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TEACHERS COLLEGE • COLUMBIA UNIVERSITY

# Cleft Palate Speech and Feeding

## *Train the Trainer*





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## Module 4.1:

- **Feeding a Baby with a Cleft Lip and/or Palate**



*Written by:*

**Catherine (Cate) J. Crowley, J.D., Ph.D., CCC-SLP**

**Miriam Baigorri Ph.D., CCC-SLP**

**Chelsea Sommer M.S., CF-SLP**

*With contributions by:*

Casey Sheren, Sara Horne, Marcos Sastre, Grace Frutos, & Julie Smith

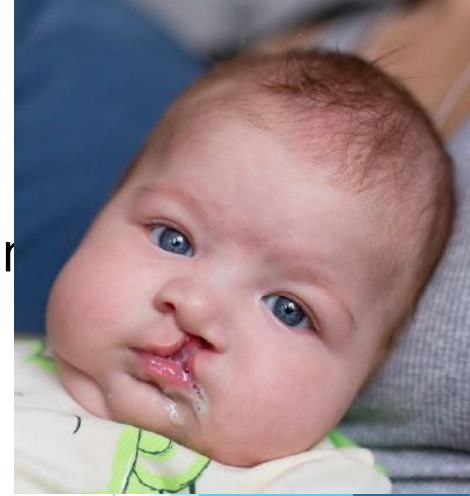
# Strategies for feeding a baby with cleft lip or palate

1. Always feed your baby in an upright position, whether it is from the breast or cup.
2. Burp your baby every 5 minutes.
3. Keep your baby upright or seated for 20 – 30 minutes after each meal.



## Other Feeding Suggestions

- Your baby should drink 2 oz. of milk for every half kilogram of weight. E.g., if the baby weighs 4 kilograms/s/he should drink 16 oz. daily.
- Feed your baby in small and frequent doses. Limit feeding time to 30 minutes.
- Position the nipple in the baby's mouth where there is no cleft or hole. A pacifier will help the baby develop skills needed for feeding before his or her surgery.
- After the meal, clean your baby's mouth and nose with a soft damp cloth.



# Pay attention to stress signs during feeding

## Babies do communicate



- Strong signs: coughing or choking during the meal or kicking out and widely stretching the arms and legs.
- Less obvious signs: difficulty breathing or changes in the breathing pattern while drinking, fingers widely stretched out, or bringing the fingers to the mouth.

# Pay attention to stress signs during feeding

## Babies do communicate



- If your baby shows some stress signs during the meal, give him some time until he looks like he is ready to start again.
- If your baby shows stress signs during every meal, bring him to the doctor.

## Use a specialty cleft palate feeding bottle, or if you do not have one, you can modify the bottle to control the flow of liquid:

- If using a bottle, try to use a softer nipple and bottle, so you can control the flow of liquid. You can boil both items to make them softer.
- If your baby still has difficulty sucking milk from the bottle, you can cut the hole of the nipple into a small X. Be careful not to let the X or hole rip over time, causing it to get too large.







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## Module 4.2:

