Helping with a Breastfeeding

Assessment Techniques and Simple Corrective Strategies

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ABSTRACT

In session #3, we learned that the transfer of existing milk is critical to the making of more milk. But when observing or helping with a feeding, how will we recognize when milk transfer occurs? How will we help the couplet when milk transfer is questionable or compromised? How is all of this related to the mother's often-expressed concerns about not having enough milk? The goal of this learning program is to help the learner to develop targeted assessment techniques and simple corrective strategies to assist the mother-baby couplet to independently achieve optimal latch and milk transfer in the first few days of life, even in situations where anatomical or behavioral issues impede optimal milk transfer.

BFHI Related Step

Step 5

Objectives

- Relate the three phases of social interaction to observable behaviors that facilitate or undermine the breastfeeding experience.
- Distinguish between the newborn's signs of approach and signs of avoidance.
- Classify signs of hunger as early or late indicators of hunger.
- Recognize clinical indicators of effective and ineffective latch and milk transfer.
- Review indicators and consequence of poor latch and ineffective milk transfer.
- Identify principles for observing and assisting with a breastfeeding.
- When observing a breastfeeding couplet in the approach, interactive, or satiety phase, distinguish between reassuring and worrisome indicators that breastfeeding is going well.
- Describe techniques to help (if needed) the mother-baby couplet to achieve optimal latch.
- Choose a general strategy to resolve problems associated with ineffective latch or the reluctant nurser.

Instructions

See the *ReadMeFirst* document in your account.

Materials and Resources

Post-test items that are similar to those found on a certification exam.

Vocabulary

Signs of Avoidance Signs of Engagement

Criteria for Earning Credits

See the *ReadMeFirst* document in your account.

Accreditation

See the *ReadMeFirst* document in your account.

Faculty

Marie Biancuzzo RN MS IBCLC has achieved national recognition for her expertise in maternal-child nursing, breastfeeding, and continuing education. Her profile is on LinkedIn.

Topical Outline

- II. Introduction and Overview
 - A. Social Interaction and Observable Behaviors
 - Goal of "Helping" with a Feeding
- III. Communication: Reading and Responding to the Newborn's States,

Behaviors, and Reflexes

- **Uvnas-Moberg: Three Phases of Social Interaction**
- Sleep/Wake States
- Behavioral States: Approach vs. Avoidance
- D. Signs of Hunger and Satiety
- The Assistive Role: Principles for "Helping"
 - A. General Guidelines
 - B. Sequence and Judgment: When to "Help"
 - C. Positioning
 - D. Touching vs Not Touching
 - **Counseling and Evaluation**
- V. When Suckling Is Not Spontaneous or Sustained
 - Slow or Delayed Adaption to Extrauterine Life
 - **Difficult Latch**
 - C. **Special Techniques**
- VI. Management of Reluctance to Feed
 - **Remove or Treat the Cause**
 - **Prevention of Cause**
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Questions for	the Author/Presenter:
Write your qu	uestions here!
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	2.
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	5.

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II. **Introduction and Overview**

A. **Social Interaction and Observable Behaviors**

- 1. Uvnas Moberg: Three Phases of Social Interaction
 - Approach (Hunger) a.
 - h. Interaction
 - c. Satiety
- 2. Observable Behaviors
 - Sleep/wake states
 - Behavioral States (Approach vs Avoidance) b.
 - Signs of Hunger and Satiety c.

Goal of "Helping" with a Feeding **B.**

- Facilitate *feeding* when the Approach phase occurs, or 1. facilitate the occurrence of the Approach phase. The latter can be easily accomplished by skin-to-skin contact.
- Some studies use the terms *suckling* and *skin-to-skin contact* 2. as interchangeable or synonymous, whereas others¹⁻³ make a clear distinction between contact and suckling.

Communication: Reading and Responding to the III. Newborn's States, Behaviors, and Reflexes

Uvnas-Moberg: Three Phases of Social Interaction A.

