Compensatory error : Speech therapy

การส่งเสริมฝึกพูดเพื่อไม่ให้ติดออกเสียงชดเชย

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cleft lip-palate: problems

- Feeding/suckling
- Sucking
- Growing
- Blowing/respiration
- Occlusion
- Speech-language development
- Articulation errors
- Resonance disorders
- Voice disorders
- Hearing/middle ear disease
- Learning (reading writing spelling)
- Psychosocial

Normal articulation/ Good speech

- Good intelligibility
- Understandability
- Acceptability

Articulation system

- placement
- manner
- voice

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Velopharyngeal function: closure

Speaking (oral sound)

swallowing

gagging

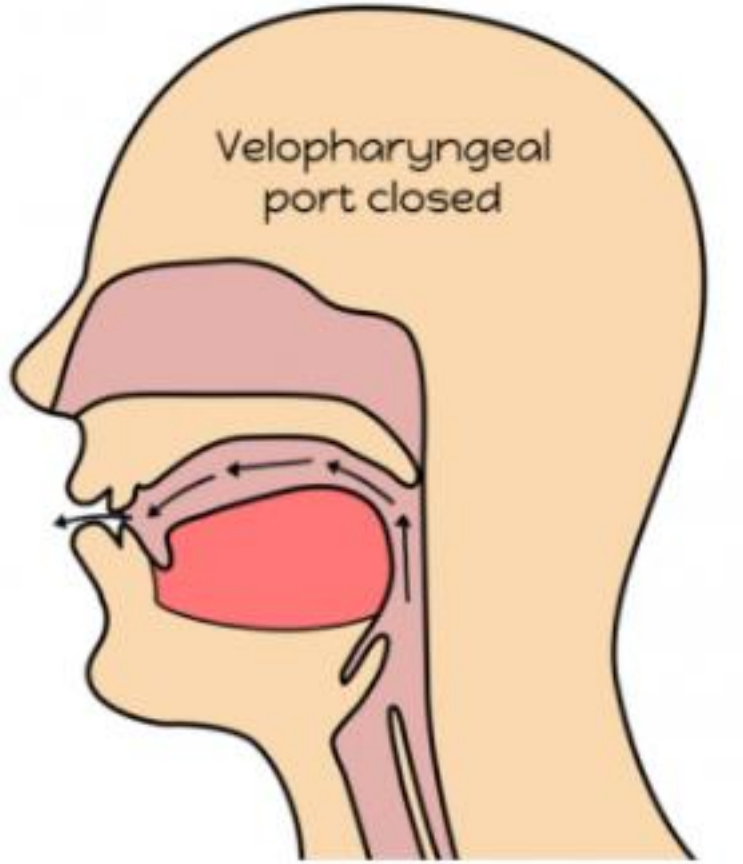
vomiting

sucking

blowing

whistling

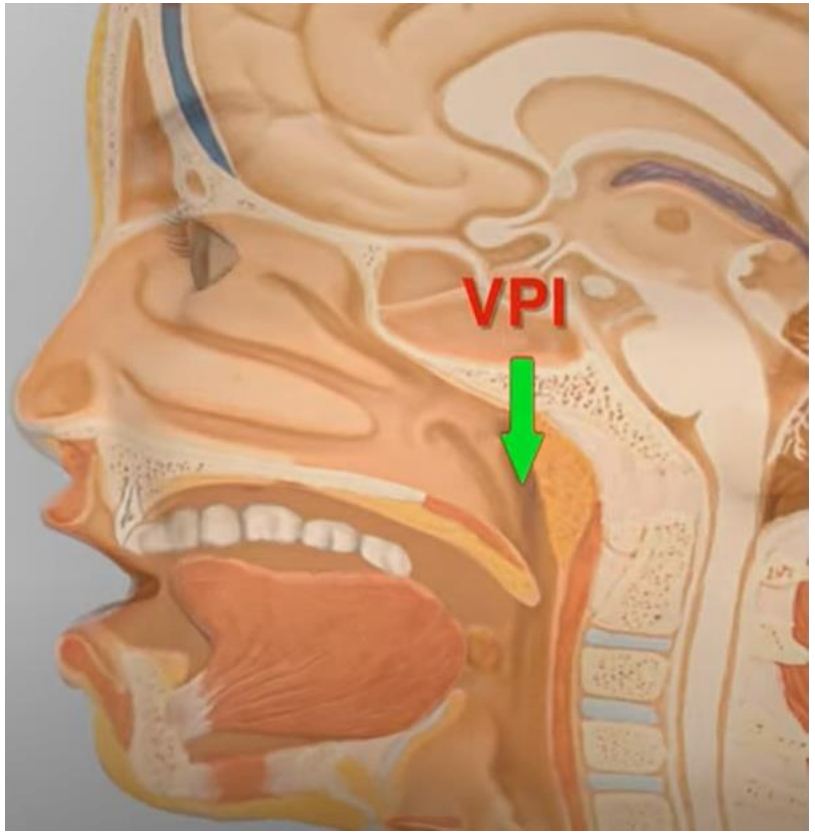
yawning



Velopharyngeal Dysfunction

- Velopharyngeal insufficiency (VPI), which is due to abnormal structure.
- Velopharyngeal incompetence (VPI), which is due to abnormal movement.

