Skin-to-Skin Contact

Key Messages for Health Care Providers

Skin-to-skin contact gives
a newborn the best start for life.

November 2023

Perinatal Services BC
Provincial Health Services Authority

Territory Acknowledgement

We respectfully acknowledge that the document "Skin-to-Skin Contact Key Messages for Health Care Providers" was developed at Perinatal Services BC on the unceded, traditional and ancestral territories of the Coast Salish People, specifically the xʷməθkʷəy̓əm (Musqueam), Sḵwx̱wú7mesh (Squamish) and səl̓ílwətaɬ (Tsleil-waututh) Nations who have cared for and nurtured the lands and waters around us for all time. We give thanks for the opportunity to live, work and support care here.

A note on gender inclusion and the language of this document

This document uses gender inclusive language as health care providers play a critical role in creating a supportive environment that meets the needs of transgender and gender non-conforming (TGNC) people. Breast/chest feeding is traditionally understood to involve a person of the female sex and gender identity (cisgender) who also identifies as a woman and mother. However, it is important to recognize that there are people in a parenting and human-milk-feeding relationship with a child who may not self-identify as such. We encourage all health care providers to inquire with families on first consultation what language they use when referring to their pregnancy, parenting and infant feeding as well as their pronouns.

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Perinatal Services BC
Suite 260 1770 West 7th Avenue
Vancouver, BC V6J 4Y6

T: 604-877-2121
F: 604-872-1987
psbc@phsa.ca
www.perinatalservicesbc.ca
www.psbchealthhub.ca

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Introduction

It has been common in Western culture to separate a mother/birthing parent and newborn after birth for medical interventions. This practice goes against the history of evolution where close contact between birthing parent and newborn was necessary for newborn survival. Neuroscientists have found placing a naked newborn prone (on their stomach) on their caregiver's bare chest with a blanket over them, also known as skin-to-skin contact or "kangaroo care," evokes neurobehaviours that help to meet and promote basic biological needs. Being in immediate, continuous, and uninterrupted skin-to-skin contact during the first hour after birth elicits the newborn's internal process to go through 9 instinctive stages: birth cry, relaxation, awakening, activity, rest, crawling, familiarization, suckling and sleeping.[1] Immediate skin-to-skin contact following birth also provides the initial colonisation of the newborns microbiome. Evolving research on epigenetics and the microbiomehighlights the importance of the optimal microbiome, enhanced by breast/chest feeding which has been implicated in improving long-term health outcomes.[1, 2] It is for these reasons that skin-to-skin contact is recommended as a standard of care for all families with newborns.

There may be a variety of personal reasons that make skin-to-skin contact difficult for some women/people, including experiences of trauma. Use a person and family-centred, trauma informed, and culturally safe approach to reduce risk of harm and promote evidence-informed safer skin-to-skin contact practices that support parents' agency over their and their newborns health. Evidence supports skin-to-skin contact, offered via a trauma-informed approach, to promote safety, security and attachment for those who have experienced trauma.[3, 4]

This document is intended to provide health care providers with evidenced based key messages on how to educate and support birthing people, families and caregivers with newborns on safe skin-to-skin contact as a standard of care recommended by provincial, national and international authorities e.g., World Health Organization. The supporting evidence in this document is inter related and may speak to various key messages.
Appendix A provides health care providers with a promotional poster on skin-to-skin contact.
Appendix B provides promotional posters that health care providers can offer to families or publicly display.

Skin-to-Skin Contact Key Messages

1. Skin-to-skin contact should begin immediately following an uncomplicated birth.[5]
2. Skin-to-skin contact can be done regardless of birthing method (vaginal delivery or c-section).[3]
3. Preterm newborns benefit from skin-to-skin contact.[5]
4. Skin-to-skin contact should continue uninterrupted for the first 1–2 hours post birth OR until the completion of the first feeding OR as long as a mother/birthing parent wants.[5]
5. Skin-to-skin contact can be done by partners or another support person.[6]
6. Skin-to-skin contact improves breast/chest feeding success.[5]
7. Skin-to-skin contact is important for all families regardless of feeding method.[7]
8. Skin-to-skin contact should continue beyond the initial 48 hour postpartum period.[8]
9. Skin-to-skin contact is a method that can be used to calm a crying newborn.[5]
10. Skin-to-skin contact reduces medical procedural pain for the newborn.[9]
11. Skin-to-skin contact should be done while the parent/caregiver is awake and following safer sleep practices.[10]

