

summary

- Fluctuating hearing loss is a common problem in children with Down syndrome.
- Hearing loss and middle ear fluid must be treated by a physician and audiologist to minimize the effect on speech and language development.
- Speech-language pathology can begin early, before the child begins to speak.
- Parents need information to help infants, toddlers and young children practice and master pre-peech and pre-language skills.
- Total Communication is a transitional system to speech which can alleviate communication frustration and help build vocabulary and concept development.
- Once a child begins to speak, parents need information to help the child continue to learn vocabulary and concepts, while at the same time helping the child expand to longer phrases.

For additional information and a resource list on speech and language skills for infants, toddlers and young children, visit our Web site at www.ndss.org or contact the NDSS information and referral center at 800-221-4602 or info@ndss.org.

NDSS thanks Dr. Libby Kumin for the preparation of this brochure.

about ndss

Our Mission:

The National Down Syndrome Society works through education, research and advocacy, to ensure that all people with Down syndrome have the opportunity to achieve their full potential.

Our Constituents:

Today, there are 350,000 people in the United States living with Down syndrome. Each of these individuals touches the lives of family members, educators, employers, health care professionals, peers and others. This network of people who are affected by Down syndrome numbers in the millions.

Our Programs:

Education. Through our model programs, Web site, Information and Referral Center and more, NDSS provides targeted, in-depth information that meets the diverse needs of our constituents.

Research. The Society hosts international research conferences and funds research both independently and through a partnership with the NIH. NDSS is the largest private funder of Down syndrome research in the U.S. **Advocacy.** In cooperation with our more than 135 affiliate groups, NDSS has influenced important local and federal legislation, established October as National Down Syndrome Awareness Month, organizes the Buddy Walk and much more.



666 Broadway, New York, NY 10012
Telephone: (800) 221-4602
Fax: (212) 979-2873
Web Site: www.ndss.org
E-Mail: info@ndss.org

Copyright 2002
National Down Syndrome Society
All Rights Reserved



NATIONAL DOWN SYNDROME SOCIETY

speech &
language
skills in
infants,
toddlers &
young children
with down syndrome

CLINICAL
INFORMATION SERIES

SPEECH & LANGUAGE SKILLS IN INFANTS, TODDLERS & YOUNG CHILDREN WITH DOWN SYNDROME

—by Libby Kumin, PhD, Professor and Director of
the Graduate Program in Speech-Language
Pathology/Audiology, Loyola College

Speech and language present many

challenges for children with Down

syndrome. Although most children with

Down syndrome learn to speak and will

use speech as their primary means of

communication, many infants and toddlers

may need assistance as they learn to use

speech and language. Total communication,

using sign language, pictures, and/or

electronic synthesized speech can serve as

a transitional communication system.

QUESTION: Are hearing problems common in children with Down syndrome?

ANSWER: Ear infections occur frequently in infancy and early childhood in all children. But, because of anatomic differences in the ears of children with Down syndrome (narrow and short canals), they are more susceptible to accumulations of fluid behind the eardrum. This is known as Otitis Media with Effusion (OME). These problems result from fluid retention and inflammation in the middle ear; sometimes with infection. The presence of fluid makes it more difficult for the child to hear, resulting in fluctuating conductive hearing loss. Children should be followed by their pediatrician and otolaryngologist (ENT) and visit an audiologist for auditory testing. This testing can be done soon after birth. Hearing testing should also be done every six months until three years of age and annually through age 12 years. Treatment usually involves either an antibiotic regimen or the insertion of tubes to drain the fluid. These recommendations follow the schedule found in the Down Syndrome Medical Interest Group Healthcare Guidelines, available through NDSS.

QUESTION: What effect does hearing loss have on speech and language development?

ANSWER: Speech and language are learned through hearing, vision and touch. Hearing is very important to speech, and studies have shown that speech and language development are negatively affected by chronic fluid accumulation. Children with Down syndrome often have fluctuating hearing loss due to the frequency of fluid accumulation. When fluid is present, hearing is affected; as fluid drains, hearing improves. When children do not consistently hear well, it is difficult to learn how sounds and events are related, e.g. the ring of the telephone or someone calling you.

QUESTION: How is feeding related to speech and language?

ANSWER: Speech is a secondary function that uses the same anatomic structures used for feeding and respiration. Low muscle tone (hypotonia) affects feeding and will also affect speech. In feeding, children gain practice with strengthening and coordinating the muscles that will be used for speech. If your child has difficulty feeding, it is important to seek guidance from a feeding specialist (a speech-language pathologist or occupational

therapist who has advanced training). Feeding therapy can to help strengthen the oral muscles. This can also have a positive effect on speech.

QUESTION: What other skills are related to speech and language development?

