

## Cleft and Palate: The Effects on Communication Skills

A cleft lip or cleft palate can affect the child's ability to develop speech and even language skills. The following aspects of verbal communication may be affected:

- **Articulation (Speech)** - the physical production of sounds to form spoken words.
- **Language** - the message conveyed back and forth in talking. This includes the ability to understand the speech of others (receptive language). It also includes the ability to express thoughts through words and sentences (expressive language).
- **Voice** - the sound that results from the vibration of the vocal cords (phonation).
- **Resonance** - the vibration of voiced sound in the oral cavity (mouth) and nasal cavity (nose).



There are three main causes of communication disorders in children with a history of cleft lip and palate. These are as follows:

### Dental Abnormalities

If the cleft extended into the gum ridge, dental development may be affected, causing the following:

- missing or extra teeth in the area of the cleft
- malocclusion (poor closure of the top and bottom jaws)

Dental abnormalities may cause a lisp type of distortion on the “teeth” sounds (s, z, sh, ch, j). They may also cause difficulty producing lip sounds (p, b, m), teeth-lip sounds (f, v), and tongue-tip sounds (t, d, n, l).

### Hearing Loss

The Eustachian tube connects the middle ear and the back of the throat. It opens with swallowing to allow fluids to drain out of the middle ear and down the back of the throat. It also eliminates negative air pressure. Children with a history of cleft palate often have poor Eustachian tube function. This is because the muscle in the soft palate that is responsible for opening the Eustachian tube does not function well. As a result, negative pressure and fluids build up in the middle ear. This causes frequent ear infections and a temporary

hearing loss. The hearing loss can affect the child's ability to develop language and even speech skills.

To avoid middle ear problems, pressure equalizing (PE) tubes are often inserted in the eardrum at an early age. This is often done with the lip repair.

### **Velopharyngeal Insufficiency (VPI)**

The biggest concern after a cleft palate is the possibility of velopharyngeal insufficiency. This occurs in about a third of patients following a palate repair. For more information, see the handout entitled: **Velopharyngeal Insufficiency and Incompetence**.



### **Summary**

Communication disorders due to cleft lip or palate can be successfully treated with early and appropriate treatment. Prior to age 3, language development should be the primary focus. After age 3, speech, voice, and resonance should be evaluated and treated if necessary. If either therapy or surgery is indicated, it is usually done in the preschool years so that speech is normal, or close to normal, by the time the child begins school. Children with a history of cleft should be managed through a craniofacial team for the best overall outcomes.

For more information, please contact the Division of Speech Pathology at (513) 636-4341 or visit our website at [www.cincinnatichildrens.org/speech](http://www.cincinnatichildrens.org/speech) or [www.cincinnatichildrens.org/vpi](http://www.cincinnatichildrens.org/vpi)