Skin-to-Skin Contact Short Term and Long Term Benefits

	Benefits for newborn	Benefits for mother/birthing parent
Short term benefits	▪ Increased demonstration of biological behaviours for breast/chest feeding and self attachment to the breast/chest ▪ Regulated temperature, respiratory rate and heart rate ▪ Decreased crying and more calm behaviours ▪ Decreased stress symptoms ▪ Increased blood glucose ▪ Release of digestive and metabolic hormones ▪ Decreased pain during procedures ▪ Increased alertness and responsiveness in premature newborns ▪ Decreased irritability and fussiness and improved sleep in premature newborns ▪ Decreased incidence of nosocomial infections in premature newborns	▪ Rapid delivery of placenta ▪ Decreased risk of hemorrhage ▪ Decreased maternal anxiety ▪ Release of digestive and metabolic hormones ▪ Increased oxytocin improving milk ejection reflex ▪ Decreased engorgement on day three postpartum ▪ Increased likelihood to breast/chest feed (also in newborn) ▪ Decreased delay in milk production post caesarean section ▪ Alleviated perception of pain from surgery
Long term benefits	▪ Colonized by parents' flora/bacteria ▪ Improved self regulation ▪ Decreased stress hormones at one month of age ▪ Longer duration of breast/chest feeding ▪ Improved brain maturation and development ▪ Increased psychomotor development in premature newborns	▪ Increased maternal calmness ▪ Enhanced parenting behaviours ▪ Decreased depression ▪ Increased positive perception of parenting ▪ Longer duration of breast/chest feeding ▪ Increased volume of expressed human milk ▪ Increased exclusive breast/chest feeding rates

Skin-to-Skin Contact Key Messages with Supporting Evidence

1 Skin-to-skin contact should begin immediately following a birth.[5, 11–18]

- Skin-to-skin contact assists to colonize a newborn's body with their mother/birthing parent's body flora but only if they are the first person to hold their newborn.[7]
- Skin-to-skin contact after birth facilitates newborn self regulation and self attachment to the breast/chest.[18]
- When studying infrared thermography of the whole newborn's body during the first hour post birth, skin-to-skin contact is as effective as radiant warmers in preventing heat loss.[19]
- Mothers/birthing parents who practice skin-to-skin contact have more rapid delivery of their placenta with reduced risk of hemorrhage because the newborn's legs and feet help by pushing on her abdomen.[5]
- Skin-to-skin contact has been shown to help the newborn regulate his or her body temperature, breathing and heart rate faster than radiant warmers and incubators.[7]
- Oxytocin released from the pituitary gland during skin-to-skin contact reduces maternal anxiety by blocking the fight, flight effect while increasing calmness and social responsiveness.[5]
- Skin-to-skin contact is important and needs to be actively encouraged for perinatal women/people using substances. Skin-to-skin care is associated with improved sleep patterns, a reduction in excessive crying and motor agitation associated with newborns exposed to substances, and a decreased need for pharmacological management.[20, 21]

2 Skin-to-skin contact can be done regardless of birthing method (vaginal delivery or caesarean section).[3]

- Emergency caesarean sections can result in delayed Lactogenesis II. Skin-to-skin contact following surgery may assist in overcoming this delay.[7]
- Skin-to-skin contact helps to release the hormone oxytocin which may help to alleviate pain from surgery and feelings of disappointment.[7]
- The benefits of skin-to-skin contact immediately or soon after a caesarean birth include physiologic stability and emotional well-being of mothers/birthing parents and newborns, increased parent and newborn communication and improved breast/chest feeding outcomes.[3]
- Skin-to-skin contact may decrease mother's/birthing parent's perception of pain following a caesarean birth.[3]

