SLHD Policy Compliance Procedure

SLHD Breastfeeding	
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Applies to	All SLHD Employees
Clinical Stream(s)	**All Clinical Streams**
Tier 2 Sign-off	Dr Robert Ogle, Clinical Director, Women's Health, Neonatology and Paediatrics, 14/04/17
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SLHD Breastfeeding

Contents

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1. Introduction

The SLHD promotes, protects and supports breastfeeding as the optimal way to feed a baby as it offers important health benefits for both mother and baby. Breastfeeding has all the nutrients a baby needs for the first 6 months of life at which time family foods or solids should be introduced while breastfeeding is continued. Breastfeeding until two years of age and beyond is recommended by the World Health Organisation (WHO) and the Baby Friendly Health Initiative (BFHI). Additionally, the National Health and Medical Research Council (NHMRC) recommends that breastfeeding be continued until 12 months of age and beyond, for as long as the mother and child desire.

This Policy Compliance Procedure (PCP) operationalises the requirements of Breastfeeding in NSW Promotion, Protection and Support (PD2011_042)

2. The Aims / Expected Outcome of this Policy Compliance Procedure

- Women are supported in their choice of infant feeding.
- To facilitate health workers to give consistent evidenced based infant feeding support to women and infants accessing healthcare in the SLHD.
- All pregnant women are provided with evidenced based information on the importance and management of breastfeeding and the potential health risks associated with giving a breastmilk substitute so they can make an informed decision regarding infant feeding.
- Women are supported to optimally feed their baby. This includes exclusive breastfeeding or where this is not possible to partially breastfeed or exclusively give a breastmilk substitute.
- Women who decide not to breastfeed are supported to feed their baby with a breastmilk substitute of their choice by providing individual instruction on safe preparation and feeding the breastmilk substitute to their baby.
- To adhere to the World Health Organization International Code for the Marketing of Breastmilk Substitutes (WHO Code).

3. Risk Statement

SLHD Enterprise Risk Management System (ERMS) Risk # 1: Breaches of standards of clinical care:

The risks addressed by this PCP are:

- The health of a woman or baby may be compromised by not breastfeeding
- Inappropriate breastfeeding support and /or management of breastfeeding problems
- Non-compliance with the WHO Code

4. Scope

All SLHD employees must comply with this PCP.

5. Implementation

- All midwifery, nursing and medical staff who care for pregnant or breastfeeding women and infants working within the SLHD must be familiar with the SLHD Breastfeeding PCP
- All other staff must be aware of the PCP and who to refer breastfeeding women to if asked about breastfeeding
- Education will take place via orientation programs and 'in service education' sessions.
- Distribution and notification of this policy to midwifery, nursing and medical staff within SLHD via usual processes.

6. Key Performance Indicators

Key performance indicators are:

- Incident Information Management System (IIMS) relating to:
  - Complaints regarding inconsistent or conflicting advice
  - Inappropriate feeding management of infants accessing SLHD services
  - Non-compliance with the WHO Code for the Marketing of Breastmilk Substitutes
  - Trends in breastfeeding rates reviewed by quarterly breastfeeding audits conducted in hospital and community tabled at the SLHD Breastfeeding Reference Group

7. Key Principles

7.1 SLHD employees refer to this policy when caring for a breastfeeding woman or infant as it provides a comprehensive, evidenced based approach to support breastfeeding practices and challenges for breastfeeding women and their newborns and infants.

7.2 All staff receive education on breastfeeding appropriate to their professional group. Clerical and ancillary staff are to be orientated to the policy and refer breastfeeding queries to appropriately trained staff.

7.3 All pregnant or breastfeeding women are given access to clear and correct information about the benefits of breastfeeding, for themselves, their babies and their families. They also receive information that will help to increase their skills and confidence to breastfeed. This information includes:

- Recommendations to exclusively breastfeed until around 6 months and to continue breastfeeding while introducing solid family foods until at least 12 months, and for as long as both mother and baby desire.
- Information on the benefits of uninterrupted skin-to-skin contact with the baby immediately after birth, until after the first breastfeed or for at least an hour to promote bonding (regardless of infant feeding choice)
- How to position and attach the baby to her breast and how to recognise the baby is feeding effectively
- Non-separation of mother and baby during their hospital stay so that the mother gains confidence in recognising and responding to her baby's cues
- No restrictions on the length or frequency of feeds in a well term baby, provided the baby is feeding effectively
- Providing skilled assistance to work through breastfeeding challenges
- Avoiding giving the baby anything other than breastmilk unless medically indicated

- Avoiding the use of teats or dummies for normal healthy babies as this may reduce the chance of successful breastfeeding
- Education and assistance to initiate and maintain the milk supply if mother and baby are separated for any reason e.g. prematurity, illness in the mother
- Written information about professional community support e.g. Child and Family Health Nurse, as well as mother to mother support e.g. Australian Breastfeeding Association

7.4 If a mother has made an informed decision to use infant formula, individual instruction on safe preparation and the giving of the formula of her choice will be provided

7.5 The SLHD encourages breastfeeding and is committed to supporting employees who choose to continue breastfeeding following their return to work after maternity leave, or commencement of paid work with SLHD.

7.6 Breastfeeding is welcome anywhere within SLHD health services. If a woman requests a privacy to breastfeed a suitable location will be provided

7.7 Any breastfeeding woman presenting to an Emergency Department or non-maternity ward will have their lactation needs identified and attended to promptly. A breastfeeding mother with a baby under 6 months is encouraged to have the baby remain with her during the hospitalisation of the mother or a sibling of the baby, so that breastfeeding is not interrupted.

