PHYSICIAN BREASTFEEDING GUIDE

EVIDENCE-INFORMED PRACTICE GUIDE FOR THE HEALTHY TERM INFANT

For family practitioners, obstetrician-gynaecologists and paediatricians, midwives, nurse practitioners and other maternity care providers, across the Interior Health region in British Columbia, Canada.

An oil painting rendition of human milk cells under the electron microscope. For more information, see inside back cover.

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This guide is written and reviewed by experienced physicians and breastfeeding specialists from within Interior Health (IH), with key input from physicians outside IH.

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KCR COMMUNITY RESOURCES
Enhancing Lives - Connecting Communities

Interior Health

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EXECUTIVE SUMMARY

THE ISSUE

Breastfeeding is the gold standard of infant feeding. It has proven health benefits for both mothers and babies.(1) The *BC Lifetime Prevention Schedule*(2) has identified breastfeeding as one of the top clinical prevention cost savers that provides positive health outcomes for mother and baby for a lifetime. In Interior Health (IH), most moms initiate breastfeeding but only 33% to 46% are exclusively breastfeeding at four months. These breastfeeding outcomes are far below the World Health Organization (WHO) recommendations of **exclusive breastfeeding (EBF)** for the first six months of life, followed by healthy family foods with continued breastfeeding until at least age two.(3)

WHY HAS THIS GUIDE BEEN DEVELOPED?

1. The **Academy of Breastfeeding Medicine (ABM)** has identified the need for physicians to have enhanced breastfeeding knowledge, attitudes, and skills to promote, protect and support breastfeeding for optimal outcomes for all families. This guide has substantial information to support the ABM goal.
2. **IH Perinatal Data** (*see page 2*) revealed that the EBF drops between initiation and before discharge from hospital. There is a further drastic drop in the first four months after discharge. Research shows that when mothers are assisted immediately after birth to have baby skin-to-skin and with a comfortable latch, this equates to longer duration of EBF.(4, 5, 6) This guide provides the details, explanations, graphics, tips and extensive references to support the research.

see page 2

3. **Community Research** (*see page 2*) with mothers and physicians within the Interior Health (IH) region led to two decisive documents, *Breastfeeding Journey Mapping report* (2020) and the *Physician Breastfeeding Resources: A Roundtable* (2022). These documents repeatedly indicated that to enhance breastfeeding knowledge and skills of physicians and primary care providers, there was a need to develop targeted, practical breastfeeding resources, such as this guide. In addition, results from a 2024 *KCR Breastfeeding Survey* showed that only 30% of mothers received enough breastfeeding education and resources prenatally from their physician or health-care provider.
4. **Global Recommendations** – This guide supports and aligns with the WHO/UNICEF Baby-Friendly Initiative (BFI) (*see page 49*), as endorsed by the Canadian Paediatric Society, Health Canada and Perinatal Services BC.

WHO IS THIS GUIDE FOR?

It is primarily for family practitioners, obstetrician-gynaecologists and paediatricians across Interior Health as well as medical residency programs across Canada. It is also for midwives, nurse practitioners, labour and delivery nurses and other maternity care providers.

CONCLUSION

There is a shared responsibility by the physician and primary care maternity provider team to establish best practice breastfeeding care during the peripartum period, and to refer as needed for knowledgeable lactation management.(8) This will contribute to higher and continued EBF rates, a positive breastfeeding experience for the mother, and reduced health-care costs.

IH Perinatal Data

Almost all mothers in B.C. initiate breastfeeding:

The *PSBC – Perinatal Data Registry* 2021/2022 (9) (most recent year) records a breastfeeding initiation rate provincially of 97.2%.

Exclusive breastfeeding rates at discharge:

The exclusive breastfeeding rate at discharge provincially is 67.1%. Discharge rates are higher in IH, ranging by facility from 71.7% to 93.5%.

Exclusive breastfeeding rates fall steadily after discharge:

At two months the EBF rate in IH ranges from 42.3 to 56.4% and at four months has dropped to a range of 33.4 to 46.2%. Accurate rates at six months in IH and provincially are unavailable.

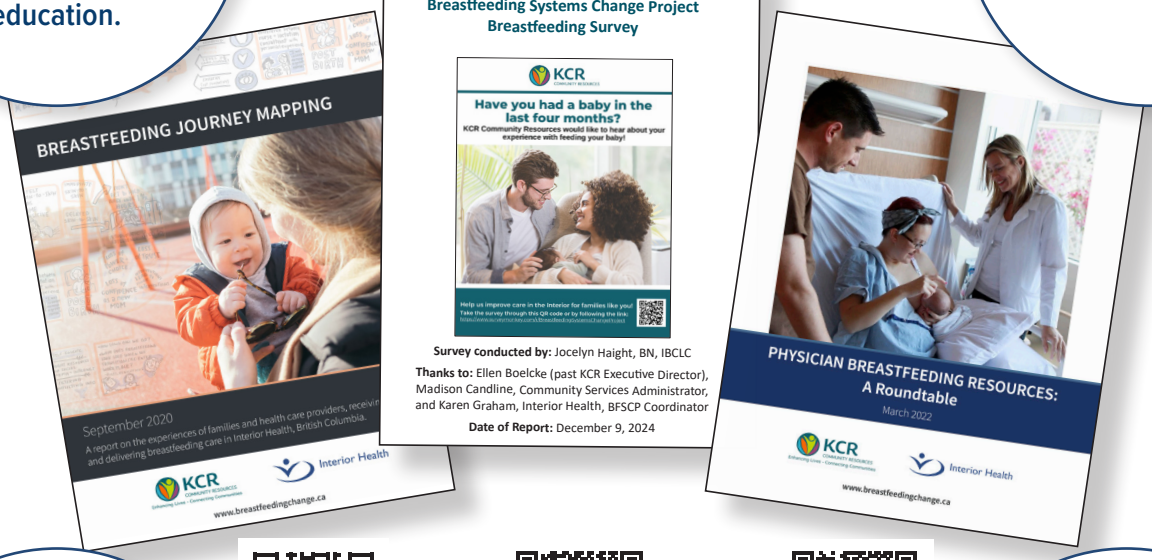
By four months only 33% to 46% of mothers within IH are still exclusively breastfeeding.

Community Research

Key breastfeeding recommendations from the community research reports below (journey mapping, survey report and the roundtable) informed the need for this guide.

Enhance physician knowledge through education during medical school residency and through continuing education.

Provide practical education that is easy to share with families during prenatal visits.



Provide practical help for mothers in the hospital setting, especially from International Board Certified Lactation Consultants (IBCLCs).

Develop resources for key clinical topics, such as tongue-tie and galactagogues.

SECTION 1 – PRENATAL

BREASTFEEDING DISCUSSIONS & ASSESSMENT

A DOCTOR'S RECOMMENDATION COUNTS!

Discussing breastfeeding with patients prenatally can improve breastfeeding initiation, exclusivity and duration.(10,11,12)

Social media and internet information is often incomplete. Your breastfeeding discussions build trust, provide accurate knowledge, and help your patient source vetted resources.

ACTION STEPS

1. **Educate about the importance of human milk and breastfeeding.**
2. **Complete a lactation history** (*see page 7*) for prior pregnancy outcomes and breastfeeding experiences such as low milk supply, and any pre-existing and present medical factors that may need additional lactation support, such as gestational diabetes, breast surgeries or inverted nipples.
3. **Ask mother if their breasts have increased in size during pregnancy.** If not, this is a red flag for possible tubular breasts (*see page 9*), and an International Board Certified Lactation Consultant (IBCLC) referral would be recommended for additional support.
4. **Discuss intrapartum interventions that can impact breastfeeding.** When a woman understands these impacts, she will be better prepared to make choices for successful breastfeeding initiation.
5. **Refer patients** to IH's *Healthy from the Start* program and public health nurses, and if applicable a midwife, doula or lactation consultant.
6. **Give anticipatory guidance for early postpartum.** Your patient needs to hear from you about the benefits of immediate skin-to-skin that helps with a good first latch. She will also benefit from learning how to do hand expression prenatally. Print off and review with her the patient handout (*see page 14*).

CONSIDERATIONS

Are there other social or health considerations that make a woman and her unborn child at-risk for poor health outcomes? If so, **breastfeeding is especially important to improve equity. Breastfeeding is protective for both baby and mother.**

Prenatal Setting

ABM PROTOCOL

#19: Breastfeeding Promotion in the Prenatal Setting Revision 2015(13)

BENEFITS OF BREASTFEEDING

The chart below lists dose-response benefits. Exclusive breastfeeding and longer duration of breastfeeding result in greater benefits.(14)

INFANT

Breastfeeding decreases the risk of:

- Infant mortality, if ever breastfed(15)
- Childhood infections (respiratory and GI), if exclusively breastfed(15,16)
- Otitis media, if ever breastfed(15,16)
- Necrotizing enterocolitis, if exclusively breastfed(16)
- SIDS if breastfed for four to six months(16)

CHILDHOOD

Breastfeeding decreases the risk of:

- Childhood obesity(16)
- Type 2 diabetes(16)
- Childhood leukemia(15,16)
- Asthma and eczema(16)

Breastfeeding increases:

- Effectiveness of vaccines(17)
- Jaw and facial muscle development(18)
- IQ(15)

MATERNAL

Breastfeeding decreases the risk of:

- Postpartum blood loss(19)
- Breast cancer(15,19,20)
- Ovarian cancer(15,19,20)
- Type 2 diabetes(15)
- Cardiovascular disease(21)

Breastfeeding improves:

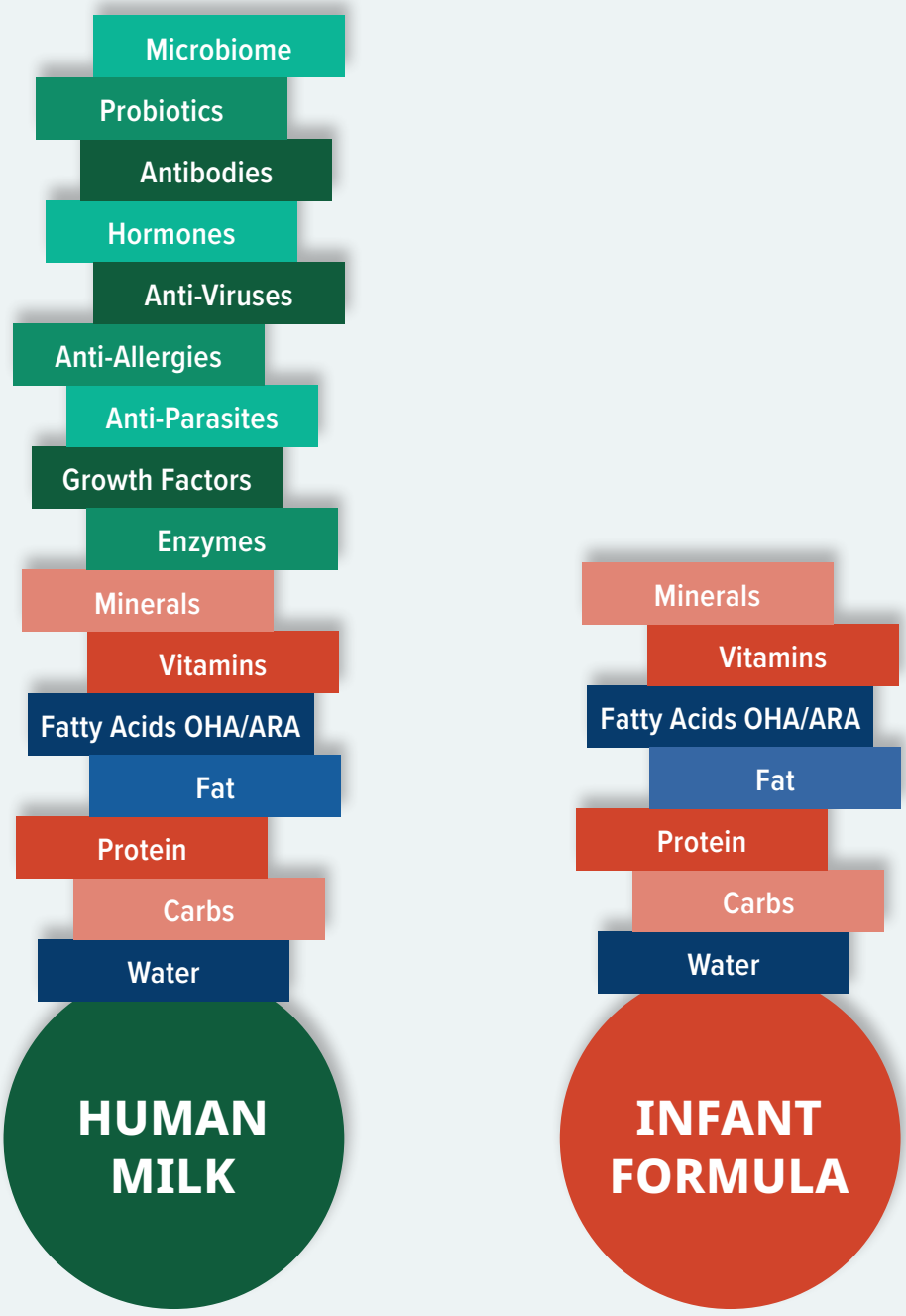
- Bonding with infant(22)
- Return to pre-pregnancy weight (22)
- Birth spacing(15,22)
- Bone remineralization with reduction of hip fractures in post-menopausal period(23)

There are many social and environmental benefits to mother and the family including(24):

- Financial savings
- Less plastic and energy waste
- Ability to feed baby during disasters

TALK TO PARENTS ABOUT THE IMPORTANCE OF BREASTFEEDING

Comparison of Human Milk Components to Infant Formula(25,26,27)



Find more information about *human milk vs. infant formula*.

PRENATAL LACTATION HISTORY

An early history can help you provide targeted support and determine if antenatal referral to a breastfeeding specialist would be needed.

Who is a breastfeeding specialist?

1. **An International Board Certified Lactation Consultant (IBCLC).** This certification can be held by a physician, nurse, midwife, massage therapist or other health professional. A woman can see her doctor or public health nurse IBCLC anytime for breastfeeding appointments. Midwife IBCLCs are also covered by MSP to support breastfeeding for up to six weeks prior to birth and six weeks postpartum. Most other IBCLCs are private practice.
2. **A La Leche League leader, public health nurse or midwife** with practical breastfeeding knowledge.
3. **A *North American Board of Breastfeeding and Lactation Medicine* (NABBLM)** certified physician. This is a new certification as of 2023, and to date there are two certified NABBLM physicians in B.C. and 25 in Canada.

In this guide we generally refer to an IBCLC. For more information on referrals, *see page 54* and *see page 57*.

Information in the chart below is from Reference 10 and with input from guide reviewers *(see page 68)*.

Lactation Risk Factors	Why it Matters?

Specific pregnancy factors
• Previous preterm birth or risk factors for preterm birth
• Thyroid – hyper or hypo(28,29)
• Gestational diabetes (GDM)
• Hypertension (HTN)/preeclampsia
• Multiple gestation
• Previous c-section
• Anticipated neonatal congenital disorders (e.g., cleft palate, cardiac defects)
• Maternal mental health issues
• Maternal past trauma including sexual violence and/or partner violence
 	
Prior breastfeeding experiences that were difficult
• Low milk supply
• Mastitis or breast abscess
• Infant medical condition that affected breastfeeding (e.g., hypoglycemia, jaundice, poor growth, tongue-tie)
• Postpartum depression
 	
Anticipated breastfeeding challenges
• Planned c-section
• Tandem feeding, managing a toddler at home, access to a breast pump, early return to work, lack of partner support
	If lactation risk factors are identified:
	• Prepare a postpartum care plan. Make a notation on the antenatal record that the care plan exists. List any of the identified risk factors for hospital staff or other postpartum clinicians. Some mothers may also wish to have a copy.
	• As needed, refer to IBCLC for prenatal and/or postpartum support.
	
	At-risk mothers need referral:
	• If there are known mental health or trauma concerns, at-risk and young mothers can be referred to a mental health worker or social worker.
	• In the Okanagan area of Interior Health, refer to *KCR Community Resources* for community support programs with one-on-one home support:
	  ◦ Family Friend Program
	  ◦ Kids Count Program

Lactation Risk Factors	Why it Matters?
Pre-Existing and Present Medical Factors • Diabetes, PCOS, HTN, obesity, past infertility (may be related to hormonal factors) • Hyper or hypothyroidism, pituitary disease or anemia • Depression/anxiety	• These medical factors can interfere with hormones that have a role in milk production or could affect breast development or could cause fatigue. • With diabetes and GDM, the biggest concern for the baby is poorly controlled blood sugars during pregnancy; **ensure a diabetes education centre referral.** Newborn hypoglycemia could lead to mother-infant separation and require supplementation.
Medications **Complete a lactation safety medication review early in pregnancy and midway through** *(see LactMed on page 56)*. • *Contraindications to Breastfeeding* by the **American Academy of Pediatrics (2021)**.(30) Given the extraordinary benefits of breastfeeding, there are few medications contraindicated in breastfeeding. Some examples are lithium, tamoxifen and other chemotherapy medications, as well as radioactive iodine. • *Medical Indications for Supplementation* by the Breastfeeding Committee of Canada.(31) Some medications are safe in pregnancy but can reduce milk production postpartum (e.g., Abilify®). Others can be sedating for the baby (e.g., some antihistamines). For information on contraceptives and ADHD meds postpartum (*see page 40*).	When mothers know the impact of a medication, they can make informed choices and possibly consider an alternative medication. For mothers on a contraindicated medication that can't be changed, consider an antenatal IBCLC referral to help mother with a feeding care plan that best suits parents' goals. An ideal option would be feeding with pasteurized donor human milk for as long as possible. Moms on a medication that puts them at risk for low supply may also be able to supplement with an at-breast supplementer (*see page 28*).
Substance Use Disorders	This is not covered in this document. Please go to *Pathways*™ or refer to *Taking Care A Short Guide to Breastfeeding and Substance Use* from the Centre of Excellence for Women's Health.(32)
Breast Surgeries The length of time since surgery may impact regeneration of blood vessels, nerves and functioning milk glands. **Breast Reductions** **Nipple free reduction is more of a risk than pedicle reduction.** With pedicle reductions the nipple stays attached to underlying breast tissue, blood vessels, glands and pectoralis muscle. **Breast Augmentation (Implants)** **Breast implants are less likely to impact breastfeeding than breast reductions.** Consider pre-operative breast shape; mothers with tubular breasts (*see page 9*) may have had breast implants in the past to alter breast size or shape, and this may mask previous anatomy.	With breast reductions, there is a risk of impaired nipple innervation/sensation, blood flow and functioning milk glands. This may lead to reduced let-down or low milk production. **IBCLC referral during pregnancy is recommended if woman has had a breast reduction.** With implants, the location of the incision/scarring is not generally near the nipple, so it would be unusual to impact nipple sensation for breastfeeding. **However, the implant can press on underlying tissue, which contributes to the edema/engorgement** that occurs in all women with implants. Engorgement affects latch and can increase pain during breastfeeding.

