## **Speech Development**

If a child has a cleft lip only, the child's speech should be normal or close to normal. Children with a cleft palate are at risk for speech problems and are followed closely by a speech language pathologist, audiologist, and otolaryngologist (ENT specialist). Before the palate is repaired, the child may have delays in speech and language. This may be related to fluid in their middle ear space, which may cause temporary hearing loss. Often, ear tubes (tympanostomy tubes) are placed to help remove the fluid. Most children do not start talking until about 1 year of age and most cleft palates are intentionally repaired around 12-15 months of age, before the child starts showing problems with speech.

Starting at Age 3, children with a cleft palate will get **regular speech evaluations** by the speech pathologists during your visit with the Cleft and Craniofacial Team. This is done to make sure that your child does not have any speech concerns.

The two most common problems with speech involve:

- 1) **Articulation**: Difficulty making certain sounds
- 2) **Hypernasality**: Speech that sounds like the person is "talking through their nose"

After the palate is repaired (and if ear tubes are placed), children may receive speech therapy and "catch up" in their skills. Children under 3 years of age may receive speech therapy in the home through an **Early Intervention Program**. If children show persistent problems with speech, they may need speech therapy while at school or at an outpatient facility experienced in working with children with cleft palates.

Despite closing the palate, some children will still be unable to create enough pressure in their mouth for normal speech. When this occurs, the soft palate continues to allow air to travel up into the nose, resulting in speech that has a "nasal" quality. The most common reason this occurs is that the palate is too short or the muscles don't work properly, leaving a gap between the soft palate and the back of the throat (also called the velopharyngeal space). This is referred to as velopharyngeal insufficiency (VPI). As many as 25% of children with repaired palates may have this problem.

Some children may change the way they talk in order to compensate for VPI both before and after palate repair. It can be difficult for children to "unlearn" these behaviors, which is why they need the assistance of a speech therapist, who is experienced in working with children with cleft palate disorders. If the VPI is severe and interferes with communication, the specialists may order tests when the child is old enough to cooperate.

A video-naso-endoscopy uses a small camera placed in the nose to look at the back of the soft palate/throat. Another study, called a videofluoroscopy, is an X-ray, which can show the problem with the soft palate closing at the back of the throat when the child talks. After these tests, the Craniofacial Team may recommend additional surgery to help with speech. The child will likely need additional speech therapy after this surgery.

In some children, their teeth or jaw may not line up correctly (malocclusion) and they may have problems making "s" or "sh" sounds. They may require a combination of speech therapy and dental treatment.