

Skin to Skin Care: The first step in bonding!

Carole E Peterson MS, IBCLC

Babies are so amazing from the beginning



We have always thought babies

- Just eat
- Sleep
- And cry
- But they can do so much more!

Infants have so many abilities

- But we have not noticed
- Our birth procedures do not encourage or recognize these abilities
- We ignore all of the newborn messages
- Mothers need to know these responses
- Remember: Breastfeeding initiation is innate!
- Attachment behaviors are observed immediately after birth

Video of newborn neck/searching

Nils Bergman

- Breastfeeding is a brain base behavior of the newborn
 - Doesn't this just make sense?
 - Infants are born to survive!
- Babies are born with the behavioral ability to breastfeed
- But the capability is fragile
- Requires the uninterrupted presence of the mother

Birth interrupts the only world they have known

- They need to regain their sense of organization
- Transition from the womb to the world requires adaptation
- Born with the ability to breathe and eat
 - Survival
- Need motion, they are used to this!
- Skin to skin is part of the perfect transition

“Most visibly remarkable observation of

- The first minutes of life is the ability of a newborn, if left quietly on the mother’s abdomen after birth, to crawl up to her breast, find the nipple and begin to suckle”
- All babies, who were given a chance, crawled toward the breast immediately
 - Girish 2013





How amazing is that?

Babies know exactly what to do and where to go

Herein lies the disconnect

- When mothers and babies are not allowed to stay together
- The babies do not exhibit these behaviors
- Babies are not able to show us all they can do
- And when babies DO exhibit these behaviors, mothers do not understand how or why the babies do what they do

We begin with skin to skin care

- Proven effective for preterm and full term infants
- Provides warmth
- Provides continuation of connection with the mother
- Interventions such as warming and cleaning are “superfluous”



9 Instinctive Stages in Skin to Skin

Parents and family need to see this chart before the infant is born

Stage	Name	Description	Time
1	Birth cry	Occurs after the birth	
2	Relaxation	Relaxed hands, no mouth movements	
3	Awakening	Small movements of the head and shoulders	3 minutes post birth
4	Activity	Mouthing, suckling and rooting movements	8 minutes
5	Rest	Occurs at anytime after a period of activity	
6	Crawling	Approaches breast with short periods of activity	35 minutes
7	Familiarization	Licks nipple, touches and massages breast	45 minutes
8	Suckling	Attaches and suckles	60 minutes
9	Sleep	Falls into a restful sleep (Widstrom, 2011)	90 – 120 minutes

Moms with Skin to Skin Immediately After Birth

- More likely to breastfeed sooner
- More likely to breastfeed more effectively
- Had a longer duration of breastfeeding
- Cared for their infants with more confidence
- Recognized and responded to infant's need sooner
 - (Crenshaw, 2012; Bigelow, 2014)



Infants With Skin to Skin Immediately After Birth

- Cried less, Stayed warmer
- More stable blood sugars
- More stable heart and respiratory rates
- More likely to leave hospital exclusively breastfed
- More likely exclusively breastfed during first 6 months of life
 - (Bigelow, 2014)
- Number of infants requiring breastfeeding interventions reduced... saving nursing time
 - (Moore 2007)

What makes the biggest impact?



Immediate and sustained skin-to-skin contact for the healthy term newborn after birth AWHONN Practice Brief Number 5, 2016

As duration of STS increases in the first 3 hours post birth
SO DOES THE RATE OF EXCLUSIVE BREASTFEEDING IN THE HOSPITAL

- 1-15 minutes 4.2%
- 16-30 minutes 6.4%
- 31-59 minutes 6.2%
- 1-3 hours 72.1%

(Bramson 2010)

Why is something so easy, so hard to do?

And it is free!

Developing Skin to Skin as a Standard of Care

- Until we educate mothers ahead of time about skin to skin we are only going to see token skin to skin happening
 - What we mean by skin to skin
 - Why it is important
 - How long it needs to be done
 - How visitors interfere with skin to skin and breastfeeding
- Educating on Day 1 is too late
 - Fielding (2011) uses the term “positioning for prevention.” With skin to skin we must educate before the infant is born if we want skin to skin to occur for extended periods of time.

Video of poor latch w/o skin to skin

Skin to Skin in the Hospital

- Barriers (nurses)
 - **Visitors** in the room 92.8%
 - Others wanting to hold the infant 71%
 - Mothers not knowing it is important 50%
 - Mothers grogginess 43%
- Barriers (mothers)
 - **Visitors** in the room
 - Others wanting to hold the infant
 - Grogginess
 - 86.6% of mothers felt that they spent enough time doing skin to skin, none of the nurses felt that the mothers spent enough time doing skin to skin
 - (Ferrarello 2014)

Timing or Duration

Infants were all placed skin to skin immediately or as soon as possible

- Mothers were asked to spend as much time doing skin to skin as possible while in the hospital
- Mothers spent between 1.25 hr and 28.6 hr with a mean of 10.8 hr.
- 77% exclusively breastfeeding at 4 weeks
- The longer it took the infant to be placed skin to skin the less likely to be exclusively breastfed
 - Ruxer 2015

Delaying the bath also makes a difference

- Delaying the first bath till after 12 hours of age increased exclusive breastfeeding from 31.4% to 40%
 - (Peer, 2011, 2013)
- If you don't have to have your bath you can do more skin to skin with your mother

Why is this so important?

