Skin-To-Skin
Does it make a difference with first breastfeeds?

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Objectives

- Learn the process of placing infant skin-to-skin
- Understand how the kind of birth can affect breastfeeding
- Learn the physiological newborn states to adjust to extra uterine life
- Learn and observe the self attachment breastfeeding process
- List ways to improve nursing practice of placing the infant skin-to-skin
The Magic Hour After Birth

Definition of Skin-to-Skin

Placing the newborn prone on the mother’s bare chest at birth or soon afterwards
Early Skin-to-Skin Contact

- Best practice for healthy term newborns
- Provides newborns and mother with numerous health benefits
- Improves suckling reflexes to breastfeed earlier after birth
Early Skin-to-Skin Within the First Hour After Birth

Maximizes the sucking reflex. The infant suck is rewarded with colostrum. (Phillips, R. 2013)
Benefits for the Newborn

- Improves infant neurobehavioral development and self-regulation
- Reduces infant grimacing and crying
- Regulates heart rate
- Stabilizes the newborn temperature more effectively than swaddling the infant
- Improves sucking reflexes to breastfeed more easily immediately after birth

(Ferber, Makhoul, 2004)
Benefits for the Mother

- Over the long term, mother/baby dyads with early Skin-to-Skin demonstrate higher child/maternal interaction scores than those mothers who did not do Skin-to-Skin, regardless of feeding type.

(Mahmood, I, 2011)
Benefits for the Mother

- Breastfeeding promotes uterine involution and decreases the rate of post partum hemorrhage.

- Mothers are more comfortable with first breastfeeds.

- Mothers who held their infants skin-to-skin indicated a strong preference for the same type of post delivery care in the future (86%) (Carfoot, 2005, Mahmood I, 2011).
Birth Practices That Affect Breastfeeding

- Cesarean Sections
  - Mother/Baby separation which interrupts the Magic Hour after birth when the baby is most ready to self-attach to breast (Righard, 1990)
  - Delay of Lactogenesis II
    - Lack of infant stimulation
    - Fluid overload in breast
    - The hormonal balance of oxytocin (pitocin) and prolactin (Riordan, 2010)
Instrumental Deliveries (vacuum and forceps)

- Increases feeding difficulties (Demessie, 2004)
- Infant often is tired and trying to recover from this difficult birth and is not ready to start breastfeeding.
- Lack of early breast stimulation can greatly affect milk supply
- Infant weight loss directly affects the infant’s ability to do effective breastfeeding
- With weight loss, the infant may need formula supplementation
- Mother may have to start pumping in hospital, which is another stressor
Epidural Anesthesia

- Infant has reduced sucking ability
- Increases the time to effective feeding
- Neurobehavioral status affected (very sleepy baby, abnormal breathing, temperature regulation)
- Delayed Lactogenesis II

“Recent studies suggest that epidural anesthesia and IV oxytocin during intra partum and post partum, is most likely one of the reasons for early cessation of breastfeeding before or at one month.”

(Dozier, 2013)
### Epidural Medications

- Agents in epidurals cross the placenta and may affect infant sucking.
- The combination of infant factors like poor suckling, delayed initiation of breastfeeding, less breastmilk consumption can correlate with poor breastfeeding outcomes.
- Epidural anesthesia is independently associated with decreased endogenous oxytocin levels.
- Mother who received both epidural anesthesia and exogenesis oxytocin had significantly lower endogenous oxytocin levels when breastfeeding within 2 days post partum.

### Other Factors

- Relationship between anesthesia and breastfeeding is complex.
- It involves institutional changes
- Clinical practices like Skin-to-Skin
- Maternal and infant factors (i.e. labor progress)
- Staff Education
- Maternal motivation
- Maternal and family education

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**What is the mechanism?**
The Direct Effect of Epidurals

- Unclear if it is the direct effect of epidural anesthesia with overall breastfeeding cessation or whether epidurals are a marker for other unmeasured compounding factors.

- Alternatively, any effect on breastfeeding outcomes could be a result of synergism:
  - Combination of epidurals
  - Induced or prolonged labor
  - Related care practices associated with exogenous oxytocin

*While biologically plausible, the exact mechanism is unknown.*
Could this change Practice?