- 1. Approach Phase (a.k.a. Hunger Phase)
 - All Five Senses are involved in the Approach phase
 - (1) Seeing
 - Visual acuity is best at about 12-18 inches away. (a)
 - (b) Like light and dark geometric shapes the best.
 - (2) Hearing
 - (a) Babies respond best to their mother's voice
 - (b) When babies are left alone, they emit a separation distress call that is similar to those of other mammals.4
 - (3) Smelling
 - Infants have a very well-developed sense of smell, (a) and will root toward the milk.
 - Infants prefer the smell of their mother's milk to (b) infant formula5
 - Odors that overpower the mother's milk may be a (c) deterrant to breastfeeding.
 - (4) **Tasting**
 - Mother's milk tastes sweet, because of the high (a) amount of carbohydrate in human milk

- Babies like a sweet taste! (Don't we all?) (b)
- (5) Touch
 - Skin-to-skin contact is enormously important! (a)
 - (b) Skin-to-skin contact is a way to approach the breast, the food, the mother!
 - (c) More on this in Session #7
- b. Normal Feeding Cues (Approach aka Hunger Phase)
 - Parents' Expectations, Interpretations (1)
 - Parents must learn to identify and respond to early hunger cues.
 - Parents need to respond to early hunger (i)
 - They often wait until infant cries; crying is a (ii) late sign of hunger
 - Parents also need to identify signs of satiety. (b)
 - Use good a/v aids (c)
 - (2) Parents Observations of Hunger Cues
 - Sometimes, infant has subtle signs of hunger
 - Likely situations (i)
 - (ii) How to recognize
 - Practices that mask hunger signs (b)
 - Tight swaddling (i)
 - (ii) **Pacifiers**
 - (iii) Separate sleeping rooms!

2. Interaction Phase

- Indicators of Good Latch for Newborn a.
 - (1) Alignment (positioning of mother and baby)
 - Baby's head and body are in a line. (a)
 - Mother holds baby's body close to hers. (b)
 - Newborns need whole-body support (not just head (c) and shoulders)
 - Baby should face the breast (baby's nose opposite the (d) nipple).
 - Do not push baby's head into the mother's breast. (I (e) call this "screwing the baby's head on.")
 - (2) Areolar Grasp
 - Open wide! (a)
 - (b) Lips flanged outwards
 - (c) Complete seal
 - Approximately ½ inches of areolar in mouth (d)
 - Tongue is troughed and extends over lower alveolar (e) ridge
 - (3) **Areolar Compression**
 - Mandible moves in rhythmic motion (a)
 - Wave-like movement of tongue (b)
 - (4) **Audible Swallowing**
 - Lack of audible swallowing ALWAYS deserves (a) follow-up.
 - Always listen for SWALLOWING! (b)
- Indicators of Poor Latch b.
 - Absence of any of the "good latch" indicators (1)
 - (2) Lips & Mouth
 - Lips flanged too far back (a)
 - Cheeks are puckered in (b)
 - Angle of the gape is less than 120° (c)

- (3) Head, Chin, and Neck
 - (a) Head is not free to move
 - (b) Chin does not indent the breast
 - (c) Neck is hyperflexed or hyperextended
 - (d) Head is turned rather than straight-on
 - Non-alignment of "nose-to-nipple" (e)
- (4) Other Indicators
 - (a) Clicking sound
 - (b) No "changing gears"
 - short fast bursts to...
 - long, slow, rhythmic bursts and eventually... (ii)
 - (iii) short, fast bursts

3. Satiety Phase

- Baby takes himself off the breast a.
- Absence of hunger cues b.
- Babies who continue to suck for long periods of time are likely c. to not be taking in milk and will NOT be satiated.

B. Sleep/Wake States

- 1. Deep sleep
- Light Sleep 2.
- 3. Drowsy
- 4. Quiet Alert
- 5. Active Fussy Alert
- Crying 6.