ANSWER: Other important pre-speech and pre-language skills are the ability to imitate and echo sounds; turn-taking skills (learned through games such as peek-a-boo); visual skills (looking at the speaker and looking at objects); auditory skills (listening to music and speech for lengthening periods of time, listening to speech sounds); tactile skills (learning about touch, exploring objects in the mouth); oral motor skills (using the tongue, moving lips); and cognitive skills (understanding object permanence, cause and effect relationships).

QUESTION: When will my child say his first word?

ANSWER: Children with Down syndrome frequently begin to use single words between the ages of two and three, but the age of the first word varies, and the first true word may not be a spoken word. Most children with Down syndrome communicate from birth through crying, looking and gesturing. They have the desire to communicate and learn that crying or making sounds can affect the environment and bring them help. Many children with Down syndrome, by 10-12 months of age, understand the relationship between a word and a concept. However, at that age, the child generally does not have sufficient neurological and motor skills developed to be able to speak.

QUESTION: What is total communication?

ANSWER: Total communication (TC) is the combined use of signs and gestures with speech to teach language. Total communication provides the child with an output system to communicate when he or she has not yet developed the skills needed for speech. In total communication, the adult uses sign and speech when talking with the child. The child learns signs in conjunction with speech and uses the signs to communicate. Sign language is a transitional system for children with Down syndrome. Other choices for transitional communication systems are pictures used on a communication board or in a communication exchange system, and/or electronic communication systems which use synthesized speech. Most children with Down syndrome are ready to use a language system many months or even several years before they are able to use speech

effectively to communicate. Therefore, a transitional communication system such as sign language, pictures or synthesized voice is frequently needed. A speech-language pathologist and/or augmentative communication specialist (AAC) can help design a transitional communication system for your child. Most children with Down syndrome will use speech as their primary system for communication.

QUESTION: What can parents do to help infants and young children learn speech and language?

ANSWER: Parents are the primary communicators of their babies and young children; thus, parents can do a great deal to help their children learn to communicate. Many of the pre-speech and pre-language skills are best learned in the home environment.

- Remember that language is more than spoken words. When you are teaching a word or a concept, focus on conveying meaning to the child through play or through multisensory experiences.
- Provide many models. Most children with Down syndrome need many repetitions and experiences to learn a word. Repeat what your child says, and give him a model to help him learn words.
- Use real objects and real situations. When you are teaching a concept, use daily activities and real situations as much as possible.
- Read to your child. Help your child learn concepts through reading about them, field trips in the neighborhood and daily experiences.
- Follow your child's lead. If your child shows interest in an object, person or event, provide him or her with the word for that concept.

There are many milestones as the child progresses toward using speech. The child responds to a familiar voice, recognizes familiar faces, experiments with many different sounds, produces strings of sounds over and over and makes a sound to mean you (dada, mama). Many children enjoy looking in a mirror, and increase their sound play and babbling when vocalizing in mirrors. Effective ways to work on these skills at home can be learned through early intervention sessions, through books, workshops and speech and language professionals.

QUESTION: When should speech-language pathology services begin? What is early language intervention?

ANSWER: Speech-language pathology services can begin in infancy. Treatment may involve sound stimulation, language stimulation accompanying play, feeding, oral motor exercises and/or other techniques. It should always include the family as a partner in treatment. Early language intervention (ELI) is the designation given for services provided to infants and toddlers from birth through the end of age two. Speech-pathology services should be part of a comprehensive overall treatment plan for infants and toddlers. It may involve sessions at home or in a center, and may be part of a team approach involving physical, occupational and other therapists working together with the family.

A government-sponsored early intervention program is available in all communities in the U.S. Speech-language and other therapy services are provided at these programs for eligible children under age three, based on disability and an evaluation. Most children with Down syndrome qualify for speech-language services. Contact NDSS or the U.S. Department of Education to find the early intervention center nearest to you. After age three, there may be continuing services sponsored by the community or services may be obtained through private practitioners or agencies for a fee. Once a child is enrolled in school, speech-language services are provided, without cost, for eligible children.

QUESTION: How do you find a qualified speech-language pathologist?

ANSWER: Qualified SLPs are certified by the American Speech-Language-Hearing Association and licensed by the state. When a professional is certified, they can use CCC-SLP (Certificate of Clinical Competence in Speech-Language Pathology) following their name. This means they have completed a master's degree in an accredited program, have completed required hours of clinical practice internship and passed a national certification examination. If you are receiving services through Child Find (a federal program that identifies the needs of children with disabilities), the health department or school system in your local area, they will have professionals working with them or they can refer you to local professionals. Members of Down syndrome support groups can often refer you to local speech-language pathologists who have experience working with children with Down syndrome.