COMMUNICATION OPTIONS--REFERENCE CHART

BEGINNINGS encourages parents to visit programs, talk with professionals and other parents in order to determine which methodobgy is compatible with the family and the child's needs. It is the family's choice.

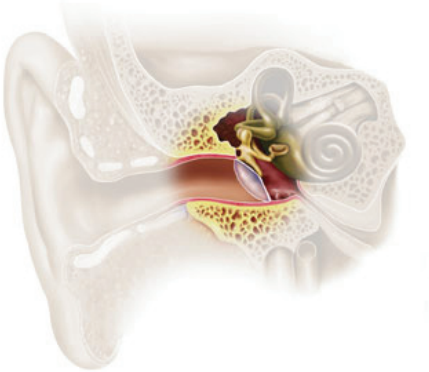
	American Sign Language/ English as a Second Language (ASL/ESL) Bilingual/Bicultural	Auditory Verbal Unisensory	Cued Speech	Oral Auditory-Oral	Total Communication
Definition	A manual language that is distinct from spoken English (ASL is not based on English grammar/ syntax). Extensively used within and among the deaf community. English is taught as a second language.	A program emphasizing auditory skills. Teaches a child to develop listening skills through one-on-one therapy that focuses attention on use of remaining hearing (with the aid of amplification). Since this method strives to make the most of a child's listening abilities, no manual communication is used and the child is discouraged from relying on visual cues.	A visual communication system of eight handshapes (cues) that represent different sounds of speech. These cues are used while talking to make the spoken language clear through vision. This system allows the child to distinguish sounds that look the same on the lips.	Program that teaches a child to make maximum use of his/her remaining hearing through amplification (hearing aids, cochlear implant, FM system). This program also stresses the use of speech reading to aid the child's communication. Use of any form of manual communication (sign language) is not encouraged although natural gestures may be supported.	Philosophy of using every and all means to communicate with deaf children. The child is exposed to a formal sign-language system (based on English), finger spelling (manual alphabet), natural gestures, speech reading, body language, oral speech and use of amplification. The idea is to communicate and teach vocabulary and language in any manner that works.
Primary Goals	To be the deaf child's primary language and allow him/her to communicate before learning to speak or even if the child never learns to speak effectively. Since ASL is commonly referred to as "the language of the deaf", it prepares the child for social access to the deaf community.	To develop speech, primarily through the use of aided hearing alone, and communication skills necessary for integration into the hearing community.	To develop speech and communication skills necessary for integration into the hearing community.	To develop speech and communication skills necessary for integration into the hearing community.	To provide an easy, least restrictive communication method between the deaf child and his/her family, teachers and schoolmates. The child's simultaneous use of speech and sign language is encouraged as is use of all other visual and contextual cues.
Language Development (Receptive)	Language is developed through the use of ASL. English is taught as a second language after the child has mastered ASL.	Child learns to speak through the early, consistent and successful use of a personal amplification system (hearing aids, cochlear implant, FM system).	Child learns to speak through the use of amplification, speech reading and use of "cues" which represent different sounds.	Child learns to speak through a combination of early, consistent and successful use of amplification and speechreading.	Language (be it spoken or sign or a combination of the two) is developed through exposure to oral speech, a formal sign language system, speech reading and the use of an amplification system.
Expressive Language	ASL is child's primary expressive language in addition to written English.	Spoken and written English	Spoken English (sometimes with the use of cues) and written English.	Spoken and written English	Spoken English and/or sign language and finger spelling and written English
Hearing	Use of amplification is not a requirement for success with ASL.	Early, consistent and successful use of amplification (hearing aids, cochlear implant, FM system) is critical to this approach.	Use of amplification is strongly encouraged to maximize the use of remaining hearing.	Early and consistent use of amplification (hearing aids, cochlear implant, FM system) is critical to this method.	Use of a personal amplification system (hearing aids, cochlear implant, FM system) is strongly encouraged to allow child to make the most of his/her remaining hearing.
Family Responsibility	Child must have access to deaf and/or hearing adults who are fluent in ASL in order to develop this as a primary language. If the parents choose this method they will need to become fluent to communicate with their child fully.	Since the family is primarily responsible for the child's language development, parents are expected to incorporate on-going training into the child's daily routine and play activities. They must provide a language-rich environment, make hearing a meaningful part of all the child's experiences and ensure full-time use of amplification.	Parents are the primary teachers of cued speech to their child. They are expected to cue at all times while they speak; consequently, at least one parent and preferably both must learn to cue fluently for the child to develop age-appropriate speech & language.	Since the family is primarily responsible for the child's language development, parents are expected to incorporate training and practice sessions (learned from therapists) into the child's daily routine and play activities. In addition, the family is responsible for ensuring consistent use of amplification.	At least one, but preferably all family members, should learn the chosen sign language system in order for the child to develop age-appropriate language and communicate fully with his/her family. It should be noted that a parent's acquisition of sign vocabulary and language is a long term, ongoing process. As the child's expressive sign language broadens and becomes more complex, so too should the parents' in order to provide the child with a stimulating language learning environment. The family is also responsible for encouraging consistent use of amplification.
Parent Training	If parents are not deaf, intensive ASL training and education about deaf culture is desired in order for the family to become proficient in the language.	Parents need to be highly involved with child's teacher and/or therapists (speech, auditory-verbal, etc.) in order to learn training methods and carry them over to the home environment.	Cued speech can be learned through classes taught by trained teachers or therapists. A significant amount of time must be spent using and practicing cues to become proficient.	Parents need to be highly involved with child's teacher and/or therapists (speech, aural habilitation, etc) to carry over training activities to the home and create an optimal "oral" learning environment. These training activities would emphasize development of listening, speech reading and speech skills.	Parents must consistently sign while they speak to their child (simultaneous communication). Sign language courses are routinely offered through the community, local colleges, adult education, etc. Additionally, many books and videos are widely available. To become fluent, signing must be used consistently and become a routine part of your communication.

