

A Gentle Touch: The Unique Breastfeeding Needs of Post Cesarean Mothers

Top Tips from the Presentation

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Timing: 60 Minutes

Description: With cesarean rate of 32.2% in the United States, the need for specific breastfeeding support that meets the unique needs of these mothers is imperative. Mothers who have had cesarean section are at risk of edematized breasts, sedated or sleepy babies, delay in lactogenesis, increased pain, and difficulty moving in early postpartum. This presentation looks at the new concept of family centered cesarean and how this approach changes breastfeeding outcomes and family attitudes about their birth. Additionally, techniques and information for better success post cesarean will be reviewed.

Objectives:

- List three potential risks to breastfeeding post cesarean section.
- Define family centered cesarean.
- Identify three things nurses/doulas/LCs can do that can help ease challenge associated with cesarean section.

Latest data from CDC on cesarean rates, circa 2015:

https://www.cdc.gov/nchs/data/nvsr/nvsr66/nvsr66_01.pdf

Trends in Cesarean

- Cesarean rates have quadrupled in last 20 years
- Over one third of all births end in cesarean
- World Health Org. recommendation less than 10-15% rate

At population level, caesarean section rates higher than 10% are not associated with reductions in maternal and newborn mortality rates. WHO, 2015

Does Cesarean Impact Breastfeeding?

- Meta-analysis of 53 studies and half a million mothers showed pre-labor Cesarean was associated with poor rates of early breastfeeding (Prior, 2012)
- Breastfeeding Post Cesarean Reduces Pain
 - 1 in 4 (23%) of the mothers who breastfed for two months or less still experienced chronic pain in the surgical site 4 months post-op
 - Just 8% of those who breastfed for 2 months or longer. (ESA, 2017)

- Cesarean Changes Microbiome
 - Higher diversity of bacteria
 - More pathogenic bacteria
 - Breastmilk can change this over time
 - Emergency delivery higher diversity of microbiota (regardless of feeding method) compared to vaginal or elective c-section
 - Exclusively breastfed babies had increasing relative abundance of Bifidobacteria
 - Mode of delivery and breastfeeding are strong determinants of the infant gut microbiota, with persistent and potentially interactive effects throughout the first year of life. Breastfeeding appears to influence microbiota diversity differently at 4 versus 12 months of age.

Impact on Initiation (Hobbs, 2016)

	Emergency Cesarean	Vaginal Delivery
Breastfeeding Difficulty	41%	29%
Used Resources In Hospital	67%	40%
Used Resources Out of Hospital	58%	52%

- Zanardo et al. (2010) found similar results, reporting that women who delivered via emergency c-section were more likely not to have been able to breastfeed their baby at delivery or at discharge.

Primary Impact

- Separation of Mother and Baby
- Delays and Reduces STS
- Changes Hormonal Regulation
- Impact of Breastfeeding

STS and Human Biology

- Necessary for Baby
 - Babies are Born One at a Time
 - Babies Born Naked
 - Babies Born without ability to thermoregulate
 - Babies poop randomly
- Necessary for Mother

- Human Breasts change up to 2 centigrade according to Temperature of Baby
- Montgomery Glands release oils that smell like Amniotic Fluid
- Bacteria from mothers direct skin contact colonizes the baby's Body (promotes immune stability)

Benefits for Baby

- Necessary for Mother
 - Human Breasts change up to 2 centigrade according to Temperature of Baby
 - Montgomery Glands release oils that smell like Amniotic Fluid
 - Bacteria from mothers direct skin contact colonizes the baby's Body (promotes immune stability)
- Stabilizes Heart Rate and Breathing Rate (Bergman, 2004)
 - 8% unstable with mother, 86% unstable in incubator
- Develops neurologic system
- Promotes quiet sleep and normal HRV (Morgan, 2011)
 - (Separation dramatic increase in HRV power, 86% decrease in Quiet Sleep, 176% increase in autonomic activity)
- Reduces Crying in the Infant, supportive for Cardiac health

Benefits for Mother

- Encourages uterine contractions
- Faster placental delivery
- Reduced maternal blood loss
- Increased release of oxytocin and prolactin

Benefits for HCP

- Babies stay warmer
- Glucose levels are higher
- Healthier transition for couplet
- Less likelihood of need for supplementation

Hypothermia Risk of STS post OR?

