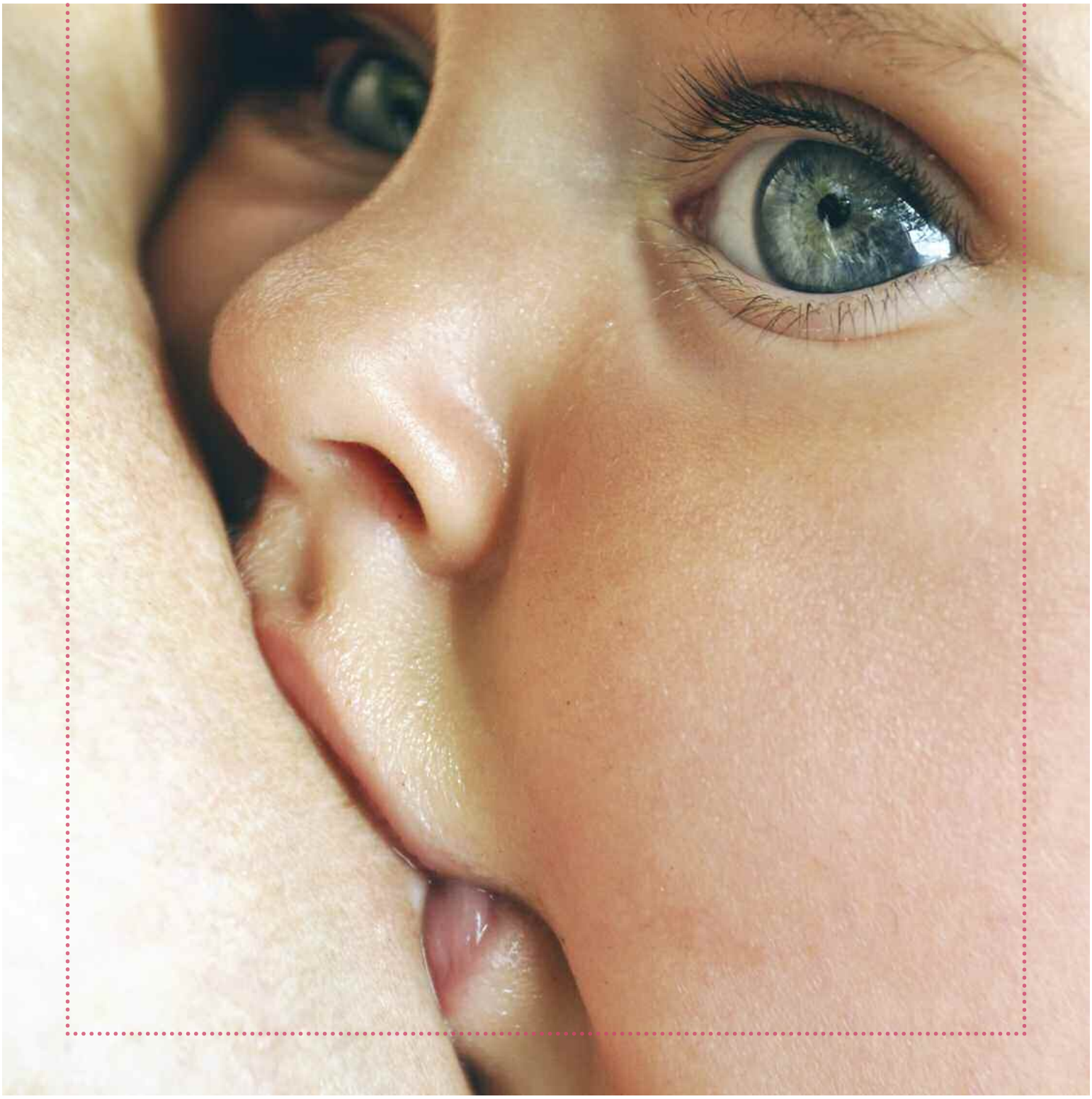
PHYSICIAN'S TOOLKIT

BREASTFEEDING

{ QUICK REFERENCE GUIDE }



INTRODUCTION

The Physician's Breastfeeding Toolkit: Evidence-informed Practice for Newfoundland & Labrador 2014 (Revised 2016).

This Resource consists of this Quick Reference Guide supported by a detailed Reference Manual. The toolkit is designed to assist physicians in providing optimal care and consistent information to breastfeeding families. The toolkit is based on current evidence and reflects global best practice in the care of the breastfeeding mother-baby dyad. Topics include initiating and sustaining breastfeeding, management of common concerns, medication safety, establishing a breastfeeding-friendly practice environment and local and national support resources.

Acknowledgements

The development of this resource was initiated by the Baby-Friendly Council of Newfoundland & Labrador in an effort to promote evidence-informed practices for breastfeeding. The Baby-Friendly Council of Newfoundland and Labrador acknowledges the contribution of the two consultants for this project, Dr. Amanda Pendergast, BSc (Hons), MD, CCFP, FCFP and Janet Fox-Beer BN, RN, IBCLC. Their professional knowledge, clinical expertise and commitment to this project are exemplary.

Thank you also to members of the advisory committee for their guidance in the development and review of the resources for the toolkit.
Members of the advisory committee include:
Dr. Rebecca Rudofsky MD, CCFP
Janet Murphy Goodridge RN, MN, IBCLC
Clare Bessell RN, BVoc Ed
Dr. Anne Drover MD, FRCPC

Designed and Produced by Fonda Bushell Inc.

Baby-Friendly
Newfoundland & Labrador


Exclusive breastfeeding for the first six months and continue up to two years and beyond.
PHAC, 2012
HEALTH OUTCOMES ASSOCIATED WITH BREASTFEEDING
{MOTHER}
↓ Breast and ovarian cancer
↓ Diabetes
↓ Osteoporosis
↓ CVD
↑ Rate of return to pre-pregnancy state
{BABY}
↓ Otitis media/LRTI
↓ Obesity
↓ Diabetes
↓ Childhood cancer
↓ Gastro
↓ SIDS
↓ NEC
↓ Asthma, atopy
↑ IQ

TABLE OF CONTENTS

WHAT ARE THE SIGNS OF A GOOD LATCH?