- **Addressing Speech and Language Before Cleft Palate Surgery**



*Written by:*

Catherine (Cate) J. Crowley, J.D., Ph.D., CCC-SLP

Miriam Baigorri Ph.D., CCC-SLP

Chelsea Sommer M.S., CF-SLP

*With contributions by:*

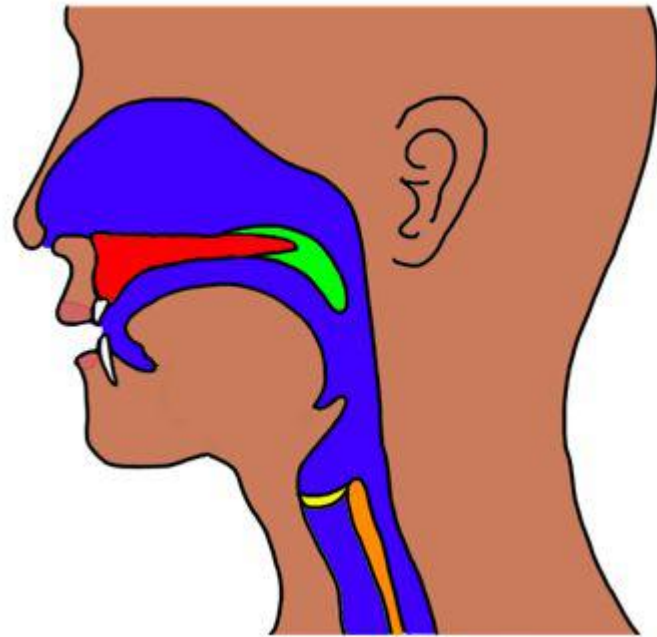
Casey Sheren, Sara Horne, Marcos Sastre, Grace Frutos, & Julie Smith



# Speech Production

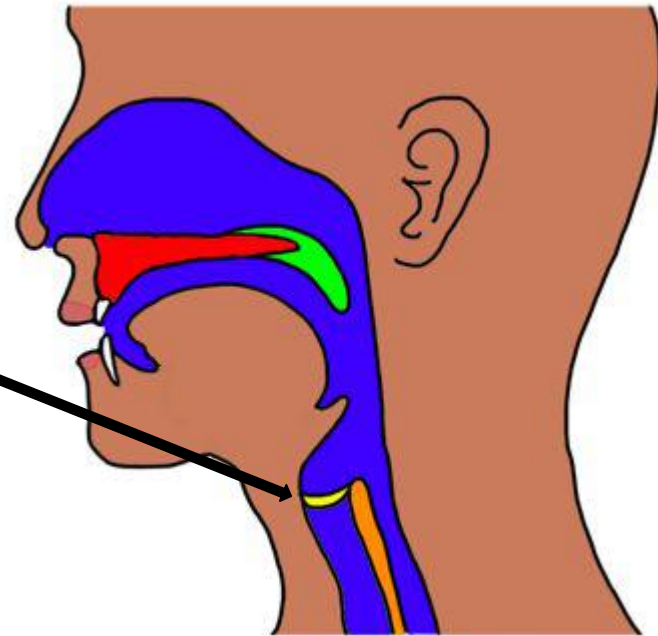
Vocal tract made up of a system of valves that alters that airstream coming from the lungs

- Glottis- at the laryngeal level
- Velopharyngeal region
- Oral region, comprised of movement of lips and or tongue (tip/dorsum), and jaw



