PHYSICIAN’S TOOLKIT

BREASTFEEDING

QUICK REFERENCE GUIDE
INTRODUCTION


Revised with permission by Renfrew County and District Health Unit, January 2020.

This toolkit is designed to assist health care providers in providing optimal care and consistent information to breastfeeding families. The toolkit is based on current evidence and reflects best practice in the care of breastfeeding families. Topics include initiating and sustaining breastfeeding, management of common concerns, medication safety, establishing a breastfeeding-friendly practice environment and local 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.

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Dr. Anne Drover MD, FRCPC

Designed and Produced by Fonda Bushell Inc.
Exclusive breastfeeding for the first six months and continue up to two years and beyond.

PHAC, 2012

<table>
<thead>
<tr>
<th>HEALTH OUTCOMES ASSOCIATED WITH BREASTFEEDING</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MOTHER</strong></td>
</tr>
<tr>
<td>✸ Breast and ovarian cancer</td>
</tr>
<tr>
<td>✸ Diabetes</td>
</tr>
<tr>
<td>✸ Osteoporosis</td>
</tr>
<tr>
<td>✸ CVD</td>
</tr>
<tr>
<td>✸ Rate of return to pre-pregnancy state</td>
</tr>
<tr>
<td><strong>BABY</strong></td>
</tr>
<tr>
<td>✸ Otitis media/LRTI</td>
</tr>
<tr>
<td>✸ Obesity</td>
</tr>
<tr>
<td>✸ Diabetes</td>
</tr>
<tr>
<td>✸ Childhood cancer</td>
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<tr>
<td>✸ Gastro</td>
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<tr>
<td>✸ SIDS</td>
</tr>
<tr>
<td>✸ NEC</td>
</tr>
<tr>
<td>✸ Asthma, atopy</td>
</tr>
<tr>
<td>✸ IQ</td>
</tr>
</tbody>
</table>
TABLE OF CONTENTS

What are the Signs of a Good Latch? ................................................................. 1
Influence of Latch & Milk Production on Breastfeeding Outcomes ............. 3
Signs of Effective Breastfeeding ...................................................................... 5
Factors that May Impact Lactation ................................................................. 6
Questions to Consider when Assessing Breast & Nipple Pain ....................... 9
Diagnosis & Treatment of Common Breastfeeding Concerns ..................... 10
Management of Poor Infant Weight Gain ....................................................... 16
Medical Indications for Supplementation ....................................................... 19
Guidelines for Supplementation ..................................................................... 20
Breastfeeding Medication Safety ..................................................................... 23
Lactation Consultants & Public Health Nurses ................................................ 29
Bibliography and Photo Credits ....................................................................... 33
WHAT ARE THE SIGNS OF A GOOD LATCH?
LIPS FLANGED OUT
Wide, gaping mouth to accommodate areola and nipple

ASYMMETRIC LATCH
More areola visible above the baby’s top lip

TUMMY TO MUMMY
Baby’s ears, shoulders and hips in alignment

CHIN TOUCHING BREAST
Nose free in the sniffing position

HAVE A LISTEN & WATCH
Active suckling and swallowing indicates milk transfer
BREASTFEEDING SUCCESS

• EARLY & OFTEN
• EFFECTIVE (OPTIMAL LATCH)
• EXCLUSIVE (NO SUPPLEMENTS)
Note: If the latch is optimal, even a reduced milk production can lead to a healthy infant weight gain.