L

LIPS FLANGED OUT

{ Wide, gaping mouth to accommodate areola and nipple }

A

ASYMMETRIC LATCH

{ More areola visible above the baby's top lip }

T

TUMMY TO MUMMY

{ Baby's ears, shoulders and hips in alignment }

C

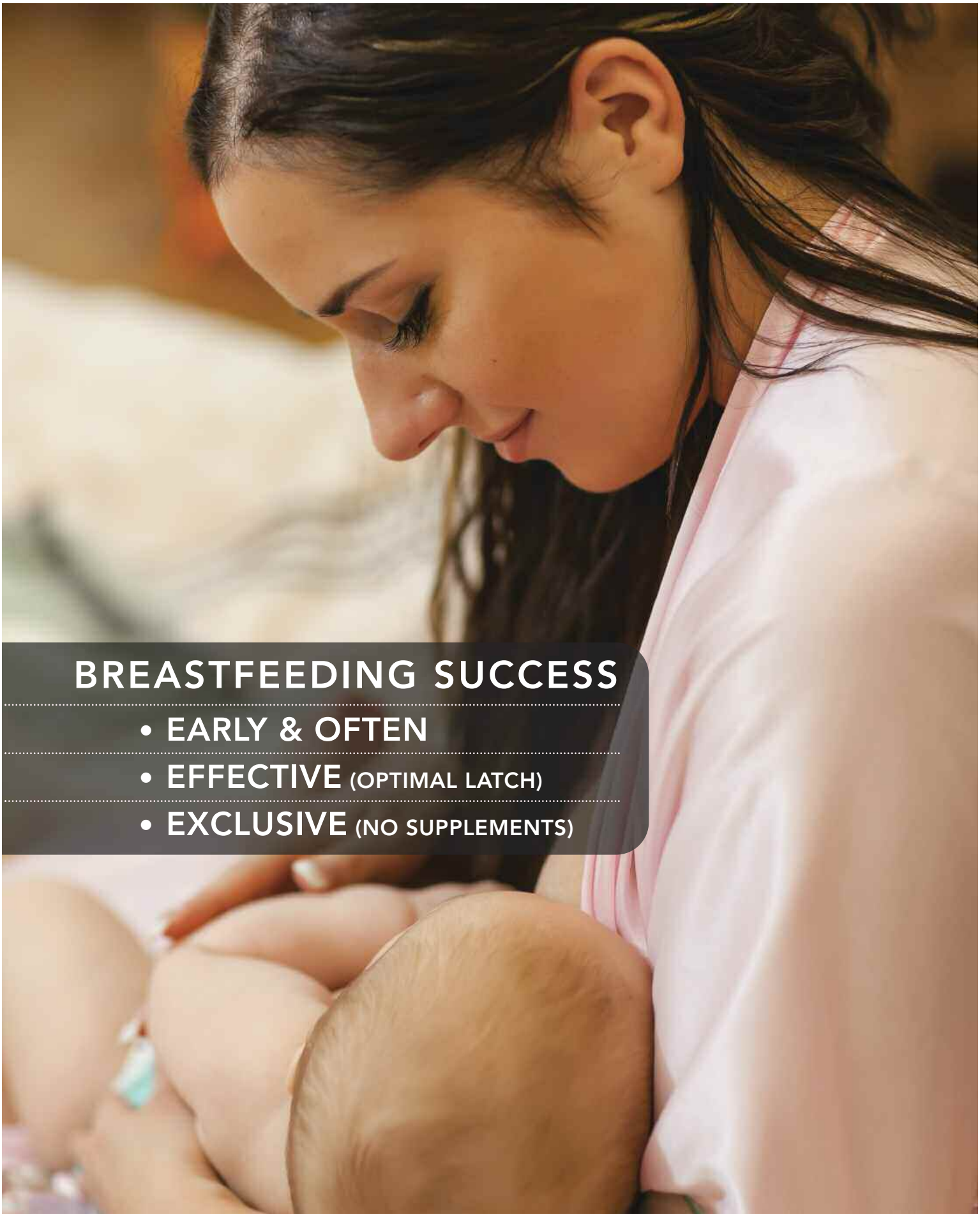
CHIN TOUCHING BREAST

{ Nose free in the sniffing position }

H

HAVE A LISTEN & WATCH

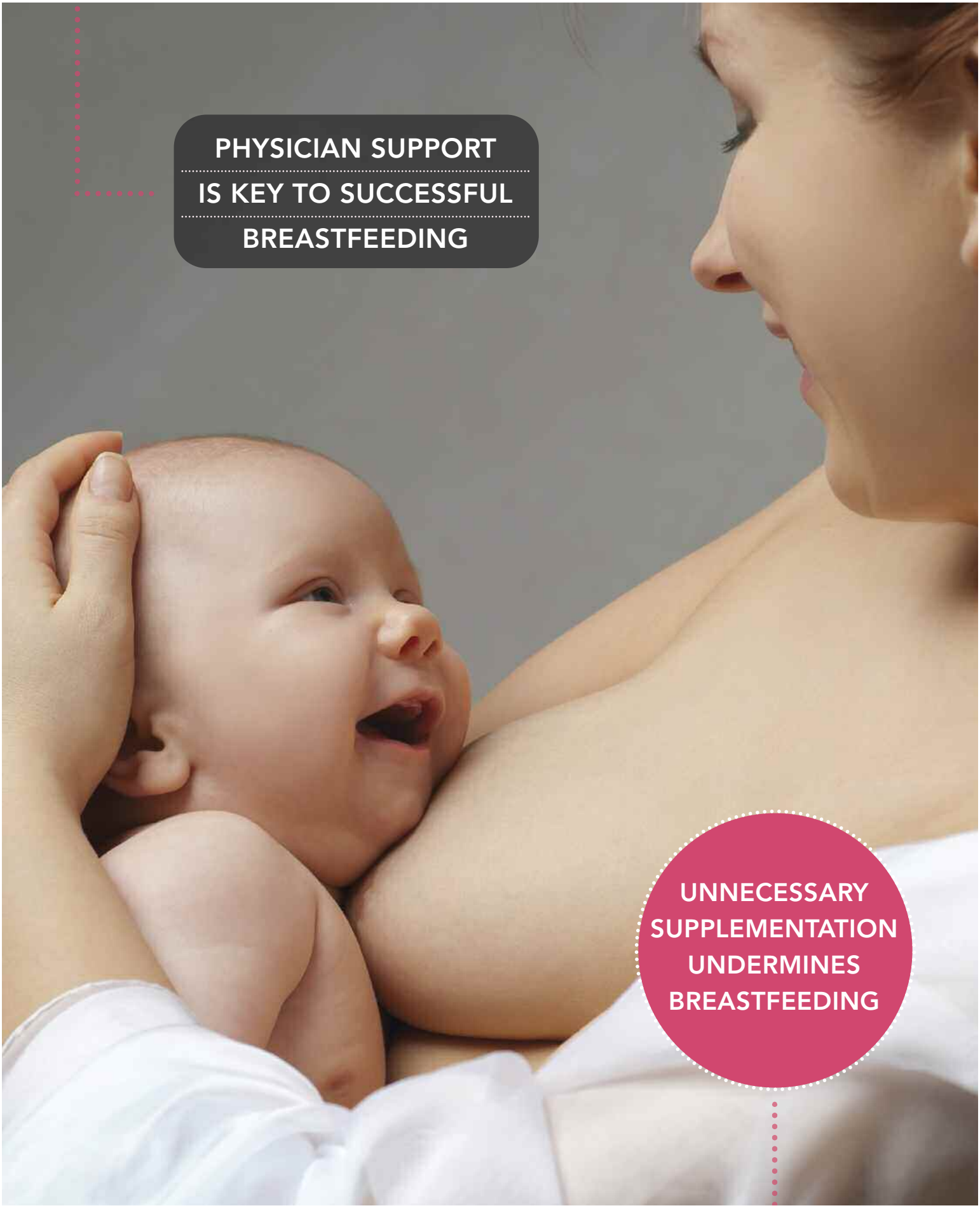
{ Active suckling and swallowing indicates milk transfer }


BREASTFEEDING SUCCESS
• EARLY & OFTEN
• EFFECTIVE (OPTIMAL LATCH)
• EXCLUSIVE (NO SUPPLEMENTS)

INFLUENCE OF LATCH & MILK PRODUCTION ON BREASTFEEDING OUTCOMES

Note: If the latch is optimal, even a reduced milk production can lead to a healthy infant weight gain.

LATCH	Milk Production	Outcomes for Mother & Baby
Optimal	Optimal	• Excellent weight gain • Pain free feeding • Efficient feeding • Satisfied baby
Adequate	Optimal	• Good weight gain • Pain free feeding • Longer & more frequent feedings
Optimal	Adequate	• Good weight gain • Pain free feeding • Efficient feeding • Satisfied baby
Poor	Optimal	• Slower weight gain • Lower milk production • Longer feeds • Possible weight loss • Sore nipples
Poor	Adequate	• Slow weight gain • Longer feeds • Growth concerns • Fatigue (mom & baby) • Sore nipples


PHYSICIAN SUPPORT
IS KEY TO SUCCESSFUL
BREASTFEEDING
UNNECESSARY
SUPPLEMENTATION
UNDERMINES
BREASTFEEDING

SIGNS OF EFFECTIVE BREASTFEEDING

{First 6 weeks}

- Exhibits readiness to feed at least 8 or more times in 24 hours
- Suckles and swallows effectively to transfer milk and stimulate production
- Has alert periods
- Settles after a feeding
- Yellow, seedy bowel movements and clear urine (see stool & urine output chart)
- Back to birth weight by day 14
- Weight gain at least 113 grams (4 ounces) per week*
- No pain with breastfeeding

*It may be acceptable for a healthy baby to have a slower weight gain pattern.

INFANT STOOL & URINE OUTPUT CHART

INFANT AGE	WET DIAPERS / DAY	STOOLS / DAY
Days 1 to 2 (colostrum)	1 - 2 clear or pale yellow	1+ meconium
Days 3 to 4 (milk coming in)	3+ clear or pale yellow	3+ green, brown or yellow
After 1st week (milk is in)	6+ clear or pale yellow	3+ soft, yellow, loose, seedy
After 4 weeks	6+ clear or pale yellow	Varies. 1 or more soft, large or may go several days without a BM**

**An occasional green stool is not unusual.

FACTORS THAT MAY IMPACT LACTATION

OBSERVATION AND EVALUATION OF BOTH MOTHER & BABY WHILE BREASTFEEDING IS ESSENTIAL.

{INFANT}

NEWBORN HISTORY

- Preterm or late preterm
- SGA
- IUGR
- Multiple gestation
- Congenital anomalies
- Ankyloglossia
- Traumatic delivery

FIRST DAYS OF LIFE

- Weight loss >10%
- Failure to regain birth weight by day 14
- Signs of illness: jaundice, fever, lethargy, hypoglycemia
- Separation from mother
- Resuscitation

FEEDING HISTORY

- Ineffective latch
- Early introduction of artificial nipples/pacifiers
- Non-medical supplementation
- State around feedings (e.g., fussy, sleepy, unsettled)

A complete history and physical of mother and baby is necessary when assessing problems such as low milk production or slow weight gain.

