Oral Motor Skills in Breastfeeding Infants

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February 5, 2013

The Reason I’m Here…
A Little Info About Speech Pathology

• Speech Pathologists are generally required to have a Masters from an accredited program
• Gold Standard is the American Speech-Language-Hearing Association’s “CCC”
• Assessment & Treatment in various settings, diagnoses and age groups

My Baby Needs WHAT Therapy??!!

• Speech Therapy
• Occupational Therapy
• Physical Therapy
4 OM Components in Breastfeeding:

- Strength
- Coordination
- Range of Motion
- Sensitivity

Obvious to an SLP? Or Not So Much?

- Obvious - milk leaking from the mouth, inability to initiate and/or maintain latch, weak suck, etc.
- Not so obvious - insufficient milk supply, nipple pain/soreness, frequent mastitis, etc.
- This is why we work together!
Basic Anatomy of the Infant Oral Cavity

Initial Oral Reflexes

- Rooting reflex
- Sucking reflex
- Swallowing reflex
Swallowing Reflexes

- Biting reflex
- Vomiting/gag reflex
- Coughing reflex

The Ever-Important Latch

- Bu’Lock, et al. (1990) demonstrated the importance of latch in breastfeeding based on cineradiography studies in 1950’s and confirmed by ultrasound in the 1980’s.
Latch Video from Ameda.com

The Proper Latch

- Baby opens mouth wide enough to grasp not only the nipple but the areola.
- Lips should be turned outward and in contact with the breast.
Cheeks are for sucking (and smooching!)

- Negative air pressure via intraoral vacuum.
- Sucking pads in cheeks provide stability.

Proper Latch, cont.

- Baby’s jaw extends over milk ducts
- Tongue raises against soft palate
- Muscles involved include- suprathyoid, infrahyoid, mylohyoid, geniohyoid, masseter, medial and lateral pterygoid, and temporalis.
- Tongue elevates lateral borders to form a trough to direct milk to be swallowed.
Proper Latch, cont.

- Peristalsis begins from tongue to oropharynx.
- Tongue tip remains anterior to maintain seal of the mouth.

Poor Latch Leads to…

- Poor suction and extraction of milk
- Nipple damage and pain
- Decreased milk supply
- Need for supplementation
- Aerophasia
- Reduced wt. gain
- Early weaning
Poor Swallowing Leads to…

- Oral or pharyngeal stasis
- Penetration
- Aspiration
- Respiratory compromise
- Feeding refusals
- Poor weight gain
- Need for supplementation and/or use of product designed for specific issues.

Latch on Approach
Positioning to Facilitate Latch

- Infant and mother belly-to-belly.
- Both comfortable and supported.
- Variety of positions attempted to find most effective for baby, prevent nipple soreness, etc.- Football, Cradle, Cross cradle, Sidelying, “Down Under”, “Beauty Pageant Sash”, etc.
Positioning, cont.

- Football
- Cradle
- Cross-Cradle

The Ever-Important Suck

- Naylor (2001) stated that in the baby’s first year, oral motor function progresses to match other biologically driven developmental processes.
- The S-S-B sequence is generally thought to be appropriately developed by around 37 weeks gestation in healthy term infants.
The Physiology of Sucking

- Newborns have innate oral reflexes and distinct anatomical features to facilitate sucking in the neonatal period.
- Jaw retraction
- Tongue positioning
- Larynx positioning
- Tongue size

Sucking in Response to Flow Rate

- As breastfeeding begins, the infant sucks more rapidly.
- Cue the maternal milk ejection reflex!
- Sucking slows as milk flow occurs and audible swallows heard.
- The amount of milk flowing influences the strength and bursts of sucking and pausing.
Suck Differences: Nutritive vs. Non-Nutritive

- Non-nutritive sucking-rate typically
  6 to 8:1 and 1-4 swallows per burst.

- Nutritive sucking-usually 1:1 but may change toward end of feeding.

Oral Dysfunction in Infants Due to:

- Prematurity
- LBW
- Metabolic disorders
- Neurological disorders
- Congenital abnormalities
- Use of NG tubes
- Just because!!
Watch Closely for Problems Early On!

- Richard (1992) demonstrated that proper latch technique in the first week of life was crucial to breastfeeding duration.
- When poor latch not corrected, probability 10x's more likely to use a bottle in the 1st month and wean early. Exclusive and partial breastfeeding rates were higher in those whose suck was corrected.

What to Assess:

- Maternal history, previous lactation experience
- Mother-infant interaction
- Newborn behavior
- Non-nutritive sucking assessment
- Breastfeeding assessment
- Bottle assessment
Why Have Speech See These Babies??

- Bauer, et al. (2008) states that Speech Therapists should perform an evaluation “to ensure a safe and efficient introduction of oral feeding”.
- “Feeding performance depended on a favorable oral motor condition…on strong sucking, rapid rhythm, and on sucking-swallowing-respiration coordination”.

Non-Nutritive Sucking Assessment

- Examiner typically uses a gloved finger in the infants mouth.
- Feel for tongue placement and movements.
- May also see use of a pacifier.
Suck Training, Continued

**Finger provides light pressure to the idli of the tongue,** then pull the finger out slowly to encourage the baby to suck it back in.

**Bottle Feeding - We Can Help!**

- Peterson and Harmer “Balancing Breast and Bottle: Reaching Your Breastfeeding Goals
- Nipple shape and transition of base to tip is key when selecting appropriate product
- Watch for gagging, “straw” suck and retracted tongue
Nipple Shapes to Consider

Nipple Flow Rate

- “Slow flow” is not always the same!!
- 26 nipples evaluated and rated in the Peterson & Harmer book
- Dripping does not mean it’s a fast flow
- Rate of flow at start of feed = how infant accepts the bottle
Nutritive Sucking and Swallowing Assessment

- May be at breast or bottle or both
- SLP examines management of secretions, suck-swallow-breathe coordination, swallowing, and breathing
- May refer for Video Oropharyngeal Swallow Study (VOSS)
Suck Training

- Should be performed by a trained professional.
- Done by SLP before a breastfeeding session.
- 2-5 minutes to avoid making baby tired or stressed.
- May see orofacial treatment- massage, tapping w/finger, etc. Bovey, et al. (1999) says “less is more”.
- Maybe used in conjunction with finger-feeding with an SNS or small feeding tube.

Finger Feeding
Rock On, Baby!!!!

References

References, Continued


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