- Belief of risk
 - low temperature in the operation room
 - mother's unconsciousness
 - spread of mother's heat from the center to the environment
 - reduction in mother's central temperature

- Beiranvand, 2014 found mother and infant's skin-to-skin contact is possible after delivering via cesarean section and does not increase the risk of hypothermia. Skin-to-skin contact after delivering via cesarean section was possible, maternal satisfaction level with skin-to-skin contact was higher, and cesarean neonates were not prone to hypothermia and improve breastfeeding initiation and facilitate the successful experience of breastfeeding compared to routine method of infant care in delivered via cesarean section.
- Physiology and Hormones
 - Changes in prolactin release
 - Reduction in prelabor oxytocin and prolactin receptor peaks in the breasts and brain (animal studies) with potential impacts on breastfeeding, maternal adaptations, and maternal-infant attachment (induction, prelabor cesarean) (Buckley, 2015)
- STS
 - Rooming In with Baby (STS)
 - Separation of mother and baby
- Glucose stabilization
 - Increase risk of supplementation
- Increase risk of PP Mood disorders
- Circumstances of Cesarean Birth on Breastfeeding
- Delay of Initial Breastfeeding
 - Importance of First Hour
 - Infant Stages
 - Oxytocin Release
 - Colonization of bacteria
 - Crawl to breast neurological patterning
- Delay of skin to skin contact
 - Encourage partners to STS
- First Few Days
 - Increased pain: adrenaline release reduces oxytocin release
 - Increased risk of edematized breasts

Family Centered Cesarean Delivery

Is it Safe?

- Asheville, NC Study (Francis, 2015)
- No negative impact on job performance.
- Length of FCCD was not significantly longer [median=79 (47-126) vs. 67 (42-107) minutes].
- No FCCD babies had temperatures requiring intervention (cooling or warming) as compared to 6 (16.7%) comparison babies (p=0.066)

Stevens, 2014 Meta-Analysis

- increase in maternal and newborn emotional well-being
- increase in parent/newborn communication
- reduction in maternal pain/anxiety
- stabilised physiological stability for the mother and newborn
- **improved breastfeeding**

Travis, 2016

- Skin-to-skin supported by NRP guidelines (AAP & AHA, 2011)
- Skin-to-skin superior to technology (Bergman et al, 2004; Ibe, et al, 2004; Lambesis, Vidyasagar, & Anderson, 1979)
- Skin-to-skin effective in treatment of hypothermia (Christensson, Bhat, Amadi, Eriksson, & Hoyer, 1998).
 - Evidence-based Treatment of Neonatal Hypothermia (Galligan, 2009)
- *Myth*- infants must be removed from the cold intraoperative environment to maintain infant thermoregulation (Gouchon et al., 2010, Nolan & Lawrence, 2009)
- Skin-to-skin is analgesic for newborns (Gray, Watt, and Blass, 2000; Marin et al. 2013)
 - Dose: more is best but...
 - 2 minutes can be therapeutic (Chermont et al, 2009)
 - 15-30 minutes most commonly studied (Gray, Watt, and Blass, 2000; Velandia, Matthisen, Uvnäs-Moberg, & Nissen, 2010)
 - Negative effects- **None!** (Moore, Anderson, Bergman, & Dowswell, 2012)
- The intervention group experienced:
 - Lower maternal pain scores ($p > .05$)
 - Lower maternal anxiety scores ($p > .05$)
 - Lower infant respiratory rate ($p < .05$)*
 - Increased infant temperature ($p < .005$)*
 - Infant salivary cortisol ($p > .05$)
 - Favorable subjective data- **singing!**
 - The control group experiences- great variations in care!