FACTORS THAT MAY IMPACT LACTATION

{MOTHER}

SOCIAL HISTORY

- Primiparous
- Inadequate social supports
- Uninvolved partner
- Early return to work or school
- Uncertain feeding goals
- Adolescent or older mother
- Physical or sexual abuse
- Unrealistic postpartum expectations
- Hx of previous breastfeeding challenges

MEDICAL HISTORY

- Breast surgery
- PCOS
- Thyroid dysfunction
- Some medications
- Flat or inverted nipples
- Obesity
- Endocrine disorders

PREGNANCY HISTORY

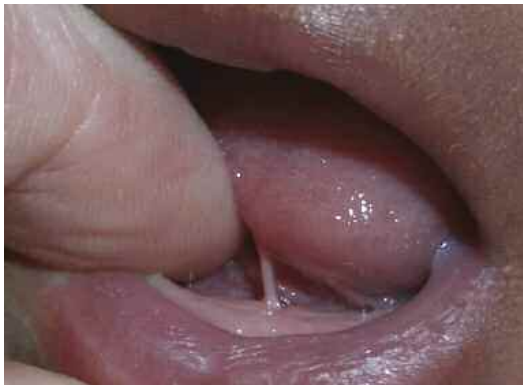
- Infertility
- Hypertension
- Gestational diabetes
- Depression/anxiety
- Anemia

LABOUR & DELIVERY

- Gestation
- Induction of labor
- Prolonged labor
- Assisted delivery or C/S

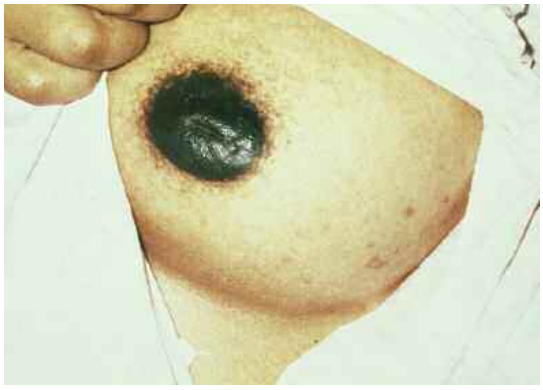
POSTPARTUM

- Infection
- Hemorrhage
- Retained placenta
- Delayed lactogenesis
- Breast or nipple pain
- Inadequate milk production
- Hormonal contraception before breastfeeding well established
- Anemia
- Thyroid dysfunction

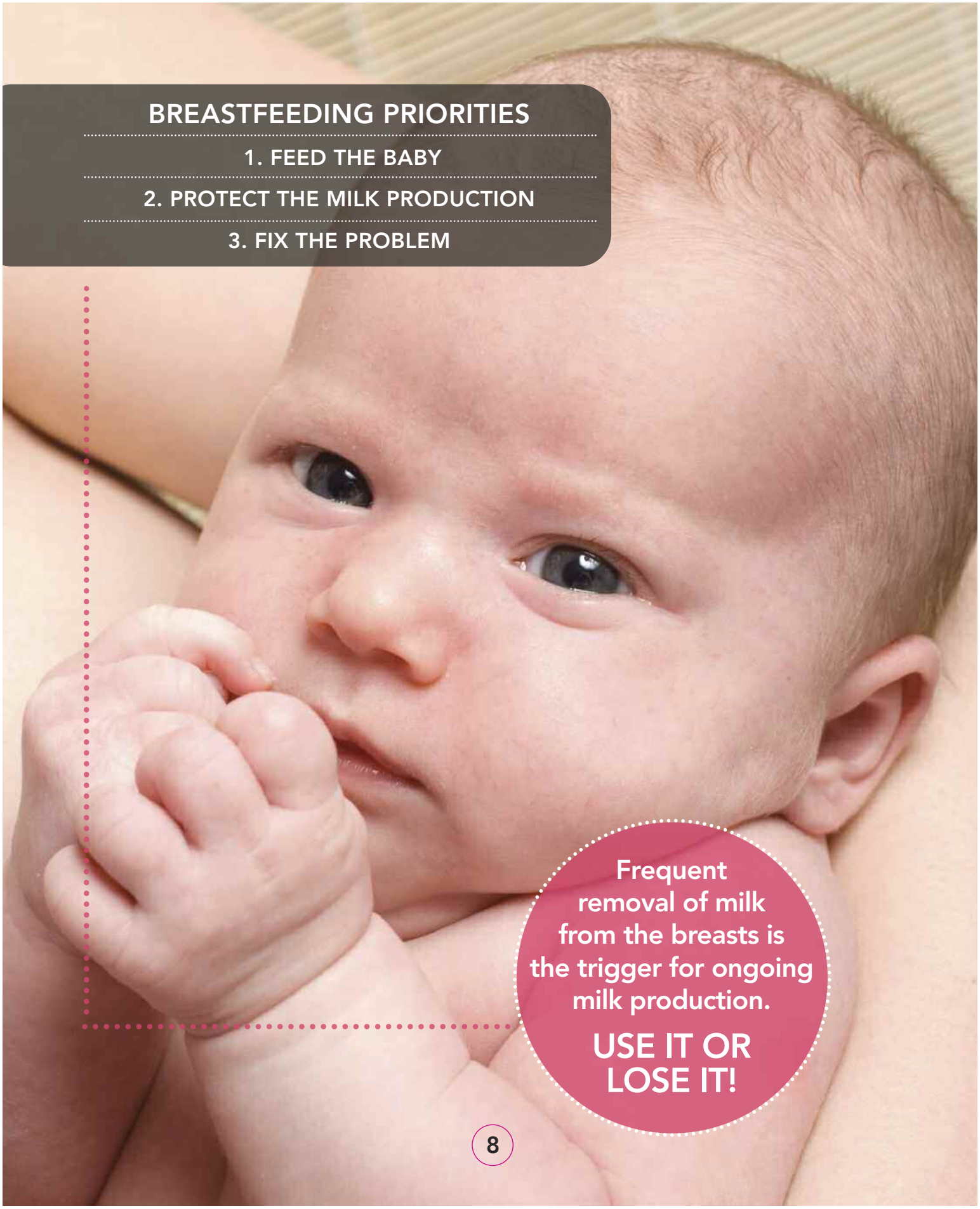


Ankyloglossia

Premature baby



Inverted nipple



BREASTFEEDING PRIORITIES

1. FEED THE BABY
2. PROTECT THE MILK PRODUCTION
3. FIX THE PROBLEM

Frequent removal of milk from the breasts is the trigger for ongoing milk production.

USE IT OR LOSE IT!

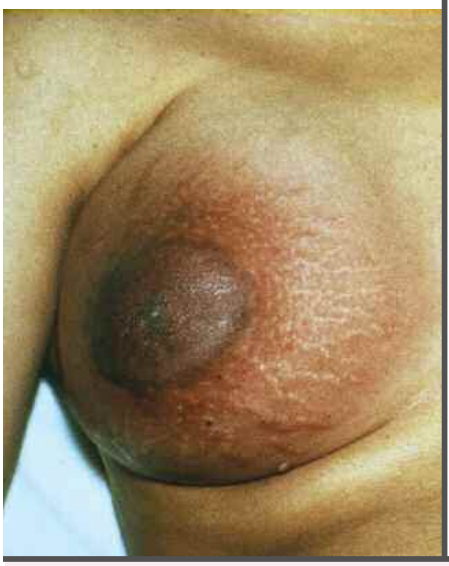
QUESTIONS TO CONSIDER WHEN ASSESSING BREAST & NIPPLE PAIN

NOTE: IT IS IMPORTANT TO ASSESS IF THE BREAST / NIPPLE PAIN IS UNILATERAL OR BILATERAL.

QUESTION	POSSIBLE DIAGNOSIS
BREAST PAIN	
• Palpable, tender mass or lump?	Blocked duct or Mastitis
• Fever, malaise and erythema?	**YES:** Mastitis **NO:** Blocked duct
• Palpable, tender, red lump not responding to mastitis or blocked duct RX?	Breast abscess
• Persistent breast fullness and pain? • Shiny, taut skin and nipple effaced?	Engorgement (more common if < 1 week PP)
• Baby choking on feeds? • Strong letdown, hypersensitive nipples, very full breasts?	Overproduction
NIPPLE PAIN	
• Soreness or pain with no skin breakdown?	Sore nipples
• Nipple pain with skin breakdown? (nipple compressed, crease or blanching across the tip, ecchymosis, shallow or deep fissure)	Abrasion/cracked nipple
• Erythema and crusting?	Infected abrasion/cracked nipple
• Shooting or burning pain worse with feeding, itchy nipples?	Candida
• Nipple blanching, blue/red colour changes?	Vasospasm/Raynaud's
• Dry, flaking skin, pruritus and erythema?	Dermatitis/Eczema
• Painful, white lesion?	Bleb or sebaceous cyst

DIAGNOSIS & TREATMENT OF COMMON BREASTFEEDING CONCERNS

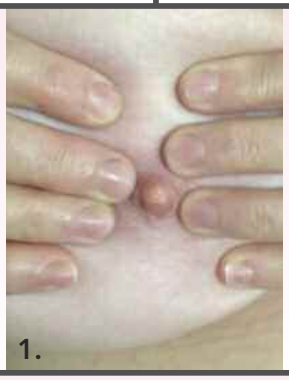
DIAGNOSIS	SYMPTOM	SIGN	TREATMENT

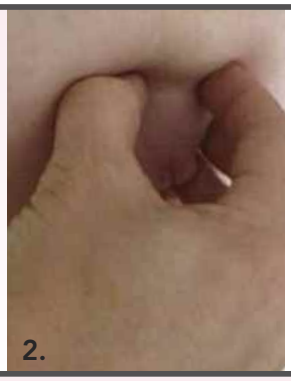
• Engorgement 	• Generalized over fullness, breast tightness and pain
	
	(Peaks days 3-5)
		• Hard, tight, red, shiny breasts
		• Usually bilateral
		• Nipple effaced
		• Areola firm
		• Difficulty latching
		• Poor let-down
			• BEFORE feeding: facilitate milk let-down with:
			  • warm compresses to breast or warm shower
			  • gentle hand massage and expression
			  • reverse pressure softening (see below)
			• DURING feeding:
			  • optimize latch
			  • frequent feedings with breast compression (see below)
			• AFTER feeding:
			  • hand expression
			  • cool compresses to breast
			  • NSAIDs prn

REVERSE PRESSURE SOFTENING (RPS)

1. Apply gentle, but firm, positive pressure inwards towards the chest wall, on the areola at the base of the nipple for 40-60 seconds prior to latching the baby.

2. Apply pressure with the fingertips moving around the circumference of the areola. This softens a 1 inch area of the areola, by pushing back interstitial fluids, reducing edema, and facilitating a deeper latch.

