Early Speech
Development in Children
With a Cleft Palate

How do early speech sounds develop?

Children use sounds to communicate as soon as they are born. Infants use different kinds of cries to signal different needs (i.e. diaper change, hunger, fatigue and pain). By two months of age, they begin to develop other vocalizations (sounds using their voices). These include cooing with vowel sounds (i.e. “aaaaa”). Next babies begin to babble using consonant sounds in repeated strings of syllables (i.e. “baba,” “mama” and “nana”). By about six months of age, a baby should have 2 to 5 speech sounds that they use during babbling. During these early stages, babies learn they can use sound to get attention.

How is sound development different in children with a cleft palate?

The palate is important for speech. When we speak, the soft palate rises to touch the back of the throat to allow us to build up pressure in our mouth for certain sounds. The speech sounds that need the palate to close to the back of the throat are called “pressure consonants”. In English, these include p, b, t, d, k, g f, v, s, z, sh, ch, dg, th. A child who has an unrepaired cleft palate cannot build up the pressure in the mouth to make these sounds. Other sounds do not need pressure build-up. These sounds are called “vowels,” “nasal consonants” and “low pressure consonants”. In English, these include m, n, ng, h, l, w, y, r and all the vowel sounds. A child with an unrepaired cleft palate can produce these sounds.

A closed soft palate with airflow (shaded) through the mouth. Can make pressure sounds like “puh” as in “papa” and “buh” as in “baby.”

Unrepaired cleft palate with airflow (shaded) coming out of the nose and mouth.
Early Sound Development in Children With a Cleft Palate

<table>
<thead>
<tr>
<th>Sounds that can be produced with an unrepaired cleft palate*</th>
<th>Sounds that cannot be produced with an unrepaired cleft palate</th>
</tr>
</thead>
<tbody>
<tr>
<td>• M as in “mama”</td>
<td>• P as in “pop”</td>
</tr>
<tr>
<td>• N as in “no”</td>
<td>• B as in “bye”</td>
</tr>
<tr>
<td>• L as in lake</td>
<td>• T as in “two”</td>
</tr>
<tr>
<td>• W as in “way”</td>
<td>• D as in “daddy”</td>
</tr>
<tr>
<td>• Y as in “yes”</td>
<td>• any other pressure consonant</td>
</tr>
<tr>
<td>• Vowels a, i, u, o</td>
<td></td>
</tr>
</tbody>
</table>

*Although these are the sounds a baby is capable of producing with an unrepaired cleft palate, it is normal for a baby to only use a few of these sounds.

Will my child need speech therapy because of their cleft palate?

Children with a cleft palate are at an increased risk for speech problems than children without a cleft. As many as half of children with a cleft palate will need speech therapy at some point in their childhood. Our ultimate goal for every child is to have speech that is easy to understand by the time they reach kindergarten.

“Speech” refers to the way we make sounds with our mouth. It does not refer to the ability to understand or use words. Children with an unrepaired cleft palate are unable to block airflow with their palate, so they sometimes “experiment” with their speech by blocking airflow in their throat. These “experimental” sounds are called **compensatory misarticulations**. Compensatory misarticulations are speech problems that are unique to children with a cleft palate. These sounds can sound like the pause in the middle of the word, “uh-oh” (i.e. a glottal stop). They can also sound like growling or “throat” sounds. The more a child uses these different sounds, the more likely they are to become a habit. This “speech habit” can persist even after the palate is surgically repaired. If the speech habit persists, your child will need speech therapy.

How can I help my child’s speech?

Even before your child has his or her palate repair or uses first words, you can help teach speech and language skills to prevent atypical speech habits from forming. Encourage your child’s speech sound development by adding the following suggestions into your everyday routines:

• Play speech imitation games with your child. When your baby says “aaah,” repeat it back to them and see if they will try to imitate you in response.
• Attach speech sounds to an action. Say “aaah” while watching bubbles float or “oooh” while pushing a toy train.
• Before their palate is repaired, encourage your child to use sounds that do not need pressure build up (e.g. vowel sounds, low pressure consonants, and nasal consonants). Model these sounds for your baby to imitate.
  • For example, when your baby is getting ready to eat, say “mmmm” or “yum yum”.
  • During diaper changes, your baby is often a captive audience. Model different sounds while you talk to your baby (i.e. “lalala”, “mamama”).
• Play imitation games in front of a mirror. Take turns clapping your hands, opening and closing your mouth, and making silly sounds that emphasize use of the lips and tongue (i.e. “nonono”, “weeweeewee”)
• If you hear your child producing a “throat sound,” growling sound or other compensatory misarticulation, do not repeat it back to them. Instead, make a sound the child can produce, such as “mamama” or “oooh”. Try to reinforce typical sound development by modeling sounds that you want your child to use when they say words.
• After your child’s palate surgery, use the same imitation games to encourage use of age-appropriate pressure sounds (e.g. p, b, t and d). Simple words that may be age-appropriate include “baby,” “ball,” “puppy,” “daddy,” etc.
• Return for regular visits with your team’s speech-language pathologist. Your child should see their team speech language pathologist 3 to 6 months after palate repair to monitor their speech development and soft palate function.

How should my child’s speech change as they grow?
• Children develop speech sounds at different times in their lives. Some speech sounds are easier to make and are used at an earlier age. Other speech sounds are harder to make and aren’t expected to be used until the child is older.
• The following are general guidelines for the age at which your child is expected to use sounds in words:
  • By age 2: m, n, p, b, h
  • Between 3 and 4 years: t, d, k, g, w, y
  • Between 4 and 5 years: f, v
  • Between 5 and 7 years: l, s, z, sh, ch, j
  • Between 7 and 8 years: th, r
• If you ever have questions about your child’s speech or language development, contact your team’s speech-language pathologist.
  • Sara Kinter, M.A. CCC-SLP can be reached at 206-987-7460.
  • Kaylee Paulsgrove, M.S. CCC-SLP can be reached at 206-987-0849.
To Learn More
- Speech and Language Services 206-987-2104
- Ask your child’s healthcare provider
- www.seattlechildrens.org

Other helpful resources
- “Speech Development” from Cleft Palate Foundation
- Center for Disease Control – Developmental Milestones
www.cdc.gov/ncbddd/actearly/milestones/
- American Speech-Language-Hearing Association – Typical Speech and Language Development
  • www.asha.org/public/speech/development/
  • www.asha.org/public/speech/development/01/

Free Interpreter Services
- In the hospital, ask your child’s nurse.
- From outside the hospital, call the toll-free Family Interpreting Line 1-866-583-1527. Tell the interpreter the name or extension you need.

Seattle Children’s offers interpreter services for Deaf, hard of hearing or non-English speaking patients, family members and legal representatives free of charge. Seattle Children’s will make this information available in alternate formats upon request. Call the Family Resource Center at 206-987-2201.

This handout has been reviewed by clinical staff at Seattle Children’s. However, your child’s needs are unique. Before you act or rely upon this information, please talk with your child’s healthcare provider.

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