Lactation Risk Factors	Why it Matters?
Lumpectomy If performed for a benign breast condition, commonly fibroadenoma, this should have limited to no impact on breastfeeding. **If performed for cancer, breast radiation will make the remaining breast tissue non-functional.** **Mastectomy** Even if the nipple is preserved, this procedure removes >95% of breast tissue.	Many women who have had a lump removed can breastfeed, unless large amounts of tissue were removed. In that case, like a mastectomy, the mother can breastfeed from her unaffected breast.
Nipple Piercing with Related Damage	Generally not relevant, unless there is damage from a piercing gone wrong, e.g., excessive scar tissue that can block milk ducts and reduce milk flow. Mother should remove any nipple jewelry in early pregnancy as the nipple will grow and develop during this time. Piercings also may be difficult to extract later in pregnancy or postpartum.
Breast and Nipple Shapes Women with large breasts, or with oral-nipple disproportion (baby has small mouth and mother has large nipple), or those who receive intrapartum IV fluid that leads to engorgement, can have altered nipple shapes, which may interfere at early stages of latch. **Ask your patient, "How would you describe the shape of your nipples?"** If they think their nipples are flat or inverted, this is an alert that they may feel they can't breastfeed. Informed conversations at this time about these concerns can be life-changing for mother and baby.	The shape of a woman's nipples is not considered a direct lactation risk factor. Nipples can be stimulated to protrude once pulled into the infant's mouth with a good latch. However, flat or inverted nipples can provide challenges with latch (especially with engorgement), so it's important to reassure them and make a plan for assistance, as needed (*see page 22*). **Note: Nipple shields are not recommended as a treatment for flat or inverted nipples** (*see page 22*).
Tubular Breasts Although tubular breasts are uncommon, (less than 2% of women), assess on physical exam and **ask your patient, "Have you noticed your breasts getting larger?"** Breast size should increase in second trimester and increase more so in the third trimester. If there is a lack of breast growth during pregnancy, this can significantly impact breastfeeding, and women should be referred antenatally to IBCLC. Tubular breasts may be due to genetic and metabolic factors (insulin resistance). For discussion of terminology and differential diagnosis of tubular breasts, *see page 41*.	Tubular breast shape may be a differential diagnosis for low milk supply. It is far better for women to receive a prenatal diagnosis and become informed, than to quit breastfeeding postpartum without a diagnosis. There are several positive early breastfeeding interventions including feeding with an at-breast supplementer and medications, such as metformin. **Clinical practice has shown that if a woman with tubular breasts takes metformin starting at 36 weeks, it upregulates prolactin receptors and this can help breastfeeding** (*see page 44*).

DISCUSS PRENATAL HAND EXPRESSION OF COLOSTRUM

Mothers can safely start colostrum expression after 36 weeks of their pregnancy, unless there is a contraindication for labour. Clinical experience shows that for many mothers this can be helpful for breastfeeding and is recommended.(10,33)

For tips for mothers on how to do hand expression (*see page 23*).

The goal is for mothers to become familiar and comfortable with hand expression. The expressed colostrum volume does not predict postpartum milk supply. Some women will not produce any colostrum prenatally, and others may produce a few drops or more.

Suggest to your patients they ask a public health nurse where they can get a free prenatal hand expression kit to collect and freeze any expressed colostrum. Many public health units across IH now provide these kits and they are sold at some pharmacies. Any collected colostrum can be brought to the hospital, and, if needed, given to the newborn in the early hours or days.

The benefits of becoming comfortable with hand expression during pregnancy:

- For infants requiring supplemental feeds or if there is mother-infant separation, either freshly expressed or stored colostrum can be used instead of formula.
- After birth, when a mother's milk comes in, she can easily relieve swollen breasts, which helps baby latch.
- It is a useful skill for mothers throughout breastfeeding and is sometimes a preferred alternative to pumping.

Colostrum is "liquid gold". Let mother know that normally milk comes in postpartum day two to three. However, if she has a c-section or if she has diabetes, for example, her milk may not come in until day four to five. Prior to the milk coming in, colostrum is all that a healthy term infant requires (in the absence of hypoglycemia).

Patient resources for hand expression:

- HANDOUT: *Interior Health Antenatal Hand Expression*
- VIDEO: *Colostrum Collection in Pregnancy* NHS Maidstone | Turnbridge Wells Hospital
- VIDEO: How to hand express | *moremilksooner.com*

DISCUSS INTRAPARTUM INTERVENTIONS THAT CAN IMPACT BREASTFEEDING

Intrapartum interventions may have impacts such as a less alert baby, delayed or difficult latching, and breast engorgement.

According to the ABM Clinical Protocol #28(34), research shows that longer labours, the use of pain-reducing interventions, and the need for surgical interventions are associated with early cessation of breastfeeding after discharge. While the use of intrapartum pain management has been linked to early cessation of breastfeeding, experiencing intolerable labour pain can lead to delayed secretory milk activation.

There has to be a balance between the need for intrapartum pain management and how that impacts breastfeeding.

When the delivering doctor or midwife explains intrapartum interventions, planned or unplanned, maternal and neonatal safety or survival is always the priority. As women become better informed about the benefits and risks of interventions, then breastfeeding implications can be a part of their shared decision making and included in their birth plan.

Continuous labour support can help mitigate some risks to breastfeeding

The ABM states that the presence of a doula can reduce breastfeeding risks. This continuous support helps women feel safe and better manage the discomfort of labour, and helps the labour progress, therefore reducing the need for interventions such as epidurals.(34,35,36) In busy hospital situations, continuous labour support might be interrupted if the nurses get busy. Explore with patients their interest to seek out ahead of time a midwife, and/or a doula or labour support person. With guidance, the husband or partner can provide targeted support to help reduce mother's pain.

Women can use a double or single-person birthing stool; these stools have a hole in the middle to relieve pressure on the woman's perineum.

Man can firmly hold hands under her belly and gently rock woman back and forth, called the penguin walk.

Mothers can try different positions during labour (*see Mayo Clinic labor positions*). A 2024 study(37) showed that mother satisfaction is linked to her being given the choice of what position she wants (*see Maternity Care Midwives video*).

PERIPARTUM ANALGESIA, IV FLUIDS

Peripartum Analgesia Protocol
ABM PROTOCOL
#28: Peripartum Analgesia and Anesthesia 2018(34)

Intervention Examples	Potential Side-Effects on Breastfeeding
Regional blocks (pudendal or paracervical)	Most commonly lidocaine or bupivacaine, which in localized doses have minimal systemic absorption. **No effect on breastfeeding.**
Nitrous oxide (Entonox®)	**This is a breastfeeding-friendly alternative to systemic opioids and neuraxial analgesia.**
IV fluids – effect on mother	It is important to keep women hydrated during labour. However, if IV fluids are needed intrapartum and early postpartum, **limit to smallest necessary volume and avoid unnecessary boluses**. Excessive IV fluids may cause breast engorgement that temporarily shortens and flattens nipples, which can make initial latching shallow, and more challenging and uncomfortable.
IV fluids – effect on neonate	IV fluids given to mother can increase baby's birth weight which in turn can exaggerate baby's early weight loss. An overly concerned mother, or hospital staff, may recommend supplementation to increase baby's weight(38) (*see page 32*). Supplementation can decrease baby's need to breastfeed and therefore impact critical early milk production.
Opioids (IV or IM)	They provide effective pain control. Systemic opioid administered intravenously or intramuscularly does cross the placenta. **Depending on the time to delivery and dosage, opioids can lead to varying degree of neonatal respiratory depression and neurobehavioral changes which may impact early latching.** If delivery is anticipated sooner than four hours, short-acting opioids, commonly fentanyl, are preferred. Morphine may be considered if more than four hours before anticipated delivery. **Avoid long-acting opioids.** Demerol (now rarely used) should be avoided intrapartum given its very long half-life and risk of neonatal sedation.(35)
Neuraxial analgesia (spinal, epidural or combined)	Provide partial or full numbing, commonly bupivacaine combined with fentanyl. **Research is inconclusive on the effects of neuraxial analgesia on breastfeeding**. The ABM protocol states "neuraxial labor analgesia likely has minimal effects on women who strongly intend to breastfeed and have good supports but may present one more subtle challenge to women whose intention to breastfeed is more vulnerable." If neuraxial analgesia is chosen, be mindful of excess boluses of IV fluids. If a mother is dehydrated or her blood pressure drops, and an IV bolus is required, consider using small boluses and assessing response after each one.

Assisted Vaginal Birth

The use of a vacuum or forceps may be required during complicated birth scenarios. Infants may get birth injuries such as hematomas, scalp lacerations, palsies (Erb's palsy) and/or have an increased risk of jaundice from the bruising. These infants need time to recover from injuries and breastfeeding may be delayed. Mother's milk may be delayed due to the stress of interventions or a long labour. Therefore, these infants may be given a small amount of formula (*see page 27*) until mother's milk comes in. **To prioritize human milk over formula, a breastfeeding support person is invaluable as soon as possible.**(40,41)

Caesarean-section

Multiple factors play into the decision for the type of anesthesia used. In terms of breastfeeding consideration, neuraxial analgesia is preferred. To make a caesarean birth as breastfeeding-friendly as possible, encourage immediate and uninterrupted skin-to-skin in the operating room, ensuring the infant is kept warm.(42) If a general anesthetic was needed, encourage the support person to hold the newborn skin-to-skin until the mother is alert and able.

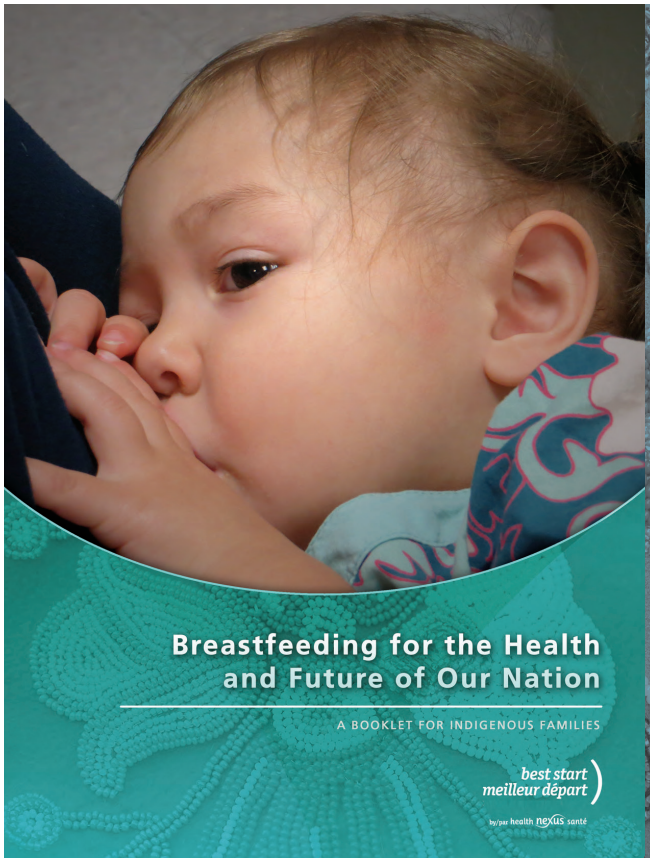
To minimize postpartum opioid requirements, preferred options are an abdominal nerve block, local anesthetic infiltration of the wound or continuing the epidural infusion post-caesarean for several hours. Joint discussions with the surgeon and anesthesiologist are helpful prior to the operation.

OTHER PRENATAL BREASTFEEDING TOPICS

1. **Go to** Pathways www.pathwaysbc.ca **for other breastfeeding topics not covered in this guide** (*see page 55*). During prenatal appointments, other questions may come up, such as "Can I drink alcohol when breastfeeding?"
2. **Mother-centred birthing supports breastfeeding:** Perspective-shifting B.C. research: UBC Faculty of Medicine, BC Maternity Research: *The Birth Place Lab Website*.

REFER YOUR PATIENT TO BREASTFEEDING RESOURCES

- Ask if she would like to be registered for *Healthy from the Start*, to speak to a public health nurse and/or lactation consultant.
- Encourage her to enrol in prenatal classes from a local health centre.
- Suggest she read *Baby's Best Chance*(43). It covers pregnancy, birth and back home, in multiple languages.
- For a plain language breastfeeding resource suggest *Breastfeeding Matters*.(44)
- The excellent Indigenous resource: *Breastfeeding for the Health and Future of our Nation*.(45)
- Patient handout (*see page 14*).



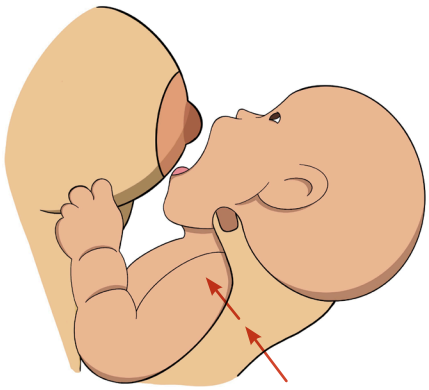
PATIENT HANDOUT

PREPARING FOR BREASTFEEDING

- After 36 weeks, try to hand express colostrum from your breasts. Collect and freeze any that you express. You can bring this with you to the hospital. If your newborn is slower to latch or for medical reasons is separated from you after birth, there is expressed colostrum for your baby's early feeds.
- Seek out labour support from a doula, midwife or other support person such as your husband or partner, mother or auntie. Their continuous support can reduce the need for labour medications or other birth interventions, which helps an early start to breastfeeding. *Watch this video* to get easy tips for labour support.
- As long as you and your baby are well, skin-to-skin with baby immediately after birth is encouraged. This early body contact stimulates your hormones to let-down your milk.

- A most comfortable and natural breastfeeding position is called the "laid-back position." With you in a semi-sitting position, with pillows supporting you, your baby lays on your chest and can latch easily. If you have a c-section, you may prefer the side-lying, cross-cradle or football hold position.
- Know that all newborn babies lose weight in the first 24 to 36 hours, and most healthy babies return to their birth weight by about 10 to 14 days. All that most babies need is colostrum in the early days in hospital.
- A comfortable latch means that the baby's mouth is latched onto your areola and nipple (not just on the end of the nipple, which hurts). With a good latch, your breasts are stimulated to make enough milk for your baby.

Push base of hand firmly against baby's shoulders, allowing baby's head to tip slightly back with chin coming in first.



When baby's mouth is wide open like a yawn, pop baby on. Latch should be on nipple *and* areola.

- Be prepared that your baby will be feeding frequently in the early days and nights (this is called cluster feeding). Cluster feeding is important because baby's stomach is tiny, and so needs to feed small amounts, often.
- If at any point your baby needs medical supplementation, expressed colostrum or breastmilk is the first choice. Your newborn will easily feed from a little spoon or medicine cup. Feeding by a bottle is not recommended since the bottle nipple causes a different sucking motion by the baby's mouth and tongue, which causes "nipple confusion."
- Have breastfeeding support names and numbers sourced ahead of time: a lactation consultant (a private practice IBCLC) or a La Leche League contact, and the Healthy from the Start phone number (1-855-868-7710). Midwives who are also an IBCLC are a free health service in BC, and can provide breastfeeding support six weeks before birth and six weeks afterwards.

Source of Handout: Breastfeeding Physicians Guide, 2025

SECTION 2 – HOSPITAL

0–72 HOUR BREASTFEEDING ALGORITHM & 12 PRACTICE TIPS

EARLY SKIN-TO-SKIN COUNTS!

Whether a vaginal or c-section birth, when the newborn is placed on mother's chest immediately after birth and for the first hour, this improves breastfeeding initiation, exclusivity and duration.

The Breastfeeding Journey Mapping (*see page 1*) gave voice to mothers who did or did not breastfeed. They felt most empowered and successful when they received consistent breastfeeding information and caring support from the hospital staff.

ACTION STEPS

1. **Print the algorithm and post it on the maternity ward** for at-a-glance guidance of what is needed to support breastfeeding in the critical early hours and days.
2. **View some of the short videos** (*see page 34*). Video topics include a good latch and position, cluster feeding is normal, how to hand express and breast compression.
3. **Sit in on sessions with a lactation consultant** (IBCLC) to learn ways of supporting new mothers.
4. **Refer to the 12 Practice Tips.** The 0–72 hours are the most critical hours to get breastfeeding established. If breastfeeding issues arise during postpartum visits, the Practice Tips still apply.
5. **Be informed when supplementation is needed.** Know the alternatives to formula and the bottle *(see page 27* and *see page 28*). The goal is to get baby back on the breast and keep breastfeeding.
6. **See the Q&A** (*see page 33*) for common questions that might come up in the 0–72-hour period with scripted answers. For example, "My partner wants to feed the baby," provides an opportunity to discuss the difference between human milk and formula.

Peripartum Management

ABM PROTOCOL

#5. Peripartum Breastfeeding Management 2013(35)

CONSIDERATIONS

Is baby medicated from labour or c-section? Keep baby skin-to-skin and support hand expression until baby is ready for first feed.

Is mom complaining of over-full breasts or sore nipples? A small change to baby's latch or mother's position can make all the difference.

0–72 HOUR BREASTFEEDING ALGORITHM

BIRTH TO TWO HOURS (VAGINAL OR CAESAREAN)

- Initiate immediate skin-to-skin contact between newborn and mother. In emergencies, when mother is not able, then skin-to-skin with a support person. **See Practice Tip 1.**
- Ensure uninterrupted skin-to-skin for at least an hour, until first breastfeed is finished, or as long as mother wishes.
- Defer baby's first bath until at least 24 hours (unless early bath indicated). **See 1**
- Be patient to allow time for baby to go through the instinctive breast crawl stages. **See 2** Let baby lead.
- Support dyad with position and latch. **See 2** Affirm with mother what is going well.
- Help with hand expression if baby has not latched or is separated from mother. **See 4** Feed baby colostrum.
- Do a breastfeeding assessment. **See 11**

IS BABY FEEDING EFFECTIVELY? ARE MOTHER'S BREASTS PAIN FREE?