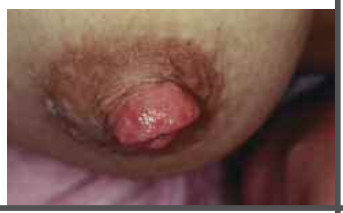

1.

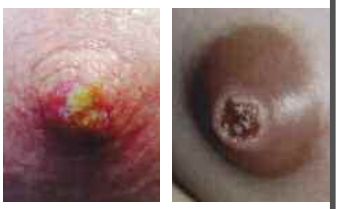
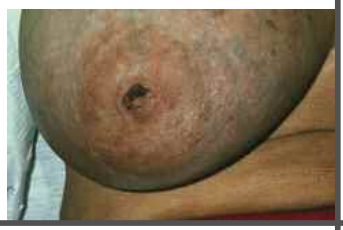

2.

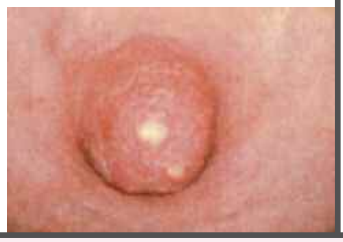
BREAST COMPRESSION is a simple technique that can enhance milk flow. The mother's hand applies gentle, but firm pressure to the breast as the baby is nursing (but not actively sucking and swallowing). This pressure can be applied using a C-hold hand position on the breast, close to the chest wall and away from the baby's lips and latch. The pressure is released when the baby stops suckling, and resumes with the baby's return to nursing.

See Appendix E in Reference Manual.
http://www.breastfeedinginc.ca/print.php?pagename=doc-BC

DIAGNOSIS & TREATMENT OF COMMON BREASTFEEDING CONCERNS

DIAGNOSIS	SYMPTOM	SIGN	TREATMENT
• Sore nipples 	• Nipple pain during feeding	• Nipple erythema • Ecchymosis • Compressed nipple post latch	• Assess and correct latch • Consider alternate positions • Apply expressed breastmilk and air nipples • Consider APNO*

• Nipple abrasion 
• Cracked nipple 
	• Painful latch
	• Nipple pain
		• Nipple erythema
		• Broken skin integrity
		• Ecchymosis
		• Bleeding nipples
		• Compressed nipple post latch
		• May have purulent discharge and honey coloured exudate
			• Assess and correct latch
			• Rule out ankyloglossia or dysfunctional suck
			• Apply expressed breastmilk and air nipples
			• Consider flushing with saline and using moist wound healing
			• Topical treatment options:
			  • APNO*
			  • 2% Mupirocin
			  • 2% Fucidic acid
			If no improvement in 48 hrs, consider po antibiotics (see mastitis on p. 14)

• Nipple bleb • Sebaceous cyst 	• Nipple pain	• White or yellow lesion on nipple face (bleb) or shaft (sebaceous cyst)	• Apply warm, moist compresses • Massage in warmed olive oil • Increase frequency of breastfeeding/expression • NSAIDs prn • Sterile lancing +/- topical antibiotic

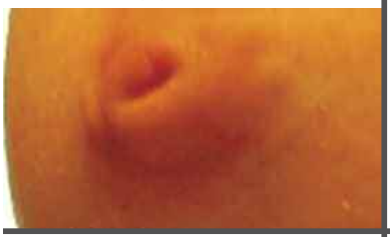
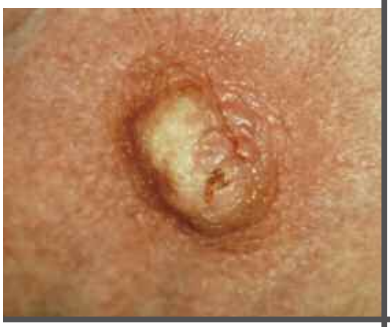
***APNO ALL PURPOSE NIPPLE OINTMENT**

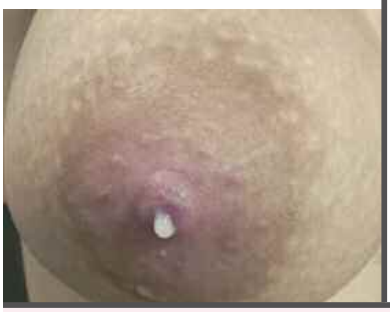
- Mupirocin 2% Ointment (15g)
- Betamethasone 0.1% Ointment (15g)
- Ibuprofen Powder 2%*
- Miconaozole Powder 2%*

*final concentration

- Apply sparingly to nipples post feeding
- DO NOT wash off before breastfeeding

DIAGNOSIS & TREATMENT OF COMMON BREASTFEEDING CONCERNS

DIAGNOSIS	SYMPTOM	SIGN	TREATMENT
• Flat / Inverted nipples 	• Difficulty latching • Nipple pain	• Non-protractile nipple • Nipple inversion • Erythema • Broken skin integrity	• Stimulate/shape nipple (using hand or pump) before latching-on • Alternate positions: e.g., football or cross cradle • Aim for a deep latch • Consult with Lactation Consultant (LC)
• Nipple vasospasm 	• Deep, shooting breast pain (Usually follows a feeding and affects both nipples)	• Nipple blanches after feeding • May progress to blue/red colour changes (Raynaud's)	• Assess and correct latch • Treat underlying infection • Apply, warm, dry compresses post feeding • Massage pectoral and chest muscles • Avoid cold • NSAIDs prn • Nifedipine 10 mg po tid or Nifedipine XL 30 mg od • Magnesium 300 mg and calcium gluconate 200 mg po bid may be helpful

• Overproduction 	• **Mother**
	  • breast fullness > 3 weeks postpartum
	  • hypersensitive nipples
	  • forceful let-down
	• **Baby**
	  • arching back with feeds
	  • choking/gagging
	  • frothy, explosive stools
			• Express initial milk into a cloth if let-down is forceful
			• Vary nursing positions
			• Offer one breast per feeding
			• Offer same breast again if < 2 hours between feeds
			• After feeding, hand express for comfort

*APNO ALL PURPOSE NIPPLE OINTMENT

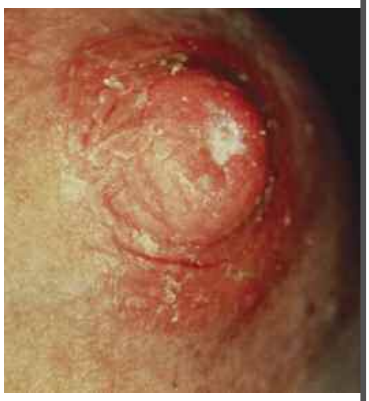
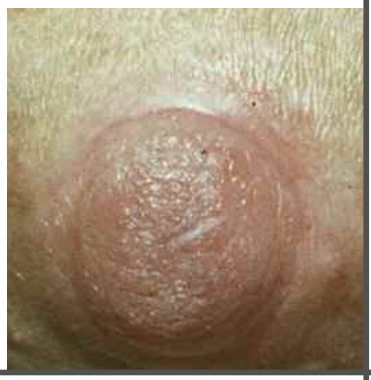
- Mupirocin 2% Ointment (15g)
- Betamethasone 0.1% Ointment (15g)
- Ibuprofen Powder 2%*
- Miconaozole Powder 2%*

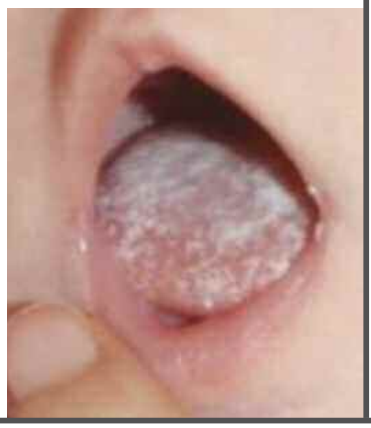
*final concentration

- Apply sparingly to nipples post feeding
- DO NOT wash off before breastfeeding

DIAGNOSIS & TREATMENT OF COMMON BREASTFEEDING CONCERNS

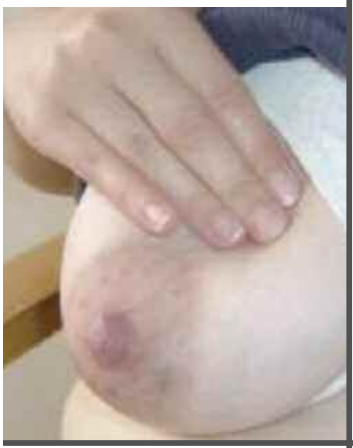
DIAGNOSIS	SYMPTOM	SIGN	TREATMENT

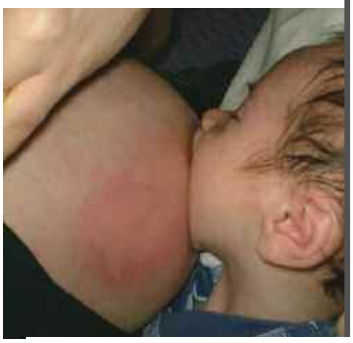
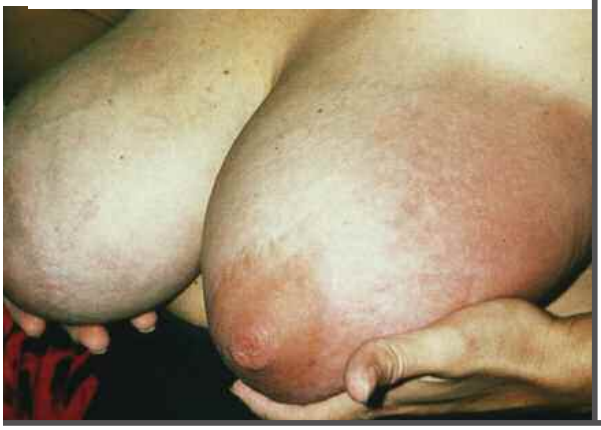
• Candida (**Mother**)
 
