

## Breastfeeding Basics

**Soledad G. Iniguez, MN, WHCNP, IBCLC**  
Lactation Services  
Oregon Health and Science University

## Objectives

- State the background of the recent focus on breastfeeding
- Understand the importance of breastfeeding counseling and support
- Understand the anatomy of the breast and physiology of lactation
- Understand the importance and process of early assessment
- Describe the components of successful latch

## Breastfeeding Why is so important!

- AAP policy statement
- Who & UNICEF
- Healthy people 2010 initiative



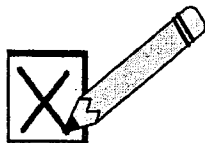
## Breastfeeding Why is so important!

Human milk is the **best**, species-specific source of nutrition for newborns and should be provided for the first 6 months of life up to a year and thereafter until it is mutually agreeable



## Help women make informed infant-feeding decisions!

- Access to comprehensive, current and culturally appropriate lactation care
- The opportunity to make informed infant-feeding decisions
- Supported in their infant-feeding decision and empowered to breastfeed their infants



## Assumptions

- Your time is limited with each client
- Your clients may be reluctant to discuss feelings
- You need a quick and effective method that:
  - Identifies specific concerns
  - Enhances self-confidence



## Best Start Marketing Approach

- Understand the target audience
- Develop a price strategy – benefits/costs
  - Reduce the costs (barriers) of breastfeeding compared to the competition
  - Increase the benefits of breastfeeding

## Price Strategy

- **Reduce the barriers**
  - Lack of confidence
  - Embarrassment
  - Time / social constraints
  - Dietary / health concerns
  - Lack of social support
  - Pain
- **Increase the benefits**
  - Enhanced mother/infant relationship
  - Pride
  - Enjoyment
  - Life long benefits for the mother and the infant

## Three-Step Counseling Approach

- Principles
  - Begin early, repeat often
    - *Frequency of messages is more important than quantity of information!*
  - Clients want and need help overcoming barriers
  - Each client is unique
  - Communication can be (must be) tailored to the unique needs

## Step 1

### Open ended questions



- Initial query – an open ended question
  - *"How are you planning to feed your baby?"*
  - *"What have you heard about breastfeeding?"*
- Probes – help you gather more information about the client's response to your initial query

## Step 2

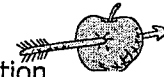
### Affirm participant's feelings



- Acknowledgment and affirmation of client's concerns is an essential ingredient in successful promotion of any complex health behavior. This is the most difficult step to master
  - *"I've heard lots of women say that!"*
  - *"That's a really common concern!"*

## Step 3

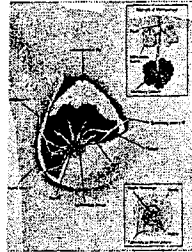
### Provide targeted education



- Provide education regarding the specific concern that you have uncovered
- Provide information in small bites
- Have repeated conversations

## What is the breast?

- A secretory gland composed of
  - Glandular tissue
  - Connective tissue
  - Blood
  - Lymph
  - Nerves
  - Adipose tissue



## External anatomy of the breast

- Body/breast size
  - Size of breast has minimal effect on lactation
  - Most women are asymmetric with one breast larger than the other
  - ☑ Marked asymmetry may be a sign of insufficient tissue



## External anatomy of the breast

- Areola
  - Darkly pigmented area around the nipple
  - Contains the Montgomery Glands
  - Thought to be a "target" for infant who's sight is not yet fully developed



## External anatomy of the breast

- Nipple
  - Come in different shapes and sizes
  - Inverted, flat or protruding
  - With stimulation most will become firm and protrude
  - Flexible and graspable will conform to baby's mouth during breastfeeding



## External anatomy of the breast

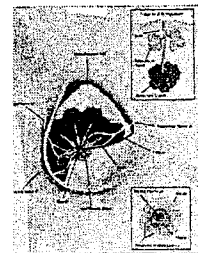
- Nipple
  - ☒ Flat and/or inverted nipples can be a problem and should be evaluated



♥ A baby only knows the nipple that is offered!