YES

ROUTINE CARE & ASSESSMENTS

- Complete newborn assessment See *PSBC Newborn Guideline, 2023*.(46)
- *Sudden Unexpected Postnatal Collapse* (SUPC) is rare but the risk is highest during the first two hours of life; monitor closely.(47)
- Encourage continuous skin-to-skin. **See 1**
- Do not separate dyad unless medically indicated.
- Observe a feed. Assess latch, position, active transfer of colostrum/milk; assist as needed. **See 2, 3, 5 & 11**
- Discuss early feeding cues (*see page 31*), responsive feeding, and normalcy of cluster feeding. **See 6**
- Show how to soothe baby without pacifiers or swaddling. **See 6**
- Teach/review hand expression. **See 4**
- Watch for 5+ feeds in the first 24 hours, and 8+ feeds every 24 hours thereafter.(46) **See 11**
- Assess number of voids and stools in each 24-hour period. **See 11**
- Teach how to prevent nipple pain and engorgement. **See 10**

NO

1-6 HOURS *IN ADDITION* TO ROUTINE CARE

- Reassure parents; it is **common** for newborns to need recovery time.
- Teach parents early feeding cues; wake baby by 6 hours after birth. **See 11**
- Hand express at least every 2 to 3 hours for as long as baby's latch is ineffective. **See 4**
- Offer any available colostrum to baby by alternate feeding method. **See 9**
- Assess position, latch and suck; support as needed. **See 2, 5 & 11.** This is more important than voiding and stools in first 24 hours.
- Ask about breast or nipple pain and manage. **See 10**
- Avoid nipple shields. **See 3**
- If supplementation is needed, use correct type, volume and method. Manage neonatal hypoglycemia, e.g. use Glucogel® and colostrum as first choice. **See 8 & 9**
- **IMPORTANT NOTE:** Few healthy term infants require a supplement in the first 24 hours, even if baby is not latching and there is little or no colostrum. **See 8**

6-24 HOURS *CONTINUE ABOVE*, PLUS:

- Teach breast compression and switch nursing, to maximize transfer of colostrum/milk. **See 5**
- Gently sweep finger inside baby's mouth to assess frenulum and palate. A skilled provider may need to do a Focused Tongue-Tie Assessment. **See 11 and page 39**
- If latching concerns continue, IBCLC consult is recommended.

24-72 HOURS *CONTINUE ABOVE*, PLUS:

- Repeat PSBC newborn assessment.
- Re-assess if baby is receiving sufficient expressed colostrum/milk. **See 8, 9 & 11**
- Consider using electric hospital grade pump (in addition to hand expression); use a 'hands-on' technique with pump. **See 7**

DISCHARGE PLAN: Answer parents' questions. Give them information about community peer support, and a plan to discontinue any supplementation for breastfeeding mothers. Communicate plan to PHN or IBCLC. Delay discharge if timely follow-up is not available.

BREASTFEEDING PRACTICE TIPS 1 TO 12

Clinical practice tips from the breastfeeding experts and reviewers (*see page 68*), plus references. For videos and patient handouts for Practice Tips 1 to 12 (*see page 34*). For IH staff, use the Algorithm and Practice Tips in conjunction with the *IH Lactation and Newborn Feeding Toolkit* (accessible to those with an IH email address or login credentials).

1 SKIN-TO-SKIN

Immediate and uninterrupted skin-to-skin contact after birth, and continued in the early postpartum period, is an evidence-based practice that supports newborn physiologic stabilization (heart rate, body temperature and blood glucose), maternal and infant attachment and improved breastfeeding initiation, exclusivity, and duration. (3,4,5,46,48)

For the healthy infant, take steps to remove common practices that interrupt immediate skin-to-skin:

- **Defer the detailed newborn exam** until after the first feed, even after a c-section (*see page 50*).
- **Delay infant bath until 24 hours after birth** as recommended by the WHO.(49) According to the American Academy of Pediatrics(50), a delayed bath avoids unnecessary separation of infant and mother; helps reduce the risk of infant hypothermia and hypoglycemia; and, maintains the vernix that may have antibacterial properties and acts as a natural skin moisturizer for the baby.

Skin-to-skin after c-section: Place baby slightly diagonally across the mother's chest. Place newborn above her breasts but not on her neck.

SKIN-TO-SKIN TIPS(5)

- Baby is not swaddled.
- Baby's back is covered with a blanket, and head with a cap.
- Mother is in semi-reclined position.
- Baby's head is turned to side.
- Nose and mouth are visible and not covered.
- Shoulders are flat against mother, chest-to-chest.
- Legs are flexed (frog legs).
- Mother should hold baby and remain awake, and avoid distractions such as cell phones.
- If mother needs critical medical surgery that requires her to be separated from her baby, then the partner or other support person can provide temporary skin-to-skin care.
- Frequent visual checks by nurse as per hospital protocols.

2 LATCH AND POSITIONS

The Amazing Breast Crawl(51,52). Immediately after birth, skin-to-skin contact with the mother in a relaxed laid-back position prompts a progression of nine instinctive newborn feeding behaviours: birth cry, relaxation, awakening, activity, rest, crawling, familiarization (with rooting and licking), suckling and sleeping. With gravity stabilizing the newborn on mother's body, the newborn can move itself up, using sense of smell, hands, and limited eyesight to find the nipple and latch. Be patient — do not force the newborn onto the breast. When the newborn is allowed to latch on its own, this greatly increases the chances of achieving a good latch with effective milk transfer.

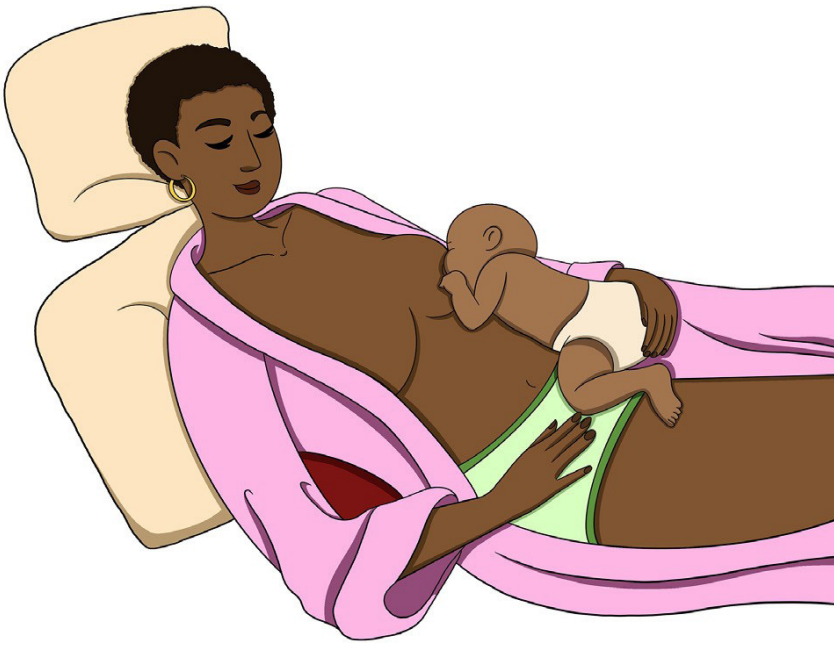
LATCH

Painful latch on nipple only is a shallow latch. Less milk transfer.

Comfortable latch on nipple and areola is a good latch. Good milk transfer.

LAID-BACK POSITION

Laid-back position is the position that the newborn is most comfortable and feels secure immediately after birth, and in the early postpartum days and weeks. Long periods of suckling is common, and this comfortable position helps mother get more rest. Use pillows to support the mother, not the baby. Teach mother to adjust the angle of recline and the position of baby.



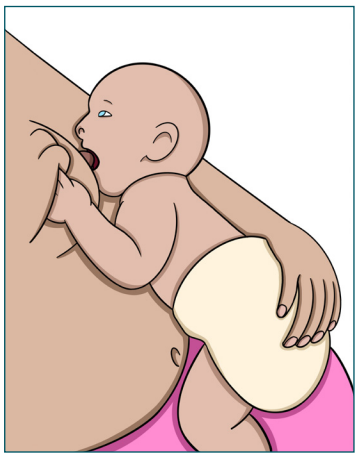
Sleepy Baby

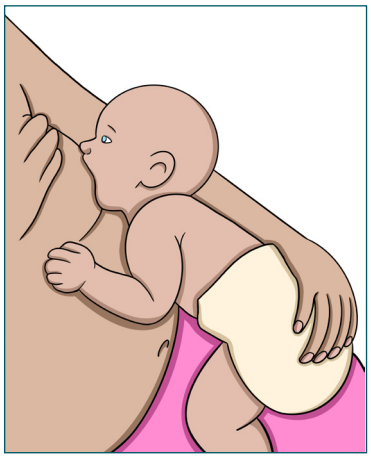
Labour narcotics can cause baby to be sleepy. Other reasons include a long birth or jaundice. If baby is sleepy, laid-back position is good for mother and baby because in prone position baby can bob its head easier. See handout on Sleepy Baby *(see page 34* #2).

With all breastfeeding support, a hands-off approach by the primary care provider is encouraged. However, there are times when gentle hands-on support is helpful. Ask permission first.

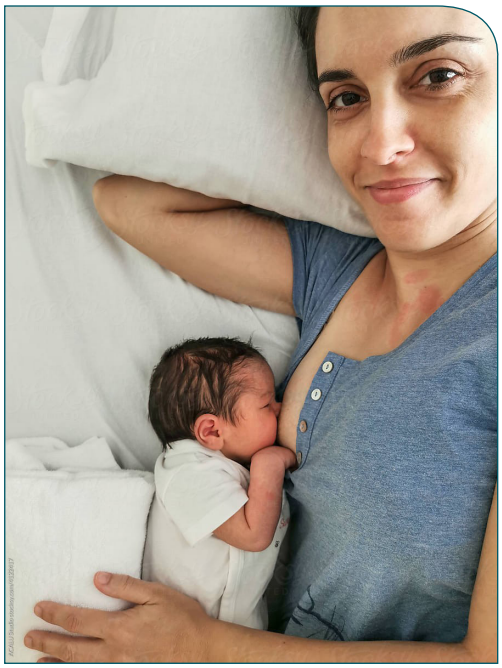
LAID-BACK LATCHING

- Place baby on mother's abdomen, with baby's face at the level of the breast.
- Mother supports baby's back and bottom, or light hand support to stabilize the head and shoulders.
- Baby's head will bob to one side.
- Baby will use its reflexes to latch on.
- Baby pulls the nipple back to its soft palate, ensuring a good latch.





For mothers who have had a c-section, other positions might be more comfortable, such as side-lying, cross-cradle or football hold (see below and *see page 21*).



SIDE-LYING POSITION

Like the laid-back position, the side-lying allows mom to relax and rest while feeding her baby. It is also a good option for women who have had a c-section, and/or have larger breasts.

Side-lying latching

If mom needs help (if she has large breasts), ask for permission to pick up her breast and place her nipple and areola right in baby's mouth, and hold until baby starts sucking.

A relaxed mom = a relaxed baby

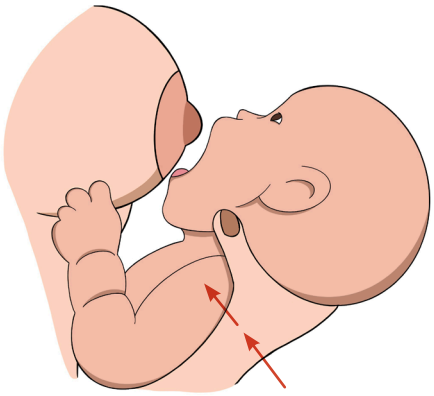
- When you enter the mother's room, take a moment to sit beside her and not rush. Listen and be with her.
- Let mom know you value breastfeeding. Encourage her and take guidance from her by how she feels and what she needs.

CROSS-CRADLE POSITION

In this position compared to the laid-back or side-lying position, more support is required so that the baby's body is held tightly against the mother's body to prompt feeding reflexes and achieve a good latch. A pillow helps to support baby at the level of the breast.

Tips for latching in cross-cradle position:

- With hand supporting the baby, allow baby's head to tip slightly back, with chin coming in first.
- Chin is pressed into the breast.
- When baby's mouth is wide open like a yawn, pop baby on.
- Once latched, more areola is typically covered by the baby's lower lip, than the top.



Baby's nostrils are conveniently flared, so they can breathe even when their nose is pressed into the breast. Only adjust if baby is having difficulty breathing, then move the baby slightly downwards. This will tilt baby's chin up and into the breast, which lifts the nose slightly off the breast.

FOOTBALL HOLD POSITION

Have the mother hold her baby along her side, with her elbow bent. The football hold allows her to use her other hand to shape breast and to do breast compressions if needed.

Like the side-lying, this position is helpful if the mother has had a c-section or has large breasts. With large breasts, another tip is to roll a burp cloth and place it under the mother's breast; this will support her breast and position the nipple and areola for a good latch.

See handout on breastfeeding with large breasts and for videos and handouts on latching and positioning (*see page 34* #2).

3 INVERTED NIPPLES

If women have identified they have flat or inverted nipples, they may believe it's a reason to not even try to breastfeed. **Reassure mothers that they can breastfeed,** see reasons listed below:

A protruding nipple is not required for latching; the baby only needs to feel breast tissue in their mouth to prompt the sucking reflex.

- Most nipples can become erect with stimulation. Continue to work on latch and positioning.
- Rolling the nipple can help the nipple point out (see short video *page 34* #3).
- Try placing a cold cloth on mother's nipple just before breastfeeding.
- Expressing, or after three days, pumping, just prior to breastfeeding.

The general consensus by the IBCLC reviewers of the guide is that nipple shields should in almost all cases be avoided for flat or inverted nipples. It was felt that only when baby cannot latch at all and none of the above work, then a nipple shield would be a last resort as a temporary intervention. See discussion below on assessment, consent and intervention time.

CONCERNS ABOUT NIPPLE SHIELDS

What is a nipple shield?

It is a nipple-shaped reusable silicone sheath that covers both the nipple and areola. It has small holes in the nipple end that allow breastmilk to pass through. The problem with nipple shields is that they obscure direct contact of the baby's mouth with the mother's nipple and areola. Tactile stimulation is needed to increase prolactin which signals milk production.

- When mothers have flat or inverted nipples, babies are at a greater risk for breastfeeding difficulties if they are exposed to the abnormal stimulus of nipple shields, pacifiers and/or bottle nipples.
- A baby learns a shallower latch when wearing a nipple shield resulting in less transfer of colostrum and breastmilk.
- Nipple shields should only be used after doing a breastfeeding assessment *(see page 31)* and with informed consent, necessary cautions, and close follow-up with the breastfeeding dyad. As needed, a Focused Tongue-Tie Assessment (*see page 39*) can be done by a physician and in consultation with an IBCLC.
- If used for flat or inverted nipples, it is best to limit nipple shield use to no more than a few days, although occasionally usage could extend to two to three weeks. Use Tips to wean, see right column.

Nipple shields with severe nipple damage

The use of nipple shields for damaged nipples is also controversial, with most reviewers feeling they should be avoided. However, some feel that if a mother has severe nipple damage (e.g., open wounds), the shield will create a barrier when feeding to reduce painful contact and allow baby to keep feeding at the breast. In this case the nipple shield could be used for a few days until the nipple has healed. Ensure it is the correct size for infant and mother, and understand it is still a temporary aid. **Ensure there is a plan in place to wean off the nipple shield once the mother goes home.**

Tips to wean off nipple shields:

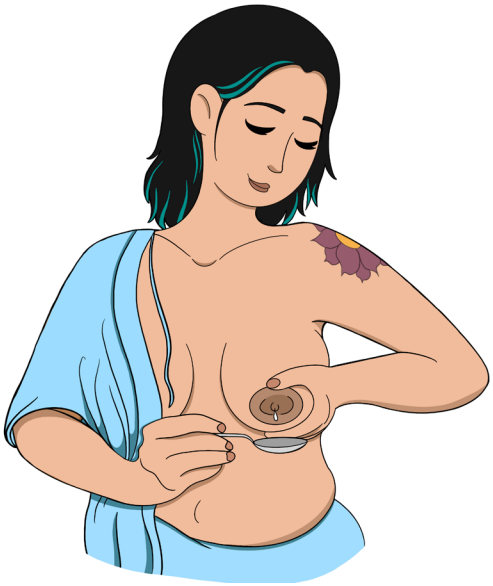
- Encourage mother to have more skin-to-skin with her baby.
- Mother can express some milk pre-feed and place it on her bare nipple (without the shield). This can entice baby to lick and then get some milk with the first suck. This will encourage milk flow and continued sucking.
- Offer breast early, when baby is still a bit drowsy or with early *feeding cues*.
- Start breastfeeding with the shield on, and once milk starts flowing, slip the shield off.

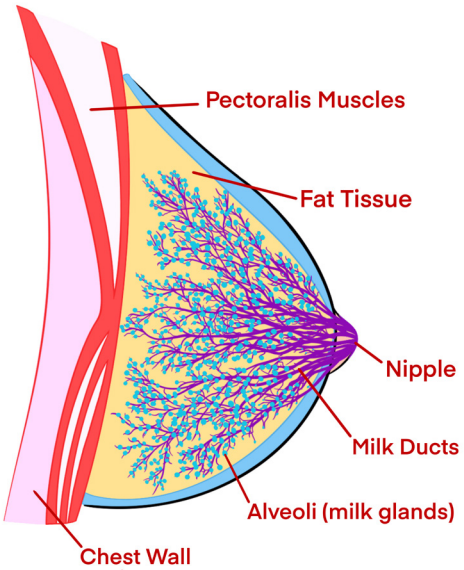
See handout on nipple shields (*see page 34* #3**).**

4 HAND EXPRESSION

It is worthwhile to teach and review hand expression with ALL mothers. Learning this skill gives them the confidence to relieve breast fullness to assist with latching, and to express milk for feeding. Hand expression is the next best tactile stimulation to an infant suckling the nipple and areola. The physical touch prompts the release of the prolactin hormone for milk production, and oxytocin for the milk ejection reflex (*see page 42*).

In the first two to three days, hand expression is an alternative to direct feeding, if needed. It results in more colostrum with a higher fat content, compared to using an electric pump.(53) Colostrum is produced in small quantities and can easily be collected by hand expression and offered to the baby on a small spoon, or by medicine cup or syringe.





Side diagram of breast

See how the milk ducts extend all the way back to the chest wall. Therefore, when expressing, gently compress the whole breast.

- Help mom be comfortable and relaxed by giving encouraging words.
- Wash hands. Have a clean spoon, cup or syringe ready for collecting the expressed milk.
- Demonstrate hand expression on a breast model or ask permission to provide gentle hands-on help.
- Give a light brushing touch in a circular motion from shoulder to nipple, and roll nipple gently between thumb and finger.
- Place hand in a C-shape with fingers on the bottom and thumb on the top, about one inch away from the nipple.
- Gently press back toward the chest wall.
- Gently compress fingers and thumb together towards the nipple.
- Catch the colostrum or milk and release the compression.
- Switch between breasts every few minutes and change the position of fingers and thumb to express from different parts of the breast.
- Encourage mother to explore what technique works best for her.
- Repeat until milk flow slows. Continued expression even after milk flow has slowed will often prompt additional letdown.