C.

Behavioral States: Approach vs. Avoidance

- 1. Signs of Approach ("Organized Behavior")⁶
 - Tongue extension a.
 - Hand on face b.
 - Hand clasp, or hands touching, or hands to body c.
 - Foot clasp (feet against each other, or crossed) d.
 - Body tuck e.
 - f. Hand-to-mouth attempt (does not have to succeed)
 - Mouthing movement g.
 - h. Suck-search
- Signs of Avoidance ("Disorganized Behavior")⁶ 2.
 - a. Yawning, grimacing
 - Sneezing b.
 - Hiccoughing c.
 - d. Spitting up
 - Sighing e.

- f. Coughing
- Airplaning g.
- Finger-splaying h.

Signs of Hunger and Satiety¹ D.

- Hunger and Satiety 1.
 - Signs of Hunger⁷ a.
 - (1) Rooting
 - **Suckling Motions** (2)
 - Motor activity: hands-to-mouth, flexion of arms, legs (3) moving as though riding a bicycle
 - (4) Posture/affect: tense; clenched fists
 - Crying: note that this is the *last* sign of hunger (5)
 - Signs of Satiety⁷ b.
 - (1) Audible swallowing during feeding
 - (2) Cessation of audible swallowing; increased nonnutritive sucking and longer pauses between sucking bursts
 - (3) Infant takes himself off from the breast, rather than being taken off
 - (4) Disappearance of hunger cues
 - Posture/affect: arms and legs relaxed, drowsy (5)
 - (6) Sleeping
 - (7) Sucking
- 2. Readiness: Indicators of Readiness to Feed
 - a. Showing signs of optimal sleep state
 - b. Exhibiting signs of engagement
 - c. Helping Baby to Become Ready to Feed
 - Skin-to-skin contact (1)
 - (2) Mother and baby approach one another in a way that has interaction. Skipping this phase and going directly to feeding is not desirable or useful. This is a dance!
 - Helping baby to find her fist (3)
 - calms a fussy baby
 - provides perioral stimulation to alert a sleepy baby (b)
- 3. Indicators of Disinterest or Refusal
 - Not Ready to Start, or not willing to continue
 - Sleep/wake states (1)
 - A hungry baby will not sleep (a)
 - A sleepy baby will not eat! (b)
 - An overly-hungry, frantic baby will not eat
 - Signs of Avoidance (disengagement, disorganization) (2)
 - Signs of Refusal b.
 - Latching briefly then pulling away (1)
 - (2) Arching back
 - (a) May be an out-and-out refusal

¹ See Marie's full-color photo-illustrated parent handout on this topic.

- May be just that baby needs to burp!
- (3) Latches but does not suckle after latch
- Goldsmith's sign is when the infant consistently refuses (4) one breast; this is a possible sign of breast cancer.8 See Biancuzzo⁷ pages 132-133; Gentilini article.⁹

The Assistive Role: Principles for "Helping"

General Guidelines Α.

- 1. Introduction and Greeting (Maternal aspect) Ask the mother if you can watch "the baby" breastfeeding (not "you")
- 2. "Introduction" to baby (Newborn aspect) Perioral area is the most sensitive part of baby's body. Stimulating the lips, gum, tongue may be key to awaking the baby's interest in suckling.

Sequence and Judgment: When to "Help" B.

- Observe before "assisting" 1.
- 2. Not always easy to tell
- 3. Do not "take over"

C. **Positioning**

- 1. General principles of positioning
- 2. Mother's Hand Positions
 - V-hold a.
 - C-hold b.
 - U-hold c.
 - Dancer hand d.
- 3. Commonly-used positions for the newborn
 - Cradle or "Madonna" a.
 - b. Side-lying
 - Football (clutch)
 - d. Less-common positions
 - Straddle hold (1)
 - (2) Others
- 4. Comparison of Basic Positions⁷ p. 155
 - a. Advantages
 - b. Limitations
 - Pertinent Points c.

