

## Feeding/Swallowing Assessment & Interventions in Infants

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## Feeding & Swallowing Evaluation

- Role
  - Identify Structural, Physiological, Sensory or Behavior Based Oral/Pharyngeal/Esophageal Deficits That May Contribute to the Child's Inability to Take Adequate Nutrition Orally.
  - Provide Recommendations &/or Treatment to Facilitate a Safe Means to Establish and Maintain Adequate Nutrition Orally.
  - Preservation &/or Habilitation of Oral Motor and Pharyngeal Skills in Non-Oral Feeders.

## Feeding & Swallowing Evaluation

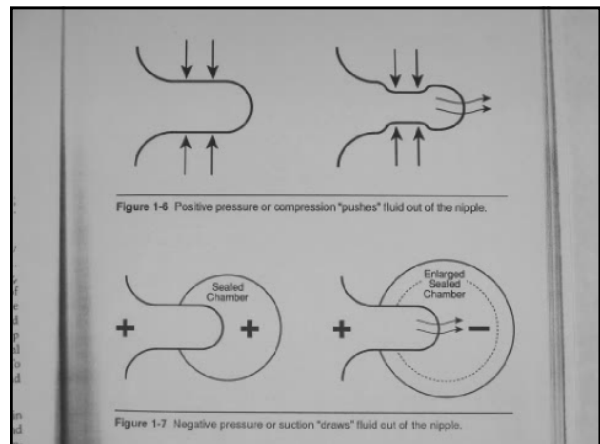
- Fulfilling all of the child's needs
  - The Multisystem, Integrated Nature of Infant Feeding (Wolf & Glass, 1992)
- \*Must Fulfill All Areas For Effective Feeding
  - Physiologic
    - Respiratory, Cardiac, Autonomic (plus "Competent GI Function")
  - Motor
    - Suck, Swallow, CNS Integrity
  - Parental Attributes
    - Emotional Status, Parental Skill / Knowledge
  - Organizational Abilities
    - State Control, Behavior
  - Plus "Appropriate Resources" (\$\$, & Family Support)

## Feeding & Swallowing Evaluation

- FEEDING & SWALLOW EVALUATION
  - General Flow of the Evaluation
    - Preliminary Prefeeding Evaluation
    - Observe Parent Feeding the Child
    - SLP Feeding, or Modifying Parent Feeding
    - Finish the Oral Examination
    - Develop Feeding Plan with the Parent
    - Demonstration / Education & Training of Plan

## Feeding & Swallowing Evaluation

- 0-4 Months
  - Suck / Swallow / Breathe
- 4-6 Months
  - With maturation, mandibular growth brings increased space for the tongue. The pharynx elongates with the hyoid, epiglottis, & larynx descending in relation to the soft palate. This creates the structural & physiological changes for transition to the volitional suck / swallow pattern.
    - Key period of development for both diagnostic & treatment considerations



## Feeding & Swallow Evaluation

### ● Autonomic Stress Cues\*

- Moderate Stress Cues: Sighing, Yawning, Sneezing, Sweating (Diaphoresis), Hiccupping, Tremoring, Startling, Gasping, & Straining.
- Major Stress Cues: Coughing, Spitting up, Gagging, Choking, Color Change, Respiratory Pauses, & Irregular Respirations.

(Wolf & Glass, 1992)

### ● Warning Signs of Aspiration &/or Dysphagia

- Difficulty coordinating suck/swallow/breathe sequence.
- Turning away, crying, arching, &/or Fussy behaviors during feeds.
- Coughing, choking, or throat clearing: before/during/after swallow.
- Hoarse, breathy, whispered voice - ? TVC or airway involvement.
- Tracheostomy – Excessive secretions/congestion, or liquid/food in trach secretions.
- History of pneumonia.
- Lung congestion with fever, or upper respiratory congestion.
- “Asthma” symptoms which don’t respond to normal treatment.
- Wet vocal quality / audible pharyngeal pooling.
- Excessive drooling.
- Fluctuating level of alertness.
- Difficulty chewing – loss of bolus control.
- Complaint: food “stuck” in throat, or “multiple swallows / bolus”.
- Regurgitation of food.