See videos (*see page 34* #4).

If baby is not latching, or is sleepy from a medicated labour and not yet feeding: Frequent hand expression is essential to stimulate milk production. Continue to support baby to latch. Encourage frequent hand expression sessions of a few minutes to 10 minutes each time. **Even a few drops every hour is helpful for milk supply.**

5 MAXIMIZE MILK TRANSFER

- Continue skin-to-skin time; the sensation of the baby on the mother's body will prompt milk letdown.
- Review positioning.
- Suggest Breast Compression or Switch Nursing, or both together (see below).

You will know that milk transfer is happening when you see and hear active sucking and swallowing. Seeing a suck-pause-swallow pattern generally indicates breastmilk transfer. The mother should feel a tug that isn't painful, and the baby's cheeks should remain full and rounded, not dimpled, or indrawn.

BREAST COMPRESSION

Breast compression is like hand expressing into the baby's mouth.

1. Spread thumb widely apart from fingers to allow for a large volume of milk glands to be compressed.
2. When the baby's sucking slows, compress thumb and fingers together firmly anywhere around the breast. Do not compress to the point of pain. Baby should begin swallowing more, in response to an increase in milk flow.
3. Hold the compression until the baby stops swallowing, then release.
4. When baby begins sucking again, repeat the compression. Move hand to slightly different areas of the breast each time (*see page 34* #5).

Baby must be sucking at least a little bit for breast compression to work.

SWITCH NURSING

While the baby feeds on one breast, the other breast lets-down, so when the mother switches breasts, some colostrum or milk is already there.

1. Let baby feed on one breast until the swallowing slows, even with compressions.
2. Gently detach baby (if needed, mother can insert her finger in baby's mouth), then latch baby on the other breast, until swallowing slows again.
3. Return baby to the first breast and finish on the second breast (i.e., two "rounds" total).

After two rounds if the baby still seems hungry, mother could rest her nipples by offering some expressed breast milk in a medicine cup.

If baby is sleepy from a medicated labour, or is weak and lethargic, and the above does not help increase milk transfer:

- Prior to initiating feeding at the breast, supplement with expressed colostrum or breastmilk.
- Use a medicine cup, spoon or tubing (*see page 28*).
- Either of the above will give baby an energy boost to nurse more effectively at the breast.

6 CLUSTER NIGHT FEEDING AND SOOTHING(54,55)

CLUSTER FEEDING

Newborn cluster feeding is normal. It commonly happens on the second or third night.

Heading into the second night, let parents know that "Tonight or tomorrow night may be a sleepless night which is normal. Newborns will feed steadily, not because they are starving, but to build up their nutrition and energy. So, it helps to be prepared, and we'll be here to help you."

Also, let parents know that newborn babies don't have adult day-night circadian rhythm. Babies simply sleep when they are tired and feed when hungry.

Encourage mother to rest during the day

Limit daytime visitors. Have the other parent (or support person) hold the newborn skin-to-skin, while mother sleeps.

If baby is crying and unsettled, see Tips to soothe baby, below.

It is important for parents to know that whatever soothing strategies they use, the newborn may still cry. Help them understand that while this can be stressful, it is normal and will not last.

Rooming-in is best

Due to concerns regarding safety and infection control, newborns should not be brought to the nurse's station to give the parents time to sleep. When a baby is roomed-in and close to its mother, there is less stress for the baby, and more breastfeeding. Baby humans, like all other mammals, are born immature and are stressed without constant contact with their mother or another human. Use nighttime as an opportunity to help parents learn how to soothe their baby, as well as learning tips for safer infant sleep (*see page 34* #6).

Tips to soothe baby

- Comfort – Cuddle baby skin-to-skin; offer the breast or a clean finger to suckle.
- Walk – Carry baby in your arms or a sling, rock gently.
- Talk or sing to the baby; make eye contact; make gentle shushing sounds.
- Gentle touch – Soft touching from neck down to toes can be comforting for baby.

If their baby is crying, some parents may ask for a bottle of formula, or a pacifier, or to swaddle their baby. Therefore, this is an especially important time to support parents to breastfeed and learn other ways to soothe their baby. Bottles, pacifiers or swaddling decrease the frequency of breastfeeding and increases the risk of mother not making enough milk. Swaddling reduces skin-to-skin and restricts infant movements.

However, in some cases, pacifiers or swaddling might be a temporary harm-reduction approach, rather than introducing formula. Formula has a higher negative impact on breastfeeding and the life-long health of the baby (*see page 27*). For ways to approach this often-challenging discussion topic with a parent (*see page 34* #12).

7 PUMPING – LATER OPTION FOR MILK EXPRESSION

Delay pumping until day three or later (prior to this, hand express as needed)

After day three, if baby is still not breastfeeding effectively, a pump can be used in combination with hand expression. **Pumping helps milk production, but the goal is always breastfeeding.**

One of the reasons to delay using a pump is that mother's milk may not have come in until day three to five. Women need to be informed that using a pump will not draw out any more milk than if they were to express by hand. Hand expression is the tactile stimulation needed for the breast-to-brain hormone feedback loop that releases prolactin and oxytocin for lactation success (*see page 42*). This is why mothers needs to know how to express by hand.

Until the milk comes in, only colostrum is produced. Therefore, when women hand express at this time and they collect a few drops, they need to be told this is fantastic!

Exceptions of when a pump is helpful to use prior to day three:

1. If mother is not breastfeeding effectively **and** is not comfortable with hand expression.
2. Breasts are edematous from IV fluid boluses in labour, complicated by a medicated baby who is not feeding well, and mother may be having difficulty hand expressing effectively.

PUMPING TIPS

- Limit pumping to no more than 10 minutes at a time per breast.
- Hands-on pumping is recommended: Mother uses her hands to express her breasts before, during and after pumping (see video, *page 34* #7).
- Hospital-grade electric pumps: There are single or double pumps, and they are sanitized between uses. A double pump can work faster and more efficiently, but takes more set-up and cleaning.
- Flange fitting: The mother's nipple should be pulled into flange without rubbing. A minimal amount of areola should pull into the neck of flange, and no "smacking" of areola with suction releasing. No matter what kind of pump is used, a proper flange fitting should be done, ideally by an IBCLC, or someone knowledgeable about pumps (*see page 34* #7, video).
- Pump setting: Adjust setting and suction level to weak or stronger as needed.
- At-home pumps:
  - These are either manual, or electric/battery operated and ideally will have a pump speed setting.
  - Rental pumps may be available at a pharmacy or public health unit.
  - Manual pumps cost less and have fewer parts and are easier to clean.
  - First Nation women can apply to the *FNHA Health Benefits Program* to get the cost of a breast pump covered.
  - There are also suction devices that collect let-down milk from the other breast, such as Haakaa® pumps. They are not substitutes for an electric pump and are more for oversupply milk collection.

RISKS OF OVERUSING BREAST PUMPS

- Overstimulating the breasts by pumping too long (more than 10 minutes per breast) can lead to overfull breasts, nipple pain and even breast engorgement.
- Nipple trauma due to poorly fitting flange or too strong of a suction level.

8 SUPPLEMENTATION

Medical Indications for Supplementation for the Breastfeeding Mother

The Breastfeeding Committee for Canada lists the *Medical Indications for Supplementation* in the newborn.(31)

Average Reported Intakes of Term Breastfed Infants(56)	
Age	Average Intake per Feed
0 to 24 hrs	2–10 mLs
24 to 48 hrs	5–15 mLs
48 to 72 hrs	15–30 mLs

Supplementation options, in order of preference:

First, mother's expressed colostrum or expressed breast milk (EBM), fresh, or collected and safely stored during pregnancy or post-delivery.

Second, pasteurized donor human milk (PDHM) from a regulated milk bank.

Some families may choose unpasteurized donor human milk (*see page 34* #8).

Last, human milk substitute (infant formula).

A newborn's stomach is tiny, only the size of a marble. Ideally a newborn will breastfeed on cue thereby getting the perfect amount they need. However, if a baby is sleepy or medicated, or not cueing, then supplement may be assessed to be needed. The above chart gives a guideline for how much is needed on average per feed. Once the baby starts to feed from the breast and respond to cues, they may not need the entire amount indicated in the chart above. Alternately, some medical indications will require *additional* supplementary volumes than shown, for example, if a mother has diabetes and her baby has persistent hypoglycemia in the early days (*even* if the baby is cueing and feeding well).

Supplementation
ABM PROTOCOL
#3: Supplementary Feedings Revised 2017(56)

Neonate hypoglycemia
ABM PROTOCOL
#1: Guidelines for Blood Glucose Revised 2014(59)

Neonatal hypoglycemia protocol:

Where IV glucose is not immediately indicated, consider initially giving colostrum if sufficient quantities are available instead of formula along with the Glucogel®, and follow the infant's blood sugars as per the hospital protocol.

Top-ups with formula in hospital should not be routine. A single exposure to formula in the early days can disrupt the baby's microbiome and may act as a sensitizing event later for cow's milk protein allergy.(57,58) In the newborn chart, **document informed consent** that parents were given the information on rationale, risks and benefits, and all other options to formula use.

Manage supplemental feedings – Tips to continue to support milk production and breastfeeding:

- Continue to encourage skin-to-skin time for unrestricted opportunities to practice breastfeeding. Support latch and position.
- Hand express at least every two to three hours or as often as the baby is feeding; or, after day three or four, hands-on electric pumping can be used.
- Feed expressed breastmilk with a small medicine cup or an at-breast supplementer (*see page 28*).
- Avoid or limit nipple shields and pacifiers.
- Avoid or limit bottles. This way you will avoid nipple confusion for the baby. When a baby breastfeeds, they press the areola and the nipple against the roof of their mouth and squeeze the milk out at their own pace. But when babies learn to suck the bottle nipple, they swallow quickly and it's easy to overfeed.

Once a bottle is introduced, the baby can gulp large volumes of milk, and can sleep for up to six hours. It is then challenging for the primary care provider to continue to work through issues with latching and re-establish breastfeeding. This is why it is highly recommended to delay bottle feeding in the first 72 hours.

9 ALTERNATE FEEDING METHODS(60,61,62,63,64,65)

For the newborn having challenges to latch or needing a supplement, use the following alternate feeding methods in the first 0–72 hours, and in some cases beyond. These methods interfere less with baby being able to get back fully on the breast and are far better options to a bottle. The two methods that are the *least likely* to interfere with breastfeeding are: an at-breast supplementer nursing device (a common brand name used is SNS™ which stands for Supplemental Nursing System™) or using a small cup. For videos (*see page 34* #9).

These are the recommended short-term feeding methods:

- **When there is an ineffective or no latch,** the parent can temporarily use either a medicine cup, or a spoon, syringe or tubing on the finger.
- **If there is a comfortable latch,** and the goal is to increase milk volume, then an at-breast supplementer (e.g. SNS™) can also be used.
  - For volumes 1–5 mLs: use a spoon or syringe.
  - For volumes 10 mLs or more use a cup or tubing.
  - If supplementation is required beyond the first few days, consider an at-breast supplementer as an alternative to bottle feeding.

Note: An at-breast supplementer can successfully be used when the infant's volume needs increase, and used for a baby's entire breastfeeding time.

- No matter the method, prepare parents for re-evaluating the feeding method on an ongoing basis to ensure the baby's needs are being met.

Whatever alternate feeding method is used, consider the appropriate volume (*see page 27*) for the baby's age and specific needs.

Physician helping a mother with an at-breast supplementer in the clinic postpartum. This photo does not show a newborn, but demonstrates how the system can be used from newborn through to older babies.

NIPPLE PAIN AND BREAST FULLNESS OR ENGORGEMENT(66,67)

Breastfeeding Pain
ABM PROTOCOL
#26 *Persistent Pain*
2016(66)

NIPPLE PAIN

Mild discomfort with breastfeeding in the early attempts is normal: This typically resolves after the baby draws the nipple and areola further into the back of their mouth to reach the soft palate for a comfortable latch.

Pain with breastfeeding is <u>not</u> normal.

Causes of nipple pain:

- **MOST COMMON:** Is a latch that is too shallow, where baby is nibbling or sucking on the nipple only. For photos of a shallow and good latch (*see page 19*). This may cause a distinct line or cut to form on the end of the nipple which can worsen to painful deeper cracks and bleeding.
- A yeast infection (thrush) can cause shooting pain, and mom (and sometimes also baby) will need to be treated with an anti-fungal medication.
- Other causes of pain (not related to latch): dermatitis, nipple blebs (blisters) or nipple vasospasm.
- Neuropathic pain is a rare condition that causes extreme nipple and breast sensitivity and pain with any stimulation, and so latching is difficult. Medication may be considered.

Treatment do's for damaged nipples

- Assess and correct latch *(see page 19)*.
- Referral to IBCLC.
- Keep nipples lubricated. With clean hands, apply a commercial nipple balm ointment. These balms are not the same as hand cream; they are fattier and thicker/waxier, and so adhere well to the nipple and act as a barrier. If mother has tried one in the past and has had no allergies to it, then suggest she use that one.
- Severe/deep wounds: Keep covered as much as possible. Use hydrogel pads, or a combination of nipple balm with hydrogel pads. **Steroids can impede wound healing.** If steroids are needed for severe pain or significant eczema on the breast, limit usage.
- Seeping wounds: Use a polyurethane matrix pad (Mepilex®), without balm, to allow for direct skin contact.
- Pain medication, as needed, NSAIDS or acetaminophen (Tylenol®); these don't help the healing but may help with mother's discomfort.

Treatment don'ts for damaged nipples

- No APNO (all-purpose nipple ointment). Why? It contains a steroid for pain relief, but this prolongs healing time. It also has antifungal and antibacterial components; neither are indicated for use on a nipple and may contribute to dermatitis. If indicated, steroid ointments can be prescribed separately for short-term use only.
- No salt or magnesium water soaks. Why? Dries out the nipple, similar to staying in the ocean too long.
- No nipple shields. Why? (*see page 22*).
- No electric pumping. Why? The suction of the pump can further damage the nipple. Teach hand expression.

Other considerations for damaged nipples

- Applying breastmilk is not, on its own, ideal for wound care as it has a high water content.
- Some soaps, oils and ointments irritate the nipple, so recommend mother use one she has used in the past.
- Lanolin is no longer used in most hospitals due to possible reactions/allergies, but is still widely used by moms. Therefore, it's important to caution them that lanolin can worsen symptoms in some women.
- Silverettes® and breast shells are used prenatally and postnatally, but are not necessary and can cause pressure on the nipple and increase edema of the nipple. They can interfere with healing by bathing the nipple in breastmilk, compared to using a nipple balm ointment.
- Disposable breast pads can be irritating.

BREAST FULLNESS OR ENGORGEMENT

Breast Fullness	Breast Engorgement
Breast fullness can happen as early as 24 hours and up to three to five days after birth. This is normal.	Breasts are overfull.
Breasts will feel tender and full as milk comes in.	Breasts will be warm, hard and painful.
Fullness is also due to increased blood flow, and interstitial fluid collecting in the breasts.	If left untreated engorged breasts can lead to a low milk supply, as mother's body is getting a message to stop making milk.
Breast fullness related to IV boluses given with epidurals during labour is a different process. This extra fluid will reduce as mom urinates, and the breast fullness will go down over several days.	Engorgement can lead to plugged milk ducts and/or breast infection (mastitis).

It can be difficult for the newborn to latch on full or engorged breasts. See prevention tips below.

Prevention

- Avoid unnecessary large volumes of IV fluids.
- Hand express colostrum or milk at least once or twice a day. During the first two to three days after birth, this has been found to effectively prevent severe engorgement.
- Breastfeed as often as the baby is willing and shows interest. Effective removal of milk allows the blood and lymph nodes to drain more easily, reducing fullness.
- Reverse pressure softening if the skin on the breasts is stretched tight and the areola is hard. See handout (*see pages 34* #10).
- Avoid wearing a tight bra (and no bra at night) and anything that might put pressure on a full breast (such as thick nursing pads under a bra).

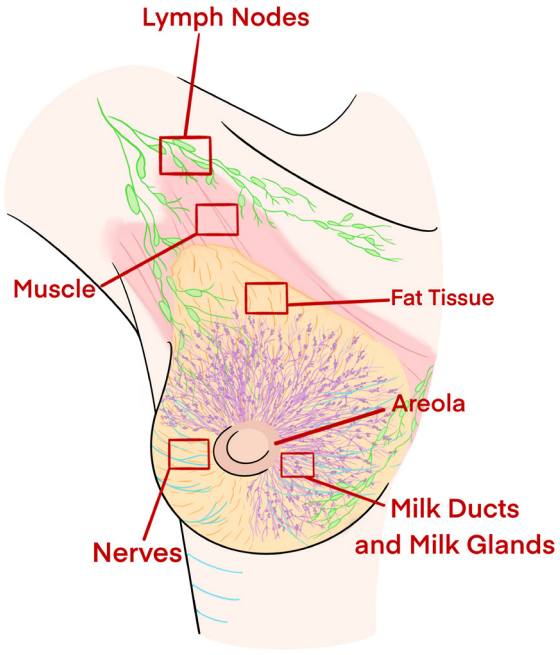
Treatment

- Hand express to comfort.
- Apply cold compresses as needed for pain and swelling.
- Reverse pressure softening.
- Lymphatic drainage if the skin on the breasts is stretched and the areola is hard. See diagram opposite showing location of lymph and breast tissue, and see lymphatic massage video (*see page 34* #10).
- NSAIDs or acetaminophen for pain.

Latest information on mastitis

ABM PROTOCOL

#36: *The Mastitis Spectrum* Revised 2022(68)



Breast diagram showing the extension of lymph and breast tissue towards the chest wall.

11 BREASTFEEDING ASSESSMENT

If baby is lethargic, not displaying feeding cues and not feeding – immediate urgent care.

For any No answers to questions 1 to 10 on pages 31 and 32, highlight as an area where mother needs support.

1. Is baby rooming-in? Yes ☐ No ☐

With rooming-in, baby will breastfeed sooner, longer and more easily.

2. Is mother comfortably positioned to support a good latch? Yes ☐ No ☐

a. She comfortably holds and positions her baby, e.g., lying back, reclined, or if sitting up, using a stool to bring her legs and baby to her so she is not hunched over.

b. Baby latches on easily.

3. Is mother having frequent skin-to-skin with baby? Yes ☐ No ☐

This will encourage cue-based breastfeeding.

