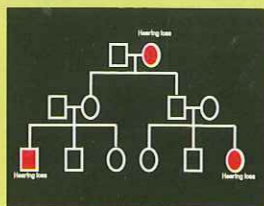
## Causes

Although the main cause for ADHD is brain dysfunction, the following factors may increase the risk for development of this disorder.

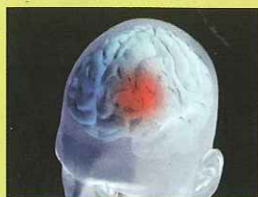
- Imbalance in brain chemicals (i.e., Neurotransmitters).



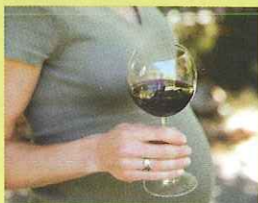
- Positive family history.



- Brain insult caused during pregnancy, delivery or immediately after Birth.



- Alcohol and drug abuse during pregnancy.



## Symptoms

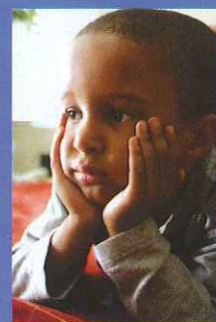
**1** Restlessness.



**2** Impatience.



**3** Impulsive behavior.



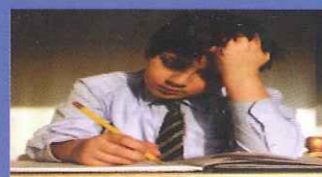
**4** Daydreaming.



**5** Selective listening.



**6** Distraction.



**7** Inattentiveness.

## Prevention

The following precautions will help in reducing the risk for ADHD.

- Having good medical care and practicing healthy habits during pregnancy.
- Avoiding alcohol, drugs, and smoking during pregnancy.



- Good parenting skills, including setting consistent behavior limits for the child.
- Strict scheduling of the day at home or school.
- Maximizing preschool learning and attention skills of the child.



## Rx

## Recommendations

- ▶ Treatment for ADHD is based on the symptoms and problem behaviors.
- ▶ Medical treatment is the most effective treatment for controlling most of the ADHD symptoms.

- ▶ Use of Psycho stimulants or stimulants.



- ▶ Behavior management.



- ▶ Pragmatic skills training.



- ▶ Counseling and including family therapy.



# SPECIFIC LANGUAGE IMPAIRMENT

Specific Language Impairment (SLI) is a developmental language disorder that can affect both the ability to speak and understand. It is not related to or caused by other developmental disorders, such as, hearing loss or acquired brain injury.

## Causes

Not much is known about the exact cause for SLI but some likely causes are:

- Sensory processing disorders: Poor sound processing abilities.

- Genetic factors.



## Symptoms

- 1** Delays and deviancies in language development .
- 2** Not able to understand word meanings.
- 3** Below average vocabulary.
- 4** Terribly nervous when asked to speak verbally.
- 5** Not able to speak in complete sentences after 3 years.
- 6** Sequencing & Problem solving difficulties.

# Rx

## Prevention

## Recommendations

*Avoid all the risk factors such as.....*

- Abnormal delivery.
- Neonatal jaundice.
- High/Low B.P.
- Noise exposure to the child.
- Convulsions.
- Infections.
- Abortions.
- Fetal distress.
- Trauma to head or neck .
- Ototoxic medicines.
- Alcohol during pregnancy.
- Elderly pregnancy, etc.,

Treatment for SLI is based on an in depth assessment of the child's abilities in language comprehension and production across various domains such as

- Vocabulary
- Grammar
- Language Use

### Speech-Language Therapy:

To enrich the child's speech-language skills, individualized therapy plan is formulated based on the aspects of language that are most significantly affected.





# CEREBRAL PALSY

- This is a condition where in movements of body parts and coordination of various muscles becomes very difficult due to brain damage.
- Age of onset: can occur before, during or after birth.

## Causes

- Brain injury (before, during or after birth).



- Infections which are passed from mother to child.



- Asphyxia: Delayed birth cry cuts oxygen supply to the brain

- Premature birth (less than 9 months).



- Jaundice soon after birth.

- Seizures.

## Symptoms

- 1 Delayed motor development (sitting, crawling and walking).



- 2 Poor coordination of body movements. (Limping, Spillage while eating, falling while running, difficult to balance body weight)

- 3 Difficulty in chewing and swallowing food.



- 4 Delayed speech & language development.