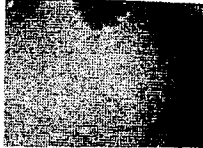
## Internal anatomy of the breast

- Mammary lobes
  - Alveolus
  - Ducts
- Nerves
  - Breast – 4<sup>th</sup>, 5<sup>th</sup>, 6<sup>th</sup> intercostals nerves
  - Nipple & areola – 4<sup>th</sup> intercostal nerve

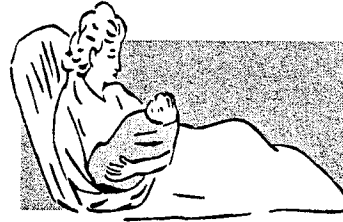


## Internal anatomy of the breast

- Nerves
  - ☑ Interruption of nerve pathways with breast surgery can doom breastfeeding by decreasing sensation, ↓Oxhitocin, ↓ Prolactin and severing ducts



## Physiology of Lactation

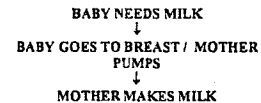


## Stages of Lactogenesis

- Stage I "*Colostrum*"
  - Secretion of milk in late pregnancy
  - Present immediately after delivery
- Stage II "*milk comes in*"
  - Secretion of copious/mature milk
  - 2-8 days postpartum
  - ☑ Delay of stage II warrants investigation
- Stage III "*Galactopoiesis*"
  - Maintenance of established lactation

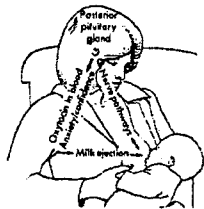
## Breast milk production

- Supply and demand principle



## Breast milk production

- Milk secretion is continuous
- Milk is stored in alveolar lumen
- Milk ejection reflex, "*let-down*", causes milk to flow faster
- Rate of milk synthesis is related to the emptiness or fullness of the breast



## Breast milk production

- In general, the emptier the breast, the faster milk is made
- If milk is regularly and thoroughly removed from the breast, milk synthesis continues
- Retained milk down-regulates production

## Not enough milk

- Baby is not effectively transferring milk from breast
- Baby is not at breast enough times/day or long enough

## Not enough milk

- Factors that inhibit breast milk production and "let down"
  - Pain
  - Stress
  - Fatigue



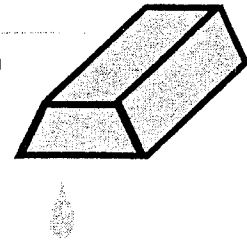
## How is the best milk made?



**NOT  
FROM  
COWS!**

## The best milk

- Breast milk – a living fluid varies with:
  - Each woman
  - Gestation
  - Within a feeding
  - During the day
  - Throughout lactation
  - A mother's diet



## The best milk

- Breast milk – a living fluid provides:
  - A whole immune system, including factors protecting against inflammation which accompanies immune reactions
  - A whole system of trophic factors that help stimulate the development of the gut, the brain, the immune system, the respiratory system
  - Long chained polyunsaturated fatty acids

## Formula **DOES NOT** compare

- Marketing approaches to make people think formulas are like breast milk – **NOT!**
- There is no way to duplicate breast milk because there is no *standard* breast milk to copy

## Formula **DOES NOT** compare

- Formula in the first days or weeks could increase the risks of developing
  - Type I diabetes
  - Inflammatory bowel disease
  - Allergies
  - Asthma



## Formula **DOES NOT** compare

- How can this be?
  - Injury to gut wall
  - Abnormal gut colonization
  - A sequence of amino acids (AB80S) in cows milk albumin which stimulates production of antibodies against pancreatic B cells, leading eventually to type I (juvenile) diabetes



## How can I help?????



## Educate

- The mother needs to know
  - How to position the baby correctly at the breast
  - How to assist the baby to the best latch
  - How to tell if the baby is getting milk

## Early Assessment

- The intake (milk transfer)
- The output (urine & stool)
- The endpoint (the weight)

## The intake - breastfeeding

- Clue the parents in to feeding cues
- Feeding frequency
- Drinking not just sucking at the breast



## The intake - breastfeeding



- Feeding cues
- ☑ Do not feed babies by the clock or by the minutes!

