

What is Cleft Lip and Palate?

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A cleft is an opening or split. A cleft lip or palate (the roof of the mouth) can occur anytime between the 6th and 12th week of pregnancy. Scientists have not been able to pinpoint the exact cause of cleft lip and palate, but they know that both hereditary and environmental problems are involved.

Clefts are named by the oral structure involved and by whether the cleft is on one side or both sides of the upper mouth. Openings that are on one side of the mouth are called unilateral clefts and openings on both sides are called bilateral clefts.

A person may be born with a cleft of:

- The upper lip
- The hard palate (bony portion of the roof of the mouth, toward the front)
- The soft palate (muscular portion of the roof of the mouth, toward the front)

These clefts can occur in any combination i.e. cleft lip and palate, cleft palate or cleft lip.

The management of a child with cleft lip and palate involves several professionals. They are:

Plastic Surgeon
Speech Language Pathologist
ENT Surgeon
Audiologist
Orthodontist
Social Worker

A child is typically seen by a speech language pathologist as early as possible after birth to establish good feeding patterns in the newborn. Proper movements of the lip, cheeks and tongue as the child suckles on a teat will help with the production of speech sounds as the child grows older.

Subsequently, the child is seen regularly until she is 18 years old to ensure that speech and language is developing normally. Within this length of time, speech and language therapy will be carried out for a limited period of time to assist with sound production or to reduce hyper nasality when necessary.

What are the effects of cleft lip and palate on speech, language and development?

Speech Difficulties

1. *Speech Delay*

Clefts of the lip and palate sometimes contribute to a delay in speech development. A cleft interferes with making the sounds of our language. The child's speech delay may continue even after the first surgical repair of the cleft because the child may have learned bad speech habits. These habits do not automatically change when the mouth has been repaired.

2. *Articulation*

Articulation is the way we make speech sounds. A child with cleft palate has difficulty speaking clearly because airflow leaks through the nose during speech. Some speech sounds such as /p/, /t/, /k/ and /d/ require the buildup of air pressure in the mouth. Other sounds such as /s/, /f/ and /z/ require that airflow be directed out the front of the mouth.

An opening in the hard or soft palate limits the child's ability to build up air pressure and control airflow.

Airflow escapes into the nose. This inability to use the palate muscles to block off the nasal cavity from the mouth so that air flows through the mouth is called **velopharyngeal incompetence**.

It is most likely to occur when the child has a cleft of the soft palate. Leaking often continues after the soft palate is surgically closed. The palate may still be too short. Reduced muscle control of the palate may also be a problem. In either case, the child is not able to close off the nasal cavity to make sounds such as /p/, /t/ and /d/.

What speech sounds are produced when the nasal cavity cannot be sealed off from the mouth? The child may substitute an unusual sound for certain consonants. The child may not build up enough pressure in the mouth for sounds that require 'stopping' of airflow, such as /t/ and /d/. The child may adapt by stopping the airflow far back in the throat. This is called "glottal stop". You can experience this by saying "bottle" very fast without saying the /t/ sound.

3. *Voice Quality*

The child's quality or tone of voice may also be unusual. The inability to seal off the nasal cavity from the mouth (velopharyngeal incompetence) may give the voice a "nasal twang". This way of talking through the nose is called **hyper nasality**.

Some children develop a hoarse voice quality because they are straining to control the airflow. Other children may use a soft voice because they feel that when they use a louder voice, more air escapes through the nose.

4. *Other Factors Contributing to Speech Difficulties*

With a cleft palate, the front portion of the roof of the mouth is often narrow or collapsed. Teeth grow irregularly, with many spaces in between. Because of these dental problems, the child may place his tongue in these spaces and distort the production of sounds.

The child with cleft palate is also prone to frequent ear infections, which may sometimes cause hearing problems. When a child has trouble hearing the difference between sounds, there are problems learning to talk.

Developmental Problems

1. *Language Delay*

Children with cleft palate may have the tendency to develop language slower than their peers. This may be due to the conductive hearing loss associated with frequent middle ear infections.

2. *Hearing loss*

Middle ear infections are common among children born with a cleft. The child needs to have his/her hearing tested and monitored by an audiologist and receive treatment if necessary by the ENT specialist.

3. *Feeding*

Children with cleft lip and palate often have feeding difficulties. A cleft of the lip makes it difficult for the child to circle his lips around a nipple. A cleft of the palate interferes with suckling. The child may experience choking or even passing liquids and foods through the nose.

It is important for parents to receive accurate advice regarding feeding. The baby probably needs a special milk bottle and teat to aid with feeding. Parents also need to learn and try different positions for feeding a child with cleft lip and palate. It is important to be patient. Feeding will take longer than normal.

4. *Social Development*

As your child grows older, the child's physical problems may interfere with the development of social skills. The child may feel embarrassed about his appearance. Your child may feel inferior because of his/her speech problems. It is important to provide as much support as possible. Reward and praise the positive aspects of your child's personality.

The management of a child with cleft lip and palate may appear to be a complicated process, but the relevant professionals are there to help guide you along the way. The child may not sound as intelligible as other children, thus it is necessary that you focus on what the child is saying rather than the way he is saying it. The child needs the same kind of support, love and encouragement as anyone else.