- 5 Stiffness, over stretching or weakness of limbs.



- 6 Drooling.

## Rx

### Prevention

- Immunization of mother at the time of pregnancy.



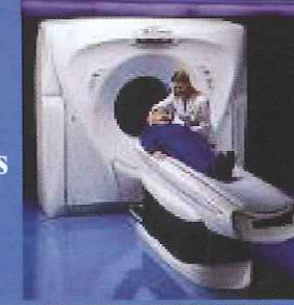
- Knowing the blood group of the parents & the risk if any.



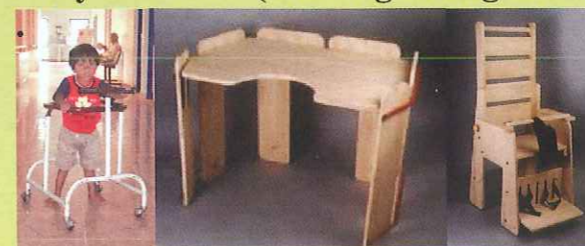
- Early and effective treatment of jaundice in infants.



- Avoiding exposure to x rays, drugs or medicines during pregnancy.



- ▶ Use of special instruments (walker, braces, special pen and spoons) which assists in daily activities (walking eating and writing)

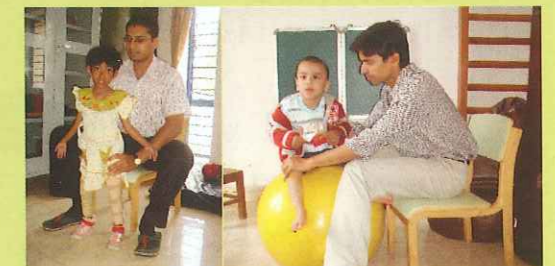


### Recommendations

- ▶ Speech therapy helps in improving control and coordination of different structures used for speech.



- ▶ Physiotherapy helps in improving control and coordination of various muscles of body.



- ▶ Occupational therapy helps in acquiring skills required for day to day activities like eating, writing, brushing etc.



- ▶ Use of communication aids (communication board, computer etc) is advocated if speech is difficult.

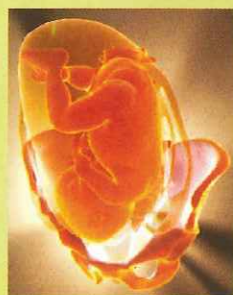


# LEARNING DISABILITIES

- It is a condition where individuals will have difficulty in either understanding what they see and hear, or link information that are processed in different parts of their brain. This limitation causes problems in listening, speaking, reading, attention and physical coordination and thus interferes with classroom learning.
- Age of onset: 3-5 years of age. Generally identified by teacher/parent after 2 years of schooling.

## Causes

Following factors may cause learning disability although the exact cause is not yet known.

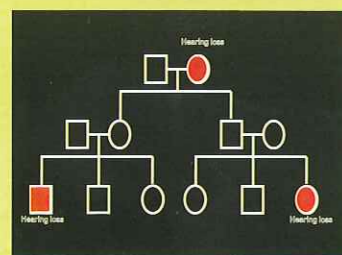


- Brain insult during birth or pregnancy.

- Brain dysfunction due to Infections in early childhood.



- Cognitive processing difficulties.



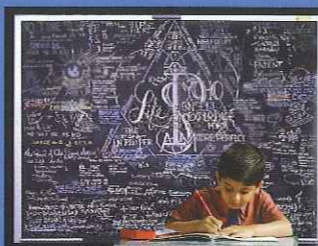
- Hereditary factors.

- Exposure to chemicals and drugs during pregnancy leading to brain damage/dysfunction.



## Symptoms

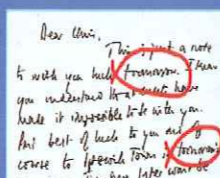
- 1 Poor reading, writing and copying skills.



- 2 Difficulty in recalling sequence of numbers, names and events.



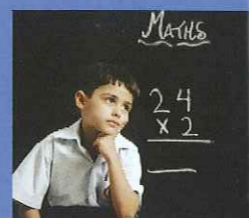
- 3 Attention deficit and poor concentration.



- 4 Spelling mistakes.

- 5 Inability to follow oral instructions.

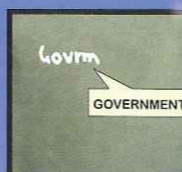
- 6 Problem doing simple mathematical calculations.



- 7 Slow in learning relationship between letters and sounds.



- 8 Mixing order of letters while writing.