Touching vs Not Touching D.

If you must touch, ask permission. 1.

2. "Touch" by moving the mother's hand or arm, not her breast

E. **Counseling and Evaluation**

- 1. Tell the mother what you are observing
- 2. Always find something positive to say!
- 3. Make sure mother understands the process
- 4. Demonstration, return demo, encouraging words
- 5. Notice how mother is responding to suggested changes
 - Verbal: ASK her how it feels, seems, etc. a.
 - b. Notice her non-verbal behavior, too

V. When Suckling Is Not Spontaneous or Sustained

Slow or Delayed Adaption to Extrauterine Life Α.

- 1. Indicators of Slow or Delayed Adaption
 - a. Unstable vital signs
 - b. "Hypoxic Stare"
 - Sleepiness c.
 - d. Sluggish "other" reflexes
- 2. Possible Adaptation Reasons for Difficult or Reluctant Latch
 - Labor-related: long labor, low oxygenation during labor, etc. a.
 - b. Meds that can depress reflexes including analgesia and MgSO₄
 - c. Complicated delivery, including vacuum
 - d. Birth trauma, including caput succadaneum, hematoma, brachial palsy, Bell's palsy, fractured clavicle
 - Unexplained phenomenon that are often diagnosed later, e. including torticollis.
 - f. Serious congenital issues, e.g., cardiac anomalies, chromosomal anomalies, etc.

B. **Difficult Latch: Anatomical Reasons**

- 1. Anatomical Variations (Maternal)
 - Large breasts and/or large areola a.
 - b. Large nipples
 - Short or flat nipples c.
 - d. Long nipples
 - Inverted nipples e.
 - f. Dimpled nipples
- 2. Anatomical Variations (Infant)
 - Baby has small mouth

- b. Tight frenulum
- High-arched palate c.
- d. Flat philtrim
- e. More serious pathology, e.g., clefting, torticollis, fractured clavicle, facial palsy, and more.

Special Techniques C.

- For Muscle Tone
 - Providing More Support: Hypotonia a.
 - (1) Straddle hold
 - (My O.T. friend emphasizes "proximal stability to (a) improve distal mobility")
 - I like straddle hold for hypotonia (b)
 - Transitional Hold (2)
 - (3) Dancer Hand
 - Hypertonia: Reducing Tension of Mandibular Muscles
- 2. Overcoming Issues with Anatomical Variations
 - a. Rolled up washcloth for large breasts
 - "U" shaping for large areolae b.

Management of Reluctance to Feed

Remove or Treat the Cause A.

- 1. Unsuccessful Latching and/or Transfer
 - Suggest repositioning of mother of newborn, as needed a.
 - b. Suggest expressing a little milk if milk is coming too fast, too slow, or nipples are short and breast is engorged.
- 2. Related Issues
 - a. Medical issues or pain
 - See if mother or baby needs medical attention, i.e., baby has sore mouth from thrush, or mother has sore nipples/breasts.
 - Watch for sources of pain: baby's head is bruised, mother has "sore bottom" and needs to be repositioned, etc.
 - Suggest pharmacologic pain relief if needed.
 - b. Avoid artificial teats or pacifiers.
 - Check on things that are "turn-offs" for baby, perhaps something c. as simple as mother's perfume.
- 3. Alerting and Consoling Techniques¹⁰
 - General Techniques a.
 - Alerting Techniques¹⁰ b.
 - (1) Eye contact
 - (2) Changing diaper
 - (3) Speaking, singing, humming
 - (4) Stroking head *against* hair growth

- (5) Skin-to-skin contact!!!!
- (6) more
- Consoling Techniques¹⁰ c.
 - (1) Carry, rock, swing
 - (2) White noise
 - (3) Holding, "nesting"
 - (4) Stroking head with hair growth

B. **Prevention of Cause**

- Skin-to-skin contact, early and often! 1.
- 2. Help mother when things are calm and unhurried
- 3. Exhibit and encourage patience
- 4. Show confidence, compassion, gentleness
- PRAISE the mother, even if it means praising her for non-5. latch behaviors!