 
	• Shooting breast pain
	• Burning, itchy sensation
	• Worse at end of day
	• Often after pain-free breastfeeding and can last minutes to hours
		• Erythematous nipple and areola
		• Shiny areola
		• Dry / flaky areola
			ALWAYS TREAT BABY TOO!
			• Apply antifungal ointment to nipples and areolae after feeding:
			  • **1st line**: APNO*
			  • **2nd line**: Gentian Violet to baby's mouth (see below) and APNO*
			  • **3rd line**: Fluconazole 400 mg day 1, then 100 mg po bid until asymptomatic x 7 days
			• Consider treating partner in resistant cases
			• Frequent hand washing
			• Sanitization of ALL objects in contact with nipples or infant's mouth (ie: droppers, pacifiers, bras, breast pads, artificial nipples)
			• Air dry breasts

• Candida (**Baby**) 	• Gassy and fussy at breast • Pulls on and off breast • Clicks while nursing	• Oral thrush • Candida diaper dermatitis	**ALWAYS TREAT MOTHER TOO!** • **1st line**: Nystatin suspension 100,000 units / ml 1 ml 4-6 times per day x 10-14 days +/- topical antifungal for diaper dermatitis • **2nd line**: 0.25-0.5% Gentian violet (diluted with distilled water) daily to baby's mouth x 4-7 days • Avoid baby wipes

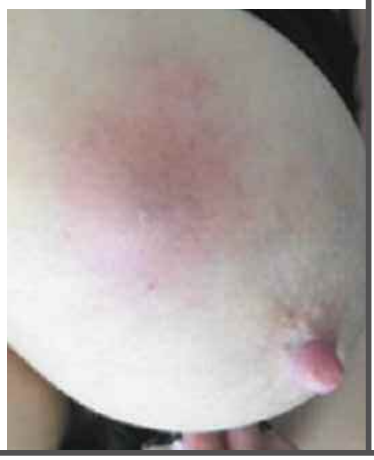
DIAGNOSIS & TREATMENT OF COMMON BREASTFEEDING CONCERNS

DIAGNOSIS	SYMPTOM	SIGN	TREATMENT

• Blocked duct
 
	• Unilateral, localized breast pain	• Localized tenderness
		• Palpable lump
		• Possible erythema
		• Afebrile
			• Apply warm compresses prior to feeding
			• Gentle breast massage before and during feeding
			• Frequent breastfeeding:
			  • start on affected side
			  • position chin towards blockage
			• Avoid missed feedings and breast constrictions (ie: underwire bras)
			• NSAIDs prn
			• Prevent recurrences:
			  • Lecithin 15 ml or 1200-2400 mg po tid - qid

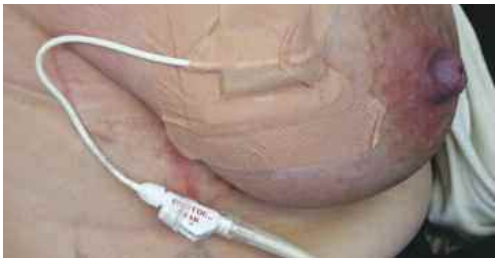
• Mastitis
 
 
	• Unilateral breast pain
	• Swelling and redness
	• Flu like symptoms:
	  • fever
	  • myalgia
	  • malaise
		• Localized erythema, tenderness and induration
		• Breast enlargement or palpable lump
		• Decreased milk production
		• Usually unilateral
		• Fever greater than 38.5C
			• Frequent breastfeeding or expression (see blocked duct)
			• If symptoms persist >12-24 hrs or mother acutely ill:
			1st line:
			  • Cephalexin 500 mg po qid
			2nd line:
			  • Cloxacillin 500 mg po qid
			  • Amoxicillin clavulanate 500 mg po tid or 875 mg po bid
			  • Trimethoprim or Sulfamethoxasole DS po bid
			  • Clindamycin 300 mg po tid
			  • treat for 10-14 days
			• NSAIDs
			• Supportive care:
			  • rest
			  • fluids
			  • nutrition

DIAGNOSIS & TREATMENT OF COMMON BREASTFEEDING CONCERNS

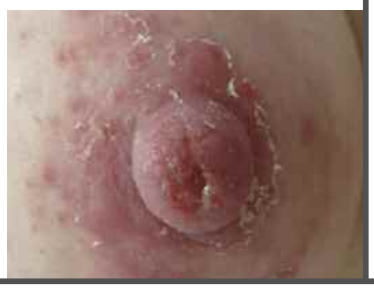
DIAGNOSIS	SYMPTOM	SIGN	TREATMENT
• Breast abscess 	• History of recent mastitis • Unilateral breast pain • Swelling and redness	• Localized erythema, tenderness, induration • Breast enlargement or palpable lump • Fever and malaise (may have subsided if the mother has had antibiotics) • Poor response to antibiotics	Surgical emergency • Requires needle aspiration or incision and drainage • Breastfeed from non-affected side • Resume feeding on affected breast once treatment started • May breastfeed from affected side if abscess does not involve nipple • Incision may leak milk but promotes wound healing

EFFECTIVE DRAINAGE OF AN ABSCESS

Needle aspiration can be used. It is best to use ultrasound, if possible, to ensure complete drainage.



For more information visit www.uptodate.com or refer to Dieter Ulitzsch, MD, Margareta K. G. Nyman,MD, Richard A. Carlson, MD. Breast Abscess in Lactating Women: US-guided Treatment. Radiology 2004; 232:904–909

• Eczema/contact dermatitis 	• Pruritis	• Oozing
		• Erythema
		• Dry flaky skin
			• Removal of irritant
			• Air dry breasts
			• Steroid cream:
			  • 1% Hydrocortisone
			  • 0.1% Betamethasone Valerate
			  • 0.1% Mometasone

MANAGEMENT OF POOR INFANT WEIGHT GAIN

Initial Assessment of:

MOTHER

- Medical hx (e.g., infertility, PCOS, obesity, endocrine dysfunction, anemia)
- Identify/treat underlying conditions: (e.g., TSH, FBG, CBC, urine C&S, vaginal or incisional swabs, pelvic U/S)
- Perinatal hx (e.g., PPH, PP depression, retained placenta, infection, GDM, HTN)

BREASTS

- Symmetry, shape, fullness, surgery
- Nipples: size, shape (flat or inverted)

BABY

- R/O underlying conditions (e.g., jaundice, fever, infection, heart murmur)
- Gestation, weight, length, HC
- Tone, alertness
- Oral cavity, suck, tongue/lip tie
- Urine/stool output

Observe the baby breastfeeding

WEIGHT LOSS / GAIN CONCERNS:

Weight Loss:

> 10% of birth weight

Not regaining birth weight by 2 wks

Inadequate Weight Gain:

< 115 g/wk @ 2 wks-4 mths

< 85 g/wk @ 4-5 mths

< 60 g/wk @ 6-12 mths

Note: Some babies take longer to regain birth weight. If breastfeeding technique is improving, supplementation may be avoided.

See next section for

POTENTIAL FACTORS & SUGGESTED MANAGEMENT

MANAGEMENT OF POOR INFANT WEIGHT GAIN

POTENTIAL FACTORS

SUGGESTED MANAGEMENT

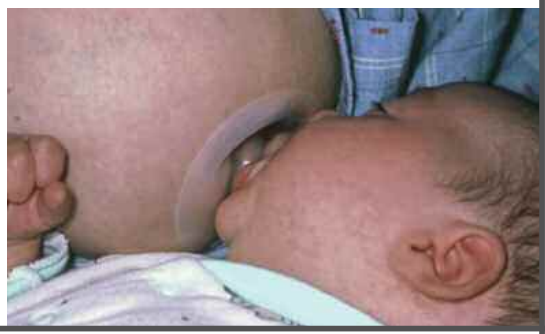
Sub-optimal Latch

- Correct latch
- Assess suck and milk transfer
- Ensure pain free breastfeeding vs nipple sucking
- Ensure position is comfortable
- Bring baby to breast rather than breast to baby

Monitor weight Q 2-4 days.

- **L** LIPS FLANGED OUT
- **A** ASYMMETRIC LATCH
- **T** TUMMY TO MUMMY
- **C** CHIN TOUCHING BREAST
- **H** HAVE A LISTEN & WATCH

Sub-optimal Milk Transfer



- Observe for sustained suck-swallow pattern, visible/audible swallowing
- Encourage skin-to-skin contact
- Assess urine/stool output (p. 5)
- Suggest breast compressions (p.10)
- Suggest switch nursing technique (alternate breasts 2-3 times/feeding)
- Hand express/pump post feedings

Sucking does not always indicate baby is feeding well.