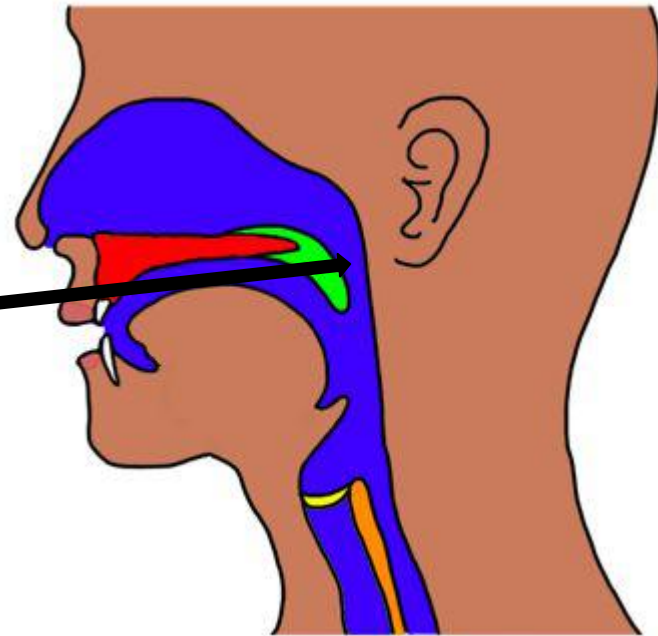
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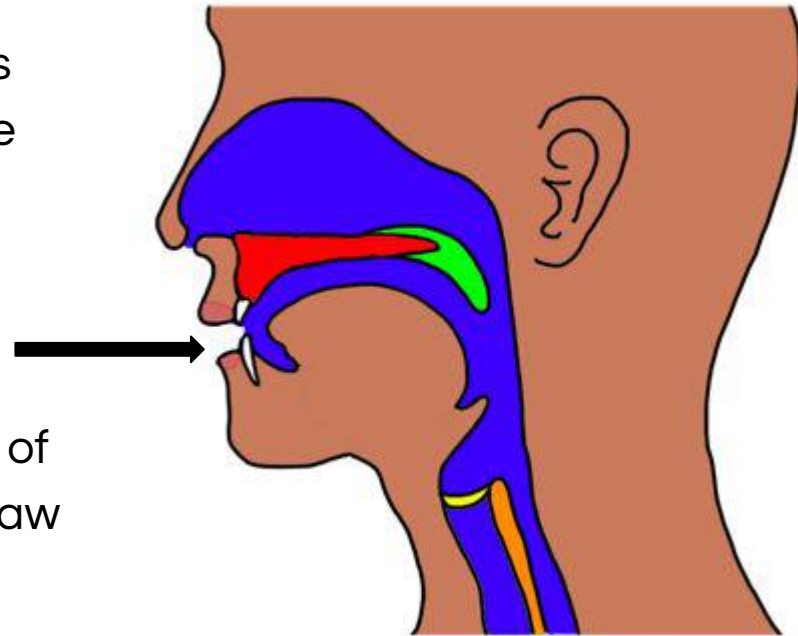
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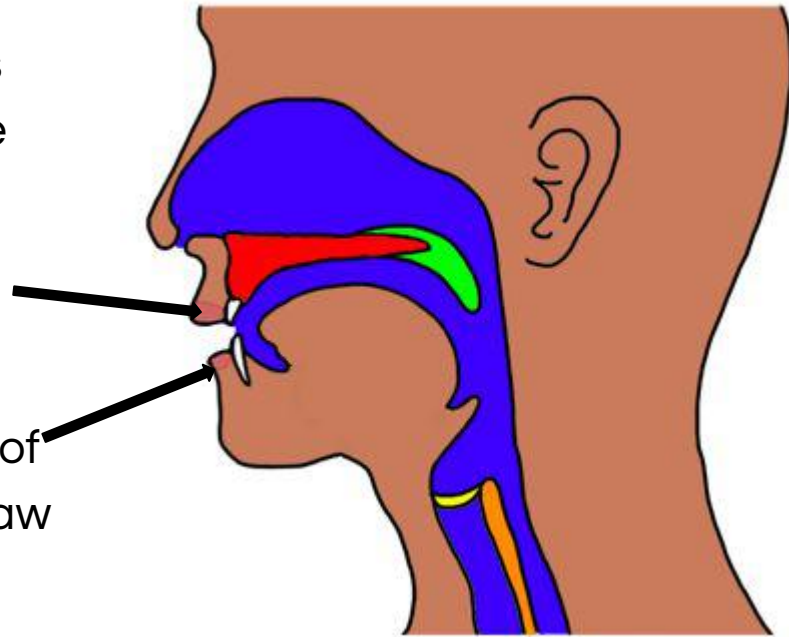
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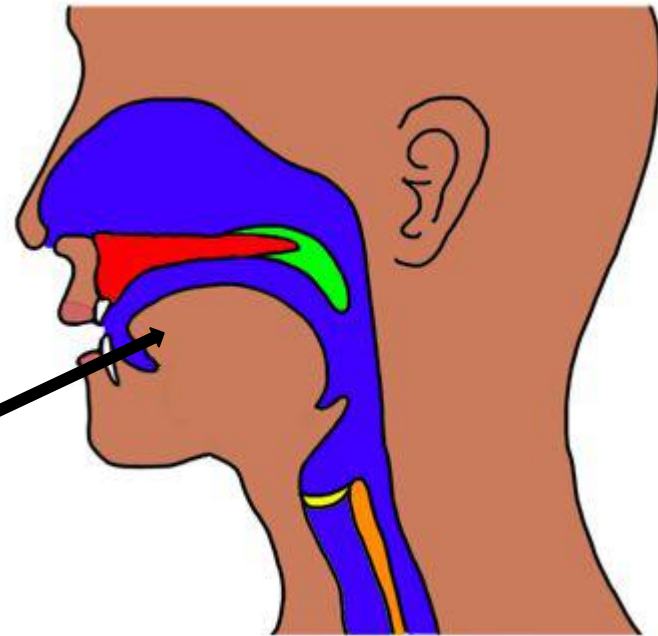
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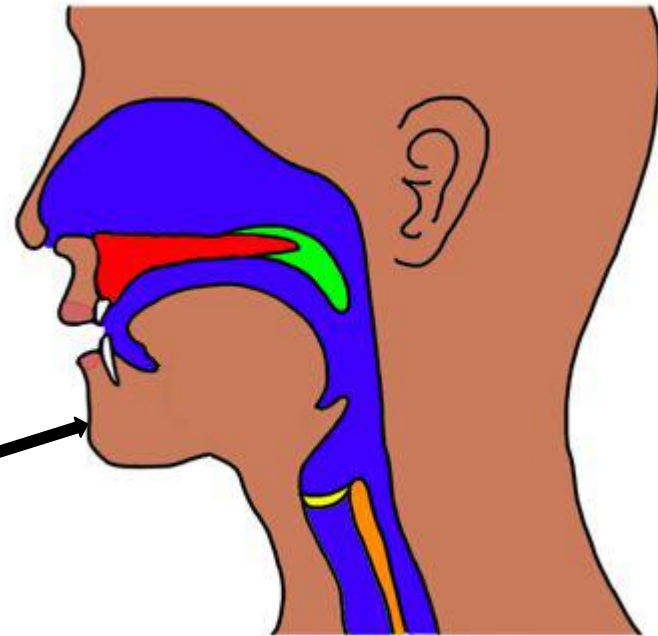
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# Speech Production