<table>
<thead>
<tr>
<th>LATCH</th>
<th>Milk Production</th>
<th>Outcomes for Mother &amp; Baby</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optimal</td>
<td>Optimal</td>
<td>• Excellent weight gain</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Pain free feeding</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Efficient feeding</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Satisfied baby</td>
</tr>
<tr>
<td>Adequate</td>
<td>Optimal</td>
<td>• Good weight gain</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Pain free feeding</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Longer &amp; more frequent feedings</td>
</tr>
<tr>
<td>Optimal</td>
<td>Adequate</td>
<td>• Good weight gain</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Pain free feeding</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Efficient feeding</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Satisfied baby</td>
</tr>
<tr>
<td>Poor</td>
<td>Optimal</td>
<td>• Slower weight gain</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Lower milk production</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Longer feeds</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Possible weight loss</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Sore nipples</td>
</tr>
<tr>
<td>Poor</td>
<td>Adequate</td>
<td>• Slow weight gain</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Longer feeds</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Growth concerns</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Fatigue (mom &amp; baby)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Sore nipples</td>
</tr>
</tbody>
</table>
PHYSICIAN SUPPORT IS KEY TO SUCCESSFUL BREASTFEEDING

UNNECESSARY SUPPLEMENTATION UNDERMINES 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
- Appropriate weight gain (see page 16)*
- No pain with breastfeeding

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

### INFANT STOOL & URINE OUTPUT CHART

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

**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
- 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.

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

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Symptom</th>
<th>Sign</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engorgement</td>
<td>Breasts over full with milk, causing tightness and pain</td>
<td>Hard, tight, shiny breasts</td>
<td>BEFORE feeding: facilitate milk let-down with:</td>
</tr>
<tr>
<td></td>
<td>(Peaks days 3-5 postpartum, and anytime milk is not removed effectively)</td>
<td>Usually bilateral</td>
<td>• warm compresses to breast or warm shower</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nipple effaced</td>
<td>• gentle hand massage and expression</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Areola firm</td>
<td>• reverse pressure softening (see below)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Difficulty latching</td>
<td>• DURING feeding:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Poor let-down</td>
<td>• optimize latch</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• frequent feedings with breast compression</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(see below)</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>• AFTER feeding:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• hand expression</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• cool compresses to breast</td>
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<td></td>
<td></td>
<td></td>
<td>• NSAIDs prn</td>
</tr>
</tbody>
</table>

## 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.

## Breast Compression

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 latched, 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.
## Diagnosis & Treatment of Common Breastfeeding Concerns

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Symptom</th>
<th>Sign</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sore nipples</td>
<td>Nipple pain during feeding</td>
<td>Nipple erythema, Ecchymosis, Compressed nipple post latch</td>
<td>Assess and correct latch and position, Apply 1&lt;sup&gt;st&lt;/sup&gt; choice: expressed breastmilk or 2&lt;sup&gt;nd&lt;/sup&gt; choice: lanolin, Consider APNO*</td>
</tr>
<tr>
<td>Nipple abrasion</td>
<td>Painful latch, Nipple pain</td>
<td>Nipple erythema, Broken skin integrity, Ecchymosis, Bleeding nipples, Compressed nipple post latch, May have purulent discharge and honey coloured exudate</td>
<td>Assess and correct latch, Rule out ankyloglossia or dysfunctional suck, Apply 1&lt;sup&gt;st&lt;/sup&gt;: expressed breastmilk, 2&lt;sup&gt;nd&lt;/sup&gt;: lanolin and/or coconut oil. With or without using a breast shell, Moist wound healing (water based hydrogel dressing), Topical treatment options: APNO*, 2% Mupirocin, 2% Fucidic acid, If no improvement in 48 hrs, consider po antibiotics (see mastitis on p. 14)</td>
</tr>
<tr>
<td>Cracked nipple</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nipple bleb</td>
<td>Nipple pain</td>
<td>White or yellow lesion on nipple face (bleb) or shaft (sebaceous cyst)</td>
<td>Apply warm, moist compresses, Coconut oil on a cotton ball against nipple (in bra), Increase frequency of breastfeeding/expression, NSAIDs prn, Sterile lancing +/- topical antibiotic</td>
</tr>
<tr>
<td>Sebaceous cyst</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