4. Does mother respond to baby's early feeding cues? Yes ☐ No ☐

a. This means bringing her baby to her breast as soon as baby shows sign of hunger, and baby opens their mouth, turns head and roots.

b. Mother doesn't wait until baby is hungry, agitated, distressed or cries.

c. See *Feeding Cues poster* (*see page 34* #11).

5. Do you hear swallowing with feed?(69,70) **Yes ☐ No ☐**

a. If baby is less than 24 hours old, swallowing should be spontaneous and intermittent.

b. If baby is more than 24 hours old, swallowing should be frequent.

6. Does mother say that after a feed her breasts feel comfortable? Yes ☐ No ☐

a. She says that her breasts feel softer and that she feels milk has been removed.

b. Her nipples are not sore or blistered.

7. Does baby appear content after a feed? Yes ☐ No ☐

a. Comes off the breast on their own at the end of a feed, and is content, even for a little while.

b. After a feed, baby may sleep and continue to suck periodically at the breast. This is called non-nutritive sucking or breastsleeping.(71) This is healthy and comforting for the baby, so mother does not have to detach her baby.

8. Is baby breastfeeding frequently during the day and night? Yes ☐ No ☐

Frequent feeds in the early days are vital to establish and maintain milk production to meet the baby's needs. Milk removal increases milk production.

Here are some guidelines for what "breastfeeding frequently" means:

Following birth, babies will often feed within one to two hours, then enter a "recovery sleep" for several hours. A sleepy, medicated baby should be gently woken by six hours of age to breastfeed.

By 12 to 24 hours, babies should be waking and cuing on their own to feed regularly: a few minutes every hour, or for hours at a time.(72)

By day two, babies typically feed on cue eight to 12 times and may have one longer stretch of sleep.

Cluster feeding at night is normal (*see page 25*).

9. Do voids and stool outputs meet expected daily frequency? Yes ☐ No ☐

a. The PSBC one-page colour handout *Breastfeeding My Baby* (*see page 34* #11). outlines the frequency of breastfeeding, size of a baby's stomach, and how many wet and soiled diapers a day are normal. This handout can help you reassure parents when breastfeeding is going well.

Baby may void or stool soon after birth but not for the next 24 hours. If baby is breastfeeding well and is content, this is not a concern.

b. If outputs are low, assess for signs of dehydration.
Note: Prior to day three, brick dust (uric acid crystals in the urine, causing a red-orange stain in the diapers) is common while breastmilk is coming in. It is considered normal in breastfed babies. It is not a sign of alarm. **After day three, brick dust may be a sign of dehydration and that breastmilk intake is inadequate.**(73)

10. Have you checked inside baby's mouth? Yes ☐ No ☐

As part of any initial newborn exam, checking for a high or arched palate, cleft palate, natal teeth and tongue-tie/lingual frenulum/tethered oral tissues are routine.(46) If there are breastfeeding concerns that may be related to a tongue-tie, consider a Focused Tongue-Tie Assessment (*see page 39*).

Baby's weight loss is not an indicator of less effective breastfeeding. Explain this to the parents.

- **Early weight loss is NORMAL, not an indicator that supplementation is needed.**
- All babies lose weight in the first 24 to 36 hours of life. This is why delaying a first weight until 24 hours is often recommended(38), although culturally, most parents want to know their baby's birth weight.
- If mother was given IV fluids during labour, this can raise a baby's initial weight, and when the fluid is lost it can be mistaken as a weight loss, resulting in undue concern.
- Weight loss must be taken in the context of the newborn's overall health.
- A recommended resource for assessing expected or concerning weight change in the newborn period is the newt® newborn weight tool(74). This tool can be used to chart a newborn's weight loss and compare to standards to help identify weight loss or gain issues.

12 Q&A WITH PATIENTS

1. My baby is so sleepy.

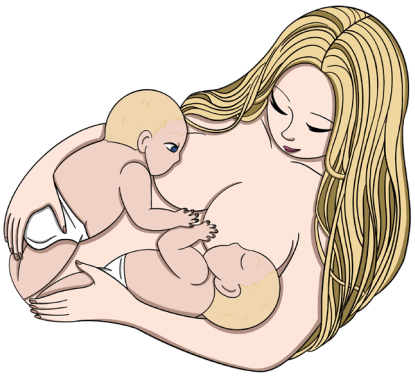
Most babies sleep a lot the first day – birth is hard work for them, too! Keep your baby skin-to-skin on your chest. Your baby will be content, and you can see your baby's early feeding cues telling you he wants to feed: he opens his mouth, and turns his head towards your breast.

2. It seems like all I do is breastfeed – I'm so exhausted.

Rest while your baby lies skin-to-skin with you. Your baby needs to feed a lot in the early days, and this helps you make lots of milk. You are so important to your baby. Do you have a support person who can stay overnight and hold your baby skin-to-skin and soothe the baby while you sleep?

3. I'm worried I'm not making enough milk.

New babies have tiny tummies, and so it's normal for them to drink tiny amounts, and to feed often. Colostrum is super healthy, and it's all your baby needs in the first few days of life. You are doing a great job!



4. Can I make enough milk for my twins?

Yes! With lots of skin-to-skin and feeding on demand, you can make enough milk. We will follow you closely to see if any supplementation is needed. You can start by feeding one baby at a time and then we can help you learn how to position and feed them together. When you get home, you'll need support from family or friends so you can get enough rest. Do you also have a doula or IBCLC to help you with breastfeeding?

5. Breastfeeding hurts.

It's not unusual for nipples to be a bit tender at the beginning of a breastfeed in the early days, but pain that lasts longer means that something needs adjusting or treatment. Would you like me to watch how baby latches and feeds?

6. My partner wants to feed the baby.

Bottles disrupt breastfeeding. Ask your partner to give the baby a bath (after 24 hours), cuddle and hold your baby skin-to-skin, and help in other ways like changing diapers.

7. My baby is always so hungry; I think my baby needs formula.

In the early days and first few weeks it is normal for your baby to be hungry and want to breastfeed often, we call it cluster feeding. If your baby fills up on formula, your baby won't be as hungry to breastfeed, and then you may not make enough milk. Cluster feeding is your baby's way to help you make more milk. Your colostrum and milk, not formula, is the healthiest food for your baby. Avoiding formula in these early days will prevent allergies later. Would you like some help with breastfeeding? (Health-care providers, refer to the informed choice handout *see page 34* #12).

8. Instances when short-term supplementation is medically indicated.

If pasteurized donor human milk (PDHM) is available: It is safe, and we recommend this over formula because it is healthier and easier on your baby's tummy.

If PDHM is not available and parents are reluctant to give baby formula: Right now, the risk of your baby's medical condition is more of a concern and outweighs the risks of formula. We will give your baby only as much as she/he needs. This is temporary, and we will still help you with breastfeeding.

PATIENT VIDEOS AND HANDOUTS FOR PRACTICE TIPS 1 TO 12

1. **Skin-to-Skin**

   VIDEO: *Skin to Skin Contact*| Child Health BC interview with Nils Bergman, MD

2. **Latch and Position**

   VIDEO: *BFSCP Breastfeeding Videos* | KCR Community Resources/Interior Health

   VIDEO: *Attaching your baby at the breast video* & *Breastfeeding Positions* |Global Health Media (in multiple languages)

   INDIGENOUS VIDEO: *Stephanie George - Part 4 - Baby Led Latching* | Oneida Nation Aboriginal Midwife Lactation Consultant

   INDIGENOUS BOOKLET: *Breastfeeding for the Health and Future of our Nation* | Best Start Resource Centre

   HANDOUT: *Positioning and Latching* | La Leche League

   HANDOUT: *Breastfeeding with Large Breasts* | Australian Breastfeeding Association

   HANDOUT: *How to wake your sleepy baby* | Kaiser Permanente

3. **Inverted Nipples – Concerns about Nipple Shields**

   VIDEO: *Rolling out a flat nipple* | IABLE

   HANDOUT: *Nipple Shields* – How to Wean from a Nipple Shield| La Leche League

4. **Hand Expression – First Choice for Milk Expression**

   VIDEO: *Hand Expression of Breastmilk* | Jane Morton, MD, Stanford Medicine

   VIDEO: *Hand Expression* | HealthLinkBC

5. **Maximize Milk Transfer – Breast Compression**

   VIDEO: *Breast Compressions* | NHS (South Warwickshire University)

6. **Cluster Night Feeding and Soothing**

   HANDOUT: *Why Does My Baby Cry* | La Leche League

   BOOKLET: *Safer Infant Sleep – Practice Resource for Health Care Providers* | Perinatal Services BC, 2022.

   INDIGENOUS BOOKLET: *Honouring our Babies - Safer Sleep Toolkit* | Perinatal Services BC, 2023.

7. **Pumping – Later Option for Milk Expression**

   VIDEO: *Maximizing Milk Production with Hands-on Pumping* | Jane Morton, MD, Stanford Medicine

   VIDEO: *How to fit breast pump flanges* | IABLE 2019

8. **Supplementation**

   HANDOUT: *Informal (Peer-to-Peer) Human Milk Sharing* | PSBC

9. **Alternate Feeding Methods**

   VIDEO: *A Video on Alternative Feeding Methods for Newborns* | HealthLink BC

   VIDEO: *Inserting a Lactation Aid* | Jack Newman, MD, International Breastfeeding Centre

10. **Nipple Pain and Breast Fullness or Engorgement**

    HANDOUT FOR HEALTH-CARE PROFESSIONAL: Nipple Wound Care: *Nipple Care 101* |Dr. Katrina B. Mitchell

    VIDEO: *Lymphatic Massage for the Breast During Pregnancy and Lactation* | IABLE

    HANDOUT: *How to Do Reverse Pressure Softening* | Jean Cotterman, RNC-E, IBCLC

    VIDEO: *The Basics of Breast Massage and Hand Expression* | Maya Bolman, IBCLC

11. **Breastfeeding Assessment**

    POSTER: *IH Baby Feeding Cues* | with permission from ©State of Queensland (Queensland Health), 2010.

    HANDOUT: *Breastfeeding My Baby* | Perinatal Services BC

    HANDOUT: *Signs that Feeding is Going Well - Best Start* | Ontario Best Start (in multiple languages)

    PHOTOS: *Diapers of the Breastfed Baby* | Kay Hoover, MEd, IBCLC and Barbara Wilson-Clay, BS, IBCLC, 2002.

12. **Q&A with Patients**

    HANDOUT: *Making an Informed Choice about Feeding Your Baby* | IWK Health (Halifax)

SECTION 3 – POSTPARTUM

ASSESS AND MANAGE LOW MILK SUPPLY (HYPOGALACTIA)

NOT HAVING ENOUGH MILK IS THE MOST COMMON REASON WOMEN STOP BREASTFEEDING(75,76)

"The vast majority of low milk supply is related to factors surrounding birth such as long labor, epidural, sleepy baby, too much IV fluid, nipple shields introduced, and lack of dedicated breastfeeding care in the hospital, followed by underlying health issues such as obesity, diabetes and autoimmune disease. We have limited understanding of how these underlying health issues affect low milk production; it is not necessarily cause and effect, and even then, many patients with those conditions have plenty of milk." Dr. Katrina B. Mitchell, Breastfeeding Medicine Physician and Breast Surgeon.

ACTION STEPS

1. **Ask about her birth experience** and if there were any medical interventions, recognizing that the interventions may have interrupted or impacted breastfeeding. Respond to moms with understanding and an empathic manner. This can help her relax as you continue with further assessment.(77)
2. **Ask mother if her baby is ready to breastfeed during the office visit.** If latch and position can be improved, milk supply may also improve. If applicable, assess pumping and nipple shields.
3. **If needed, refer to IBCLC to assist mother with positioning and latch for more effective milk transfer.**
4. **To determine if low milk supply has other causes,** *see pages 38* to *47* for maternal and infant history, assessment, differential diagnosis and management, for example, galactagogues.
5. **Time is critical.** The longer breastfeeding challenges are unaddressed, the more likely your patient will stop breastfeeding.
6. **Check** out the patient handouts and short courses on low milk supply (*see page 47*).

CONSIDERATIONS

Learn about breastfeeding by calling your local IBCLC to sit in on some breastfeeding appointments.

At this first return appointment, if both baby and mother are distraught, it won't be immediately possible to do a detailed history, physical exam and differential diagnosis, so start with **observing baby at the breast. Do a quick assessment** to determine if it is a perceived or real low milk supply.

OBSERVE BABY AT BREAST – QUICK OFFICE ASSESSMENT

- Check latch and position. Suggest changes to mother to improve latch and position (*see page 19* and *page 59*) With encouragement and necessary direction, a better latch may be achieved at this visit.
- How often is she breastfeeding? Is she feeding at night? Feeding on cue?
- Is she mostly direct feeding, or by hand or pump expression? Is she using a bottle?
- Is she using a nipple shield? If so, provide direction on how to wean off (*see page 22*).
- If mom is pumping and she brought her pump with her, observe the response to suction and ability of pump to remove milk (*see page 26*).
- Also see Practice Tip 11, Breastfeeding Assessment (*see page 31* and *page 32*).

If mom has been expressing milk, let her know that her supply will likely increase with more breastfeeding. With a comfortable position and a good latch her baby will get enough milk.

If mom has not been expressing milk manually or with a pump, this may the time to introduce these options to increase milk supply (*see page 23* and *page 26*).

At this first postpartum visit, if a good latch of the areola and nipple by the baby has not been successful, it can still be learned. **The baby does not automatically need to be put on formula to resolve a low milk supply** (unless of course baby is dehydrated or has other signs of illness, and there is no other supplementation option). **Refer to an IBCLC as needed.**

If the cause of low milk supply is still unclear, consider completing the maternal and infant history, Focused Tongue-Tie Assessment and differential diagnosis, to determine how to manage. See *page 38* to *page 42*.

HISTORY – MATERNAL AND INFANT

Maternal (includes non-birth parents who induce lactation)	
Previous Breastfeeding	Any difficulties, duration of breastfeeding
Prenatal	GDM, hypertension, lack of breast growth
Intrapartum	Preterm labour, prolonged labour, postpartum hemorrhage (PPH), mode of delivery, need for instrumentation, excessive IV fluids, medications
Postpartum	Delayed skin-to-skin, poor latching, infant separation, supplementation, delayed milk, Retained Products of Conception (RPOC)
Past Medical and Surgical History	Refer to prenatal lactation history (*see page 7*).
Medication and Herbs	*LactMed®* Galactagogues (*see page 44* to *page 46*).
Mental Health Screens Completed	• Mental health concerns, strength of social supports • Postpartum depression and anxiety screens: EPDS and GAD-7 • Dysphoric Milk Ejection Reflex (D-MER) is a rare psychological condition(78)

Infant		
Early Postpartum	Gestation at birth, mode of delivery, neonatal resuscitation required, birth trauma or any dyad separation. First early feed and latch? Concerning weight loss, jaundice, supplementation, hypoglycemia.	This guide is focused on healthy term infant. Additional support is needed to breastfeed at-risk preterm and SGA infants. See ABM protocol #10.(79)
Medical History	Congenital disorders, any illnesses, or further hospitalizations.	

PHYSICAL EXAM – MATERNAL AND INFANT

Maternal

Ask if her breasts increased in size during pregnancy or after delivery. Assess breast contours, nipple size and oral-nipple disproportion that might be a sign of a tubular breast (*see page 41*). Assess for nipple damage.

Infant		
Weight	Ideally infant is back to birth weight by 10–14 days postpartum, then aim for 20–30g/day until two months of age, based on WHO growth velocity.(80,81)	To graph the expected postpartum weight loss based on percentiles, try the *newt® newborn weight tool*. (74)
General Physical	Assess for alertness and activity, hydration status, outputs (stools and wet diapers per 24 hours), signs of jaundice, low muscle tone, thorough head-to-toe assessment.	
Musculoskeletal	• Torticollis; can lead to difficulties achieving an effective latch, on affected side. • Plagiocephaly; could indicate that baby is on its back too much and not skin-to-skin enough. • Severely recessed chin; can affect breathing while breastfeeding. • Hypotonia; need more head or body support when positioning at the breast.	
Focused Tongue-Tie Assessment	*See page 39*	

The Tongue-Tie Frenotomy Controversy

Terminology: Tongue-tie (ankyloglossia) and lingual frenulum are often used interchangeably. Commonly we use tongue-tie. The term tethered oral tissues is broader and refers to both tongue-tie and lip-tie.

There is considerable controversy on the practice of frenotomy:

- The most recent vetted HealthLink BC resource is *Tongue-tie and tethered oral tissues*.(82)
- There are additional statements from *American Academy of Pediatrics*/AAP (2024)(83), the *American Academy of Otolaryngology Head and Neck Surgery*(84) and the *Canadian Paediatric Society*/CPS (2012)(85)

These four well respected, current, evidence-based guidelines each acknowledge the frenotomy controversy and have slightly differing conclusions.

Frenotomy is a simple office procedure to a skilled provider and within the scope of practice of physicians and dentists. If you refer to an allied health professional for a frenotomy assessment and frenotomy, look for a multidisciplinary approach that includes IBCLCs who are trained in doing the **essential** feeding and Focused Tongue-Tie Assessment prior to considering a frenotomy.

The presence of a tongue-tie does not always necessitate a frenotomy. Complex tongue and other oral cavity muscle movements are required for breastfeeding; extension of the tongue is only one of the movements required. A frenotomy may be needed when there is **persistent nipple pain.** Position and latch can look good but in fact the latch is compromised by the tongue-tie. If a frenotomy is not done, a mother's nipple pain may not improve, and her milk supply may also lessen.(83,85)

FOCUSED TONGUE-TIE ASSESSMENT

To assess for tongue-tie/tethered oral tissues:

1. **Assess tongue position.**
   When baby is calm and with a closed mouth, put downward pressure on the chin and assess where tongue is positioned at rest. The tongue should rest on the palate. Put your gloved finger into baby's mouth and stroke the bottom gumline from side-to-side. The tip of the tongue should move laterally, following your finger side-to-side.
2. **Is there a restrictive attachment of the tongue?**
   Put downward pressure on baby's chin and insert your finger along the lateral tongue then sweep anterior to midline. Feel under the tongue for a "speed bump" (the tongue-tie). Then look to see if there is a restrictive attachment.
3. **Assess suction and range of motion of tongue.**
   Insert a finger, pad side up, for the baby to suck. Feel the palate for a ridge. A ridge could indicate submucosal cleft. You should feel a strong vacuum, and the baby should be able to maintain contact between their tongue and your finger during the rhythmic sucks. If baby breaks the suction with each suck this indicates poor suction. Next, apply slight downward pressure on the chin to see if the baby can maintain the connection between tongue and finger, which would indicate poor upward range of motion.

Some clinicians find a functional assessment rating tools for tongue ties helpful. Two examples are *TABBY Tongue Assessment Tool* (86) or the *Hazelbaker Assessment Tool* (87). These have not been validated and should not be used in isolation to make the decision if frenotomy is required.