Restricted Feeding

- Educate mother on signs of readiness or cues for feeding
- Discuss importance of frequent, unrestricted feeding (8 or more times in 24 hrs)
- Advise to finish feedings on first breast and then offer the second
- Avoid pacifiers as a means of delaying feedings
- Consider psychosocial concerns as identified in history

Skin-to-skin care improves breastfeeding outcomes.

MANAGEMENT OF POOR INFANT WEIGHT GAIN

POTENTIAL FACTORS	SUGGESTED MANAGEMENT
Sub-optimal Milk Production 	• Assess maternal health • Optimize position and latch • Increase breastfeeding frequency (8 or more times in 24 hrs) • Suggest breast compressions (see p. 10) • Suggest switch nursing technique • Hand express/pump post feedings) • Supplement **if medically indicated** using expressed breastmilk (EBM) or breastmilk substitute (BMS) with lactation aid (See Reference Manual p. 10) • Consider galactogogues (e.g., Domperidone 10-20 mg po qid) • Follow care plan in consult with LC
Preterm / SGA 	• Follow care plan in consult with LC • Supplement **if medically indicated** using EBM or BMS with lactation aid (See Reference Manual p. 10) • Suggest hand express/pump post feedings • Increase breastfeeding frequency (8 or more times in 24 hrs)
Psychosocial Concerns 	• Consider other risk factors as identified in history (e.g., depression, uncertain feeding goals, stress, early return to work/school, dieting, self-confidence) • Reassess latch and technique • Provide education and support • Refer to community mother-to-mother support • Refer to LC

MEDICAL INDICATIONS FOR SUPPLEMENTATION

If breastfeeding must be interrupted or stopped for a medical reason, always consider the risks posed by using a breastmilk substitute (e.g., formula).

Infants who should not receive human milk:

- Some inborn errors of metabolism (e.g., galactosemia, maple syrup urine disease)
- Maternal HIV*

Infant conditions that may require supplementation for short periods of time, with continued breastfeeding:

- Birth weight < 1500 grams
- Gestation < 32 weeks
- Unresolved hypoglycemia
- Significant weight loss >10% below birth weight
- Not regaining birth weight by 2 weeks
- Inadequate weight gain of less than:
  115 g/week: 2 weeks - 4 months
  85 g/week: 4 - 5 months
  60 g/week: 6 - 12 months

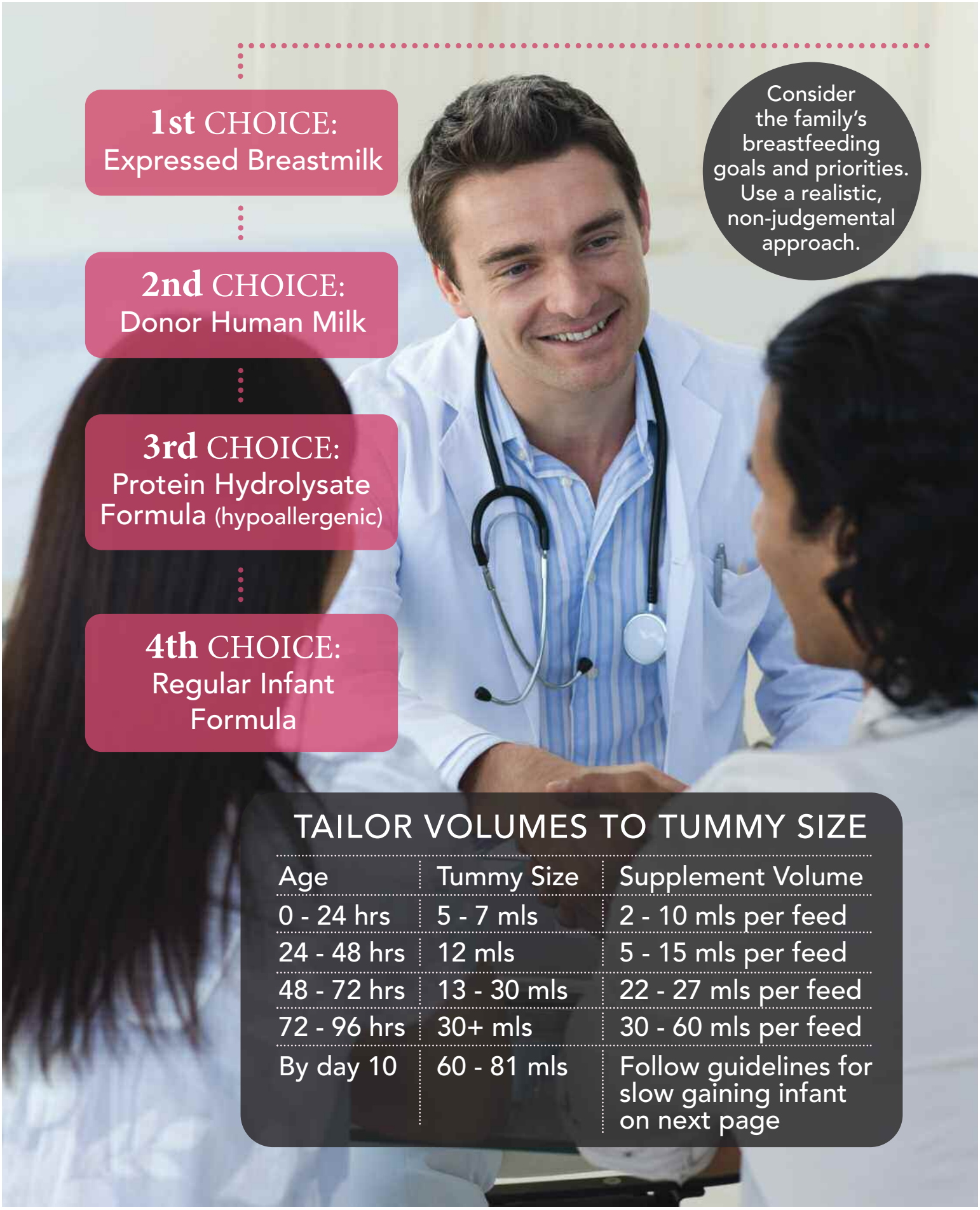
Maternal conditions that may require supplementation for short periods of time, with continued breastfeeding:

- Severe illness (e.g., sepsis)
- Specific maternal medications (see medications p. 22)
- HSV-1 (until active lesions near the nipple and areola resolve)

Maternal conditions that require close monitoring and may require supplementation:

- Delayed lactogenesis (e.g., retained placenta, diabetes mellitus, labour or birth interventions)
- Breast abscess (may breastfeed on affected breast once treatment started)
- Breast surgery
- Hepatitis B
- Hepatitis C
- Substance use

* In Canada, HIV positive mothers are advised to feed with a breastmilk substitute. In some countries, management may be different when the use of a breastmilk substitute is not Acceptable, Feasible, Affordable, Sustainable and Safe (AFASS).



1st CHOICE:
Expressed Breastmilk

2nd CHOICE:
Donor Human Milk

3rd CHOICE:
Protein Hydrolysate Formula (hypoallergenic)

4th CHOICE:
Regular Infant Formula

Consider the family's breastfeeding goals and priorities. Use a realistic, non-judgemental approach.

TAILOR VOLUMES TO TUMMY SIZE

Age	Tummy Size	Supplement Volume
0 - 24 hrs	5 - 7 mls	2 - 10 mls per feed
24 - 48 hrs	12 mls	5 - 15 mls per feed
48 - 72 hrs	13 - 30 mls	22 - 27 mls per feed
72 - 96 hrs	30+ mls	30 - 60 mls per feed
By day 10	60 - 81 mls	Follow guidelines for slow gaining infant on next page

GUIDELINES FOR SUPPLEMENTATION

KEY POINTS:

- Tailor management to mother and baby
- Always observe and assess breastfeeding first
- Optimize breastfeeding technique and management
- Supplement using the volume and method least likely to interfere with breastfeeding
- Avoid artificial nipples and bottles - use cup, spoon or lactation aid

Cup feeding

Hand expression of colostrum

Lactation aid

For the slow gaining infant:

- Start with ad lib supplemental feedings guided by the baby's appetite
- If infant is not exhibiting hunger cues, aim for a minimum supplementation of 50 ml/kg/24 hours divided into 8 feedings
- Increase supplement to meet baby's appetite and appropriate weight gain
- Mother should express breastmilk after feedings to increase production
- Reduce supplements as mother's milk production increases and baby's weight is appropriate

Note: These babies are still getting SOME breastmilk, so when supplementing give an amount that represents partial intake.