## Prevention

- Identify problems like difficulty in understanding and/or speaking during preschool period.
- Start therapy from a speech-language pathologist at the earliest.



- Take proper care during pregnancy and child birth.



## Rx

## Recommendations

- ▶ Treatment involves a team consisting of parent, teachers, speech-language pathologist, clinical psychologist & special educator.



- ▶ Providing easy learning opportunities.

Listening skill training



- ▶ Training to improve handwriting, reading, spelling & awareness of speech sounds.



- ▶ Sound-letter correspondence

- ▶ Exercises to improve memory and concentration.





# MENTAL RETARDATION

- Individuals with Mental retardation are characterized by limited intelligence and are poor in acquiring skills required to function in daily life like communication, self-care, learning in school and social skills. They learn new skills at slower rate compared to normal children.
- Age of onset: Any time from birth to age of 18 years.

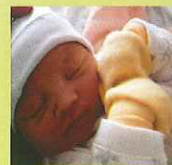
## Causes



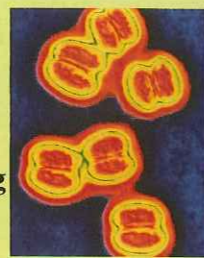
- Malnutrition of pregnant mother.



- Brain damage due to reduced oxygen supply.



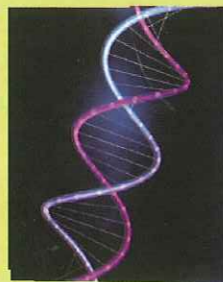
- Head injuries during or after birth.



- Infections (like Meningitis, Measles, Whooping cough, German measles etc.).



- Iodine deficiency.



- Genetic abnormalities.



- Harmful effects of medicines taken during pregnancy.

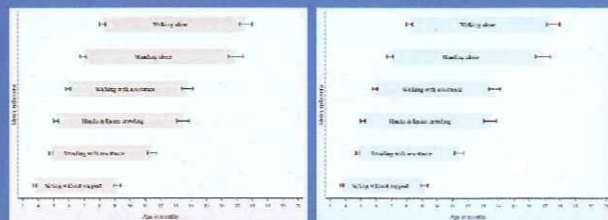


- Alcohol, tobacco & drug addiction during pregnancy.

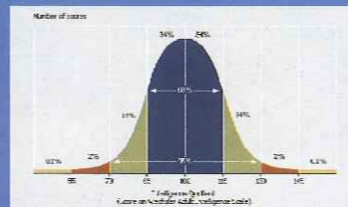
## Symptoms

- 1 Delayed development in Physical milestones such as Sitting, walking etc.

- 2 Delayed speech-language development.



- 3 IQ/DQ less than 70.



- 4 Slow learning and limited memory.

- 5 Aggressive/ self injurious behaviors.

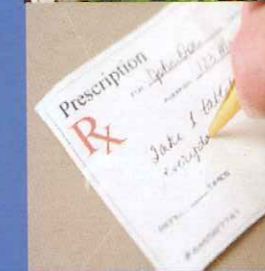
- 6 Difficulty in problem solving & learning abstract concepts.



- 7 Difficulty in understanding social rules.

## Prevention

- Proper care and cleanliness during pregnancy and delivery.
- Nutritious and well balanced diet should be given for the mother and child.
- Taking medicines without proper medical guidance during pregnancy should be avoided.
- Vaccination against infections for infants and pregnant mothers and timely treatment of infections should be carried out.
- Prenatal screening for genetic defects should be carried out.
- Only iodized salt should be used for cooking.



## Rx

## Recommendations

- ▶ The primary goal is to improve intellectual and functional skills.



- ▶ Speech-language therapy is provided to improve communication abilities.



- ▶ Special education and training is provided as early as possible.



- ▶ Vocational training
- ▶ Family members are trained to deal with special needs of the children.



# APHASIA

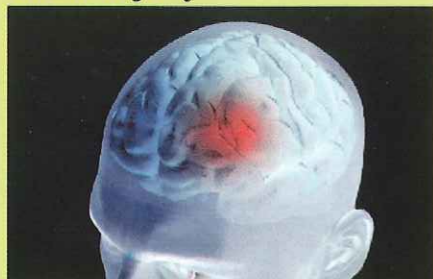
- It is a language disorder which impairs the ability of an individual to produce or understand language due to injury to brain. It occurs most commonly due to stroke or head injury.
- Onset: Most common in old age but it can occur in any age due to brain insult.