If a restrictive tongue-tie is identified following assessment, and is negatively impacting breastfeeding despite optimizing latch and position, frenotomy can be considered and should be a shared decision with parents:

- Discuss **rare** risks of surgery to infant including risks of bleeding, pain, infection, poor wound healing, infant feeding refusal, and potential damage to surrounding tissues.
- Studies show no difference in outcomes between frenotomies done using laser versus an office-based procedure (83,84).

For a current evidence-based discussion about tongue ties consider watching the free 1-hour IABLE frenotomy assessment course: Tethered Oral Tissue: Trends and Truths, with Dr. Elise Graham (*see page 47*).

DIFFERENTIAL DIAGNOSIS FOR LOW MILK SUPPLY

Most common cause for low milk supply is infrequent or ineffective breastmilk removal. (88)

- Shallow latch of the areola and nipple.
- Infrequent feeding: Scheduled timed feedings, early supplementation by bottle or use of pacifier or nipple shields.

MATERNAL ILLNESS:

Severe illness, such as sepsis, surgery or preeclampsia early postpartum, can delay lactation or lead to less frequent milk removal leading to decreased milk production.(89)

POSTPARTUM ANXIETY AND DEPRESSION/BIRTH EXPERIENCE:

These can **significantly** impact a mother's postpartum transition. When a mother experiences fear and worry or negative emotions, this can lead to a lack of self-confidence in her ability to breastfeed, and interfere with bonding and frequency of breastfeeding. A mother's interpretation of her birth experience will be different than how it is defined by the health-care provider, so hear her story.

MEDICATIONS:

Some medications can impact milk supply or sedate the baby, but the impact is variable depending on factors such as dose, frequency, dose timing and particle size distribution (PSD). Contraceptives (see below), nicotine, alcohol, stimulants (see below) and aripiprazole (Abilify®), can impact milk supply and women need to be aware of the possibility so proactive steps can be taken. *LactMed®* is a great resource that anyone can use.

Contraceptives

Hormonal contraceptives should be used with caution for patients with low milk supply. Hormonal contraceptives are generally considered safe for women six weeks postpartum, although many women notice a decrease in milk produced even with progesterone-only contraceptives. Due to the potential of decreased milk with hormonal options, discuss risks versus benefits, and alternative contraceptives.

Early postpartum (<six weeks): Avoid progesterone contraceptives. Clinical experience has shown that exposure to progesterone (pill, depo or LARC) can decrease milk production and lead to a shortened breastfeeding duration.

Warning: Depo-medroxyprogesterone irreversibly decreases milk production.

Avoid combined oral contraceptive pills (COCPs). From clinical experience, some recommend that it be a last choice, and to delay use beyond six weeks, as it will reduce milk production at any time. The estrogen in COCPs reduces prolactin. Recommend alternatives such as non-hormonal or barrier contraceptives methods during this time.

Contraception

ABM PROTOCOL

#13: Contraception During Breastfeeding Revised 2015(90)

Note: For the woman with low milk supply who is not exclusively breastfeeding through the day and night, Lactational Amenorrhea Method (LAM) will not be reliable.

After 6-8 weeks postpartum: Progesterone-only, COCPs and LARC are now considered safe; but, if lactation is not well established by six weeks, mothers need to be advised that it may still reduce how much milk they'll make, and they will need to breastfeed more to maintain supply. When choosing a COCP, the lowest dose of estrogen is recommended to minimize the negative effect on milk supply. See *LactMed®*

Stimulants

- High doses/misuse of amphetamines and methylphenidates can accumulate in breastmilk, so advise not to breastfeed.(32,91)

ADHD Medication

- The limited data available suggests that these medications when used to treat ADHD/narcolepsy at typical doses are compatible with breastfeeding.
- There is a theoretical risk to reduced milk production due to their potential effect on prolactin, but the clinical relevance is not well established.(91)

BREAST SURGERY REDUCTION OR AUGMENTATION

For more information (*see page 8*).(92)

INFANT OROMOTOR ISSUES

Tongue-tie or tethered oral tissue, palate abnormalities, severely recessed chin or poor mouth tone (*see page 38* and *page 39*).

TUBULAR BREASTS(89,93)

In this guide we refer to tubular breasts, rather than breast hypoplasia or the non-specific term of insufficient glandular tissue (IGT). (Additionally, the use of the word "insufficient" can cause immediate discouraging feelings for the mother.) While most women with low milk supply have normal breast size and contours, tubular-shaped breasts are a differential diagnosis for low milk supply. Tubular breasts were discussed earlier (*see page 9*).

Who is at risk?

Women with hormonal and endocrine conditions such as high androgen states (obesity, type 2 diabetes, GDM), insulin resistance, advanced maternal age, history of infertility or preeclampsia. (89)

Maternal signs

Lack of breast size increase during pregnancy or after delivery.

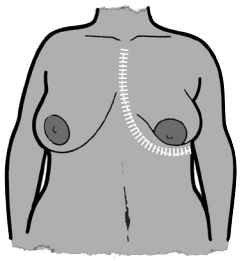
One breast may be significantly larger than the other, and there may be a disproportionately large or bulbous areola, see photo below and graphics to right.

Note: It is difficult to tell how much glandular tissue there is by palpatation.

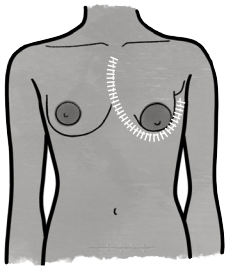
Photo above shows cylindrical shape with a large areola relative to the breast size, asymmetric sizes between breasts and wide spacing. See *physicianguidetobreastfeeding.org* for more photos showing the spectrum of shapes.

The diagrams below show a tubular breast on the woman's left side, with varying degrees. She can have a tubular breast on one or both breasts.

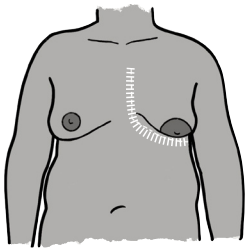
TYPE 1
Upper part of left breast close to armpit is normal, but less fullness at lower part of breast, and breast might look flatter.



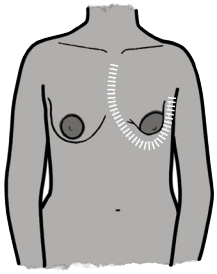
TYPE 2
The left nipple is larger than the right. There is less fullness in the lower and lateral part of the left breast.



TYPE 3
Widely spaced breasts. Asymmetry of nipples. Less fullness in the left breast in the subareolar region.



TYPE 4
Little breast fullness and less subareolar tissue on left breast.



Based on *Von Heimburg classification system of hypoplastic or tuberous breasts*, 1996. Permission to use graphics from reference 94.

RETAINED PRODUCTS OF CONCEPTION (RPOC)

Interferes with the physiologic decrease in progesterone after delivery, which is an important signal for secretory activation (lactogenesis 2).

HYPOPROLACTINEMIA

Low prolactin is usually caused by not breastfeeding (or expressing) frequently enough early postpartum.

See diagram to the right showing breast-brain prolactin and oxytocin feedback.

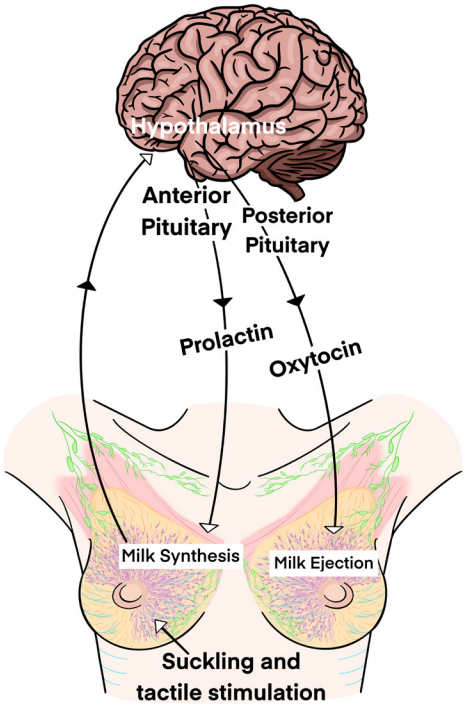
Low prolactin can also be caused by medical events that damage the pituitary, such as postpartum Sheehan syndrome, or use of aripiprazole in pregnancy or postpartum.

THYROID DISORDERS

Both hypothyroidism and hyperthyroidism may reduce milk supply. There are no randomized control trials, but case studies and cohort analyses have supported this correlation.(28) However, many women with thyroid disorders can produce healthy milk levels.

The Breast-Brain Connection

A positive feedback loop ensures continued milk production as long as the infant continues to breastfeed.



To read more about lactation physiology and lactogenesis go to this excellent website designed specifically to assist primary care practitioners:

Anatomy and Physiology | The GP Infant Feeding Network (UK).(95)

PLACENTAL INGESTION

Depending on the method of placenta preparation (raw or dried), progesterone and estrogen may still be present, both which inhibit prolactin leading to low milk production. Additionally, there are infection control risks in the process of preparation of encapsulated tablets made from placenta.(96)

RETURN OF MENSES OR PREGNANCY

Milk production often decreases the week prior to the return of menstruation due to higher estrogen and progesterone levels and lower prolactin level.

HERBS

Normal consumption of herbs in food or teas would not decrease milk supply, but some concentrated herbal preparations can. The impact depends on the concentration and amount consumed.
For example, concentrated preparations of peppermint, parsley, rosemary, sage, spearmint or thyme can decrease milk supply.

INVESTIGATIONS

There are no standard lab tests for low milk production. Order lab tests for other clinical conditions, for example:

- TSH: If mother has clinical signs of hypo or hyperthyroidism.
- CBC, ferritin: If she had a postpartum hemorrhage; related fatigue could be a factor in mother's energy to breastfeed.
- Pregnancy test: If mother is late postpartum and thinks she may be pregnant.
- Prolactin: Is rarely checked because there is presently lack of consensus and no clinically defined parameters on how to interpret this.
- Pelvic ultrasound: If there are symptoms of RPOC.

MANAGEMENT

See "BREASTFEEDING PRACTICE TIPS 1 TO 12" (*see page 18* to *page 33*).

Peripartum Management
ABM PROTOCOL
#5: Peripartum Breastfeeding Management 2013(35)

Adequate support

The early postpartum period is the mother's time to focus on breastfeeding her infant with a good latch and milk transfer, resting and healing. The best supports from family and friends are often meal preparation, childcare and housework. **If your patient does not have adequate support, refer her for health-care professional support** (*see page 57*)**, and for at-risk mothers** (*see page 7*).

Ensure effective latch (*see page 19*)

Uncommon issues that could affect latch that might not have previously been identified:

- If torticollis is suspected, this affects positioning, and the infant might benefit from physio referral.
- Hypotonia may benefit from neurology referral.
- If infant has uncoordinated suck without tongue-tie restrictions, suggest suck training exercises.(97)

Frenotomy, if indicated (*see page 39*)

Ongoing skin-to-skin

- *See page 18*.
- Ensure baby is not swaddled. Products such as bassinets with a swaddling harness restrict baby's movements while sleeping and are not recommended.

Frequent effective feeding

- To avoid a drop in prolactin levels, recommend cue-based feeding, day and night. Typically, aim for feeds at least every three hours night and day, and limit to one break no longer than five hours. To help increase milk, encourage breastfeeding, as it is more effective than pumping.
- For more tips on maximizing milk transfer, including breast compression or switch nursing (*see page 24*).

Hand expression or hands-on pumping

Immediately after a direct feed, suggest mother hand express or try hands-on pumping (*see page 23* and *page 26*). This helps ensure adequate milk removal as a temporary solution while working on latch and frequency of feeds.(89)

Correct maternal lab abnormalities, if any have been identified

Galactagogues (*see page 44-47*)

Consider prescribed and/or herbal galactagogues only if the mother's milk supply remains low after optimizing milk removal and correction of medical causes.

Although galactagogues such as domperidone have been used for decades, high quality, evidence-based research on pharmaceutical and herbal galactagogues is lacking. Most of the studies are based on a small number of patients. They also have high dropout rates and lack randomization, controls or blinding.(98)

Response to galactagogues vary. Women with tubular breasts will generally see less response to galactagogues, although metformin can help some (*see page 9*).(99)

GALACTAGOGUES – MEDICATIONS

Galactagogues
ABM PROTOCOL
#9: Use of Galactagogues 2018(88)

Galactagogue Disclaimer

The three prescription galactagogues, metformin, domperidone and metoclopramide, are used off-label. As there is a lack of randomized controlled trials to support their usage (given ethics of doing such studies in pregnancy and breastfeeding), the current evidence is anecdotal and based on usage by many women followed in breastfeeding clinics.

Metformin is an emerging area of usage as a galactagogue.

Domperidone continues to be controversial. It is not going to fix all cases of low milk supply, and therefore needs to be prescribed following careful assessment and with close follow-up.

Breastfeeding specialists have a wide range of prescribing practices for galactagogue medications, and there is no clear consensus on ideal dosing regimens or expected milk increase. The following dosing is based on current ABM galactagogues protocol and clinical experience from breastfeeding medicine physicians (IBCLCs and NABBLM certified) who reviewed this guide.

Physicians and other prescribers must prescribe within their clinical competence, professional codes and ethics of their statutory bodies and prescribing policies of their employers.

See Patient Handouts and Physician Quick Courses and Handouts (*see page 47*).

The galactagogues listed below (*see page 44* to *page 46*) are not presented in any specific order. The choice of which herb or prescription medication to use should be based on your most likely diagnosis, mechanism of action, side effects, and patient preference including financial coverage.

Metformin (89,99,100,101)

Use

- Used off-label as a galactagogue. It is a relatively low-risk intervention.
- Metformin is prescribed as a galactagogue by breastfeeding medicine physicians in Canada, in the context of PCOS/insulin resistance, tubular breasts (hypoplasia), if related to the insulin resistance (*see page 41*), or in some cases for those who've had breast reduction. This is an emerging area of practice, and studies are forthcoming.
- Derived from the legume, goat's rue, a commonly used herbal galactagogue.
- Mechanism of action in lactation remains unclear; however, it is likely due to improved insulin sensitivity impacting glandular tissue function.

Dosing

- Starting dose: 250mg TID, slowly increase based on tolerance to 500mg TID.
- Early benefits can be seen, but maximum benefit usually in four to six weeks.
- Metformin can continue to increase milk supply past the six weeks in some patients (pers. comm. Dr. Shawna Lamond, Well Fed Clinic Calgary, *see page 68*).
- If no improvement after six weeks, then discontinue.

Possible Maternal Side Effects

- Nausea, GI distress, diarrhea.
- For women with PCOS, it can make menstrual cycles more regular and increase fertility, so ensure contraception in place if pregnancy is not desired.(102)

Metformin can be used in addition to domperidone or metoclopramide.

Domperidone (88,89,100)

Use

Typically used, and Health Canada approved, for GI dysmotility. Used for decades in Canada off-label as a galactagogue. It is a dopamine antagonist that **increases prolactin secretion**.

For women with tubular breasts, domperidone is not effective.

Studies have shown an increase in milk of 90mL/day, and up to a full doubling of initial production with 30–60mg/day.(88)

Cautions:

- For patients who have mental health concerns, given domperidone's effect on decreasing dopamine.
- Can cause QT prolongation and risk of fatal ventricular arrhythmia.

Dosing

Recommended dose: 10mg PO TID.

No research has been done on safety or effectiveness of >60mg/day.

Maximum effect is typically reached by 7 to 14 days.

Duration: Domperidone has only been studied with durations from one to four weeks.(88) In clinical practice, there is lack of consensus on duration of therapy and it is used from a few days to months. **If prescribed for more than 14 days, frequent follow up is crucial to ensure ongoing safety, effectiveness and lowest effective dose.**

Consider maternal ECG prior to start and again at 48 hours if mother is on any other QT prolonging medications.

Discontinuing domperidone: To avoid side effects and psychological concerns **don't stop abruptly. Decrease by 10mg/day every five to seven days.** See handout *on page 47*).

Possible Maternal Side Effects

Dry mouth, headaches, abdominal cramps, increased hunger/weight gain. Psychological symptoms with **abrupt** discontinuation: depression, anxiety and suicidal ideation.

Medication interactions:

- Medications metabolized by CYP3A4: fluconazole and macrolide antibiotics, cannabinoids and antipsychotics. Also, grapefruit.
- Other QT prolonging medications, e.g., SSRIs, antibiotics.

Withdrawal symptoms:

Anxiety and insomnia if used for longer than a few weeks or above the max recommended 30mg/day. Mother can get symptoms even if not abrupt discontinuation if she takes domperidone for a longer period. See Discontinuing under Dosing.

Shared decision making with patient when prescribing domperidone

Have an informed discussion about medication being used off-label, risks and common side effects, as well as ongoing assessment of effectiveness and lowest effective dose. Discuss a plan for a slow taper to help mitigate above risks.

Health Canada Safety Alert: Domperidone can cause sudden cardiac death or a serious ventricular tachycardia. In 2013 there were 2,000,000 domperidone prescriptions filled in Canada with 12 reports that domperidone was a possible cause of a heart event. Health Canada recommends maximum dose of 30mg/day.(103)

Always screen for increased risk of developing an arrhythmia prior to prescribing: history of palpitations, personal or family history of arrhythmia, or cardiomyopathies, pre-pregnancy obesity (BMI>25), or concurrent use of medications metabolized by CYP3A4 enzyme.(88)

There is a higher risk of sudden death or prolonged QT related arrhythmias for women who are breastfeeding and taking QT prolonging medications or are prescribed more than 30mg domperidone per day, or, for women who are 60 years or older.

Counsel breastfeeding woman to notify prescribing physician or pharmacist if she:

- Starts any new medications (such as antibiotics or antidepressants) while taking domperidone.
- Becomes pregnant; would then taper off, as the safety of domperidone in pregnancy is not yet confirmed.

