

Helping Babies with Down Syndrome Develop Speech & Language By Libby Kumin, Ph.D., CCC-SLP

Welcome to the great adventure of helping your baby learn to speak. It is exciting to get to know your baby and to watch them learn about their world. While your newborn cannot talk to you, they can communicate with you through cries, smiles, gestures, sound and body language. Your baby wants to communicate with you and they begin communicating right from birth. When your baby cries, he is often sending a message that he wants attention. When your baby smiles and looks at you, he is sending you a message that he is happy and content, and maybe that he wants to play with you or be held. The way that you react to these messages can foster further communication. If you respond by coming to the baby and taking care of their needs, the baby will gradually become aware that making noises and sounds affects the environment. You are the most important person in your child's life, and you will be instrumental in helping your baby learn language.

There are many things that we can do to help children move along the road to speech. Speech involves coordinating breathing, voice, and rapid and precise movements of the lips, tongue, palate and jaw. We use the same structures and muscles for speech that we also use for breathing, eating,

drinking, blowing bubbles, and making clicking, popping, and "throwing a kiss" sounds. Through feeding and play, we can begin to work early on some of the same skills and movements that your child will need to speak. Here is what you can do to help your infant develop language and speech:



Infants look all around, taking in the many sights of their new world. To learn language, infants need to learn 3 visual skills:

- To look at you

- To look at an object together with you

- To focus on an object and explore it

You can help your baby learn these skills through play. Encourage your baby to look at your face by making funny faces and smiling. Hold objects up to your face so that your baby looks right at you, but also hold objects in your hand and look at the object together with your infant. When you look at an object together, take time to explore it. Use sound effects and look interested in the toy. Touch the toy, smell it look at it and comment on what you see and feel. That will increase your baby's interest in exploring.



Listen Listen

In order to listen, your baby needs to have adequate and reliable hearing. Children with Down syndrome often have fluid in the middle ear and fluctuating hearing loss. Hearing needs to be checked frequently. *The Healthcare Guidelines for Individuals with Down Syndrome* (See Resources) recommend hearing testing by 3 months of age, with follow-up testing every 6 months to 3 years of age and annually throughout childhood. The pediatrician or otolaryngologist (ear, nose and throat medical specialist) working with the audiologist (specialist in hearing testing and treatment) can develop a treatment program to ensure that your baby's hearing will be the best hearing possible.

You can teach your child to pay attention to sound, and to listen longer to sounds. Musical tapes and CDs and musical toys (such as bells and xylophones) are terrific! Comment on sounds and look for the source of the sound, e.g., "Do you hear an airplane? Look, there it is!" Or "I hear a meow. Let's look for the cat." When you come into your child's room, call his name and wait for him to turn to you. Sing songs

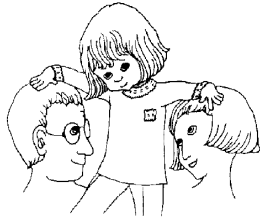
and play with musical toys. Sway back and forth, dance with your child, and respond to the rhythm. Many of the speech rhythm concepts can be learned through music.

Interact...



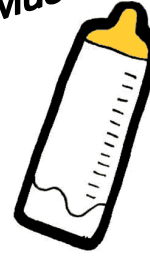
You want to help your infant develop the awareness that making noises or using gestures will get results from the environment. This is known as *communicative intent*. How can you help your child develop this skill? Interpret anything that your child does as communicative and respond to it in that way. So, if your baby kicks her feet, play a game with her toes or put a balloon or even a tambourine near her feet that she can kick. If she looks over at the front door, ask her if she wants to go outside. If she makes a "mmm" sound, react to it as if she said "mama" and respond. Say the word "mama" and point to mama. If she makes a "bbb" sound, react as if she said "ball." Point to the ball and play with it. Engage your baby in the play. Show by your actions how delighted you are at your child's attempt to communicate.

Touch



Infants respond to touch. They may find it comforting or they may find it uncomfortable. Some infants with Down syndrome are hypersensitive to touch, i.e. they don't like being touched especially around the mouth. Current thought is that children who are hypersensitive need lots of sensory experience with touch through massage and play. Use a washcloth and lotion to massage your child's skin. Rub cotton, velvet, wool, and burlap on your child's skin during play. You might use different types of teething toys, which have different surface designs and shapes. Put together samples of all kinds of textures for your child to explore. For example, you might hide small toys in a shoebox filled with pasta or rice and help your child find the toys. You might have pieces of sandpaper, cotton balls, aluminum foil, Velcro, sponge, and velvet in a bag for your child to feel and learn about different textures (be sure to supervise; safety first). Provide interesting toys for your child to bite, mouth, and explore. Infant massage specialist and occupational therapists can provide assistance, when needed.

Feeding/ Strengthen Muscles



Feeding

uses many of the same muscles and structures that are used for speaking. Sometimes, infants with Down syndrome have difficulty with feeding because of low muscle tone (floppy muscles) or tongue or lip strength and control. If your child is experiencing any difficulty with feeding, ask for help. Many hospitals and/or early intervention programs have feeding specialists, and a feeding evaluation can be done within the first week after birth, if needed.