BREASTFEEDING MEDICATION SAFETY

COMPATIBLE CAUTION AVOID

ANALGESIA

Compatible

- **Acetominophen**
- **NSAIDs:** Ibuprofen, Diclofenac, Celecoxib, Indomethacin, Naproxen
- **Triptans:** Sumatriptan, Eletriptan
- **Tramadol**
- **Methadone:** if taken during pregnancy

Caution

- **Narcotics:** Codeine
  May cause infant drowsiness and feeding difficulties.
  Safe for short term use only
- **NSAIDs:** Naproxen
  Longer half-life, other NSAIDs may be preferred in preterm infants

Avoid

- **Triptans:** Rizatriptan, Zolmitriptan, Naratriptan *
- **Ketorolac**
  Black box warning

ANTI-INFECTIVES

Compatible

- **Penicillins:** Amoxicillin, Clavulanate, Fucidic acid
- **Cephalosporins:** Cefuroxime, Cephalexin, Cefaclor, Cefazolin
- **Macrolides:** Erythromycin, Azithromycin, Clarithrymycin
- **Sulfonamides:** TMP-SMX (full-term infants)
- **Tetracyclines** (short term use only)
- **Nitrofurantoin** (infants >1 month)
- **Antifungals:** Fluconzaole (po), Clotrimazole, Miconazole, Terbinafine (topical)
- **Antivirals:** Acyclovir, Valacyclovir
- **Anti-malarial:** Chloroquine, Hydroxychloriquine

Caution

- **Clindamycin** (infant diarrhea)
- **Metronidazole** (possible infant mutagen)
- **Quinolones:** Ciprofloxacin, Levofloxacin, Moxifloxacin, Olfloxacin, Gatifloxacin (older studies show arthropathy in infants, newer studies show low risk)

Avoid

- **Antivirals:** Famciclovir *
- **Sulfonamides:** avoid in preterm or jaundiced

* No published data

LactMed: www.toxnet.nlm.nih.gov

COMPATIBLE CAUTION AVOID

CARDIOLOGY

- **B-blockers:** Propranolol, Metoprolol, Labetalol
- **ACEI:** Enalapril, Captopril, Quinapril
- **Vasodilators:** Apresoline
- **Calcium channel blockers:** Verapamil, Diltiazem
- **Diuretics:** Hydrochlorothiazide, Furosemide
- **Anticoagulants:** Warfarin, Heparin

- **B-blockers:** nadalol, acebutalol, atenolol (excreted in breastmilk)

- **ACEI:** Ramipril, Lisinopril, Fosinopril *
- ARB *
- Statins *

CONTRACEPTION

Progestin-only contraceptives:
- Micronor®
- Mirena®

Anectdotal reports suggest some women experience a reduced milk supply.

Estrogen containing contraceptives:
- Start after breastfeeding well established (6+ weeks).

Progestin-only contraceptives:
- Depo-Provera® 150 mg IM
- Some women experience a reduced milk supply. Consider breastfeeding goals.

DERMATOLOGY

- **Topical antifungals & steroids:** Clotrimazole, Miconazole, Terbinafine, Hydrocortisone, Betamethasone
- **Acne:** Topical Tretinoin, Adapalene, Benzoyl Peroxide, Clindamycin
- Pimecrolimus, Tacrolimus
- Calcipotriene

* No published data

LactMed: www.toxnet.nlm.nih.gov

BREASTFEEDING MEDICATION SAFETY

COMPATIBLE CAUTION AVOID

DIAGNOSTIC TESTS/SURGERY

- X-ray/CT/MRI/US
- **Contrast:** Gadopentetate, Iothalamate, Diatrizoate
- I 123 or technicium scans
- **Propofol:** safe to resume breastfeeding when mother recovered from GA

- **Gallium citrate:** Stop breastfeeding depending on dose (7-30 days)

- **I 131:** Delay elective diagnostic studies until breastfeeding completed
- **Contrast:** Iopamidol, Ioversol, Iodipamide, Iodixanol

DMARD

- Methotrexate

E.N.T.

- **Intranasal steroids:** Mometasone, Fluticasone
- **Anti-histamines:** Certirizine, Desloratadine, Loratadine, Diphenhydramine

- **Pseudoephederine**
  Can decrease milk supply

* No published data

LactMed: www.toxnet.nlm.nih.gov

 COMPATIBLE  CAUTION  AVOID

ENDOCRINOLOGY

- **Diabetic:** Metformin, Glyburide, Acarbose, Insulin
- **Levothyroxine**

- Gliclazide
- TZD*
- Incretins*

GALACTOGOGUES

- Fenugreek
- Blessed Thistle
- Goat's Rue

Available at:
- **Food For Thought** 84 Gower St, St. John's T: 754-3801
- **Healthy Choices** 9655 Topsail Rd, St. John's T: 745-8686
- **Vitality Products Inc.** 98 Bonaventure Ave., St. John's T: 753-8020
- **Whole Health** Valley Mall, Corner Brook T: 634-6101

- Domperidone (caution in patients with hx of HTN, arrhythmia, cardiovascular disease)

GASTROENTEROLOGY

- **H2 blockers:** Ranitidine, Cimetidine
- **PPIs:** Pantoprazole
- **Laxatives:** Docusate sodium, lactulose
- **Antiemetics:** Dimenhydrinate

- **Domperidone**
  Caution with HTN, arrhythmia, CAD or risks for same
- **Bismuth subsalicylate**

- **PPIs:** Rabeprazole, Lansoprazole, Esomeprazole, Omeprazole (limited studies)
- **Methotrexate**

* No published data

LactMed: www.toxnet.nlm.nih.gov

BREASTFEEDING MEDICATION SAFETY

 COMPATIBLE  CAUTION  AVOID

NEUROLOGY

- **Anticonvulsants:** Phenytoin
- **Triptans:** Sumatriptan, Eletriptan

- **Anticonvulsants:** Valproic acid, Carbamazepine, Gabapentin. Monitor for thrombocytopenia, drowsiness, hepatotoxicity, weight gain, developmental milestones.

- **Triptans:** Rizatriptan, Zolmitriptan, Naratriptan*

PSYCHIATRY

- **SSRI:** Paroxetine, Escitatopram, Sertraline (preferred)
- **SNRI:** Venlafaxine and Desvenlafaxine
- **BZD short & medium acting:** Lorazepam, Oxazepam
- **ADHD:** Methylphenidate (infants > 1 month)

- Mirtazapine
- **BDZ long acting:** Diazepam, Alprazolam, Clonazepam
- **TCA:** Amitriptyline, Desipramine, Imipramine
- Bupropion
- Lithium
- Trazadone
- Aripiprazaole

MONITOR INFANT FOR:

- **Poor weight gain**
- **Sedation**
- **Irritability**

- Quetipine
- Atomoxetine

* No published data

LactMed: www.toxnet.nlm.nih.gov

COMPATIBLE CAUTION AVOID

RESPIROLOGY

- **Short acting:** Terbutaline, Salbutamol, Ipratropium
- **Long acting:** Salmeterol, Formoterol
- **Steroid inhalers:** Budenoside, Fluticasone, Ciclesonide, Beclomethasone
- **OTCs:** Dextromethorphan, Guaifenesin (infants > 2 months)

- Monoleukast *

SOCIAL

- **Alcohol:** < 2 drinks per day
- **Caffeine:** < 450 mg (3 cups) per day

- **Smoking:** LESS is BETTER! Not a reason to stop breastfeeding as infant will be exposed to components of cigarettes

Most drugs can be safely used by breastfeeding mothers.

- It is rarely necessary to stop breastfeeding because of a medication
- If a drug is incompatible, an alternative can usually be prescribed
- Breastfeed before a scheduled dose to minimize transfer into breastmilk
- Try to schedule "once a day" medications when baby has longer sleep periods

* No published data

LactMed: www.toxnet.nlm.nih.gov

LACTATION CONSULTANTS & PUBLIC HEALTH NURSES

Avail of hands-on and in-home assessment, counselling and support by Lactation Consultants and Public Health Nurses

LACTATION CONSULTANTS & PUBLIC HEALTH NURSES {LABRADOR~GRENFELL}

LACTATION CONSULTANTS	PHONE	FAX
Regional	285-8206	944-3722
PUBLIC HEALTH NURSES	**PHONE**	**FAX**
Happy Valley-Goose Bay	897-2243/2114/2329	896-5415
Port Hope Simpson, Charlottetown, Norman Bay, Pinsent's Arm, William's Harbour	960-0271 Ext: 229	960-0461
Mary's Harbour, St Lewis, Lodge Bay	921-6228	921-6975
L'Anse au Clare, Forteau, English Point, L'Anse Amour, L'Anse au Loup, West St. Modest, Capstan Island, Pinware, Red Bay	931-2450 Ext: 237	931-2000
St. Anthony East, Goose Cove, St. Anthony Bight, St. Carol's, Great Brehat, Raleigh, Ship Cove, Cook's Harbour, Boat Harbour	454-0362	454-2163
St. Anthony West, St. Lunaire-Griquet, Gunner's Cove, Noddy Bay, Quirpon, Straitsview, Hay Cove, L'Anse au Meadows	454-0290	454-2163
Bide Arm, Englee, Main Brook	457-2215 Ext: 231	457-2214
Roddickton, Conche, St. Julien's, Croque	457-2215 Ext: 233	457-2214
Eddies Cove East, Green Island Cove, Lower Cove, Green Island Brook, Pines Cove, Shoal Cove East, Sandy Cove, Savage Cove, Nameless Cove, Flower's Cove, Bear Cove, Deadman's Cove, Anchor Point, Blue Cove, St. Barbe, Pigeon Cove, Black Duck Cove, Plum Point, Pond Cove, Brig Bay, Bird Cove, Reefs Harbour, New Ferrole, Shoal Cove West	456-2401	456-2562
Labrador City/Wabush	285-8347/8319/8316	944-3722
Churchill Falls	925-3377	925-3380
North West River	497-8824	497-8521
Cartwright	938-7306	938-7286
Black Tickle	471-8872	471-8893
Sheshatshiu	497-3833/3837	

BREASTFEEDING SUPPLIES + PUMP RENTALS: Lawtons Home Health
www.lawtons.ca/home-healthcare/home-medical-supplies/breastfeeding