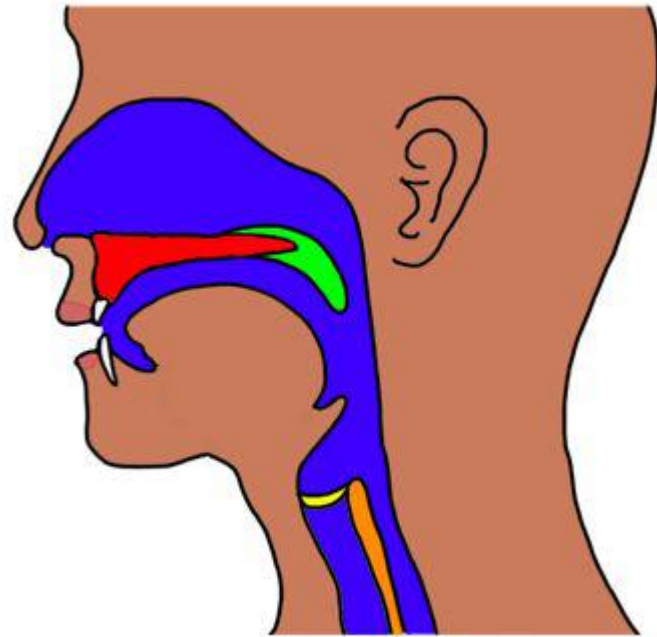
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# Speech Production

- Speech production is pressure driven, other regions may compensate for loss of pressure, may lead to velopharyngeal dysfunction



# Early Vocal Development

- Prior to 6 months of age
  - Early vocalizations produced in the pharynx and glottis
- By 6 months of age differences are observed
  - Typically developing infants
    - begin producing more anterior labial and alveolar consonants, e.g., bilabial sounds m, p, and b; alveolar sounds n, t, and d
    - Sounds move forward from in the throat to in the mouth.