- **Velopharyngeal mislearning**, which is due to abnormal speech sound production.



cleft palate speech

- Articulation errors (compensatory)
- Nasality defect
  - Hypernasality
  - nasal emission
  - nasal turbulence/ nasal snort
- weak consonants
- short utterance length

Compensatory articulation disorders (CAD)

- **Abnormal articulation placement due to abnormal structure**.
- These are most often errors of placement, not voice or manner.
- These errors may persist after palate repair and require speech therapy
- CAD can also be considered a phonologic disorder, phonological system is integrated with the language system

Common compensatory errors

- a child produces sounds farther back in the mouth than is appropriate

Compensatory articulation disorders (CAD)

Misarticulation type

- ❑ 1. Structural
- ❑ 2. Functional
- ❑ 3. Developmental/Phonological
- ❑ 4. Compensatory
  - ❑ 4.1 Anterior oral
    - ❑ 4.1.1 Dentalization/ inter-dentalization
    - ❑ 4.1.2 Lateralization/ lateral
    - ❑ 4.1.3 Palatalization/ palatal
  - ❑ 4.2 Posterior oral
    - ❑ 4.2.1 Double articulation
    - ❑ 4.2.2 Backed to velar/ uvular
  - ❑ 4.3 Non-oral
    - ❑ 4.3.1 Pharyngeal articulation
    - ❑ 4.3.2 Glottal articulation
    - ❑ 4.3.3 Active nasal fricatives
    - ❑ 4.3.4 Double articulation
  - ❑ 4.4 Passive
    - ❑ 4.4.1 Weak and/or nasalized consonants
    - ❑ 4.4.2 Nasal consonants for oral consonant
    - ❑ 4.4.3 Gliding of fricatives/ affricates

How to treat cleft palate speech?

- **The main goals to help children with "cleft palate speech" are to:**

- Establish correct articulation (placement, manner, and voicing) using articulation therapy techniques.

-During speech, the goal is to have good airflow through the mouth for all speech sounds except m, n, and ng.

- Ensure there is good oral pressure during sound production.
- Establish new motor speech patterns that replace speech sound errors.

What type of intervention would be used when working with a child with a cleft palate?

- Behavioral Intervention: **Speech Therapy** for Cleft Palate Speech Errors.
- Direct speech therapy is appropriate for treatable speech problems (i.e., articulation errors), including compensatory misarticulations and phoneme-specific nasal air emission.

counselling to the parents regarding:

a) Feeding the baby
b) Speech and language stimulation
c) Speech observation
d) Language intervention to facilitate vocabulary development
e) Development of Speech sound accuracy
f) Correcting the resonance
g) Improving the speech intelligibility

Strategies for Treating Compensatory Articulation in Patients with Cleft Palate

- the first 3 years, they should concentrate on the *quantity* of speech (how much the child can understand, how many different words the child uses, and how many words are used in utterances)

- *quality* of speech (articulation, resonance, and intelligibility) is after

Strategies for Treating CAD

- speech and language stimulation during the critical period
- parents can do to stimulate early phonemic development
  - encourage vocalizations by imitating the child's cooing and babbling
  - production of plosives once the cleft is repaired
- create speech by making air pressure in your mouth before releasing it while touching your tongue to different parts of your mouth

Strategies for Treating CAD

- If there is hypernasality or nasal air emission during production, the parents can be shown how to gently pinch the child's nostrils during sound imitation to allow for more normal production.

Strategies for Treating CAD

- Infants and Toddlers (0-3 years)

- encourage consonant inventory, especially pressure consonants, vocabulary, and oral airflow .
- The sounds that are least affected by cleft is first stimulated (e.g., nasals).
- Parents should initiate simple babbling games to reinforce stop consonants, but ignore the nasal emission that accompanies them
- Parents are to avoid reinforcing laryngeal growls and glottal stops and respond to the baby by modeling a more appropriate, desired vocalization

Strategies for Treating CAD

- Providing a hybrid naturalistic early speech and language intervention: which gives oppurtuinity to enhance vocabulary and increase intelligibility which inturn focuses on both speech and language intervention

Early intervention program

- Indirect approach: parents are given target consonants to model for babbling.
- Home based program: parents are trained to facilitate and reinforce appropriate patterns in babbling and first words
- Games using manipulated vocabulary: In which specific target words used is effective.