• Will these risk factors be identified in labor, so this mother is given more support to begin breastfeeding?

• Will Skin-to-Skin be practiced on a more regular basis to overcome these potential problems?

• Will institutional and clinical outcomes change with Skin-to-Skin to support the continuation of breastfeeding?
The Importance of Skin-to-Skin to Stabilize the Newborn

- **Newborn transition to extra uterine represents one of the most dramatic and potentially hazardous events in human life.**
  - Lungs- fluid clearance and lung volume becomes established around 2-4 hours after birth
  - Heart rates change dramatically: 5-10 minutes (160 beats per minute), at one hour (130 beats per minute)
  - Circulation changes: blood eventually flows through all four chambers of the heart
  - Carbohydrate metabolism-blood glucose levels gradually increase over several days- dietary carbs low in the first few days of life
Continued Stabilization of the Infant

- Gastrointestinal changes- meconium passes, baby is very gassy, especially with increased volume of food
- Infant has more stable blood pressure
- Infant’s contact with the mother colonizes the infant with harmless bacteria, which protect the infant from pathogenic bacteria
- Hormones- Fetus signals body to go into labor
  - Surge of catecholamines, epinephrine, norepinephrine at time of labor and early after birth (up to four hours)
  - enhance surfactant release
  - augment release of thyroid hormones
  - assist with lung fluid absorption

*Regardless of feeding choice, Skin-to- skin supports the normal physiological transition of the newborn to extra-uterine life.*
*(Christenssen, 1992, Walters, 2007)*
Skin-to-skin Improves Breastfeeding Patterns
Positive Outcomes For Breastfeeding

- Infants held Skin-to-Skin were more than twice as likely to breastfeed successfully during their first feeding post birth than those who were swaddled and held. (Carfoot, 2005, Mohmood, I, 2011)

- Infant spending more than 50 minutes Skin-to-Skin with their mothers immediately after birth, were eight more times likely to breastfeed spontaneously.

- At birth, the infant’s strong suckling reflex and self attachment to the breast starts the milk removal process – synthesis of milk-Lactogenesis II.

- Infant immediately receives immunological components of colostrum in this early breastfeeding moment.

- Early Skin-to-Skin results in early and frequent breastfeeding, and correlates with longer duration and exclusivity of breastfeeding. (Estroom 2003, Mahmood I, 2011)
Natural Migration to the Breast

occurs approximately one hour after birth

(Moore et al., 2007)
The first hour after birth is when the baby has the strongest sucking reflex.

- Hand massage by baby releases higher levels of maternal oxytocin (Mattesen, 2001)
- This jump starts “Lactogenesis II”
- Oxytocin is also associated with strong nipple erection, which helps the baby latch onto the breast
- Gratification of this reflex “imprints” this normal bio behavior to facilitate the baby to learn to suck
HOW DOES THE BABY FIND THE BREAST ????
NEWBORNS HAVE A HEIGHTENED SENSE OF SMELL

- Human infants have a fine olfactory discrimination capacity to be attracted to maternal breast odor within the first hour of life.
- Natural occurring odors play a role- infants respond to their own amniotic fluid (Varendi, 1998).
- Infants placed Skin-to-Skin near the breast, spread their own amniotic fluid on the mother’s chest and breasts and follow this scent path to find the nipple and aerola (Muzuno, 2004).
- Skin-to-Skin also results in the early recognition of the mother’s milk odor.
- The aerola has scent organs that help the infant to find the mother’s nipple-the Montgomery glands release odorants to attract the infant (Dorcet, 2007).
Ways to Improve Nursing Practice

The Iowa Model of Evidence Based Practice to Improve Quality of Care, Implementing Skin-to-Skin Contact
Titler, et al, 2001
No matter the choice of feeding, Skin-to-Skin Care at birth follows the evidence based research for the best newborn care.
Celebrating Skin-to-Skin

A foundation of the Baby Friendly Hospital Initiative
References

**Skin-to-Skin Care and the Effects on Breastfeeding**
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**Infant Smell and Breastfeeding**

Varendi H, Porter RH, Winberg I: Natural odour preferences of newborn

**Unexpected Collapse of Healthy Newborns**