VII. Summary

- Recognizing and responding to the three phases of social interaction is critical to helping with a breastfeeding.
- Observing a breastfeeding entails observing not only the baby's ability to latch and transfer, but also, the mother's comfort level and any related difficulties.
- With minor issues, "helping" is in order; interfering is not. Couplets who are experiencing difficulties need more active help.

VIII.References

- 1. Widstrom AM, et al. Short-term effects of early suckling and touch of the nipple on maternal behaviour. Early Hum Dev. 1990;21(3):153-163.
- Taylor PM, et al. Early suckling and prolonged breast-feeding. Am-J-Dis-Child. 1986;140(2):151-154.
- 3. Righard L, Alade MO. Effect of delivery room routines on success of first breast-feed. Lancet. 1990;336(8723):1105-1107.
- 4. Christensson K, et al. Separation distress call in the human neonate in the absence of maternal body contact. Acta Paediatr. 1995;84(5):468-473.
- 5. Varendi H, Porter RH. Breast odour as the only maternal stimulus elicits crawling towards the odour source. Acta Paediatr. 2001;90(4):372-375.
- 6. SUNY College at Stonybrook. Baby Talk [Videotape].
- 7. Biancuzzo M. Breastfeeding the Newborn: Clinical Strategies for Nurses. St. Louis: Mosby; 2003.
- 8. Goldsmith HS. Milk-rejection sign of breast cancer. Am J Surg. 1974;127(3):280-281.
- 9. Gentilini O, et al. Breast cancer diagnosed during pregnancy and lactation: biological features and treatment options. Eur J Surg Oncol. 2005;31(3):232-236.
- 10. Bocar D. The Breastfeeding Educator Program Notebook. Oklahoma City OK: Lactation Consultant Services; 2011.

IX. Bibliography

- Adair R, Zuckerman B, Bauchner H, Philipp B, Levenson S. Reducing night waking in infancy: a primary care intervention. Pediatrics. 1992;89(4 Pt 1):585-588.
- Adams D, Hewell S. Maternal and professional assessment of breastfeeding. J Hum Lact. 1997;13(4):279-283.
- Agostini C. Gherlin, leptin, and the neurometabolic axis of breastfed and formula-fed infants. Acta Paediatr. 2005;94(5):523-525.
- Ballard JL, Auer CE, Khoury JC. Ankyloglossia: assessment, incidence, and effect of frenuloplasty on the breastfeeding dyad. Pediatrics. 2002;110(5):e63.
- Brown A, Lee M. Breastfeeding during the first year promotes satiety responsiveness in children ages 18-24 months. Pediatr Obes. 2012;7(5):382-390.
- Brown A, Raynor P, Lee M. Maternal control of child-feeding during breast and formula feeding in the first 6 months post-partum. J Hum Nutr Diet. 2011;24(2):177-186.
- Bystrova K, Ivanova V, Edhborg M, et al. Early contact versus separation: effects of mother-infant interaction one year later. Birth. 2009;36(2):97-109.
- Cadwell K. Latching-on and suckling of the healthy term neonate: breastfeeding assessment. J Midwifery Womens Health. 2007;52(6):638-642.
- Cadwell K. Latching-on and suckling of the healthy term neonate: breastfeeding assessment. J Midwifery Womens Health. 2007;52(6):638-642.
- Cakmak H, Kuguoglu S. Comparison of the breastfeeding patterns of mothers who delivered their babies per vagina and via cesarean section: an observational study using the LATCH breastfeeding charting system. Int J Nurs Stud. 2007;44(7):1128-1137.
- Carter CS, Altemus M. Integrative functions of lactational hormones in social behavior and stress management. Ann N Y Acad Sci. 1997;807:164-174.
- Chapman DJ, Pérez-Escamilla R. Breastfeeding among minority women: moving from risk factors to interventions. Adv Nutr. 2012;3(1):95-104.
- Disantis KI, Collins BN, Fisher JO, Davey A. Do infants fed directly from the breast have improved appetite regulation and slower growth during early childhood compared to infants fed from a bottle? Int J Behav Nutr Phys Act. 2011:8:89.
- Elias MF, Nicolson NA, Bora C, Johnston J. Sleep/wake patterns of breast-fed infants in the first 2 years of life. Pediatrics. 1986;77(3):322-329.
- Gross RS, Fierman AH, Mendelsohn AL, et al. Maternal perceptions of infant hunger, satiety, and pressuring feeding styles in an urban Latina WIC population. Acad Pediatr. 2010;10(1):29-35.