- Dr. Jack Newman: **www.breastfeedinginc.ca**
- Baby-Friendly NL: **www.babyfriendlynl.ca**
- Latch & Positioning: **www.rebeccaglover.com.au**
- LactMed: **www.toxnet.nlm.nih.gov**

LACTATION CONSULTANTS & PUBLIC HEALTH NURSES {CENTRAL}

LACTATION CONSULTANTS	PHONE	FAX
Grand Falls-Windsor	489-4470	489-4638
Gander	651-6480	651-3341
PUBLIC HEALTH NURSES	**PHONE**	**FAX**
Baie Verte	532-5271	532-4632
Belleoram	881-6101	881-6104
Botwood	257-4900	257-3640
Brookfield	536-1157/1158	536-3491/2433
Buchans	672-3343	672-1123
Carmanville	534-2692	534-2843
Centreville/Trinity	678-2574	678-2095
Change Islands	621-6161	621-3126
Conne River	882-5107	882-5142
Fogo	266-2200	266-1017
Gander	651-6261	651-2394
Gambo	674-4931	674-0067
Gander Bay	676-2737/2155	676-2352
Grand Falls-Windsor	489-8154/4692/8157	489-4638
Glovertown	533-2848	533-1086
Harbour Breton	885-2403/3136	885-2892
LaScie	675-2454	675-2478
Lewisporte	535-0905	535-0360
New World Island	629-7134	629-7114
Robert's Arm	652-3410	652-3671
Springdale	673-3281/4626/4316	673-4970
St. Alban's	538-3300	538-3899
St. Brendan's	669-5381	669-3105
Twillingate	884-1370/5426	884-5437

BREASTFEEDING SUPPLIES + PUMP RENTALS: Lawtons Home Health
www.lawtons.ca/home-healthcare/home-medical-supplies/breastfeeding

- La Leche League Canada: **www.llllc.ca**
- Dr. Jane Morton: **newborns.stanford.edu**
- Motherisk-Sick Kids: **www.motherisk.org**
- Milk supply post-surgery: **www.makingmoremilk.com**

LACTATION CONSULTANTS & PUBLIC HEALTH NURSES {WESTERN}

LACTATION CONSULTANTS	PHONE	FAX
Regional	632-2973	632-2636
PUBLIC HEALTH NURSES	**PHONE**	**FAX**
Benoit's Cove	789-2832	789-3351
Burgeo	886-3360	886-2301
Cape St. George	642-5463	642-5464
Corner Brook	632-2830	632-2636
Cow Head	243-2129	243-2088
Deer Lake	635-7830	635-5211
Doyles	955-2710	955-3075
Hampden	455-3333	455-2167
Jeffreys	645-2541	645-2601
Meadows	783-2123	783-3044
Norris Point	458-2211 Ext: 260	458-2943
Pasadena	686-5052	686-5392
Port aux Basques	695-4623/4622	695-2845
Port Saunders	861-9126	861-3762
Ramea	625-2261	625-2130
Stephenville	643-8701	643-8732
Stephenville Crossing	646-2762	646-5277
St. George's	647-3851	647-3959
Woody Point	453-2401	453-2420

BREASTFEEDING SUPPLIES + PUMP RENTALS: Lawtons Home Health
www.lawtons.ca/home-healthcare/home-medical-supplies/breastfeeding

- Dr. Jack Newman: **www.breastfeedinginc.ca**
- Baby-Friendly NL: **www.babyfriendlynl.ca**
- Latch & Positioning: **www.rebeccaglover.com.au**
- LactMed: **www.toxnet.nlm.nih.gov**

LACTATION CONSULTANTS & PUBLIC HEALTH NURSES {EASTERN~ ST. JOHN'S}

LACTATION CONSULTANTS	PHONE	FAX
Community Health	752-4099	752-4975
Health Sciences Complex	777-7412/4058	777-4125
PUBLIC HEALTH NURSES	**PHONE**	**FAX**
St. John's East	752-3585	752-4472
St. John's Downtown Area	752-4884	752-4832
St. John's Central	752-4281	752-4714
Mount Pearl/Paradise	752-4805	752-3563
Conception Bay South	834-7937	834-7948
Bell Island	488-2704	488- 2703
Ferryland	432-2930	432-2012
Portugal Cove/St. Phillips	895-7051	895-7050
Shea Heights	752-4314	752-4302
Torbay	437-2201	437-2203
Trepassey	438-2890	438-2375
Witless Bay	334-3941	334-3940
La Leche League	Jane Jan Amber Meaghan	722-5815 739-9368 782-3740 753-2942
Janeway Helpline	722-1126	

BREASTFEEDING SUPPLIES + PUMP RENTALS: Lawtons Home Health
www.lawtons.ca/home-healthcare/home-medical-supplies/breastfeeding

- La Leche League Canada: **www.llllc.ca**
- Dr. Jane Morton: **newborns.stanford.edu**
- Motherisk-Sick Kids: **www.motherisk.org**
- Milk supply post-surgery: **www.makingmoremilk.com**

LACTATION CONSULTANTS & PUBLIC HEALTH NURSES {EASTERN~RURAL}

LACTATION CONSULTANTS	PHONE	FAX
Community Health	229-1571	229-1591
PUBLIC HEALTH NURSES	**PHONE**	**FAX**
Bay Roberts	786-5224	786-5299
Bonavista	468-2073	468-2821
Burin	279-7947	279-7936
Clarenville	466-5716	466-5718
Come by Chance	542-3507	542-3420
Grand Bank	832-1602	832-1173
Harbour Grace	945-6512	945-6514
Heart's Delight	588-2565	588-2416
Holyrood	229-1551	229-1591
Lethridge	467-4302	467-5400
Old Perlican	587-2370	587-2634
Marystown	279-7935	279-7936
Placentia	227-3641	227-3749
St. Bernard's	461-2737	461-2246
St. Bride's	337-2260	337-2214
St. Mary's/St. Joseph's	525-2100	525-2411
St. Lawrence	873-2880	873-2481
Whitbourne	759-3370	759-3377

BREASTFEEDING SUPPLIES + PUMP RENTALS: Lawtons Home Health
www.lawtons.ca/home-healthcare/home-medical-supplies/breastfeeding

- Dr. Jack Newman: **www.breastfeedinginc.ca**
- Baby-Friendly NL: **www.babyfriendlynl.ca**
- Latch & Positioning: **www.rebeccaglover.com.au**
- LactMed: **www.toxnet.nlm.nih.gov**

PHOTO CREDITS

Cover:	iStock
Inside front cover:	Shutterstock
p. 2: Mother and baby	Shutterstock
p. 4: Mother with smiling baby	Shutterstock
p. 6: Preterm baby breastfeeding	Shutterstock
p. 7: Ankyloglossia	Dr. Nicholas Blackwell
p. 7: Premature baby	Shutterstock
p. 7: Inverted nipple	UNICEF
p. 8: Baby with hands near face	Shutterstock
p. 10: Engorgement	UNICEF
p. 10: Reverse Pressure Softening 1 & 2	Clare Bessell
p. 10: Breast compression	Unknown source
p. 11: Compressed nipple	Unknown source
p. 11: Nipple abrasion	Janet Fox-Beer
p. 11: Nipple abrasion (severe)	Dr. Nicholas Blackwell
p. 11: Cracked nipple	UNICEF
p. 11: Nipple bleb/Sebaceous cyst	Dr. Jack Newman
p. 12: Flat/inverted nipples	www.007b.com
p. 12: Nipple vasospasm	Unknown source
p. 12: Overproduction	Unknown source
p. 13: Candida ~ Mother (Both)	UNICEF
p. 13: Candida ~ Baby	Unknown source
p. 14: Massage of blocked milk duct	Unknown source
p. 14: Mastitis	Dr. Nicholas Blackwell
p. 14: Mastitis	UNICEF
p. 15: Breast abscess	Dr. Jack Newman
p. 15: Needle aspiration of breast abscess	Dr. Jack Newman
p. 15: Catheter drainage of breast abscess	Dr. Jack Newman
p. 15: Nipple eczema	© DermNetNZ
p. 17: Sub-optimal latch	Shutterstock
p. 17: Optimal latch (Both)	Frischknesht, Stillen Kompakt,1. Edition 2007 © Elsevier GmbH, Urban & Fischer, Munich
p. 17: Sub-optimal milk transfer with nipple shield	Dr. Jack Newman
p. 17: Restricted feeding	Shutterstock
p.17: Skin-to-skin	Shutterstock
p. 18: Sub-optimal milk production with lactation aid	Dr. Jack Newman
p. 18: Preterm/SGA	Olive Goobie
p. 18: Psychosocial concerns	Shutterstock
p. 20: Counselling with physician	Shutterstock
p. 21: Cup feeding	Dr. Nicholas Blackwell
p. 21: Hand expression of colostrum and spoon feeding	Janet Fox-Beer
p. 21: Lactation aid	Dr. Jack Newman
p. 28: Physician and woman	Eastern Health
p. 34: Breastfeeding baby	Shutterstock
p. 35: Breastfeeding baby	Shutterstock
p. 36: Breastfeeding family	Shutterstock
Notes:	Shutterstock
Inside back cover:	Shutterstock
Back cover:	Dennis Rashleigh

Every attempt has been made to acknowledge copyright or ownership of the images used in this reference guide. The authors apologize for any errors and welcome any information for corrections.

NOTES

NOTES

NOTES

Baby-Friendly
Newfoundland & Labrador

www.babyfriendlynl.ca