What is biological nurturing?

A newly developed neuro-behavioral approach to the initiation and sustaining of breastfeeding

Encompasses two main components:

- **Position** – use of “laid-back breastfeeding” postures
- **Innate Behavior** – instinctual feeding reflexes that are released in the close mother/baby environment which aid latch and sustain milk transfer

Suzanne Colson, PhD, MSc, BA, RM, RGN

- Concept of biological nurturing was developed by Dr. Suzanne Colson
- She has over 35 years of clinical experience helping breastfeeding mothers
- Research for her master of science and doctoral degrees explored the instinctual behaviors related to breastfeeding for both mothers and babies
Why is a new approach needed?

- In England, as in the United States, most women (7 out of 10) plan to breastfeed, yet many stop before intended because they encounter problems
- 17% stop within the first week
- Research (2005) indicates women stop due to:
  - Latch/suck problems (35%)
  - Sore nipples, perceived milk insufficiency (25%)
  - Belief that bf too tiring, complicated (10%)
- As a result, many women start motherhood feeling disappointed, guilty, or like failures

Oregon Data

- 9 out of 10 women initiate breastfeeding
- 6 out of 10 women are bf (any) at 6 months
- Less than 4 out 10 women are bf (any) at 12 months
- Within the first week of birth, 33% of mothers have introduced formula; 43% within the first month
- Reasons for stopping exclusive bf include:
  - Not enough milk
  - My baby was hungry
  - Baby refused the breast; didn't like my milk

Benefits of Biological Nurturing

Appears to help:
- Establish breastfeeding
- Reduce breastfeeding problems
- Increase enjoyment of breastfeeding
- Sustain breastfeeding
Traditional BF Positions

- Mothers are upright
- Reliance upon a pillow
- Babies lie across the mother’s body
- Babies arms and legs may be unsupported
- Mother applies pressure to baby’s back for support

“Laid-Back Breastfeeding”

**Mother**
- Is in a comfortable semi-reclined position
- Body well supported, especially head, neck, and shoulders

**Baby**
- Lies on top of the mother with head near the breast
- Body is not flat but tilted upward
- Legs and feet are supported

Video Clip #1

(8 min 19 sec)
Mechanisms of Laid-Back BF

- Increases the dimensions of the maternal body space available to the baby
- Increases the number of baby positions available (360 BF positions)
- Uses gravity positively
- Mother’s body is supported (freedom of movement)
- Mother is focused on the baby
- Positional interactions work even when baby is asleep

Video Clip #2
(1 min 53 sec)

Innate Behaviors

- Definition: Natural reflexes, impulses, and/or responses that are not learned ... often termed inborn, instinctual, inherent, spontaneous, or hardwired
- Dr. Colson believes that both mothers and babies have breastfeeding instincts
- In the baby, she calls these inborn responses “primitive neonatal reflexes” (PNRs)
- In the mother, they are labeled as “instinctual mothering behaviors”
Primitive Neonatal Reflexes

- There are many types of reflexes, e.g. knee jerk
- These reflexes are observed in the newborn in order to
  - Evaluate infant’s nervous function
  - Predict gestational age
  - Assess physical health
- Previously 3 reflexes were thought to be involved in feeding: rooting, sucking, swallowing
- It now appears that there are around 20 feeding reflexes (see chart)

20 Feeding Reflexes

<table>
<thead>
<tr>
<th>Endogenous (also called Cues)</th>
<th>Rhythmic</th>
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</thead>
<tbody>
<tr>
<td>Hand to mouth</td>
<td>Suck</td>
</tr>
<tr>
<td>Mouth gape</td>
<td>Maseter (jaw jerk)</td>
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<tr>
<td>Tongue dart/lick</td>
<td>Swallow</td>
</tr>
<tr>
<td>Lip smacking</td>
<td></td>
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<tr>
<td>Arm cycle / Leg cycle</td>
<td></td>
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<tr>
<td>Finger flexion/extension (hand massage)</td>
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<tr>
<td>Anti-Gravity</td>
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<tr>
<td>Head righting</td>
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<td>Head lifting</td>
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<tr>
<td>Rooting (side to side)</td>
<td></td>
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<tr>
<td>Head bobbing (woodpecker)</td>
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</tbody>
</table>

Feeding Reflexes

These reflexes may play a dual role in the mother/baby feeding relationship

- May be a barrier to feeding
  - Cue misinterpreted by mother, e.g. rooting interpreted as baby shaking head no, baby not wanting to breastfeed
- Can be a stimulant to feeding
  - Key finding of research - reflexes more apt to stimulate feeding when the mother is in a laid-back position
Video Clip #3
(6 min 31 sec)

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Video Clip #4
(5 min 9 sec)
Instinctual Mothering Behaviors

- Nesting
- Transportation, picking up
- Body placing
- Olfactory (Smell)
- Greeting
- Grooming
- Gaze and Imitate

Maternal Effects

Biological nurturing appears to
- Increase enjoyment of breastfeeding
- Sustain breastfeeding

How?
- Releases higher concentrations of hormones (hormonal rush)
- Research has shown that a high maternal oxytocin level on day 2 is associated with increased bf duration

Maternal Hormones

Oxytocin
- Has an anti-stress effect
- Highest concentrations immediately following birth
- Released in pulses and it peaks

Prolactin
- Directs maternal love toward the baby
- Peaks about 30-45 minutes into a breastfeed
What reduces Oxytocin Levels?

- Cold temperatures
- Close observation
- Teaching
- Fear and anxiety
- Pain
- Conversation, questions
- Bright lights

Goal of Biological Nurturing for Mothers

Promote a hormone-enhancing environment conducive to breastfeeding

Video Clip #5

(1 min 14 sec)
Observation of the infant’s behavioral state is key.

There are situations in which biological nurturing does not work as easily as shown in previous clips.

Most common reason for a baby being unable to latch is because the baby is crying.

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Challenging Situations

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Challenging Situations

Neonatal Behavioral States

- Deep sleep
- Light sleep
- Drowsy
- Quiet alert (active)
- Active alert (fussy, irritable)
- Crying

Traditionally we have been told that a sleeping baby will not feed and a hungry baby will not sleep.

Research data suggests that some infants with breastfeeding problems may learn to feed better when in a drowsy or light sleep state.

The more awake the baby, the stronger the reflexes (which can interfere).

Feeding Baby in a Sleep State
Video Clip #6
(6 min 16 sec)

BF Problems That May be Helped by Feeding in a Sleep State
- Latch problems or refusal
- Strong let-down
- Baby fighting the breast
- Sore or flat nipples
- Breast fullness or engorgement
- Long feed intervals
- Disorganized suck-swallow-breathe
- Colic
- Choking
- Any non-medical problem that causes moms to worry

Recommendations for Feeding in the Hospital
- Skin to skin contact right after birth for 1+ hours
- Biological nurturing upon transfer to room for at least 3 days
- Don't wake sleeping baby; instead, hold baby in biological nurturing postures to stimulate feeding reflexes
- Do not wrap up baby and leave alone in crib for 8-12 hours
- Question the value of breast milk expression for a healthy term baby
Mothers and babies are versatile feeders. There is no right or wrong breastfeeding position. The right position is the one that works. The breastfeeding position the baby uses often mimics the position the baby was in the womb. Babies do not always feed for hunger; “non-nutritive sucking” is hugely beneficial to increase milk supply.

Babies often self attach; mothers can help them do this. A baby does not need to be awake to latch on and feed. Mothers and babies both have instinctual breastfeeding behaviors. Encourage mothers to trust their instincts. Mothers and babies play an equally important role in the breastfeeding relationship.
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