- Hall B. Changing composition of human milk and early development of an appetite control. Lancet. 1975;1(7910):779-781.
- Jenks M. Latch assessment documentation in the hospital nursery. J Hum Lact. 1991;7(1):19-20.
- Leeming D, Williamson I, Lyttle S, Johnson S. Socially sensitive lactation: exploring the social context of breastfeeding. Psychol Health. 2013;28(4):450-468.
- Lewallen LP, Street DJ. Initiating and sustaining breastfeeding in African American women. J Obstet Gynecol Neonatal Nurs. 2010;39(6):667-674.
- Marchini G, Linden A. Cholecystokinin, a satiety signal in newborn infants? J Dev Physiol. 1992;17(5):215-219.
- Matheny RJ, Birch LL, Picciano MF. Control of intake by human-milk-fed infants: relationships between feeding size and interval. Dev Psychobiol. 1990;23(6):511-518.
- Matthiesen AS, Ransjö-Arvidson AB, Nissen E, Uvnäs-Mosberg K. Postpartum maternal oxytocin release by newborns: effects of infant hand massage and sucking. Birth. 2001;28(1):13-19.
- Mennella JA, Gerrish CJ. Effects of exposure to alcohol in mother's milk on infant sleep. Pediatrics. 1998;101(5):E2.
- Mennella JA, Yourshaw LM, Morgan LK. Breastfeeding and smoking: short-term effects on infant feeding and sleep. Pediatrics. 2007;120(3):497-502.
- Montgomery-Downs HE, Clawges HM, Santy EE. Infant feeding methods and maternal sleep and daytime functioning. Pediatrics. 2010;126(6):e1562-e1568.
- Mosko S, Richard C, McKenna J. Infant arousals during mother-infant bed sharing: implications for infant sleep and sudden infant death syndrome research. Pediatrics. 1997;100(5):841-849.
- Mulder PJ. A concept analysis of effective breastfeeding. J Obstet Gynecol Neonatal Nurs. 2006;35(3):332-339.
- Nissen E, Gustavsson P, Widström AM, Uvnäs-Mosberg K. Oxytocin, prolactin, milk production and their relationship with personality traits in women after vaginal delivery or Cesarean section. J Psychoson Obstet Gynaecol. 1998:19(1):49-58.
- Phillips V. Assessing satiety in the bottle-fed baby. J Hum Lact. 1993;9(1):10.
- Rahman A, Hag Z, Sikander S, Ahmad I, Ahmad M, Hafeez A. Using cognitive-behavioural techniques to improve exclusive breastfeeding in a low-literacy disadvantaged population. Matern Child Nutr. 2012;8(1):57-71.
- Riordan J, Gill-Hopple K, Angeron J. Indicators of effective breastfeeding and estimates of breast milk intake. J Hum Lact. 2005;21(4):406-412.
- Riordan JM, Koehn M. Reliability and validity testing of three breastfeeding assessment tools. J Obstet Gynecol Neonatal Nurs. 1997;26(2):181-187.
- Savino F, Fissore MF, Liguori SA, et al. Serum gherlin concentration, fasting time and feeding in infants. J Pediatr Endocrinol Metab. 2007;20(9):1027-1033.
- Schwichtenberg AJ, Pehlmann J. A transactional model of sleep-wake regulation in infants born preterm or low birthweight. J Pediatr Psychol. 2009;34(8):837-849.
- Shrago LC. The breastfeeding dyad: early assessment, documentation, and intervention. NAACOGS Clin Issu Perinat Womens Health Nurs. 1992;3(4):583-597.