### APNO - All Purpose Nipple Ointment

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

Note: Short term use of 2-3 weeks only, then reassessment

- DO NOT wash off before breastfeeding
- Apply sparingly to nipples postfeeding

---

**11**
<table>
<thead>
<tr>
<th>DIAGNOSIS</th>
<th>SYMPTOM</th>
<th>SIGN</th>
<th>TREATMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flat / Inverted nipples</td>
<td>Difficulty latching</td>
<td>Non-protractile nipple</td>
<td>Stimulate/shape nipple (using hand or pump) before latching-on</td>
</tr>
<tr>
<td>Nipple pain</td>
<td>Nipple inversion</td>
<td>Alternating positions: e.g., football or cross cradle</td>
<td></td>
</tr>
<tr>
<td>Nipple vasospasm</td>
<td>Deep, shooting breast pain (Usually follows a feeding and affects both nipples)</td>
<td>Nipple blanches after feeding</td>
<td>Assess and correct latch</td>
</tr>
<tr>
<td>Overproduction</td>
<td>Mother</td>
<td>Nipple blanches after feeding</td>
<td>Treat underlying infection</td>
</tr>
<tr>
<td></td>
<td>• breast fullness &gt; 3 weeks postpartum</td>
<td>May progress to blue/red colour changes (Raynaud's)</td>
<td>Apply, warm, dry compresses post feeding</td>
</tr>
<tr>
<td></td>
<td>• hypersensitive nipples</td>
<td></td>
<td>Massage pectoral and chest muscles</td>
</tr>
<tr>
<td></td>
<td>• forceful let-down</td>
<td></td>
<td>Avoid cold</td>
</tr>
<tr>
<td>Baby</td>
<td>arching back with feeds</td>
<td></td>
<td>NSAIDs prn</td>
</tr>
<tr>
<td></td>
<td>choking/gagging</td>
<td></td>
<td>Magnesium 300mg and calcium gluconate 200mg po bid may be helpful</td>
</tr>
<tr>
<td></td>
<td>frothy, explosive stools</td>
<td></td>
<td>Nifedipine 10mg po tid or Nifedipine XL 30mg od</td>
</tr>
</tbody>
</table>

**APNO ALL PURPOSE NIPPLE OINTMENT**

- Mupirocin 2% Ointment (15g)
- Betamethasone 0.1% Ointment (15g)
- Ibuprofen Powder 2%*
- Miconazole Powder 2%* *final concentration

- Apply sparingly to nipples post feeding
- DO NOT wash off before breastfeeding
## Diagnosis & Treatment of Common Breastfeeding Concerns

<table>
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<tr>
<th>Diagnosis</th>
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<th>Sign</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Candida (Mother)</strong></td>
<td>• Shooting breast pain&lt;br&gt;• Burning, itchy sensation&lt;br&gt;• Worse at end of day&lt;br&gt;• Often after period of pain-free breastfeeding and can last minutes to hours</td>
<td>• Erythematous nipple and areola&lt;br&gt;• Shiny areola&lt;br&gt;• Dry / flaky areola</td>
<td>![Always Treat Baby Too!]&lt;br&gt;<strong>1</strong>&lt;sup&gt;st&lt;/sup&gt; line: APNO* applied to nipple and areola after each feeding&lt;br&gt;<strong>2</strong>&lt;sup&gt;nd&lt;/sup&gt; line: Fluconazole 400 mg day 1, then 100 mg po bid until asymptomatic x 7 days (If topical treatment has failed)&lt;br&gt;Frequent hand washing&lt;br&gt;Sanitization of ALL objects in contact with nipples or infant’s mouth (breast pad, soother, toys)&lt;br&gt;Prophylactic coconut oil on nipples for mothers prone to yeast infection</td>
</tr>
</tbody>
</table>

| **Candida (Baby)**  | • Gassy and fussy at breast<br>• Pulls on and off breast<br>• Clicks while nursing | • Oral thrush<br>• Candida diaper dermatitis | ![Always Treat Mother Too!]<br>**Nystatin suspension** 100,000 units / ml 1 ml 4-6 times per day x 10-14 days +/- topical antifungal for diaper dermatitis<br>Avoid commercial baby wipes if diaper rash is present<br>Prophylactic Coconut oil used on diaper area for baby prone to yeast rash |
# Diagnosis & Treatment of Common Breastfeeding Concerns