Present to emergency room if mother experiences any palpitations, dizziness, syncope or seizures.(104)

Psychiatric symptoms (e.g., anxiety, depression and insomnia) with discontinuation

Health Canada completed a review of nine cases (four Canadian) of this association; it could present in patients with or without personal history of psychiatric illness. In most of these cases, daily dose was >30mg/day. A slow taper helped mitigate these side effects.(105)

Note: Even without taking domperidone, sudden cessation of breastfeeding, or even following a normal weaning regime, can be associated with psychiatric symptoms. When mother wishes to stop breastfeeding, recommend slow weaning.(103)

Metoclopramide(88,89,100)		
Use	**Dosing**	**Possible Maternal Side Effects**
Used off-label as a galactagogue. Like domperidone, it is a dopamine antagonist that **increases prolactin secretion.** Not commonly used in Canada given the availability of domperidone. **Caution:** Avoid for patients with psychiatric or seizure disorders given neuropsychiatric side effects.	2.5–10mg TID Start low, go slow. **Duration:** Caution against prolonged use due to risk of depression, fatigue and tardive dyskinesia. ● If no increase in milk supply after four to six weeks, discontinue. ● If it helps milk supply, discontinue once solids are introduced.	Anxiety, depression, dizziness, fatigue, tremors, dystonic reaction, and extra-pyramidal symptoms. Rare – tardive dyskinesia

GALACTAGOGUES – COMMONLY USED HERBS(88,89,100,101)

Decades of cultural practices have led to the use of various galactagogue herbal preparations, with anecdotal benefits. Mechanism of action of many herbs are unknown and high-quality scientific evidence of effectiveness and dosing is lacking. Concerns about herbs include: a lack of standardized dosing, potential side effects, interactions with medications, possible allergic reactions, and contaminants in unregulated supplements. Some herbs increase anticoagulation or impact blood sugar levels.(88) The Natural Product Number, or NPN on the label means Health Canada has approved it as safe, but clinical trials are not required for this approval.

LactMed® is a free breastfeeding database that lists herbal products as well as prescription medications.

FENUGREEK		
Use	**Dosing**	**Possible Maternal Side Effects**
Phytoestrogen, improves insulin sensitivity. In about 5% of patients there is a risk of decreased milk, as phytoestrogens can either act like an estrogen or block estrogen receptors. This is more likely with insulin resistance, PCOS or thyroid disorder.	2–3 capsules of the 500–610mg TID	Flatus and abdominal pain; maple syrup odour in urine or sweat. Note: Infant may also have flatus and abdominal pain. Dizziness, decreased blood glucose levels, allergy (cross react with peanuts or other legumes), can exacerbate asthma, liver toxicity, and may interact with warfarin.
GOATS RUE		
Mechanism unclear, may alter lactogenesis at the glandular level; likely improves insulin sensitivity.	2mL TID if liquid; 1050mg capsules TID Milk volume increases slowly over four to six weeks.	Hypoglycemia, anti-coagulant effect, hypotension, cough, weakness, jitteriness, headaches.
MORINGA		
Thought to increase prolactin levels.	250–500mg capsules BID or TID	**Contraindications:** diabetes, thyroid disease, pregnancy and with some anti-hypertensives. Stomach upset, abdominal pain, diarrhea. Note: Infant may also have these GI effects.
SHATAVARI (WILD ASPARAGUS)		
Improves insulin sensitivity and phytoestrogen. As with fenugreek, some may see a decrease in their milk supply.	800–1000mg capsules TID	Headaches Teratogenic during pregnancy. **Medication interaction:** lithium and diuretics.

PATIENT HANDOUTS, PHYSICIAN HANDOUTS AND QUICK COURSES

PATIENT HANDOUTS: Low Milk Supply	
Breastfeeding My Baby Chart To reassure parents if things are going as per expected norms.	Perinatal Services BC
Low Milk Production (2023)	IABLE
Domperidone (2023)	Goldfarb Breastfeeding Clinic (Montreal)
Weaning from Domperidone (2022)	Goldfarb Breastfeeding Clinic (Montreal)
Herbs for Increasing Milk Supply (2023)	Well Fed Clinic (Calgary)

PHYSICIAN HANDOUTS AND QUICK COURSES: Low Milk Supply	
Handout: *Galactagogues* (Herbs and Prescriptions) (©2024)	PhysicianGuideToBreastfeeding.org
ABM Clinical Protocol #9 Galactagogues (2018)	Academy of Breastfeeding Medicine
Medication and herb compatibility with breastfeeding. *Search*	LactMed®
Handout: *Factors that may cause or contribute to inadequate milk intake in newborns*	Perinatal Services BC
Article by Dr. Kara Jansen on using domperidone to enhance lactation. 0.25 Mainpro+	UBC Faculty of Medicine
One-hour free e-course by Dr. Anne Eglash: *Low Milk Production*	IABLE
One-hour free e-course on frenotomy assessment by Ontario-based Dr. Elise Graham: *Tethered Oral Tissue: Trends and Truths*	IABLE

SECTION 4 – BFI

BABY-FRIENDLY INITIATIVE (BFI)

COMMIT TO BFI PRACTICES IN CLINICS, HOSPITALS AND HEALTH CENTRES.

The *10 Steps to Successful Breastfeeding in Hospitals* and the *International Code of Marketing of Breast-Milk Substitutes* launched in 1980 by WHO/UNICEF are reputable and relevant targets for all medical centres.

Penticton Regional Hospital (PRH) and Penticton Health Centre (PHC) were awarded the BFI Designation in April 2024, the first in Interior Health.

ACTION STEPS

1. **Formally incorporate BFI practice changes into your organization's strategic priority goals.** See the four notable changes implemented by Penticton Hospital (*see page 50*).
2. **Steps a physician clinic or a maternity care provider clinic can take:**
   - Remove all free formula samples and formula advertising from your clinic.
   - Display the Breastfeeding "Anytime, Anywhere" poster or sticker in your waiting room.
3. **Steps a hospital can take:**
   - Reduce the time after birth for baby to initiate skin-to-skin with mother.
   - Establish policy that ensures rooming-in for healthy newborn and mother.
   - Assist mothers with hand expression, and work towards minimizing the use of electric pumps in the first 72 hours.
4. **Steps a health centre can take:**
   - Prioritize initial staff training, such as *step2education*® for nurses, and ongoing training.
   - Watch the one-minute *Penticton BFI video*.

CONSIDERATIONS

When families see formula promotion in the clinic office, hospital or health centre, it silently betrays breastfeeding support.

BFI DESIGNATION

In April 2024, the Baby-Friendly Initiative (BFI) Designation was awarded by the *Breastfeeding Committee for Canada* to the Penticton Regional Hospital (PRH) and Penticton Health Centre (PHC).

This is the first BFI Designation for any Interior Health (IH) health facility.

There are two other BFI-designated hospitals in B.C.: St Paul's Hospital and B.C. Women's, both in Vancouver. Penticton Health Centre is the only community health centre in B.C. presently designated. Across Canada, there are nine other BFI-designated hospitals/birthing centres and three BFI-designated health centres. Québec has their own breastfeeding designation processes.(107) For Penticton, this was a four-year process with a dedicated team from both facilities. Nurses and physicians created policies and practices to best support, protect and promote breastfeeding.

BFI Designation was developed by the **World Health Organization (WHO)** and **UNICEF** to improve worldwide breastfeeding rates through the implementation of **10 Steps to Successful Breastfeeding**(108) (*see page 51*) and the International Code of Marketing of Breast-Milk Substitutes (*see page 50*).
BFI is endorsed in a *joint statement* of Health Canada, Canadian Paediatric Society, Dietitians of Canada, Breastfeeding Committee for Canada and by *Perinatal Services BC* (PSBC). The WHO recommends exclusive breastfeeding for six months and continued breastfeeding for up to two or more years.

Staff members from PRH and PHC with the official BFI Designation plaques, April 5, 2024. The BFI Designation Practice Lead from 2020 to 2024 was Meggie Ross, RN, IBCLC (wearing red shirt). Also seen here is PRH Clinical Operations Manager, Cynthia Barton (back row, left) and PHC Clinical Operations Manager, Patricia Park (back row, fourth from right) who were instrumental in supporting the BFI project.

Evidence-Based Guidelines

Research shows that when health facilities follow the 10 Steps to Successful Breastfeeding:

- Women are supported to initiate and sustain breastfeeding.
- The dyad has significantly better health outcomes in the short and long-term.
- There are fewer breastfeeding challenges.(109)

FOUR NOTABLE BFI PRACTICE CHANGES AT PENTICTON HOSPITAL

1 Ongoing Training for Staff (WHO Step 2)

Penticton nurses, physicians and midwives completed a step2education® online course, either the 22-hour Breastfeeding Essentials or the four-hour *ES06 Breastfeeding Essentials for Physicians* (*see page 56*). They attended breastfeeding mini learning sessions (eduQuicks), and a Managing Obstetrical Risk Efficiently quality improvement presentation.

2 Skin-to-Skin Contact for Mothers and Newborns Immediately Following Birth (WHO Step 4)

Best practice for breastfeeding and transition to maternal and newborn stability postpartum is to provide immediate skin-to-skin contact.(110) Implementing this key practice required collaboration between family physicians, obstetricians-gynaecologists, midwives, paediatricians and nurses. This *video* (111) evidenced the newborn exam for a healthy term infant could be deferred until after the first feed, even after a c-section. Staff prioritized skin-to-skin contact during routine initial resuscitation (drying, stimulating, initial Apgar scores). Infants requiring further resuscitation were brought to the warmer (Panda™ Infant Warmers being used in IH).

3 Human Milk for Babies (WHO Step 6)

An inherent part of the BFI Designation is adherence to the WHO/UNICEF International Code of Marketing of Breast-Milk Substitutes. Therefore, all formula samples and formula promotion displays were removed. Donated, pasteurized human milk is the first choice when medically-indicated supplementation is required. Donated human milk is collected in Kelowna and Kamloops, sent to the BC Women's Provincial Milk Bank in Vancouver to be pasteurized, then returned (free except for shipping) and stored on the region's key maternity wards for use as needed. All physicians and nursing staff were educated on best practices related to supplementation.(56) A challenge for staff was to recognize how normalized formula use has become within our culture – a direct result from decades of aggressive profit marketing, aimed at health institutions by the international formula companies. If formula supplement is given to a newborn, it is brought to the mom in a generic (no brand name) container. Most importantly, to avoid overfeeding, only the anticipated volume is decanted.

4 Allow Mothers and Newborns to Stay Together (WHO Step 7)

Prior to the BFI Designation, babies were too often taken to the nursery or nursing station for observation while a mother napped. Now the healthy baby is roomed-in with their mother. Six HALO® Bassinests were purchased; they swivel 360 degrees over the hospital bed. Results from *two pilot projects within IH* (112) showed that these allow a breastfeeding mother to have easy access to her newborn, even if she has had a c-section, or has pain or reduced mobility. Mothers learn to hear and observe early feeding cues, before their baby becomes agitated and starts crying. This encourages frequent feeds in those early hours and days, that are so essential for establishing mother's milk supply.

TEN STEPS TO SUCCESSFUL BREASTFEEDING IN HOSPITALS(108,109)

STEP 1: A written and posted breastfeeding policy.

STEP 2: Ongoing training for all staff in the facility.

STEP 3: Have conversations with families about the importance of breastfeeding.

STEP 4: Immediate skin-to-skin contact for mothers and newborns following birth.

STEP 5: Show mothers how to breastfeed.

STEP 6: Human milk for babies, unless medically indicated to supplement.

STEP 7: Allow mothers and newborns to stay together, unless there are medical concerns.

STEP 8: Support mothers to breastfeed as often as babies cue hunger.

STEP 9: Informed discussion about risks to breastfeeding of pacifiers and bottles.

STEP 10: Continue breastfeeding support from hospital to home.

To learn more about the Penticton BFI Designation process *and how to implement the 10 Steps or International Code of Marketing in your IH hospital, health centre, clinic or community, please contact babyfriendly@interiorhealth.ca.*

HOW TO MAKE YOUR CLINIC BREASTFEEDING-FRIENDLY

Implement the WHO/UNICEF International Code of Marketing of Breast-milk Substitutes Code and protect mothers from infant formula marketing.(113,114)

Infant formula sales around the world have increased to about US$55 billion annually.(115) Infant formula is a multinational business and is heavily marketed to mothers on social media, as well as to health-care professionals. This marketing influences parents' decision to use formula rather than breastfeed. (116,117) **The global breast pump industry is also big business** at US$2 billion annually and, again, heavily marketed to mothers.(118)

When a physician or other health-care provider gives a mother a formula sample, it undermines her confidence to breastfeed. When a physician recommends and supports a mother to breastfeed, this will improve the health of her and her baby, reduce her costs, and ultimately reduce costs on the health-care system.

MAKE YOUR OFFICE FREE OF INFANT FORMULA MARKETING AND RELATED PRODUCTS – SAY NO TO CONFLICT OF INTEREST

1. **No formula samples, or promotional clinic or office supplies.** No formula samples, baby bottles, sign-up cards or coupons with brand marketing for pregnant women or postpartum. This includes branded measuring tapes, weigh scale cover sheets, pens or note pads.

2. **No advertisements.** No magazines or posters advertising formula or general infant feeding topics that depict bottle feeding (even if only the manufacturer name or logo is visible).

3. **Educational materials.** These must explain risks of bottles and formula, including the costs.

4. **No free staff perks or financial donations,** such as education sessions, conferences or meals.

5. **No infant feeding company representatives on site,** to prevent interaction with patients.

Additional consideration:

No promotion of pumps in the prenatal period of time. Promoting pumps undermines a mother's confidence that she can breastfeed.

Display the "Anytime, Anywhere" *decal* or *poster*.

This is an easy step that immediately tells mothers they are welcome to breastfeed in your clinic, and that the physicians and staff in your clinic support breastfeeding.

SECTION 5 – RESOURCES

RESOURCES & REFERRALS

BREASTFEEDING CARE PATHWAY IS A NEW PATHWAY™.

It includes resource links and referrals. New links are added every month.

ACTION STEPS

1. **Log in to** *www.pathwaysbc.ca* **and then to the Breastfeeding Care Pathway** or search "breastfeeding" and the topic you want. It is for family physicians, midwives and nurse practitioners in British Columbia. If you are a paediatrician, endocrinologist or other specialist, you can request access to Pathways™.
2. **Check out the Quick Lists** (*see page 56* and *page 57*) for a featured selection of continuing education, resources and referrals. These indispensable lists are for all readers of this guide including those who cannot access Pathways™ and for out-of-province practitioners.
3. **Become familiar with the Academy of Breastfeeding Medicine (ABM)**, a "worldwide organization of medical doctors dedicated to educating and empowering health professionals to support and manage breastfeeding, lactation, and human milk feeding" at *www.bfmed.org*. ABM is listed as the go-to-place in our quick list of continuing education. They have protocols on more than 30 topics. ABM protocols are referenced throughout this guide.
4. **Take a breastfeeding course** to enhance your knowledge. For example, UBC CPD has two courses that are each 90 minutes long and you'll earn Mainpro+® credits.
5. **Refer every pregnant woman to** *Healthy from the Start*, an Interior Health phone support program with nurses and lactation consultants. They can provide further referrals as needed, such as to a public health nurse, mental health counsellor or social worker, or community support program for at-risk mothers.
6. **Refer your patient to an IBCLC** for breastfeeding challenges.

CONSIDERATIONS

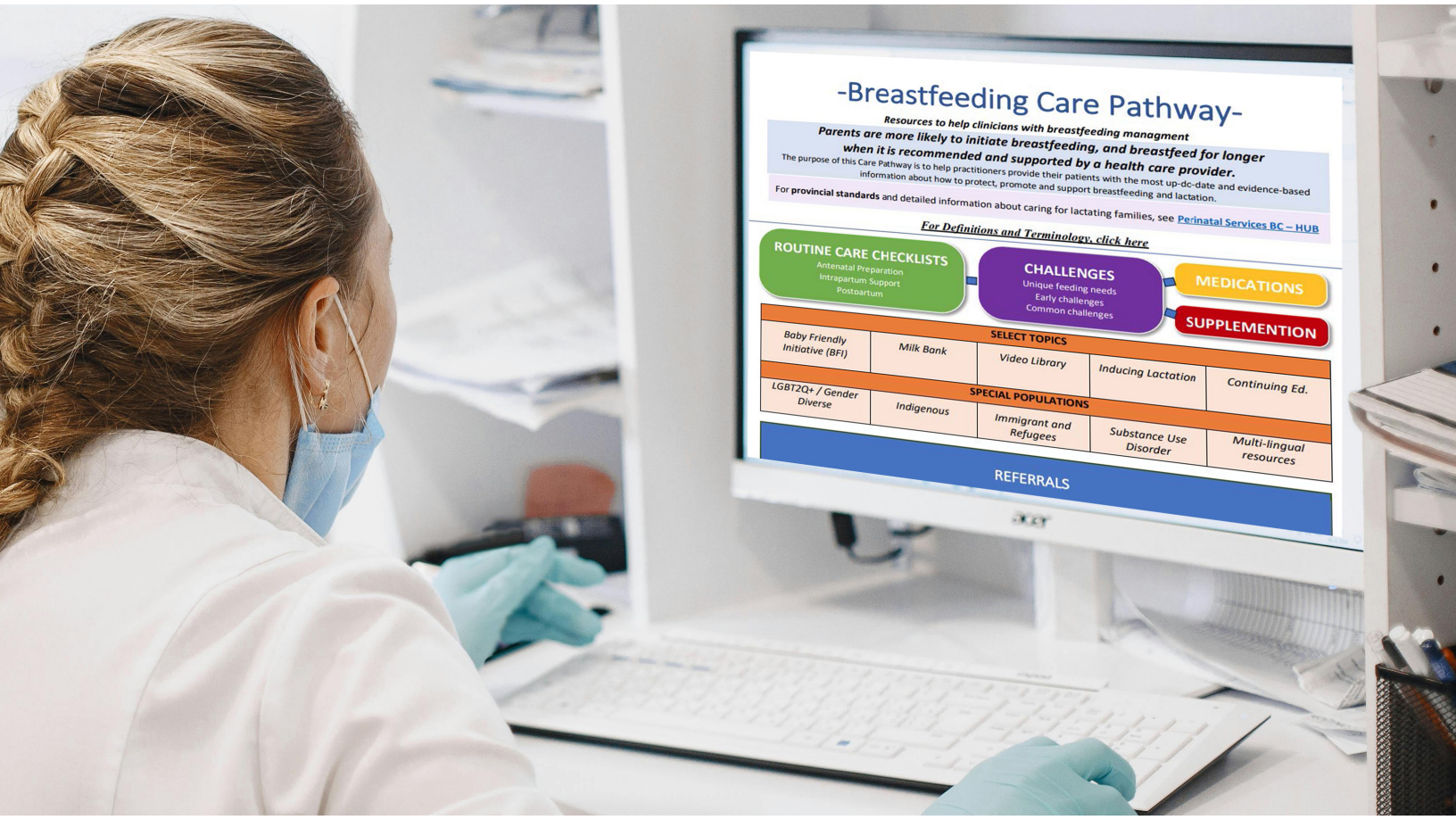
Even though breastfeeding has proven health benefits to mother, child and society, training on this topic in medical school and residency is too often limited. The purpose of this guide and particularly this section, is first, to show you where to find vetted resources, and second, to help you know that if you feel overwhelmed, there are places and lactation consultants where you can refer your patients for more in-depth breastfeeding support.