- Taveras EM, Scanlon KS, Birch L, Rifas-Shiman SL, Rich-Edwards JW, Gillman MW. Association of breastfeeding with maternal control of infant feeding at age 1 year. Pediatrics. 2004;114(5):e577-e583.
- Tawia S. Breastfeeding interventions that improve breastfeeding outcomes and Australian Breastfeeding Association services that support those interventions. Breastfeed Rev. 2012;20(2):48-51.
- Thomas KA, Foreman SW. Infant sleep and feeding pattern: effects on maternal sleep. J Midwifery Womens Health. 2005;50(5):399-404.
- Thomas KA. Differential effects of breast- and formula-feeding on preterm infants' sleep-wake patterns. J Obstet Gynecol Neonatal Nurs. 2000;29(2):145-152.
- Tobin DL. A breastfeeding evaluation and education tool. J Hum Lact. 1996;12(1):47-48.
- Uvnäs-Mosberg K. Oxytocin may mediate the benefits of positive social interaction and emotions. Psychoneuroendicronology. 1998;23(8):819-835.
- Uvnäs-Mosberg K. Physiological and endocrine effects of social contact. Ann N Y Acad Sci. 1997;807:146-163.
- Velandia M, Uvnäs-Mosberg K, Nissen E. Sex differences in newborn interaction with mother or father during skin-to-skin contact after Caesarean section. Acta Paediatr. 2012;101(4):360-367.
- Vidas M, Folnegović-Smalc V, Catipović M, Kisić M. The application of autogenic training in counseling center for mother and child in order to promote breastfeeding. Coll Antropol. 2011;35(3):723-731.
- Walker M. Functional assessment of infant breastfeeding patterns. Birth. 1989;16(3):140-147.
- Widström AM, Wahlberg V, Matthiesen AS, et al. Short-term effects of early suckling and touch of the nipple on maternal behavior. Early Hum Dev. 1990;21(3):153-163.
- Wiessinger D. A breastfeeding teaching tool using a sandwich analogy for latch-on. J Hum Lact. 1998;14(1):51-56.

Optimal Alignment

Infant flexed and relaxed	Muscular rigidity	Use comforting and calming techniques
Head and body at breast level	Head and/or body sagging; baby reaching for breast	
Head squarely facing the breast	Head turned:	
	Laterally	
	Hyperextended	
	Hyperflexed	
	No "tummy-to-tummy"; trunk is facing the ceiling,	
	not the mother	
Infant's body aligned from shoulder to iliac crest	Infant's body unaligned	

Areolar Grasp

Angle of the mandibular gap is about 120-130°	Angle of the gape is less than 90°	
Upper and lower lips flanged outward	One or both lips not flanges	
	One of both lips curled inwards	
	One or both lips are flanged too far back	
Complete seal formed around areola; strong		
vacuum		
Approximately 1½ inches of areolar tissue is		
centered in infant's mouth		
Chin indents the breast	Chin does not indent the breast	
Cheeks are full and rounded	Cheeks are "puckered" in	
Tongue is troughed	Tongue is flat	
Tongue extends over lower alveolar ridge	Tongue does not extend over lower alveolar ridge	
	Often occurs when infant does not have a wide-	
	open gape	

Areolar Compression

Alcolal Complession					