Levels of Hearing Loss	Degree of Hearing Loss	Effects on Language & Speech Understanding
normal	0 dB - 15 dB	None
mild	26dB - 40dB	may have trouble hearing faint or distant sounds
moderate	41dB - 55dB	speech must be loud to be understood; will have some difficulty in group discussions
moderate to severe	56dB - 70dB	will have increasing difficulty in group discussions; speech likely to be defective; language usage and comprehension deficiencies; vocabulary limitations
severe	71dB - 90dB	may be able to hear loud voice about 1 foot from ear; may be able to identify environmental sounds; may be able to discriminate vowels but not consonants; speech and language will be affected if hearing loss is present before 12 months unless amplification is provided
profound	91dB +	may be able to hear loud sounds more through vibrations than of tonal patterns; may rely on vision rather than hearing as the primary sensory channel for communication; speech and language deficiencies

www.ncbegin.org/audiology/diagnosis.shtml

Types of Hearing Loss

CONDUCTIVE HEARING LOSS: Sound waves are conducted into and through the hearing system in a variety of ways. The term conductive hearing loss refers to a disruption or mechanical blockage of the movement of sound waves (vibrations) at some point in the hearing system before they reach the inner ear. A conductive loss occurs in the outer and/or middle ear.



Sound is first conducted through the air into the ear canal and then transmitted further via vibration of the middle ear bones. This conduction of sound can be disrupted by something as simple as a build-up of wax in the ear canal. It can also be disrupted by a hole in the ear drum, or by the presence of fluid in the middle ear.

Otitis Media is a common cause of conductive hearing loss associated with children who have frequent ear infections. Normally, the air pressure in the middle ear should be equal to the air pressure on the outer side of the eardrum. The Eustation Tube, which connects the middle ear and the back of the throat, helps to maintain this balance of pressure. Allergies, a cold, or a nose and throat infection might close the Eustation Tube and will block the exchange of pressure. Nature will complain, and can cause a painful earache or a plugged ear. Fluid can also build up in the middle ear. If this condition is not treated, infection can spread to the inner ear (through the mastoid bone) and/or cause the eardrum to burst. Children are more susceptible to middle ear infections because their Eustation Tubes are straighter and shorter than those in an adult. Often a tiny cut, called a myringotomy, is made in the eardrum and a small ventilating tube is inserted. The tube usually remains within the ear for 2 to 8 months. Normally, it works it way out naturally during the healing process. Hearing loss can fluctuate anywhere from a 20 dB to 40 dB loss when a child is suffering from an infection.

Many conductive losses can be treated and eliminated with medication or surgery. But conductive loss can occur due to malformations of the outer or inner ear. If the conductive hearing loss occurs because the bony or soft tissues of the outer ear have not fully developed, it is known as microtia. If there is no visible canal opening, there is atresia of the ear canal. These types of problems do not allow enough sound to the ear drum for the middle and inner ear to detect sound. The three small bones in the middle ear may be fused, or stuck together so that they cannot carry the sound from the eardrum to the cochlea. This is most common with the last ossicle, or the stapes. If the rest of the middle and outer ear are working well, a surgeon may be able to go into the middle ear cavity and loosen the stuck bones. These procedures are usually done after a child is at least four years old, and the procedures may not completely correct the hearing loss

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SENSORI-NEURAL HEARING LOSS: This type of hearing loss is caused by a problem with the reception of sound in the inner ear or in the transmission of electrical impulses along the auditory nerve to the brain.
Possible causes of sensorineural hearing loss are: heredity; drugs; permanent damage due to excessive noise; prenatal exposure to rubella, cytomegelovirus; RH incompatibility at birth; low birth weight caused by prematurity; elevated biliruben levels (jaundice); meningitis; and some infectious diseases such as mumps.
A sensor-neural loss implies damage to the sensors or nerve fibers which connect the inner ear to the hearing center in the brain. Since damaged nerve fibers do not regenerate or repair themselves like some other parts of the body, this damage is permanent.

MIXED HEARING LOSS: This is a combination of conductive and sensor-neural hearing losses. The conductive loss often masks the sensorineural loss. It is important to have a child with a conductive loss tested for the presence of a sensorineural loss. There is often some improvement in the hearing of a child with a mixed hearing loss when the conductive loss is corrected or improved upon.

UNILATERAL HEARING LOSS: This type of hearing loss only affects one ear and may range from mild to profound. Most children with unilateral loss have problems localizing or locating the source of sound. Others may have difficulty with paying attention in noisy situations and language-based academic subjects.

AUDITORY NEUROPATHY (AN): Auditory neuropathy is a type of hearing loss where the cochlea, or organ of hearing, appears to be functioning normally. However, sound cannot travel to the hearing centers of the brain because the auditory nerve is not working properly. Children with AN sometimes can hear sounds but cannot understand what those sound mean or hear better on different days, with no obvious reason for the difference. And, most children, even those that can discriminate words in a quiet environment, cannot use their residual hearing in noise. Doctors don't know the exact cause of this type of hearing loss, but there seems to be an increased risk for children who have a brother or sister with AN or babies who were born premature or had severe jaundice.