Play with Sounds

Your baby makes sounds during the course of the day. When your baby makes a sound, such as *papapa*, imitate that sound and smack your lips together making the *p* sound. Follow your child's lead, and repeat the sounds or movements (lip puckers and throwing a kiss) that your child makes. Repeat the same sound that your child made, but then vary it a bit. For example, sing the p-p-p up and down the scale. Or say it in a very high voice, then a very low

voice; shout the sound then whisper the sound. Make it fun! Make a variety of sounds- use lip- popping sounds, click the tongue on the roof of your mouth, say *chachacha* to exercise your jaw.

Oral massage, oral exercises and sound play can help your child learn skills that will be needed for speech. A speech-language pathologist who specializes in working with muscles of the facial area is known as an oral motor specialist. A complete oral motor evaluation is recommended before 1 year of age. The specialist can develop a home treatment exercise program that will help your child prepare for speech.

Stimulate Language



Create a language rich environment for your infant. In the course of the day, label any objects or people in whom your child shows interest. Make this a part of your daily activities, and follow your child's lead. Certain activities lend themselves to stimulating specific vocabulary. For example, eating lends itself to talking about food and drink, utensils, kitchen items, and verbs (drink, eat, open). Bathtime lends itself to talking about body parts, water, soap, shampoo, and

hot and cold. When you go outside, there are trees and flowers, vehicles, stores, community workers, and neighbors. Use short phrases, so your child will learn the important words in his environment. Wait and see if your child will try to say words and sounds; take time to give him a chance to participate. A language evaluation is recommended by or before 1 year of age.

We learn language by watching and listening to people around us. Babies learn to make connections between the words they hear and the objects and people they see. Most children with Down syndrome make that connection and are ready to use language on or before 1 year of age. At that age, they can usually understand words, but they are not ready to speak. But it is important that they continue to learn new language concepts, and that they have a more complex way of letting you know their needs than just crying, smiling, or looking. Babies and toddlers with Down syndrome have a lot to tell us and they become frustrated if they cannot make their needs known. Therefore, babies and toddlers need to use a system other than speech as a transitional system to communicate their needs until their muscles, nerves, and coordination skills are ready for speech.

The research has shown that children with Down syndrome begin to use speech anywhere from 9 months to

8 years of age. That is a very wide range, but we don't need to passively wait for speech to happen. We can provide a pre-speech communication system, and we can help the child learn the skills that they need to be able to speak. The speech-language pathologist can help by providing information, and teaching you the skills that you need to help your child. Books and newsletters can provide helpful information for you. Some suggested readings are included in the resources section.

The systems that are generally used by children with Down syndrome to communicate until they are ready to use speech are *sign language, communication boards, picture exchange communication, and electronic communication systems*. *Sign language* systems are symbolic hand gestures. Gestures that resemble actual real life situations, e.g., pointing to the mouth for eating or pretending to drink from a cup for drinking, may be used. Formal sign language systems such as American Sign Language (ASL) and Signed Exact English (SEE) may be taught. They may be used as a short-term transitional communication system until the child develops speech. *Communication Boards* are individually designed communication systems made up of pictures, photographs, line drawings, or words (for older children).

Your child points to the pictures that represent what he is requesting. Communication boards may be made of tagboard, or may be plastic sheets with pictures tucked into pockets, photo albums with communication pictures, or magnets on the refrigerator with pictures of apples, juice, milk, water and soda. There are many varieties of communication boards and they are inexpensive and individualized. *Picture exchange systems* may also be used where parent and child physically exchange photographs or line drawings as the basis for communication, much like a speaker and listener. *Electronic communication systems* can also be used. They are more costly, but provide an early "voice" for your child.

In all of these systems, you will be using speech along with the sign or picture, so your child will continue to hear and learn speech. Although your child will be communicating through the sign or picture, you will always accompany that sign or picture with speech. This combination is known as *Total Communication*.

The speech-language pathologist can work with you and your child to help you learn the signs, and to choose materials for the communication board or exchange system that will be useful for you and your child. Why is it important to use a transitional communication system until your child is

ready to use speech? Through the signs and pictures:

- ✓ Your child will be able to communicate his messages to you
- ✓ You will be able to understand the communication, lessening frustration for you and your baby
- ✓ Your child will be able to continue progressing in language, learning new words and concepts and using them
- ✓ You will be able to get to know your child's personality, and sense of humor through his communication

Finding a Speech-Language Pathologist

School systems have speech-language pathologists who work with children with special needs. According to the guidelines in IDEA 97 (Individuals with Disabilities Education Act Amendments of 1997), children who are at risk for delays in communication (speech, language, and hearing) are eligible for special education services. Although the educational plan is supposed to be individualized and designed to meet the needs of the individual child, many school systems do not provide speech and language evaluations and/or treatment until a child with Down syndrome is older (3 years of age) or is speaking. In countries outside



of the United States, early intervention services may or may not include speech and language.

Speech and language information and help is available. A speech-language pathologist has professional training in communication development and disorders. The American-Speech-Language-Hearing Association awards professional credentials when the speech-language pathologist has successfully completed undergraduate and master's degree accredited programs, completed extensive clinical practicum, and a clinical fellowship year, and passed a national certification examination. Speech-language pathologists who have been awarded professional credentials will use CCC-SLP after their name. The local school system is a good starting place to look for speech and language help.

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