Importance of Skin to Skin care

- Mild hypothermia in the full term infant requires that the infant be immediately warmed
 - If the infant is moved to the nursery and placed under a warmer this requires mother infant separation and can cause stress in both mother and infant
 - If the infant is placed STS with its mother
 - Separation does not occur
 - The infant will warm faster than if placed under a warmer
 - There will be opportunity for increased maternal infant attachment

Importance of Skin to Skin care

- Facilitates attachment and contributes to the attachment process
 - (Johnson 2005, Karl 2006)
- Helps mother get to know their babies better
 - (Roller 2005, Johnson 2007)
- Helps provide the infant with the best source of normal bacterial colonization
 - Infants are born sterile and need normal colonization, not colonization from hospital bacteria
 - (Hanson 2006)

Importance of Skin to Skin care

20 minutes of STS will reduce cortisol levels (stress hormone) in

- Infants by 67%
- Mothers by 48%
- High levels of cortisol interfere with infant's ability to organize and breastfeed
 - (Morelius 2005, Engler 2005)

Full Term Infant

- Skin to skin is a wonderful tool for coping with an newborn that is not nursing or is having breastfeeding problems
 - (Meyer 1999, Chiu, 2005)
- Many times when placed STS, the infant will fall into a deep sleep and after a period of 15 to 30 minutes awake on his own and start breast seeking movements
- STS decreases the stress in both the mother and infant which occurs when breastfeeding problems occur
 - A non-stressed out mother and infant is a lot easier to work with and is so much happier!

Skin to Skin After C/section

- Infants were placed skin to skin on their mother's chest while in the OR
 - Exclusive breastfeeding rates increased from 20% to 68% with the new program
 - Only 33% received formula supplementation if they did skin to skin in the OR
 - 42% received formula supplementation if they didn't get skin to skin in the OR, but got it with in 90 minutes of the birth.
 - Hung,2011

What will help the mother?

Information and education

Position for Skin to Skin



Arms and legs should be extended so as much of the infant's body surface as possible is in contact with the mother's body

Infant should have only a diaper on, preterm infants also need a hat and socks

The infant is placed on its abdomen between the mother's breasts.

Position

- For the safety of the infant when doing skin to skin
 - The mother needs to be at a 35-80° angle This is the optimal position for infant safety
 - Infant's head and shoulders are elevated, a position which provides the optimal lung function
 - Infant's head is tilted back providing a good airway. Mother has to be able to see the infant's face
 - (Suzanne Colson, 2014; Killion, 2017)



Early skin to skin contact begins at birth

- According to mammalian neuroscience, the intimate contact inherent in this place evokes neurobehaviors ensuring fulfillment of basic biological needs
- A sensitive period
- Infant needs certain behaviors that encourage and support survival
 - Moore 2016



CDC MPINC skin to skin indicators

- Transitions infants
 - Womb to the world
- Increases likelihood of breastfeeding
- Practice increased from 40.4% to 83%
 - Moms need to know to request this
 - Remind them and their support people
- Routine care done while skin to skin increased 16.6% to 49.5%

Thermoregulation, Safari 2018

- The prevalence of hypothermia for newborns who received skin to skin was 2% compared to 42% in the control group
- Skin to skin contact provides an appropriate and affordable yet high quality alternative to technology
- It is easily implemented (it is free!)
- Has the potential to save newborns and mothers lives
- It is necessary to prioritize the training of health providers to implement essential newborn care including skin to skin care

The baby arrives!

- He is ready to survive
- He has the skills to eat and breathe



Primitive neonatal reflexes

- Hand to mouth
- Mouth gape
- Tongue dart
- Hand/finger flex and grasp
- Arm/leg cycle
- Head lift
- Head bob
- Suck and swallow
- And 2 of these reflexes safeguard breathing
 - Colson, 2014

Hand to mouth



Mouth gape



grasp



Head lift





Motor skills

- Must be nurtured, promoted and practiced
 - Kinesiologist Jane E. Clark
- Sensory-perceptual-motor learning
- Time to rehearse their feeding movements to become skilled
 - “Motor memory consolidation vs skill decay”
 - Think of yourself learning a new method of eating

When you hold your newborn in

- A bottle feeding position, his skill memory associates this with a bottle
- Focusing on using a laid back, skin to skin position associates learning the skill of eating with this position that encourages all of his reflexes and soon to be learned motor skills
- Less interference in his pathway to learning

Moro reflex is more than a reflex

- A non verbal communicative behavior whose meaning is a request to be in mother's arms
- Crying and orientation of the body head and eyes toward a human are gestures of intention to communicate
- The neuro mechanism of the Moro reaction probably involves both the fear and the separation-distress systems