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Symptom</th>
<th>Sign</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blocked duct</td>
<td>Unilateral, localized breast pain</td>
<td>Localized tenderness, Palpable lump, Possible erythema, Afebrile</td>
<td>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)</td>
</tr>
<tr>
<td>Mastitis</td>
<td>Unilateral breast pain, Swelling and redness, Flu like symptoms: fever, myalgia, malaise</td>
<td>Localized erythema, tenderness and induration, Breast enlargement or palpable lump, Decreased milk production, Usually unilateral, Fever greater than 38.5C</td>
<td>Frequent breastfeeding or expression (see blocked duct), If symptoms persist &gt;12-24 hrs or mother acutely ill: 1st line: Cephalexin 500 mg po qid, 2nd line: Cl oxacillin 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</td>
</tr>
</tbody>
</table>
# Diagnosis & Treatment of Common Breastfeeding Concerns

## Diagnosis
- Breast abscess

## Symptom
- History of recent mastitis
- Unilateral breast pain
- Swelling and redness

## Sign
- 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

## Treatment
- 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

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**Effective Drainage of an Abscess**

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

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## Eczema/Contact Dermatitis

- Removal of irritant
- Air dry breasts
- Steroid cream:
  - 1% Hydrocortisone
  - 0.1% Betamethasone Valerate
  - 0.1% Mometasone

## Pruritus
- Oozing
- Erythema
- Dry flaky skin

## Oozing
- Erythema
- Dry flaky skin

---

Initial Assessment of:

MOTHER

• Medical hx (e.g., infertility, PCOS, obesity, endocrine dysfunction, anemia)
• Perinatal hx (e.g., PPH or high blood loss, PP depression, retained placenta, infection, GDM, HTN, stress)

BREASTS

• Development in puberty and during pregnancy
• Symmetry, shape, fullness
• Nipples: size, shape
• Prior Sx (e.g. augmentation, reduction, biopsy)

BABY

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

Observe the baby breastfeeding

WEIGHT CONCERNS:

> 8-10% loss of birth weight on day 5 of life OR not regaining birth weight by day 14 requires careful assessment and breastfeeding assistance by professional with breastfeeding expertise

A healthy term newborn may take up to 3wks to regain birth weight.

Expected Weight Gain:*  

• 150g+/wk @ 2-4 weeks  
• 130-420g/wk @ 1-2 months  
• 90g-250g/wk @ 2-4 months  
• 50g-180g/wk @ 4-6 months  

Follow the WHO Set 2 growth charts  
*Based on 5th-97th percentile for weight velocity, not overall weight for age. Slower gains may be normal, but require assessment.

Excess newborn weight loss is correlated with intrapartum maternal IV fluid, and may not indicate ineffective breastfeeding.
# MANAGEMENT OF POOR INFANT WEIGHT GAIN