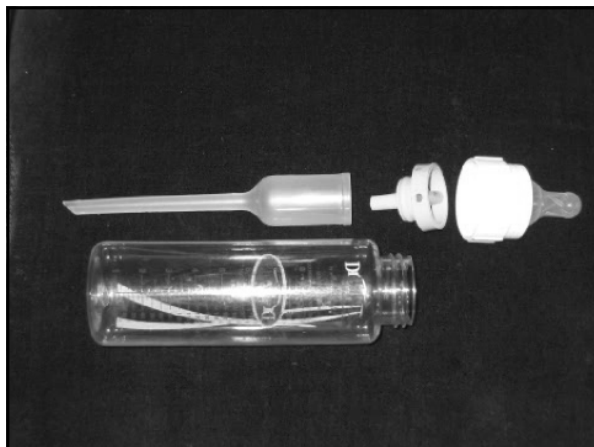
## Feeding & Swallow Evaluation

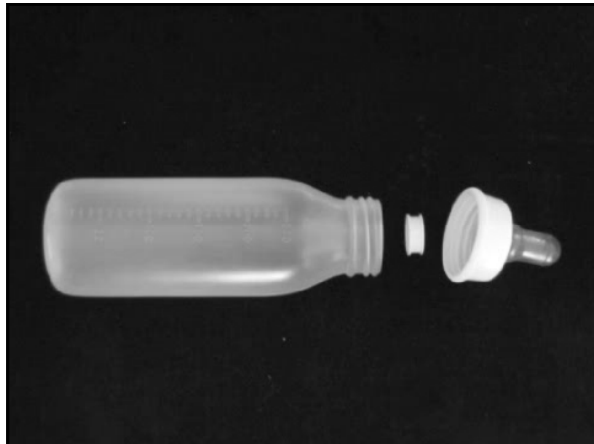
### - IMPRESSIONS

- Diagnostic Statement
- Strengths & Weaknesses
- Prognosis

### - RECOMMENDATIONS / PLAN

- Oral vs. Non-Oral
- Best Mode of Oral Intake (if Oral is Safe)
  - Best Textures to Meet Nutrition Orally
  - Compensatory Strategies
  - Equipment / Modifications
  - Feeding Techniques / Parent Training / Treatment
- Further Testing / Work Up





## Specific Treatment Strategies

### ● Compensatory Strategies

#### – Feeding Techniques

##### ● Positioning

- Upright 30-45 degree
- Side-lying
- Supine or Prone
- 90 Degrees Upright
- Head, Neck, Trunk Support

##### ● Verbal / Body Language

- A positive & nurturing feeding environment, with verbal interaction & bonding during the meal time.

## Specific Treatment Strategies

### ● Suck-Swallow-Breathing Treatment Strategies

- Weak Suck
  - Jaw /Cheek Support, Slight Retraction of Nipple From Mouth
  - Dr. Brown, Haberman, Pigeon can be used
- Prolonged Sucking (Feeding Induced Apnea)
  - Pacing, Decreased Flow Rate, Dr. Brown
- Short Sucking Bursts
  - ? Dysfunctional Swallow vs. Respiratory Difficulties
  - Decreased Flow Rate
- Disorganized Sucking
  - External Stabilization, Bundling, Reduced Sensory Stim., External Rhythms (Rocking, Soft Music)
  - Decreased Flow Rate
  - Ensure Adequate Respiratory Support

## Specific Treatment Strategies

### ● Thickening Formulas or Breast Milk

#### – Formulations:

- Thick It (Starch base)
- Rice Cereal
- Simply Thick (Gum tree base)
- Baby Foods ( use only after 4 months of age)

#### – Breast Milk

- Simply Thick: [simplythick.com](http://simplythick.com)
- Baby Foods (use only after 4 months of age)

#### – Remember Flow Rate is Altered!!

## Specific Treatment Strategies

### ● Poor Weight Gain / Failure to Thrive

- Specific Treatment Strategies: Breast &/or Bottle
  - R/o psycho-social contributory factors & resolve issues
  - Parent education & training!!!
    - Lactation Consult
    - Estimate Output (EMM volume)
    - Feeding / Swallowing Contributory Factors
  - Supplemental vs. total bottle feeding
    - Fortified EMM vs. formula
  - Supplemental / complete tube feeding
    - Fortified EMM vs. formula
    - Maintain oral skills while on TF
      - Continue feeding regimen and oral intake in (at least) small quantities
    - Ht/wt Ratio to ideal %tile, and then Wean TF
      - Weight maintained as oral intake increases & TF decreased

## References

- Wolf, L.S. & Glass, R.P. (1992). Feeding and Swallowing Disorders in Infancy. Therapy Skill Builders, Tucson, AZ.
- Morris, S.E. & Klein, M.D. (2000). Pre-feeding Skills (2<sup>nd</sup> ed.). Therapy Skill Builders, Tucson, AZ.
- Arvedson, J.C. & Brodsky, L. (2001). Pediatric Swallowing and Feeding, Assessment and Management (2<sup>nd</sup> ed.). Singular Publishing Group, INC, San Diego, CA.