– Rousseau, 2017

These reflexes are all innate feeding behaviors

Effect of epidural on these reflexes

- Can inhibit sucking reflex
- Observed 24 to 48 hours after birth
- Rhythmic reflexes decreased when exposed to synthetic oxytocin
 - Intrapartum administration inhibits these reflexes associated with breastfeeding
 - This does not appear to be dose dependent
 - Gabriel et al, Breastfeeding Medicine, 2015
- Pitocin can negatively effect duration of breastfeeding
 - Higher doses of Pitocin, unlikely to be breastfeeding at 3 months
 - Fernandez, Acta Paediatrica, 2012

Behaviors

- Dependent on hormones and body movements to progress
- Self attachment is a behavior
 - Primary driving force
- The purpose of this behavior is to ensure the basic biological needs of the infant
- But you need the stimuli to bring the baby to this point
- When we separate the mother and baby we lose this window of opportunity

Important stimuli

- Mother's smell
- Skin to skin contact
 - Touch
 - Warmth
 - Stability and movement

This is the first step to an efficiently wired right brain

This is accomplished by skin to skin

Think of the mother's reaction

- When she sees these behaviors and then realizes these are all breast seeking behaviors
- Education and skin to skin immediately after delivery can make the difference
- EMPOWERING!



If separated from mother, the baby

- Anxious
- Distressed
- Tenses
- Arches
- But if not in contact with her skin, he arches
- Not “getting away” but a sign of distress
- Disorganizes his behavior
- Making voluntary actions difficult
- Makes learning difficult





Protest despair response

- When an infant is separated from its mother to any other habitat
- This elicits protest despair
- Babies know its life and survival depend on the right habitat (Mom!)
- First response is sympathetically mediated process
- Crying and extensor activity
- Response is to alert the caregiver of this crisis

What we know now

- When mothers hold their babies in a semi reclining position
 - Less pressure on baby's back
 - Mother's body is the foundation, allowing baby to sequence the reflexes to find and suckle at the breast
 - More stroking of babies feet seemed to elicit lip and tongue reflexes
 - Chin position controlled by gravity

We need a positive start to breastfeeding

These techniques, along with skin to skin, can provide that start.

Babies lose control when they cry

- When they cry they become disorganized
- Difficult to perform new behaviors when disorganized
- Waiting until a baby cries to signal hunger disorganizes him from learning a new behavior
- When babies were in a drowsy or light sleep, they were more likely to latch and transfer milk
- Babies change state rapidly
- State changes are not smooth transitions

What we all can do

- Educate all about the newborn innate abilities
- Provide support and encouragement which will affect initiation, bonding, attachment and self-efficacy
- Support the physiologic process of breastfeeding
- Undisturbed by interventions and directions
- Healthy newborns remain with their mothers
- Remove artificial time constraints
- Minimal support to facilitate breastfeeding
- Babies can and will do this!

– Shafer 2015

Breastfeeding confidence

- And newborn breastfeeding behavior are strong predictors of duration as well as exclusivity
- HCP should monitor the breastfeeding behavior of newborns
- Provide the mothers with factual information
- Help them to develop maternal confidence in breastfeeding before they are discharged

– Loke, 2013

Outcome

- Early Skin-to-Skin care is a straightforward example of an evidenced-based practice intervention that, when intergraded into the routine care of healthy newborns, creates a positive and beneficial experience for mothers and infants

• (Haxton, 2012)

20 Year Follow-up of Skin to Skin Care

- A total of 494 of the original 716 participants were identified
- The effects of KMC at 1 year on IQ and home environment were still present 20 years later
- These now grown up individuals had reduced school absenteeism, hyperactivity, aggressiveness, externalization, and socio-deviant conduct of young adults
 - (Carpak 2017)

A bridging strategy

- Baby is at the right place at the right time, right habitat
- Encourage any age baby to organize his innate behaviors
- Womb to the world
- Continuity with mother
 - Voice, heartbeat, odor, body space
- Newborns achieve metabolic adaptation
- We can also use this technique when baby is home

Video of older baby searching behavior

Encourage mothers

- To cuddle babies for the first 3 days
- Transition from the womb to the world
- Needs to learn his new environment
- Enables his ability to learn new behaviors
- Bottles will not encourage him
- Drink rather than drown does not help him to learn
- He needs to practice his skills!

Bottom line

- Infants thrive on close contact with caregivers in early postnatal life
- They are completely dependent on others for care and emotion regulation
 - Moore, 2017
- Touch and interaction make the difference
- Holding your baby increases breastfeeding success as well as their transition to this new life

Health professionals

- “If you can send parents home with their newborn baby competent and confident and no longer needing you, you have done your job well.”
- “Your goal should be to have parents leave the nursery emotionally attached to their baby.”
- You can be confident that this baby is off to a good start in life.
 - Bergman, 2013.

When we provide this information to mothers

- We empower them
- To bond with their babies
- Provide the first important feed sooner
- Breastfeed longer

We build families

Additional information to expand your knowledge

- Supporting Sucking Skills in Breastfeeding Infants, 2017
- Catherine Watson Genna
- Chapter 2 by Nils Bergman
- Chapter 4 by Christina Smilie