<table>
<thead>
<tr>
<th>POTENTIAL FACTORS</th>
<th>SUGGESTED MANAGEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sub-optimal Latch</strong></td>
<td>• Correct latch</td>
</tr>
<tr>
<td></td>
<td>• Assess suck and milk transfer</td>
</tr>
<tr>
<td></td>
<td>• Ensure pain free breastfeeding vs nipple sucking</td>
</tr>
<tr>
<td></td>
<td>• Ensure position is comfortable</td>
</tr>
<tr>
<td></td>
<td>• Bring baby to breast rather than breast to baby</td>
</tr>
<tr>
<td></td>
<td><strong>Monitor weight Q 2-4 days.</strong></td>
</tr>
<tr>
<td><strong>Sub-optimal Milk Transfer</strong></td>
<td>• Observe for sustained suck-swallow pattern, visible/audible swallowing</td>
</tr>
<tr>
<td></td>
<td>• Encourage skin-to-skin contact</td>
</tr>
<tr>
<td></td>
<td>• Suggest breast compressions (p.10)</td>
</tr>
<tr>
<td></td>
<td>• Hand express/pump post feedings</td>
</tr>
<tr>
<td></td>
<td>• <strong>Large nipples</strong> may require breast compressions throughout feeds and pumping until baby grows and can accommodate the size of the nipple</td>
</tr>
<tr>
<td><strong>Restricted Feeding</strong></td>
<td>• Educate mother on signs of readiness or cues for feeding</td>
</tr>
<tr>
<td></td>
<td>• Discuss importance of frequent, unrestricted feeding (8 or more times in 24 hrs)</td>
</tr>
<tr>
<td></td>
<td>• Advise to finish feedings on first breast and then offer the second</td>
</tr>
<tr>
<td></td>
<td>• Avoid pacifiers as a means of delaying feedings</td>
</tr>
<tr>
<td></td>
<td>• Consider psychosocial concerns as identified in history</td>
</tr>
</tbody>
</table>

Sucking does not always indicate baby is feeding well.

Skin-to-skin care improves breastfeeding outcomes.
# Management of Poor Infant Weight Gain

<table>
<thead>
<tr>
<th>Potential Factors</th>
<th>Suggested Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-optimal Milk Production</td>
<td>- Assess maternal health</td>
</tr>
<tr>
<td></td>
<td>- Optimize position and latch</td>
</tr>
<tr>
<td></td>
<td>- Increase time spent skin to skin</td>
</tr>
<tr>
<td></td>
<td>- Increase breastfeeding frequency (8 or more times in 24 hrs)</td>
</tr>
<tr>
<td></td>
<td>- Suggest breast compressions (see p. 10)</td>
</tr>
<tr>
<td></td>
<td>- Hand express/pump post feedings</td>
</tr>
<tr>
<td></td>
<td>- Supplement if medically indicated using a lactation aid (pg 22): Expressed breastmilk (EBM) or if unavailable, artificial baby milk (ABM)</td>
</tr>
<tr>
<td></td>
<td>- Consider galactogogues (see pg.26 Medication)</td>
</tr>
<tr>
<td></td>
<td>- Consult with Lactation Consultant</td>
</tr>
</tbody>
</table>

| Preterm / SGA                           | - Supplement if medically indicated using EBM or ABM with lactation aid (pg 22)      |
|                                         | - 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 Lactation Consultant                                                   |
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
- Not regaining birth weight by 2-3 weeks
- Inadequate weight gain (see page 16)

**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. 23)
- 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, PPH, 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

TAILOR VOLUMES TO TUMMY SIZE

<table>
<thead>
<tr>
<th>Age</th>
<th>Tummy Size</th>
<th>Supplement Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 24 hrs</td>
<td>5 - 7 mls</td>
<td>2 - 10 mls per feed</td>
</tr>
<tr>
<td>24 - 48 hrs</td>
<td>12 mls</td>
<td>5 - 15 mls per feed</td>
</tr>
<tr>
<td>48 - 72 hrs</td>
<td>13 - 30 mls</td>
<td>15-30 mls per feed</td>
</tr>
<tr>
<td>72 - 96 hrs</td>
<td>30+ mls</td>
<td>30 - 60 mls per feed</td>
</tr>
</tbody>
</table>
| By day 10   | 60 - 81 mls| Follow guidelines for slow gaining infant on next page

Consider the family’s breastfeeding goals and priorities. Use a realistic, non-judgemental approach.
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, instead use cup, spoon or lactation aid (pg. 22)

For the slow gaining infant:
• Start with 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.
Use of Lactation Aid
Or Supplemental Nursing System (SNS)

**Babies learn to breastfeed by breastfeeding.** If supplementation is medically indicated, a lactation aid is the best option, since baby is on the breast and breastfeeding. Cup and spoon feeding are good alternatives when the baby is very sleepy or not yet able to latch to the breast.