3 Preterm newborns can benefit from skin-to-skin contact.[5, 22]

- Skin-to-skin contact is an essential standard of care for preterm infants from birth.[8, 11]
- Early and prolonged skin-to-skin contact between a preterm infant and parent/caregiver, also known as Kangaroo Care (KC), has been shown to have both short and long term benefits for both infant and parent. KC is a core element of family-centered care for sick newborns, keeping parents and newborns together, and inviting the parents to take a central role in the care and nurturing of their baby while in hospital and preparing them for home.[23]
- The WHO recommends KC for preterm infants for continuous and prolonged periods of time (8 to 24 hours a day, for as long as the family is able), starting immediately after birth (unless the infant is critically ill).[23]
- Evidence for Kangaroo Care includes:[5, 7]
  - Improved cognitive and motor functioning
  - Improved brain maturation
  - Reduced risk of infections
  - Reduced pain and stress during painful procedures
  - Improved transition to extrauterine environment and physiological stability (temperature regulation, heart and respiratory rate stability)
  - Improved parental confidence and comfort in caring for their infant
  - Enhanced parental satisfaction, strengthened parental-newborn attachment, and parent-infant interactions
  - Reduced risk of parental depressive symptoms
  - Improved breastfeeding outcomes (earlier initiation and longer duration) and higher volumes of expressed human milk

For more information see:
Kangaroo Care Key Messages for Healthcare Providers[22]

4 Skin-to-skin contact should continue uninterrupted for the first 1–2 hours post birth OR until the completion of the first feeding OR as long as a mother/birthing parent wants.[5]

- Newborns held skin-to-skin with their mother/birthing parent have higher blood glucose levels 75–90 minutes after birth.[5]
- Newborns held skin-to-skin with their mother/birthing parent have slightly higher temperatures on average compared to newborns placed in a bassinet next to their mother/birthing parent 90–120 minutes after birth.[5]
- Mother/birthing parent breast/chest temperature between 30–120 minutes post birth may regulate newborn temperatures more effectively and help prevent neonatal hypothermia.[5]
- Oxytocin released by the pituitary gland during skin-to-skin contact may enhance parenting behaviours in the early postpartum period.[5]
- Newborns held skin-to-skin with their mother/birthing parent have a dramatic decrease in heart rate variability during newborn sleep[10] when compared to maternal newborn separation, skin-to-skin contact may prevent the long-term harm of exaggerated automatic nervous system and disrupted quiet sleep on neurodevelopment.[24]

5 Skin-to-skin contact can be done by partners or other caregivers.[6]

- Newborns placed in skin-to-skin contact with their non-birthing parent/caregiver cry less and reach a calm drowsy state more quickly than newborns placed in a bassinet.[6]
- Fathers/partners who provide skin-to-skin contact have lower levels of anxiety and depression, and develop a more sensitive approach to parenting.[25]
- Being cared for on the non-birthing parent/caregiver's chest can facilitate the development of pre-feeding behaviours.[6]
- Newborns cared for skin-to-skin by their non-birthing parent/caregiver can achieve stable temperatures and blood glucose levels.[26, 27]

6 Skin-to-skin contact improves breast/chest feeding success.[5]

- Skin-to-skin contact increases a mother's/birthing parent's likelihood to breast/chest feed.[5]
- More newborns are exclusively breast/chest fed between three and six months when cared for with skin-to-skin contact.[5]
- Breast/chest feeding duration increases by an average of 64 days when skin-to-skin contact is started less than 24 hours after birth.[5]
- A newborns biological feeding instincts depends on skin-to-skin contact with their birth parent. Guided by smell, a newborn can crawl up to the breast/chest and begin feeding. If a parent and baby are separated, research shows it takes longer for babies to latch effectively.[5]
- Most newborns from unmedicated births will self-attach and suckle at the breast/chest within the first 50 minutes after birth if placed skin-to-skin with their mother/birthing parent (medicated births include epidurals, spinals, intramuscular narcotics, and intravenous infusions).[7]
- Mothers/birthing parents practicing skin-to-skin contact report less perceived breast/chest hardness/engorgement on day three postpartum.[5]