Early intervention program

- Using pairs of consonants with whispered vowels
- The child is instructed to over aspirate the consonant-again to prevent the glottal stop from occurring. As the child demonstrates success with this whispered production, voicing is gradually reintroduced for the vowel.
- Increasing consonant inventory and vocabulary simultaneously

Early intervention program

- Increasing awareness of airflow
- Simple blowing toys that offer low resistance can be used to demonstrate oral airflow
- The blowing activity should follow with a sound production activity

Strategies for Treating CAD

- Expensive equipment is not typically necessary.
- Basic assessment and therapy can be done with a simple kit including a mirror, tongue depressors, recorder, flash/picture cards, and toys/games.
- Avoid correcting your child when he/she makes a mistake. Instead, repeat the words correctly. For example, your child might say, “Toy in my woom.” You can say, “Yes, Billy, your toy is in your room

Strategies for Treating CAD

- Young Children (3 years and up)

- using complete sentences, although errors in syntax and morphology are common
- child should be using nasal and plosive sounds, some fricatives, and even affricate phonemes
- the individual needs to learn appropriate articulatory placement and oral flow

Strategies for Treating CAD

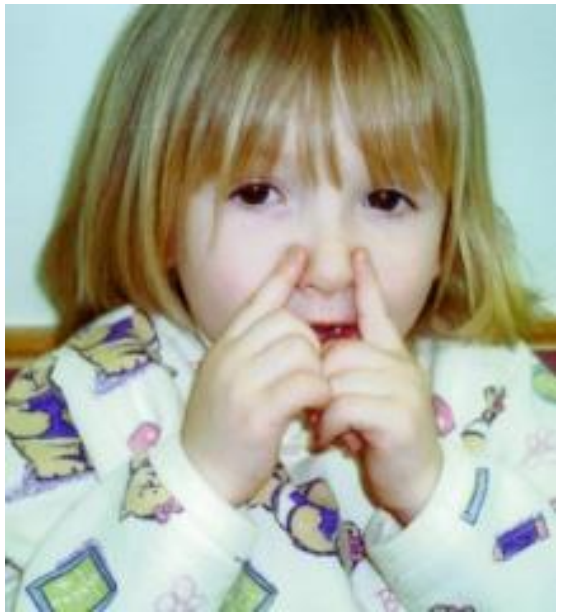
- to be targeted first, based on the child's stimulability and the sounds that will have the biggest impact on intelligibility
- Begin with anterior sounds, as they are the most visible
- Always start with the voiceless cognate and then add voicing

How do you work with articulation for kids?

- **Be a good role model**
- Speak clearly and calmly.
- Use age-appropriate language.
- Make eye contact (get down to the child's level if necessary)
- Repeat sentences back to children, replacing mistakes with corrections.
- Repeat sentences back to children, expanding on the words they've used.
- Describe and comment on what you're doing.

How do you work with articulation for kids?

- may facilitate the motor learning acquisition of speech production by assisting the child to connect the tactile-kinesthetic input with the auditory outcome during meaningful speech activities



Ask the child to carefully produce oral sounds or sentences without the vibration

How do you teach oral resonance?

- Start with having the client EXPERIENCING **vowels** and nasals (listen to V's & nasals).
- Help him discover that vowels come out the mouth while nasals come out the nose. Say, “That sound is coming out your nose.” And “That sound is coming out your mouth.”
- Help the client learn to DIFFERENTIALLY CONTROL vowels and nasals.

Strategies for Treating CAD

- School-age Children

- At this point, VPI should have been corrected if it was present.
- If there is still hypernasality or nasal emission, the child should be referred to the craniofacial team for evaluation(or reevaluation) of velopharyngeal function and consideration of physical management.
- this age group often have malocclusion or dental anomalies that cause obligatory distortions or compensatory errors.

How to improve VPI?

- Research has shown that blowing bubbles, sucking exercises, velar exercises and using oral-motor exercises are not effective for improving velopharyngeal function.
- **Surgery is commonly needed** to improve VPI.

Reference

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2. Kummer AW. (©2020). Cleft Palate and Craniofacial Conditions: A Comprehensive Guide to Clinical Management. Jones & Bartlett Learning, eBook.

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