Delay in Lactogenesis

- Breastmilk transfer among women with c-sections was significantly lower in the first 5 days postpartum, compared to women with vaginal births (Evans, 2003_)
- Delayed onset of lactation was significantly higher in mothers that delivered via c-section compared to those that delivered vaginally (Scott, 2007)
- Maternal Stress - hormonal pathway that stimulates lactogenesis is disrupted by c-section delivery, either from maternal stress or decreased oxytocin secretion, and can hinder milk production

- Infant stress may affect lactogenesis via weak or inadequate sucking ability or reduced infant demand

Importance of first 24 Hours

- First 72 Hours
- Key for longterm supply
- Receptor sites -Progesterone to Prolactin

Get Hands Involved

- Hands On Pumping
 - Getting your hands involved significantly increases milk released
 - Increase fat content in expressed milk
 - Increases oxytocin output (which in turn stimulates prolactin release)
 - Recommended to then used hand expression post hand on pumping

Hand Expression

- Step One: Wash hands and container for milk. Hold breast in the C-position or at 3 and 9 o'clock using the same hand as breast you are expressing.
- Step Two: Have thumb and forefinger about an inch and a half from nipple. Press back towards chest and then squeeze fingers together. Release. Repeat.
- <http://newborns.stanford.edu/Breastfeeding/HandExpression.html>

Parker Research

- **Parker showed that when remove milk within first hour mothers have double milk at 3 weeks and double even at 6 weeks**
- Only the mothers who expressed in first hour had significant advantage of milk supply, not 2-6 hours or after 6 hours.
- All mothers peak around 3 weeks and then taper down.

Why Hand Express?

- Traditional research shows that mothers who pump see their milk supply diminishing over time, but when moms use hand expression the milk supply **actually increases over time.**
- Mothers taught HOP increased MDV (48%) despite pumping less. (Morton, 2009)

- For mothers that are using hands on pumping, the calorie and fat values are significantly higher 62.5 g of fat per liter versus 25-45. (Morton 2014, Dewey et al 1984, Mandel Pediatrics 2005)

Edematized Breasts

- Symptoms
 - Swelling in breast tissue or areolar space with pitting edema
 - Causes
 - Excess iv fluids
 - Inability to process postpartum fluids for variety of medical reasons
- Treatment
 - Avoid pumping
 - Reverse pressure softening
 - Flower hold
 - Feed baby often to avoid engorgement
 - Hand massage

Addressing Fatigue (Lai, 2014)

- Poorer physical functioning
- More fatigue (Declercq, 2008)
- BFHI – rooming in
- Mother's who room in ensure optimal care for babies at expense of own needs and desired rest
- Rest after surgery helps reduce postpartum fatigue (Jansen, 2007; McGovern, 2006)
- High levels of melatonin from exhausted mothers are transferred to babies resulting in immature sleep/wake cycle sleep by babies and even less sleep (Groer, 2005)

Night Exhaustion

- Lack of visitors permitted on the ward
- Hesitation of the women to summon midwives for assistance
- Compounded maternal tiredness
- Supplemented with formula so babies would sleep through the night
- Attached cribs helped ease night feedings

- By Day three most women post cesarean had an easement of postpartum fatigue and post surgical pain.
- IV lines and catheters removed and were ambulatory.
- Study suggests a blood biochem test to test for melatonin levels
- Suggest moderation in rooming in to accommodate for postpartum fatigue

Changes in Suck

Sakalidis, 2013

- “CS infants (exposed to pethedine and norpethedine) displayed more anterior tongue movement on Day 3 than at follow-up compared with the V group, which showed a similar amount of movement at each assessment (p for interaction < 0.001). Compared with the V group, the CS group showed faster suck rates, especially on Day 3 (p<0.001), later times to first breastfeed (p=0.01) and breast fullness (p=0.03), and lower neurobehavioral scores (p=0.047). Breastfeeding duration and milk intake were similar between groups. “

Get Creative

- Postpartum Doulas
- Bring in beds for partners to sleep comfortable overnight
- Encourage grandparent care for nighttime rest
- Have CLC/IBCLC on staff day and night
- More than one lactation visit a day

Questions:

info@motherjourney.com, www.motherjourney.com

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