7 Skin-to-skin contact is important for all families, regardless of feeding method.[7]

- Mothers/birthing parents who provide skin-to-skin contact for their newborns report more positive feelings towards their newborns, more positive perceptions of their newborns, less depression and more empowerment in their parenting.[19]
- Skin-to-skin contact stimulates the release of gastrointestinal hormones such as insulin, cholecystokinin, somatostatin and gastrin which aid in digestion and metabolism for both mother/birthing parent and newborn.[7]
- Skin-to-skin contact facilitates newborn adaptation to the new non-sterile environment. A newborn's skin, respiratory tract and gastrointestinal tract are colonized with maternal body flora, which tend to be non-pathogenic microorganisms and immunological factors such as secretory immunoglobulin A (IgA).[8]
- Reduced abandonment, abuse, failure to thrive and neglect have been found in hospitals that initiated the "Baby-Friendly Initiative" which include initiatives such as; early skin-to-skin contact and continuous rooming-in with parents while in hospital.[28]

8 Skin-to-skin contact should continue beyond the initial 48 hour postpartum period.[8]

- Skin-to-skin contact, offered via a trauma-informed approach, can promote safety, security and connectedness.[29] Mothers/birthing parents show more positive affect, touch and adaptation of preterm newborn cues compared to traditional care.[8]
- Preterm newborns held skin-to-skin have increased perceptual cognitive and motor development compared to traditional care.[8]
- At six months, preterm newborns held skin-to-skin show a higher score on the Bayley Mental Development Index and the psychomotor development index compared to traditional care.[8]
- At one week and one month postpartum, mothers/birthing parents who have provided ongoing skin-to-skin care for their newborns reported fewer depressive symptoms (on the Edinburgh scale).[19]
- Mothers/birthing parents who practice skin-to-skin contact with their newborns demonstrate a reduction in salivary cortisol at one month postpartum compared to those who do not practice skin-to-skin contact.[19]

9 Skin-to-skin contact is a method to calm a crying newborn.[5]

- Newborns placed in a bassinet cry ten times more and respond with immediate "protest, despair" behaviours.[5]
- Preterm newborns who receive skin-to-skin contact in the Neonatal Intensive Care Unit are more alert and responsive, and less irritable and fussy.[23]
- Skin-to-skin contact, practiced regularly in the early weeks, may reduce total crying duration and crying length.[5, 30]

10 Skin-to-skin contact reduces medical procedural pain for the newborn.[9]

- Premature Infant Pain Profile (PIPP) score in the first 90 seconds following a painful procedure favoured skin-to-skin contact for newborns.[9]
- A systematic review concluded that holding newborns skin-to-skin during painful procedures is beneficial and not harmful.[9]
- In a study of 30 healthy term newborns receiving a heel stick, crying was reduced by 82% and grimacing was reduced by 65% in newborns who were held skin-to-skin.[31]

For more information on medical procedural pain practices, refer to the PSBC Painful Procedure Algorithm

11 Skin-to-skin contact should be done while the parent/caregiver is awake and following safer sleep practices.[32]

- There is a potential risk to the newborn if the caregiver falls asleep during skin-to-skin contact, including unintentional injuries such as airway compromise or falls.[32]
- Sudden unexpected postnatal collapse (SUPC) is a rare but devastating neonatal event. Position of the newborn and frequent monitoring in the first hours and days after birth is a key factor in minimizing risk of SUPC while supporting safer skin-to-skin practices between the parent/caregiver and the newborns.[32–36]

For more information on SUPC, refer to: Sudden Unexpected Postnatal Collapse (SUPC) Practice Resource for Health Care Providers

For more information on safer sleep practices and SUPC, refer to PSBC's Safer Infant Sleep: Practice Resource for Health Care Providers and Honouring our Babies Safer Sleep[10]

Summary conclusion

In summary, skin-to-skin contact is a method of nurturing care, shown extensively in the literature to benefit the parent-newborn dyad, both physiologically and behaviourally and has been shown to improve breast/chest feeding success. Protecting opportunities for skin-to-skin contact and providing women/people with information, support and resources to enhance breast/chest feeding are important ways that HCP can promote and enhance the dyads short and long term health outcomes for all families starting from birth and continued throughout infancy. Parents/caregivers of newborns should be offered education on the importances of skin to skin contact, how to safely hold and breast/chest feed a newborn during skin-to-skin contact.