## The output - elimination

- Stool
  - First few days *Meconium*
  - Stool color and consistency changes
  - The more milk the earlier the stool changes
- ☑ Red flag if the baby is still having meconium-like stools on the fourth day of life

## The output - elimination

- Stool
  - Frequency of stools
    - DOL 4 to 4 weeks → 4 stools/day up to each feed
    - ☑ In the majority of cases, infrequent stools at this age mean the baby is not getting enough milk
    - 1 – 3 months → anywhere in between

## The output - elimination

- Urine
  - Before milk in → in general one wet diaper on the first day, two wet diapers on the second day, and three on the third
  - After milk in → the number should increase rapidly, so by the end of the first week 6 *soaking-wet* diapers/day

## The end point – weight gain

- Weight
  - Loss 8% of birth weight
  - Return to birth weight 10 – 14 days
  - Rate of gain
    - First 2 months → 30 grams/day
    - > 2 months → 20 – 30 grams/day
- ☑ One of the most common etiologies for poor weight gain with breastfeeding is: *ineffective latch*

## Starting a Feeding

- Maternal positioning
  - Infant positioning
  - Infant latch and suckle
- ☑ Observation of the maternal-infant dyad is of outmost importance!

## Positioning



## The basis of successful breastfeeding

A good latch!  
The better the latch...

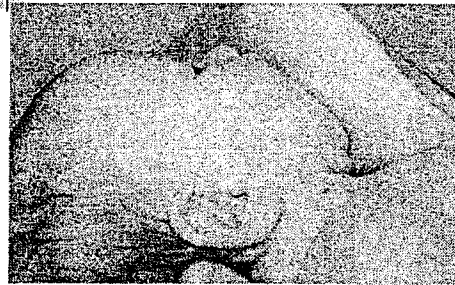
- The better the baby gets milk
- The less likely the mother gets sore nipples
- The less likely the baby will "need" supplementation



## What is a good latch?

- Characteristics of a better latch – *asymmetric*
  - Baby's chin *touches* the breast
  - Baby's nose *does not*
  - Baby covers *more* of the areola with lower lip than with upper lip
  - Baby slightly tilted upwards

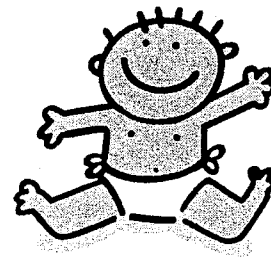
## Latch - asymmetric



## Sucking vs. Drinking

- Watch for long, rhythmic suck/swallow pattern with jaw/mouth movement (open mouth wide → *pause* → close)
- During the open pause the baby is getting a mouth full of milk
- The length of the pause is proportional to the amount of milk the baby is getting

The baby will stay where he is getting milk!





## ***REFERENCES:***

The Ultimate Breastfeeding Book of Answers Jack Newman, MD and Teresa Pitman

Breastfeeding: A Guide for the Medical Profession, Ruth A. Lawrence, MD

Breastfeeding and Human Lactation, Jan Riordan and Kathleen G. Auerbach

The Breastfeeding Answer Book, revised edition, LaLeche League International

Medications and Mother's Milk, Thomas Hale

Breastfeeding and the Use of Human Milk, American Academy of Pediatrics

\*\*\*

American Academy of Family Physicians (1997-98). *Reference Manual*. Selected Policies on Health issues: 53.

Bryant, C., Coreil, J., D'Angelo, S., Baile, D. and Lazarov., M (1992). A new strategy for promoting breastfeeding among economically disadvantaged women and adolescents. *NAACOG'S clinical issues in Perinatal and Women's Health Issues: Breastfeeding* 3(4): 723-730.