Artificial nipples, such as bottles and soothers/pacifiers should be avoided while babies learn to breastfeed. Babies learn by doing, if they learn how to suck on a bottle, they may apply that technique to mom when attaching to the breast, which can cause pain and damaged nipples.

Lactation aids or SNS can be home made, using a 5fr feeding tube and a clean container, OR parents can purchase a commercially made SNS.

Once baby has latched and fed from mom, the tube can be inserted into the corner of the baby’s mouth, past the gums. If correct positioning has been achieved and the latch has a good seal, the baby will draw milk from the container as he continues to feed at the breast. (Keep container at level of breast to allow baby to control the flow). **Caution:** Ensure tube does not slip too far into babies mouth/throat. Tube only needs to extend past the baby’s gums to function properly.

See video clip online and visit www.nbci.ca for more information.

https://www.breastfeedinginc.ca/inserting-a-lactation-aid
## Analgesia

<table>
<thead>
<tr>
<th>COMPATIBLE</th>
<th>CAUTION</th>
<th>AVOID</th>
</tr>
</thead>
</table>
### • Acetaminophen
### • NSAIDs: Ibuprofen, Diclofenac, Celecoxib, Indomethacin,
### • Triptans: Sumatriptan, Eletriptan
### • Triptans: Rizatriptan, Zolmitriptan, Naratriptan *

| • Narcotics: Codeine | • NSAIDs: Naproxen |
| May cause infant drowsiness and CNS depression | Longer half-life, other NSAIDs may be preferred in preterm infants
| Safe for low dose short term use only |

| • Triptans: Rizatriptan, Zolmitriptan, Naratriptan * |

## Anti-Infectives

| • Penicillins: Amoxicillin, Clavulanate, Fucidic acid |
| • Cephalosporins: Cefuroxime, Cephalexin, Cefaclor, Cefazolin |
| • Macrolides: Erythromycin, Azithromycin, Clarithromycin |
| • Sulfonamides: TMP-SMX (full-term infants) |
| • Tetracyclines (short term use only) |
| • Antifungals: Fluconazole (po), Clotrimazole, Miconazole, Terbinafine (topical) |
| • Antivirals: Acyclovir, Valacyclovir |
| • Anti-malarial: Chloroquine, Hydroxychloriquine |

| • Clindamycin (infant diarrhea) |
| • Metronidazole |
| • Quinolones: Ciprofloxacin, Levofloxacin, Moxifloxacin, Ofloxacin, Gatifloxacin (older studies show arthropathy in infants, newer studies show low risk) |
| • Nitrofurantoin |

| • Antivirals: Famciclovir * |
| • Sulfonamides: (avoid in preterm or jaundiced infants) |

* No published data

### CARDIOLOGY

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

### CONTRACEPTION

- **Progestin-only contraceptives**:
  - Micronor*
  - Mirena*
  - Start only after breastfeeding well established (around 6 weeks PP)

- **Estrogen containing contraceptives**:
  - Can reduce milk supply

- **Progestin-only contraceptives**:
  - Depo-Provera 150 mg IM
  - Women can 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

**DIAGNOSTIC TESTS/ SURGERY**

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

- **Caution**
  - Contrast: Iopamidol, Ioversol, Iodipamide, Iodixanol

- **Avoid**
  - I 131: Delay elective diagnostic studies until breastfeeding completed
  - Gallium citrate

**DMARD**

- Methotrexate

**E.N.T.**

- **Compatible**
  - Intranasal steroids: Mometasone, Fluticasone
  - Anti-histamines: Cetirizine, Desloratadine, Loratadine,

- **Caution**
  - Pseudoephedrine
    - (A single dose decreases milk production acutely and repeated use seems to interfere with lactation)
  - Diphenhydramine (small occasional dose only)