# Effect of Cleft Palate on Early Vocal Development

- These children cannot produce sounds requiring lingual palatal contact such as ng, /k/, /g/.
- They cannot direct the airflow through the mouth, leading to distortions of early stop consonants such as /b/, /d/.
- They are likely to have chronic middle ear infections affecting the ability to hear sounds because the tensor veli palatini muscle may not be functioning.



## Infants with Cleft Palate

- Glottal production persists
- Few if any alveolar or palatal phonemes
- Fewer total number and variety of consonants
- Phonetic repertoire: nasals, glides, and glottals
- Fewer multisyllabic productions



# What to do *before* the cleft palate is repaired to improve speech outcomes *after* surgery

## 1. Reinforce babbling using sounds the baby can make correctly

- The baby can make m, n, and ng sounds and the w, l, y sounds, and the vowels.
- Vocal play back and forth with the baby using those sounds.



# What to do *before* the cleft palate is repaired to improve speech outcomes *after* surgery

## 1. Reinforce babbling using sounds the baby can make correctly

- If the baby babbles with sounds that are not part of the language, such as in English glottal stops or sounds made at back of the throat, smile and babble back with the sounds the baby can make like “nanana” or “yi yi ya ya yee” or “nane nane” or “wa wa woo woo”. Eventually, the baby will respond with the sounds the parent makes.



# What to do *before* the cleft palate is repaired to improve speech outcomes *after* surgery



## 2. Reinforce language

- Use language to have fun with your baby as you would with any other child.
- They are no more delicate than other children.
- Sometimes children with cleft palate need more communication interactions with the parents so their language develops well.



# What to do *before* the cleft palate is repaired to improve speech outcomes *after* surgery

## 3. Use functional vocabulary

- Use words that have the sounds the child can make.
  - E.g., mommy, me, my, more, man, mine, no, nana, ear, hair, eye, arm, knee. on, in, moon, ring, new, noon, moo, meow, wow, wow wow (dog bark), roar (lion or truck sound), maa (lamb sound), mini, you, yay, yeah, yoyo, yo, lamb, etc.



# What to do *before* the cleft palate is repaired to improve speech outcomes *after* surgery

## 4. Focus on correct placement of the sounds even if the child cannot create oral airflow

- Reinforce the correct placement to make the sound.
  - Ex. "Cookie" or "NGooNGEE," or "I want a cookie" "I wanN a NGooNee." (the NG is like the last sound on "ring" and "sing").



# What to do *before* the cleft palate is repaired to improve speech outcomes *after* surgery

## 5. A special word for fathers

- Fathers will have to wait to hear “Daddy” until after the cleft palate is repaired. A child with a cleft cannot say the D sound yet. But they can make the M sounds, so they can say, “Mommy.” The best approach is to call Daddy, “Nanny”. The N and D are made in the same place in the mouth with the tongue. After the cleft is repaired the child will much more easily say “Daddy”. Be patient, fathers (or “Nanny”), and after the surgery you will hear “Daddy.”



# Credits

Catherine (Cate) Crowley, J.D., Ph.D., CCC-SLP

Miriam Baigorri, Ph.D., CCC-SLP

Chelsea Sommer, M.S., CF-SLP



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# Credits

Graduate Research Associates and SLP master's students:

Marcos Sastre III, B.S.

Casey Sheren, B.A.

Sara Horne, B.S.

Graduate Research Assistants and SLP master's students:

Johanna Kreishbuch, B.S.

Julie Smith, B.S.

Pam Kotorac, B.S.



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Acevedo Spoke

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For more information, please contact Dr. Catherine Crowley at  
[crowley@exchange.tc.columbia.edu](mailto:crowley@exchange.tc.columbia.edu)



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