## Causes

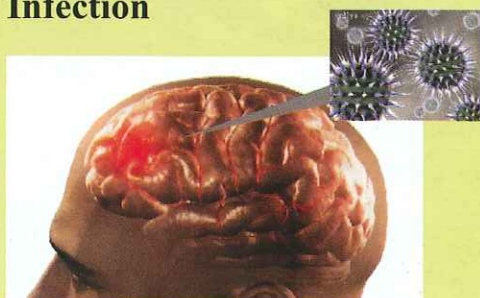
### • Stroke



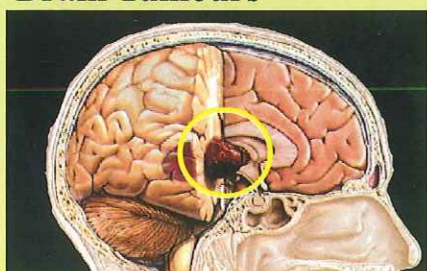
### • Head injury



### • Infection



### • Brain Tumours



## Symptoms

**1** Language is impaired and contains short utterances, word or phrases.

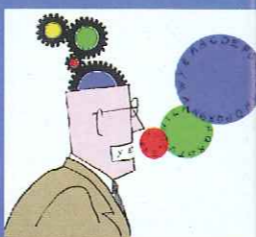
**2** Trouble in understanding speech.



**3** Reading and writing may be affected.



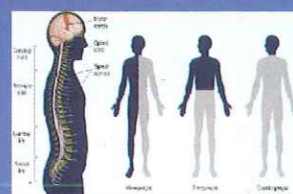
**4** Inability to form grammatically correct sentences.



**5** Difficulty in finding right word.

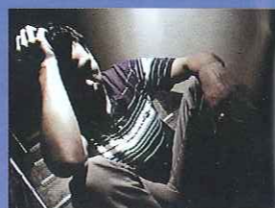


**6** Replacing intended word by another word



**7** Paralysis of one side of body (commonly right side).

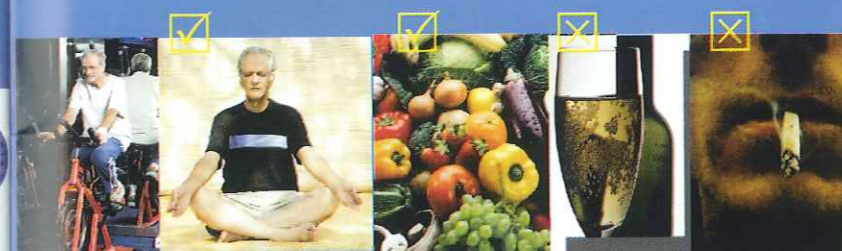
**8** Depression.



## Prevention

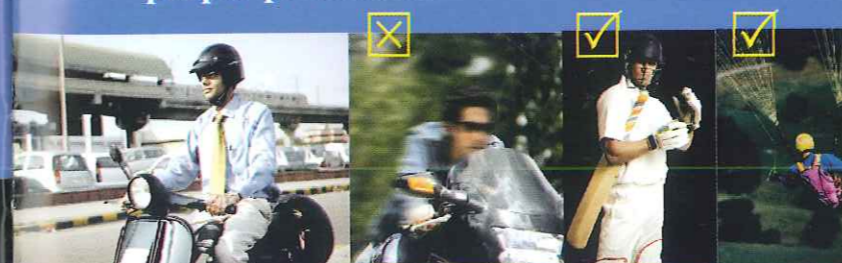
1. Preventing cardiovascular diseases by doing the following.

- Keeping blood pressure in check.
- Regular exercise.
- Healthy and balance diet.
- Avoiding intake of alcohol and tobacco.



2. Avoid head injuries by not doing the following

- Driving Fast.
- Riding without helmet (wearing helmet can prevent chances of head injuries by 90%).
- Playing dangerous sports without proper protection.



## Rx

## Recommendations

- ▶ Mainly focuses on restoring cognitive, communication and physical (walking etc) functions.
- ▶ Treatment should begin with in a few months after onset.

### Speech-Language therapy:



- ▶ Teaching use of residual language abilities.
- ▶ Teaching use of simple language through short and simple sentences.
- ▶ Teaching alternative communication through signing, writing etc.
- ▶ Improving communication using communication boards, or any other nonverbal technique.
- ▶ Physiotherapy and occupational therapy.
- ▶ Medical treatment.
- ▶ Involvement of family and Psychological support is crucial.





Contact for further details:

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