

## Speech Development

### **Do children with cleft palate have speech problems?**

It is common for children who are born with a cleft palate to have speech problems at some time in their lives. Over half of them will require speech therapy at some point during childhood. However, many children who are born with a cleft palate develop normal speech by the age of 5.

Regular evaluations by the speech-language pathologist on your child's cleft team will help you decide if speech therapy services or other types of interventions are needed. The speech-language pathologist will be able to assess your child's speech production and language development and make appropriate therapy recommendations.

It is also extremely important for your child's ears and hearing to be examined on a regular basis, whether you suspect a problem or not. Children with cleft palate are more susceptible to ear infections (*otitis media*) than children without clefts. Children with many ear infections are at risk for hearing loss, language delays, and speech problems because they are not able to hear language normally when fluid collects in the middle ear.

### **What speech problems might children with clefts have?**

Before the palate is repaired, there is no separation between the nasal cavity and the mouth. This means that a) the child cannot build up air pressure in the mouth because air escapes out of the nose, and b) there is less tissue on the roof of the mouth for the tongue to touch. Both of these problems can make it

difficult for the child to learn how to make some sounds.

It is not unusual for a child who is born with a cleft palate to show a delay in both the onset of speech and the development of speech sounds during the first 9-24 months of age. Therefore, it is important to talk to your child and to encourage your child to talk to you. Once the palate has been repaired, your child may be able to learn more *consonant* sounds and say more words, but speech may still be delayed during the early years. *Articulation* problems (difficulties in making certain sounds) may persist in some children throughout early childhood for a variety of reasons. If your child's teeth do not "line up" correctly, speech may be understandable, but some sounds (like "s" or "sh") may sound distorted or "mushy." It is also important to remember that some children, with or without a cleft palate, may simply develop speech more slowly than others.

When speech is produced correctly, the soft palate lifts and moves toward the back of the throat, separating the nasal cavity from the mouth so that air and sound can be directed out of the mouth. The inability to close off the nasal cavity from the mouth is called *velopharyngeal inadequacy*. Children who have velopharyngeal inadequacy may sound like they are "talking through their noses." This problem occurs because when the soft palate cannot close off the nose from the mouth, air and sound can escape through the nose during speech, possibly resulting in *hypernasality* and *nasal emission* of air. (It is normal for air and sound to come out of the nose when saying the "m," "n," or "ing" sounds.) Approximately

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25% of children with repaired cleft palates still show signs of velopharyngeal inadequacy.

You may notice that your child produces “grunt” or “growl” sounds. These sounds represent a behavior that some children learn in an attempt to compensate for velopharyngeal inadequacy. This behavior usually begins before the palate is repaired, but it may continue even after the palate is closed. Although it can be corrected by speech therapy, you should not encourage your child to make these types of sounds, because it can be difficult for him or her to “unlearn” this habit.

Children with velopharyngeal inadequacy may also have a *voice disorder*. In this case, your child’s voice may sound hoarse or “breathy” and may fatigue easily. This problem is usually caused by the strain that he or she puts on the vocal cords while trying to build the pressure necessary for normal speech.

#### **What can be done about speech problems?**

Speech therapy alone may be able to correct your child’s speech disorder. Therapy can be extremely effective for children with mild hypernasality, an articulation disorder, or speech delay. The goal of speech therapy will be to develop good speech habits as well as to learn how to produce sounds correctly. Speech therapy alone will generally NOT correct hypernasality that is caused by moderate to severe velopharyngeal inadequacy.

The type of therapy your child receives will be determined by the type of problem your child has. Furthermore, the amount of therapy your child needs will depend on the severity of the speech problem. If your child’s articulation difficulties are related to a dental abnormality, the combination of articulation therapy and dental treatment can help to minimize the problem.

If your cleft palate team decides that speech therapy alone will not correct your child’s speech problem, there are some other options. Your child may require another palate surgery to help with speech. The two most common speech surgeries are 1) *pharyngeal flap* and 2) *sphincter pharyngoplasty*. (The surgeon may

also choose to redo the original repair.) Your child’s speech-language pathologist and surgeon will work together to determine the most appropriate type of surgery for your child. Talk to your surgeon about which procedure he or she intends to perform. It is important to remember that surgery is not a “quick fix.” It is almost always necessary for a child to participate in speech therapy after surgery to practice correct articulation and good speech habits.