*No published data*  

### ENDOCRINOLOGY

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

- **Gliclazide**
- **TZD***
- **Incretins***

### GALACTOGOGUES

- **Fenugreek:** recommended dose 6 grams/day in divided doses
  - Available over the counter
  - Give information along with a referral to breastfeeding support

- **Domperidone** (caution in patients with hx of HTN, arrhythmia, cardiovascular disease): recommended dose 10-20mg 3-4times/day, dose tapering prior to cessation
  - **Blessed Thistle:** recommended dose 1.5-3 grams as a tea, up to 3 times daily (allergy: ragweed family) **Give information/Rx along with a referral to breastfeeding support**

### GASTROENTEROLOGY

- **H2 blockers:** Ranitidine
- **PPIs:** Pantoprazole, Lansoprazole, Esomeprazole, Omeprazole

- **Laxatives:** Docusate sodium, lactulose
- **Antiemetics:** Dimenhydrinate (small occasional dose)

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

- **Bismuth subsalicylate**
- **H2 blockers:** Cimetidine

- **PPIs:** Rabeprazole,

- **Methotrexate**

* No published data

**NEUROLOGY**

- **Anticonvulsants**: Phenytoin
  - Trip tans: Eletriptan

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

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

**PSYCHIATRY**

- **SSRI**: Paroxetine, Escitalopram, Sertraline (preferred)
- **SNRI**: 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**
- **Quetipine**

- **Atomoxetine***

* No published data

RESPIROLOGY

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

- Monoleukast *

SOCIAL

- Alcohol: < 2 drinks per day
- Caffeine: < 300 mg per day

- Smoking: LESS is BETTER!
  Not a reason to stop breastfeeding as infant will have second hand exposure

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
- If the drug has a short half-life, encourage feeding after the first half-life has passed

* No published data

28
**LACTATION CONSULTANTS & PUBLIC HEALTH NURSES**

Make use of hands-on and in-home assessment, counselling and support by Lactation Consultants and Public Health Nurses.
### LACTATION CONSULTANTS 
& PUBLIC HEALTH NURSES

<table>
<thead>
<tr>
<th>Public Health Nurses</th>
<th>COST</th>
<th>PHONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Renfrew County and District Health Unit, Family Health intake line, Monday – Friday 8:30-4:30. Calls returned within one business day.</td>
<td>Free</td>
<td>(613) 735-8651 ext 589</td>
</tr>
<tr>
<td>Public Health Nurses available for phone or in-home breastfeeding support for all families living in Renfrew County and District. Certified Lactation Consultant (IBCLC) available.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Private Lactation Consultants</th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Lois O’Brien BScN, Lactation Consultant (IBCLC)</td>
<td>One-time fee $25 local (Petawawa/Pembroke), $40 for outlying areas.</td>
<td>(613) 735-8049 Call between 8am-10pm only</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Breastfeeding Clinics</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Pembroke Regional Hospital, labour &amp; birth unit Patty Keon RN, Lactation Consultant (IBCLC) available Monday-Friday by appointment up to 7 days after birth.</td>
<td>Free</td>
<td>(613) 732-2811 ext 6438</td>
</tr>
</tbody>
</table>
| **Pembroke Breastfeeding Drop-in**  
Monday’s 9am-12pm, at the West Champlain Family Health Team (315 Pembroke St. E). Open to all, do not need to be a patient. No appointment needed. | Free | Ashley Hanly RN BScN (613) 735-8651 ext 578 |
| **Petawawa Breastfeeding Drop-in**  
Tuesday’s 9am-11am, at the Petawawa Centennial Family Health Centre (154 Civic Centre Rd). Open to all, do not need to be a patient. No appointment needed. | Free | Heidi Krebsz NP (613) 687-7641 |

www.OntarioBreastfeeds.ca
**OTHER BREASTFEEDING SUPPORT**

### NATUROPATHIC DOCTOR

<table>
<thead>
<tr>
<th>Name</th>
<th>Cost</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cheryl Allen</td>
<td>Fees covered by some extended health plans</td>
<td>(613)635-7206</td>
</tr>
</tbody>
</table>