Appendices

Appendix A

Skin-to-Skin Contact Poster for Health Care Providers

Appendix B

Skin-to-Skin Contact Posters and Fact Sheet for Parents and Public


Hold me in my
birthday suit

Skin-to-skin contact gives your baby the best start for life

BENEFITS FOR BABY

- Cries less and is calmer
- Stays warmer
- Stabilizes blood sugar, heart rate and breathing
- Protects your baby with your good bacteria
- Improves breastfeeding or chestfeeding success

BENEFITS FOR PARENTS

- Reduces stress
- Increases bonding and attachment
- Helps parent know when baby is getting hungry
- Helps parents gain confidence in caring for their baby
- Helps with breastfeeding or chestfeeding
- Improves milk supply

SAFETY

- To keep your baby safe, avoid distractions such as cell phones while baby is skin-to-skin or while baby is feeding

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Poster 1


Hold me in my
birthday suit

Skin-to-skin contact gives your baby the best start for life

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SAFETY

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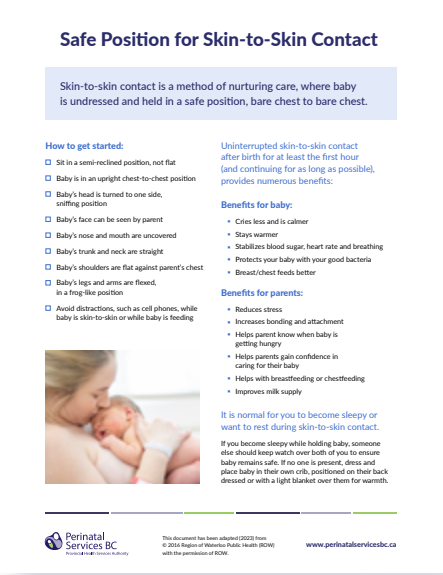
Poster 2


Safe Position for Skin-to-Skin Contact

Skin-to-skin contact is a method of nurturing care, where baby is undressed and held in a safe position, bare chest to bare chest.

How to get started:

- ☐ Sit in a semi-reclined position, not flat
- ☐ Baby is in an upright chest-to-chest position
- ☐ Baby's head is turned to one side, sniffing position
- ☐ Baby's face can be seen by parent
- ☐ Baby's nose and mouth are uncovered
- ☐ Baby's trunk and neck are straight
- ☐ Baby's shoulders are flat against parent's chest
- ☐ Baby's legs and arms are flexed, in a frog-like position
- ☐ Avoid distractions, such as cell phones, while baby is skin-to-skin or while baby is feeding

Uninterrupted skin-to-skin contact after birth for at least the first hour (and continuing for as long as possible), provides numerous benefits:

Benefits for baby:

- Cries less and is calmer
- Stays warmer
- Stabilizes blood sugar, heart rate and breathing
- Protects your baby with your good bacteria
- Breast/chest feeds better

Benefits for parents:

- Reduces stress
- Increases bonding and attachment
- Helps parent know when baby is getting hungry
- Helps parents gain confidence in caring for their baby
- Helps with breastfeeding or chestfeeding
- Improves milk supply

It is normal for you to become sleepy or want to rest during skin-to-skin contact.

If you become sleepy while holding baby, someone else should keep watch over both of you to ensure baby remains safe. If no one is present, dress and place baby in their own crib, positioned on their back dressed or with a light blanket over them for warmth.

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Fact Sheet

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Perinatal Services BC
Suite 260 1770 West 7th Avenue
Vancouver, BC V6J 4Y6

T: 604-877-2121
F: 604-872-1987
psbc@phsa.ca
www.perinatalservicesbc.ca
www.psbchealthhub.ca