BREASTFEEDING CARE PATHWAY

Pathways
www.pathwaysbc.ca

- Pathways™ *www.pathwaysbc.ca* is an online medical resource created by and for B.C. physicians. **Family physicians, midwives and nurse practitioners all have direct access to Pathways** as part of their association fees. At no cost, obstetricians and paediatricians and others (such as quality improvement teams, primary care network members and project managers) can *request access*. Pathways was created in 2017, and is a not-for-profit society managed by a board of directors.
- It provides "quick access to current and accurate referral information, including wait times and areas of expertise of specialist and specialty clinics. Pathways also provides access to hundreds of patient and clinical resources, as well as community services and allied health information that is categorized and searchable."
- There are currently more than 45 health topics on Pathways, with the **Breastfeeding Care Pathway** (2024) being new. *The Physician's Breastfeeding Roundtable* (*see page 1*) recommended creating the Breastfeeding Care Pathway, and so funding was secured from the Breastfeeding Systems Change Project and the Health System Redesign Funding (HRF) for Physician Engagement (*see page 66*).

The Breastfeeding Care Pathways has information on topics not covered in this guide such as breastfeeding low birth weight and premature babies; breastfeeding an adopted baby; use of marijuana, alcohol and other substances; and special populations including LGBT2Q+ and anyone inducing lactation.



QUICK LIST: CONTINUING EDUCATION AND RESOURCES

ACADEMY OF BREASTFEEDING MEDICINE (ABM) BREASTFEEDING PROTOCOLS

Academy of Breastfeeding Medicine (ABM) Protocols	More than 30 best-practice breastfeeding protocols, e.g., neonate hypoglycemia, milk storage, galactagogues, anesthesia, and more. Check out the 2024 **prenatal setting**, 2023 **physiologic infant care** and 2022 **mastitis spectrum** protocols. ABM also has *microlearning videos*, thought-provoking *podcasts* and *blogs* geared for physicians, and *parent handouts* in many languages. **FREE**

QUICK ACCESS TO CURRENT INFORMATION

Physician Guide to Breastfeeding (website)	An excellent resource for health-care professionals, lactation consultants and families. Developed by Dr. Katrina B. Mitchell, an American breastfeeding medicine physician and breast surgeon. An expansive list of topics covered with current evidence-based approaches and educational photographs. **FREE**
IABLE (Institute for the Advancement of Breastfeeding and Lactation Education)	IABLE is an American nonprofit membership breastfeeding organization, founded by Dr. Anne Eglash, and led by breastfeeding medicine physicians (IBCLCs and/or NABBLM certified). Online lectures, article reviews and monthly *podcasts* on key topics in breastfeeding medicine. *Parent handouts* in many languages. **FREE**
LactMed, Drugs and Lactation Database, US National Institute of Health	An evidence-based, easy-to-search database of medications and herbal safety during breastfeeding. Alternative medications are suggested where appropriate. **FREE**
Two further sources of breastfeeding medication information	*Infant Risk Center* **FREE** For maternity practices, another recommended source is Dr. Thomas Hales' *Hale's Medications and Mother's Milk*. Can be accessed free by IH employees at this *link*. You can also search the IH library Maternal Child Health subject guide (accessible to those with an IH email address or login credentials).

COURSES FOR PHYSICIANS

UBC CPD Breastfeeding Courses	Two 90-minute online UBC CPD breastfeeding courses: *Latching On: How Family Physicians Can Support Breastfeeding Patients* and *But I Don't Do Maternity Care! Specialist Physician Management of the Breastfeeding Patient*. **1.5 Mainpro+® credits per course FREE**
step2education® *ES06 Breastfeeding Essentials for Physicians*	This four-hour online course reviews physician care for breastfeeding from prenatal to birthing (including meds in labour) to postnatal; aligned with BFI accreditation requirements. **4 Mainpro+® credits.** Reduced cost for IH physicians: Contact *admin@step2education.com*.
IABLE e-courses	E-courses. Cost varies with course. **Mainpro+® credits**

OTHER PATIENT OR MATERNITY CARE PROVIDER INFORMATION SOURCES

Perinatal Services BC & Newborn Health Hub	The Hub is a growing database of information. Search breastfeeding. Includes B.C. provincial standards and resources for breastfeeding care, from the first trimester of pregnancy to postpartum. **FREE**
Interior Health *Feeding Your Baby* website	Links to patient and health-care professional resources. Three **breastfeeding videos** created by KCR with IH BFSCP collaboration are linked. **FREE**

QUICK LIST: CONSULTATIONS AND REFERRALS

IH Healthy from the Start (HFS) – Breastfeeding Support Phone Line

#1 Single Point of Contact

To determine how your patient can best be supported, **call the Healthy from the Start line at 1-855-868-7710.**

HFS is available Monday to Friday, 8:30 a.m. to 4:30 p.m. Speak with a lactation consultant at the Breastfeeding Support Phone Line. They will assist with breastfeeding challenges and system navigation for complex concerns. Parents, physicians and other primary care providers can also call the HFS phone line.

Public Health Nurses
Find your local IH Health Centre. Search on "Health Centre" under "Select Category."

Public health nurses are available in each community to provide breastfeeding care and support. Many are IBCLCs. Some health centres have breastfeeding clinics, others provide 1:1 support by appointment. Some have breastfeeding classes.

Peer-to-Peer Community Support
La Leche League Canada

Contact your local *Health Centre* to learn about programs in your community. Search on "Health Centre" under "Select Category."

La Leche League offers peer support and education in-person, and by telephone or online.

Many communities have peer-led group drop-ins and baby cafés.

Private Lactation Consultants
(International Board-Certified Lactation Consultants – IBCLCs)
Find a Lactation Consultant

An IBCLC may also be a nurse, midwife, dietitian, massage therapist or other type of health-care provider.
Fee for service.

Other Clinics

These clinics are staffed by physicians with advanced training in lactation medicine that is either IBCLC or NABBLM certified (*see page 7*), or nurse or midwife IBCLCs. Some clinics require a physician referral.

MSP Coverage: Physician breastfeeding services are always covered under MSP. Midwife IBCLC consults (for advanced or standard breastfeeding care) are covered by MSP antenatally and up to six weeks postpartum.

This is not a comprehensive list. Check Pathways™ for additional B.C. breastfeeding clinics and referrals.

- *The Milk Clinic*
  Penticton-based but serving all of B.C. MDs and midwife IBCLCs. In-person and virtual consultation. 778-622-4422
- *Encompass Pregnancy Care Cranbrook*
  250-420-2323, by referral

Vancouver breastfeeding clinics accessible to mothers from IH:

- *BC Women's Hospital Breastfeeding Clinic*
  No referral needed. Phone consults across the province. Staffed primarily by nurses. 604-875-3743 or 604-875-2282
- *Breastfeeding Medicine Clinic (St Paul's Hospital)*
  604-682-2344 ext. 62434

There are a variety of **in-person** clinics in Alberta that will see B.C. patients. Those living in the Kootenays may want to access these. B.C. patients will be reimbursed through MSP for out-of-province in-person physician appointments. For example, *Well Fed Clinic* (Calgary).

There are a variety of other clinics across B.C. outside the Interior Health geographic region, including in Victoria and Nanaimo.

Adoptive Breastfeeding Support: Dr. Jack Newman, *International Breastfeeding Centre* (416-498-0002) in Toronto. While this is out of province, they will respond to special requests.

TROUBLESHOOTING COMMON BREASTFEEDING PROBLEMS

	Baby Not Latching	Sore or Cracked Nipples	Breast Engorgement	Low Milk Supply
COMMON CAUSE	Baby did not get immediate and uninterrupted skin-to-skin after birth Sleepy baby, typically due to labour and delivery meds Shallow latch and poor position	Shallow latch and poor position	Excess IV fluids given to mother during labour Natural process of milk coming in at day two to five Infrequent or irregular feeding	Shallow latch Infrequent feeding
STEPS TO RESOLVE	**1.** Skin-to-skin (page 18) **2.** Hand express and collect colostrum/milk until baby is ready to feed (pages 23 and 28) **3.** Gently wake sleepy baby (page 34 #2) **4.** Assist with latch and positions; try laid-back, side-lying or cross-cradle (pages 19–21)	**1.** Assess latch and position (pages 19–21) **2.** Assess nipple and areola damage (page 29) **3.** Lubricate damaged nipples with balm ointment (page 29) **4.** Hydrogel pads for deep wounds (page 29) **5.** Pain medication as needed (page 29)	**1.** Hand expression (or after day three, pumping) (page 23) **2.** Lymphatic massage (page 30) **3.** Reverse pressure softening (page 30) **4.** Frequent breastfeeding (page 32)	**1.** Assess latch (pages 19–21) **2.** Skin-to-skin (page 18) **3.** Frequent breastfeeding (page 32) **4.** Breast compression while breastfeeding (page 24) **5.** Switch nursing (page 24) **6.** Hand expression and/or pumping (page 23 and 26) **7.** Galactagogues, if needed (pages 44–47)
KEY STEP	**Baby's mouth is wide open before latch**	**Laid-back position for a good latch**	**Hand expression**	**Skin-to-skin**

TROUBLESHOOTING COMMON BREASTFEEDING PROBLEMS

	Inverted Nipples	Thrush on Nipples or in Baby's Mouth	Blocked Milk Duct or Mastitis	Oversupply of Breastmilk	Tongue-Tie/ Tethered Oral Tissues
COMMON CAUSE	Often congenital Engorgement related to milk coming in (day two to five) Excess IV fluids given to mother during labour	Breaks in nipple skin allows fungus to grow Fungus can be transferred to baby's mouth Antibiotic side-effect	Unmanaged breast engorgement (blocked milk ducts are common and can lead to mastitis if not treated)	Some women naturally make extra milk Increased prolactin Over-pumping which is over-stimulating the breasts	Frenulum is too short and tight Frenulum is still attached to tongue tip Tongue or lip is tied
STEPS TO RESOLVE	**1.** Gently roll or stretch the nipple just before breastfeeding (page 22) **2.** Place cold cloth on nipple before breastfeeding (page 22) **3.** Hand express just before breastfeeding (page 23) **4.** Ensure good latch and position (pages 19–21)	**1.** Anti-fungal agent for mother (and partner, if also infected) (page 29) **2.** Anti-fungal agent for baby, as needed (page 29) **3.** Manage the sore or cracked nipples (page 29)	**1.** Start feeds from affected breast **2.** Gentle breast and lymphatic massage and hand expression can help move the milk from the blocked milk duct(page 23 and 30) **3.** Avoid tight bra/ clothing (page 30) **4.** Antibiotics and other medical treatments, as needed **5.** Pain medication as needed (page 30, ABM mastitis protocol)	**1.** Reduce or stop pumping (page 26) **2.** Try laid-back or side-lying position to slow milk flow (pages 19–20) **3.** Hand express the initial fast flow (foremilk) then latch baby (page 23) **4.** Enquire about mother's herbal galactagogue use (pages 46–47)	**1.** Assess latch and position (pages 19–21) **2.** Assess tethered oral tissues (Focused Tongue-Tie Assessment) (page 39) **3.** If tongue-tie is compromising latch and there is persistent nipple pain, frenotomy may be needed (page 39)
KEY STEP	**Roll the nipples**	**Anti-fungal cream for nipples**	**Gentle massage and hand expression**	**Laid-back or side-lying position**	**Frenotomy if assessed to be needed**

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FINANCIAL SUPPORTS AND DISCLAIMERS

Financial Supports

KCR received grant funding from the *Vancouver Foundation*, as part of the KCR/IH BFSCP, which supported contractors, editing, design, graphics and printing.

vancouver foundation

Additional funding to support IH physician reviewers was provided by the *Physician Engagement in Health System Redesign Initiative of the Joint Collaborative Committees*.

Thank you to KCR and IH for additional internal supports related to this project.

Disclaimer for Health-Care Providers

This evidence-informed practice guide is intended to enrich clinical practice related to breastfeeding medicine. Health-care professionals must continue to rely on their training and experience, workplace policies and professional guidelines.

Legal Disclaimer

This document is intended to give an understanding of breastfeeding and outline one or more preferred approaches to its management. It is not intended as a substitute for the advice or professional judgment of a health-care professional, nor is it intended to be the only approach to the management of a clinical problem. We cannot respond to patients or patient advocates requesting advice on issues related to medical conditions. If you need medical advice, please contact a health-care professional.

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Gender Language Statement

This guide uses gendered language because of our mission to advance women's health. As per the gender language statement used in documents written by The Society of Obstetricians and Gynaecologists of Canada (SOGC), we encourage health-care providers to have respectful conversations with patients to identify and utilize gender pronouns that affirm their identity.(119)

ACKNOWLEDGMENTS, CREDITS AND REVIEWERS

We recognize the more than fifty physicians and health-care providers who wrote and reviewed this guide. These passionate individuals, from within and out of the IH area, generously agreed to share their knowledge and expertise for this guide, advancing the health of women and infants.

The Physicians Breastfeeding Guide is a KCR Community Resources (KCR) initiative in collaboration with Interior Health (IH) under the Breastfeeding Systems Change Project (BFSCP):

Karen Graham, RD, CDE, is a public health dietitian with IH Population Health, and is the coordinator of the BFSCP and oversaw the recruitment of professionals, sourced the funding and resources, and managed the reviews, graphics, edits and final production. A project of this size and scope has been successful because of the unwavering commitment from both IH and KCR.

Exceptional credits to **Katelin Mitchell**, KCR Executive Director and **Ellen Boelcke**, Executive Director prior to Fall 2024. Special recognition to **Katrina Lehenbauer**, IH Manager, Healthy Communities, and other managers and staff within IH Population Health for their collaboration and support.

Contractors: Dr. Michelle Arnold, Tiffany Holdsworth-Taylor and **Jocelyn Haight**.

Editor: Janice Madill, BSW, BSc, Easy English

Final copy proofreader: Kim Whidden, IH Communications

Graphics: Katherine Eggleston, on pages 10,11,14,18,19,20,21,23,24,25,28,30,33 and 42.

- The breast anatomy drawings on page 23 and page 30 had input from Tiffany Holdsworth-Taylor, Dr. Katrina B. Mitchell and Dr. Michelle Arnold.
- The Laid-Back Latching graphics on page 20 were adapted from *Cambridge Breastfeeding Alliance - Photos of laid-back breastfeeding*.

Final design: Karen Christensen, Executive Administrator, KCR Community Resources

Breastfeeding Systems Change Project (BFSCP) and 12-member Steering Committee:

Dr. Virginia (Ginny) Clark and **Meggie Ross**, (IH Baby-Friendly Initiative Practice Lead, 2020 to 2024) provided extensive time, exceptional expertise, and steadfast dedication, understanding the fundamental need for an accessible and comprehensive guide to breastfeeding locally, nationally and globally.

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The writing and reviews of this guide have been ongoing over the last five years. Some reviewers focused on one or two sections; others have reviewed the full document at various stages. Their important contributions are indicated in brackets.

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Photographer Credits:

B. Wilson-Clay/K. Hoover, The Breastfeeding Atlas, 7th Ed. 2022: page 19 (left); Best Start Resource Centre, page 13 (bottom); David McIlvride: page 35, 58; Delimazamrud.my, page 21 (bottom); FreeP!k: page 3; iStock: page 19 (right), 20 (top), 47, 52, 53, 66; Jocelyn Haight, page 50; Katrina B. Mitchell, page 41; Lindsey Eden Photography, page 51 (top); Maureen Smith: front and back cover; Nate Osborne: inside back cover; Per Joensen: page 49; Perinatal Services BC, page 13 (top); Pexels.com: pages 55; Rick Durand (touch ups Haley Olsthoorn Photography): page 28; Stocksy: page 5, 11, 20 (bottom); US Breastfeeding Committee (USBC): pages 15, 21 (top), 37, 51 (bottom).

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This guide is also available as an online resource:

At www.breastfeedingchange.ca → Systems Change Project Resources → For Physicians

Front Cover Image: An oil painting rendition of human milk by artist Maureen Smith, inspired by electron microscope photographs. This art piece was part of the *Human Milk Project*, a collaborative art project with Department of Biological Sciences, Thompson Rivers University, Kamloops, B.C. This art piece was part of the Breastfeeding Art Expo: www.breastfeedingchange.ca → Breastfeeding Art Expo → Art Catalogue.

Library and Archives Canada Cataloguing in Publication

Title: Physician breastfeeding guide : evidence-informed practice guide for the healthy term infant: for family physicians, obstetrician-gynaecologists and paediatricians, midwives, nurse practitioners and other maternity care providers, across the Interior Health region in British Columbia, Canada.

Names: KCR Community Resources, issuing body.

Description: First edition. | "This guide is written and reviewed by experienced physicians and breastfeeding specialists from within Interior Health (IH), with key input from physicians outside IH." | Includes bibliographical references and index.

Identifiers: Canadiana 20250113341 | ISBN 9780995980914 (softcover)

Subjects: LCSH: Breastfeeding—British Columbia. | LCSH: Breastfeeding.

Classification: LCC RJ216 .P49 2025 | DDC 649/.3302461069—dc23

Printed and bound in Canada.

We would like to recognize and acknowledge the traditional, ancestral, and unceded territories of the Interior Health region: the Dãkelh Dené, Ktunaxa, Nlaka'pamux, Secwépemc, St'át'imc, syilx and Tŝilhqot'in Nations.

The photo to the left, *The Source*, is a hand-painted life-size bust where the breastfeeding mother and her story were interpreted by Indigenous artist, Rebecca Bessette. This art piece was part of the Breastfeeding Art Expo.

Dr. Cindy Landy, Physician, IBCLC from Calgary

What a fantastic document! I can see the amount of effort that it took to create such an amazing, current, evidence-based document! Kudos!

Dr. Chris Pienaar, Paediatrician from Cranbrook

Congratulations on a very thorough and comprehensive document.

Dr. Nagu Atamuri, Family Physician from Kamloops

I think it is very useful to have this manual as physicians do not get a tremendous amount of breastfeeding education.

Birte Paschen, Midwife from Vernon

I finally managed to read the document and I'm blown away! This is so amazing! I cannot wait to share this with my colleagues!

Barb Webster, Maternal Child Health, First Nations Health Authority, from Vancouver

The resource is fantastic!!! A huge amount of work and it has so much information. Congratulations! I love all the info in Sections 2-5.

Dr. Bill Ehman, Family Physician from Nanaimo

Thank you for sending me this amazing and complete review....The content is complete and accurate. I found the 0-72 hrs section most helpful.

Linda Trudeau, Nurse and IBCLC from Vancouver

It is a large resource and includes so many good links that can be used for ongoing resources.

Dr. Shiraz Moola, Obstetrician-Gynaecologist, Nelson

Great document!

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