### PHYSIOTHERAPY

<table>
<thead>
<tr>
<th>Name</th>
<th>Cost</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ottawa Valley Physiotherapy &amp; Sports Medicine</td>
<td>Fees covered by some extended health plans</td>
<td>Petawawa Office: (613) 687-6600 Renfrew Office: (613) 432-9088</td>
</tr>
<tr>
<td>Physio in the Valley</td>
<td>Fees covered by some extended health plans</td>
<td>(613) 635-4777</td>
</tr>
</tbody>
</table>

### TONGUE TIE REFERRALS

<table>
<thead>
<tr>
<th>Name</th>
<th>Cost</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr Linde Corrigan, Petawawa Centennial Family Health Centre</td>
<td>OHIP</td>
<td>(613) 687-7641</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>Cost</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr Gina Corrigan and Dr Kipp, North Renfrew Family Health Team</td>
<td>OHIP</td>
<td>(613) 584-1037</td>
</tr>
<tr>
<td>Dr Fayad, Dentist, Chapman Hills Dental</td>
<td>Fees may be covered by some extended health plans</td>
<td>(613) 823-4001</td>
</tr>
<tr>
<td>Dr Crossman, Dentist, Hampton Park Dental Centre</td>
<td>Fees may be covered by some extended health plans</td>
<td>(613) 792-4040</td>
</tr>
</tbody>
</table>

[www.OntarioBreastfeeds.ca](http://www.OntarioBreastfeeds.ca)
## OTHER BREASTFEEDING SUPPORT

### BREAST PUMP RENTAL/RETAILER

<table>
<thead>
<tr>
<th>BREAST PUMP RENTAL/RETAILER (Hospital Grade)</th>
<th>LOCATION</th>
<th>PHONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Resource Centre</td>
<td>Killaloe</td>
<td>(613) 757-3108</td>
</tr>
<tr>
<td>Mulvihill Drug Mart</td>
<td>Pembroke</td>
<td>(613) 735-0161</td>
</tr>
<tr>
<td>Shoppers Drug Mart</td>
<td>Arnprior</td>
<td>(613) 623-7971</td>
</tr>
</tbody>
</table>

### ONLINE AND TELEPHONE SUPPORTS

<table>
<thead>
<tr>
<th>ONLINE AND TELEPHONE SUPPORTS</th>
<th>LOCATION</th>
<th>PHONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Telehealth Ontario 24/7 Breastfeeding Support</td>
<td>Website</td>
<td>1-866-797-0000</td>
</tr>
<tr>
<td>La Leche League Canada (LLL)</td>
<td><a href="http://www.lmc.ca/">www.lmc.ca/</a></td>
<td>1-800-665-4324</td>
</tr>
<tr>
<td>Dr. Jack Newman, Breastfeeding Inc</td>
<td><a href="http://www.breastfeedinginc.ca">www.breastfeedinginc.ca</a></td>
<td></td>
</tr>
</tbody>
</table>

### ONLINE MEDICATION & BREASTFEEDING REFERENCE

<table>
<thead>
<tr>
<th>ONLINE MEDICATION &amp; BREASTFEEDING REFERENCE</th>
<th>LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>LactMed, part of the National Library of Medicine's (NLM) Toxicology Data Network (TOXNET®), is a database of drugs and dietary supplements that may affect breastfeeding.</td>
<td><a href="http://www.lactmed.ca">www.lactmed.ca</a></td>
</tr>
<tr>
<td>E-Lactancia, a part of APIALAM, database for medication and breastfeeding</td>
<td><a href="http://www.elactancia.org">www.elactancia.org</a></td>
</tr>
</tbody>
</table>
BIBLIOGRAPHY


www.OntarioBreastfeeds.ca


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: 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 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. 22: 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
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Back cover: .............................................................................Dennis Rashleigh

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