Gartner, LM., Black, L.S., Eaton, A.P., Lawrence, R.A., Naylor, A.J., Neifert, M.E., O'Hare, D., Schanler, R.J. (1997). Breastfeeding and the Use of Human Milk. Work Group on Breastfeeding. *Pediatrics*, 100(6):1035-1039.

Hale, T. (2000) *Medications in Mother's Milk* (9<sup>th</sup> Edition). Amarillo, TX. Pharmasoft Medical Publishing.

Health Care professional Subcommittee of the Breastfeeding Promotion Consortium and the National Breastfeeding Leadership Roundtable. (1996). *Suggested consistent management messages for mothers*. National Alliance for Breastfeeding Advocacy (NABA). Weston, MA.

Hoover, K. (1997). *How to know your breastfeeding baby is getting enough*. Philadelphia Department of Public Health, Office of Maternal and Child Health, 500 S. Broad Street, Philadelphia, PA, 19146.

Kliethermes, PA, et al. Transitioning preterm infants with nasogastric tube supplementation: Increased likelihood of breastfeeding, *JOGNN*, 28:264,1999

Lawrence, R.A. (1997). *A review of the medical benefits and contraindications of breastfeeding in the United States*. Maternal and Child Health Technical Information Bulletin. Arlington, VA: National Center for Education in Maternal and Child Health.

Lawrence., R.A. (1994). *Breastfeeding: A Guide for the Medical Profession* (4<sup>th</sup> ed.). St. Louis, MO: C.V. Mosby Company.

- Lemons PK. From Gavage to Oral Feedings: Just a Matter of Time. *Neonatal Network*. 20(3), April 2001
- McCain GC. Behavioral State Activity During Nipple Feedings for Preterm Infants. *Neonatal Network*. 16(5), 43-47, August 1997
- Meier PP. Bottle and breastfeeding: Effects on transcutaneous oxygen pressure and temperature in preterm infants. *Nurs Res*, 37-36, 1988
- Meier P. Breast-feeding Behavior of Small Preterm Infants. *MCN*. 10: 396-401. November/December 1985
- Meier P. Breastfeeding in the Special Care Nursery: Prematures and Infants with Medical Problems. *Pediatric Clinics of North America*. 48(2), April 2001
- Meier, P, et al. Breastfeeding Support Services in the Neonatal Intensive-Care Unit. *JOGNN* 26(4) 338-346, July/August 1993
- Meier P, McCOy R, Mangurten H. Kangaroo Care and Breastfeeding for Preterm Infants. *Breastfeeding Abstracts: A Newsletter for Health Professionals*. LaLeche League International. 9(2), November 1989
- Meier, P, et al. Nipple Shields for Preterm Infants: Effect on Milk Transfer and Duration of Breastfeeding. *J Human Lactation* 16(2): 106-114, 2000.
- Meier PP, Anderson GG. Responses of small preterm infants to bottle and breastfeeding. *MCN*, 12:97, 1987
- Mohrbacher, N. and Stock, J. (1997). *The Breastfeeding Answer Book*. La Leche League International. Schaumburg, IL.
- WHO/UNICEF. (1989). *Protecting, Promoting and Supporting Breastfeeding: The special role of maternity services*. A Joint Statement, World Health Organization. Geneva, Switzerland.
- Riordan, J. and Auerbach, K.G. (2001). *Pocket Guide to Breastfeeding and Human Lactation* (2<sup>nd</sup> ed). Boston, MA. Jones and Bartlett Publishers.
- Riordan, J. and Auerbach, K.G. (1993). *Breastfeeding and Human Lactation*. Boston, MA: Jones and Bartlett Publishers.
- Subcommittee for clinical application guide. (1992). *Nutrition during pregnancy and lactation*. Institute of Medicine, National Academy Press. Washington, D.C.
- Valatis, R., Scheeshka, J., and O'Brien, M. (1997). Do consumer infant feeding publications and products available in physician's office protect, promote and support breastfeeding? *J Hum Lact* 13(3);203-208.