Although surgery is the most frequently-chosen approach for improving velopharyngeal function, a *prosthetic device* may be an option for some patients. These speech aids are placed in the mouth, much like an orthodontic retainer. The two most common types are 1) the speech bulb and 2) the palatal lift. The speech bulb is designed to partially close off the space between the soft palate and the throat. The palatal lift appliance serves to lift the soft palate to a position that makes closure possible. Many professionals feel that prosthetic appliances work best in children who are at least five years of age. However, each patient should be evaluated on an individual basis to determine if one of these devices is appropriate for him or her.

#### **What is the role of the speech-language pathologist on a cleft palate team?**

The speech-language pathologist on the cleft palate team has many responsibilities and should see your child regularly. The speech-language pathologist should consistently assess your child’s speech and language development, as well as screen for hearing problems (with the help of an audiologist). In addition to evaluating speech, the speech-language pathologist can help you and your child minimize feeding difficulties, possibly offering guidance on adapted feeding techniques. (This role may also be filled by the team nurse.)

#### **What can parents do to help?**

Parents and caregivers play a vital role in a child’s speech and language development. It is important that you talk to your child and encourage him or her to practice appropriate speech behaviors. If possible, work closely with your speech-language pathologist to

develop a home carryover program. He or she can tell you about certain activities that are specific to your child's speech disorder. It is important that your child feels successful about his or her speech, so always be encouraging and make it fun!

#### **How do parents pay for speech therapy?**

Insurance companies may pay for speech therapy for children born with cleft lip and palate, though they may limit the number of therapy sessions and may require a physician's letter. Consult with your insurance provider to obtain the necessary information. Your school district is also obligated to evaluate and treat your child if he or she qualifies for the school program and has reached the age of three. Contact your school system's special education department to inquire about these services.

#### **Where can I learn more?**

Further information can be obtained from any member of your cleft palate team, your local school district, and the Cleft Palate Foundation (CPF). CPF has produced this factsheet and other publications about various aspects of treatment for individuals born with clefts.

**For further information on cleft lip and palate, or for a referral to a cleft palate/craniofacial team, please contact:**

**Cleft Palate Foundation  
1504 East Franklin Street, Suite 102  
Chapel Hill, NC 27514**

**800.24.CLEFT  
919.933.9044  
919.933.9604 fax  
info@cleftline.org  
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## **GLOSSARY**

**Articulation**—Movements of the mouth and airway that produce speech.

**Consonant**—Every letter sound except a,e,i,o,u.

**Nasal Emission**—Air that escapes through the nose during speech.

**Hypernasality**—Speech that sounds overly "nasal," as if the person is "talking through his/her nose."

**Otitis Media**—Ear infection.

**Pharyngeal Flap**—Surgical procedure designed to minimize hypernasality. A flap of skin creates a "bridge" between the soft palate and the back of the throat.

**Prosthetic Device**—Artificial substitute for a missing part of the body.

**Sphincter Pharyngoplasty**—Surgical procedure designed to minimize hypernasality.

**Velopharyngeal Inadequacy/Incompetence**—Condition in which the soft palate cannot extend enough to "seal" the nasal cavity from the mouth during speech. This problem may result in hypernasal speech.

**Voice Disorder**—Speech problems such as hoarseness, low speaking volume, or strained voice quality.

## **BIBLIOGRAPHY**

*Cleft Palate Speech.* Peterson-Falzone, Hardin-Jones, Karnell (2000).

*Communicative Disorders Related to Cleft Lip and Palate.* Bzoch (1997).

*Cleft Palate Speech Management: A Multidisciplinary Approach.* Shprintzen, Bardach (1995).

*Cleft Palate: Interdisciplinary Issues and Treatment—For Clinicians By Clinicians.* Moller, Starr (1993).

You may also want to consult the following publications by the Cleft Palate Foundation:

*Cleft Lip and Palate: The First Four Years*

*Cleft Lip and Palate: The School-Aged Child*

*Cleft Lip and Palate: Information for the Teenager Born with a Cleft*

*Cleft Lip and Palate: The Adult Patient*