7.8 Any research being undertaken in a SLHD Health Facility that involves mothers and babies must be carefully scrutinised for potential implications on infant feeding, or interference with the full implementation of the policy.

8. Related Policies

This policy should be used in conjunction with the policies below

- SLHD_PD2013_004 Breastfeeding and employment
- SLHD_PD2015_020 Infant Formula Policy
- SLHD_PD2015_021 Consent for complementary feeding infants with a breastmilk substitute policy
- SLHD_PD2013_021Breastfeeding women (includes boarder babies: Care in the Emergency department or inpatient ward)

9. Acknowledgements

Special acknowledgement is made to those responsible for the formulation of the first Breastfeeding Guidelines of the Central Sydney Area Health Service and the subsequent editions of the Sydney South West Area Health Service Breastfeeding Guidelines and then the Sydney Local Health District Breastfeeding Guidelines as of July 1st 2011.

The main contributors to this review of this document are:

- Carmel Kelly, CMC Parenting and Lactation – Royal Prince Alfred Hospital
- Angela Martin, CMS Lactation - Canterbury Hospital
- Martina Besters – CNC Perinatal Drug Health
- Holly Goodwin – Australian Breastfeeding Association
- Lactation Team at RPA
- Allan Kelly - Staff Neonatologist, Canterbury Hospital
- Nicholas Evans - Staff Neonatologist, Royal Prince Alfred Hospital

We would also like to acknowledge the support given in the critical reading of these guidelines by members of the SLHD Breastfeeding Reference Group.

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10. Background and Baby Friendly Health Initiative

10.1 Australian Statistics

In Australia, while breastfeeding initiation is high at 96% of women initiating breastfeeding[2], duration is becoming the main area of concern. The Australian Infant Feeding Survey (2010) reported the proportion of babies receiving any breastfeeding declined to 74.6% at 1 month, 68.7% at 4 months and 60.1% at 6 months. Breastfeeding to 13 – 18 months was just over 18% and 7.4% of women breastfed to 18 – 24 months[3].

In New South Wales fully breastfeeding at discharge from hospital was 82.1% in 2012. By 6 months of age mothers reported that 29.2% of infants were exclusively breastfed[4]. The latest statistics reveal that fully breastfeeding at discharge has lowered slightly to 78.9%

There are population groups with lower breastfeeding rates such as less privileged, younger mothers (less than 25yrs old)[7] and babies born to aboriginal mothers. Mothers born in Asia are amongst the earliest of the ethnic groups to stop breastfeeding[4]. This means a loss of important health benefits to these babies and therefore a greater cost to Australia's economy.

In 2006 the *Breastfeeding in NSW: promotion, protection and support policy* was released and then reviewed in 2011, with the aim of providing direction for NSW Health and Local Health Districts on how to promote, protect and support breastfeeding in the community and among staff[5].

10.2 The International Code for the Marketing of Breastmilk Substitutes

Development and adoption of the International Code of Marketing of Breastmilk Substitutes (1) (The WHO Code) occurred in 1981 at the World Health Assembly and Australia was a signatory to this Code. The aim of the Code is to contribute to the provision of safe and adequate nutrition for infants by the protection and promotion of breastfeeding. It also aims to ensure the proper use of breastmilk substitutes when these are necessary, based on adequate information and through appropriate marketing and distribution. The WHO Code applies to all products marketed as partial or total substitutes for breastmilk and includes infant formula, bottles and teats.

Summary of the International Code for the Marketing of Breastmilk Substitutes

1	**Advertising**	No advertising of infant formula products to the public
2	**Samples**	No free samples to mothers, their families or health care workers.
3	**Health Care Facilities**	No promotion of products to the public No infant formula company staff to advise mothers No gifts or personal samples to health workers eg. diaries No free or low cost supplies to be given
4	**Information**	No words or pictures idealising artificial feeding, including pictures of infants, on the labels of products. Information to health workers should be scientific and factual
5	**Labels**	All information on artificial infant feeding, including the labels, should explain the benefits of breastfeeding, and the costs and hazards associated with artificial feeding
6	**Products**	Unsuitable products, such as sweetened condensed milk, should not be promoted for babies. All products should be of high quality and take account of the climatic and storage conditions of the country where they are to be used
World Health Organization. Geneva 1981 (Courtesy IBFAN 1982) World Health Organization 2008 The International Code of Marketing of Breast-Milk Substitutes: frequently asked questions.		

10.3 Innocenti Declaration

Produced in 1990, the Innocenti Declaration set international standards for breastfeeding to empower, "…all women to exclusively breastfeed their children for 4-6 months and to continue breastfeeding with complementary food well into the second year of life".

In 2001 the World Health Assembly acting on a recommendation from the WHO Expert consultation recommended exclusive breastfeeding for 6 months with the introduction of complementary food and continued breastfeeding thereafter.

In 2005, the Global Strategy operational targets recommended protection, promotion and support of exclusive breastfeeding for six months and continued breastfeeding up to two years of age or beyond, while providing women access to the support they require – in the family, community and workplace.

10.4 Baby Friendly Health Initiative

The Baby Friendly Health Hospital Initiative (BFHI), a global accreditation process, was launched in 1991 by the WHO and the United Nations Children's Fund with the aim of improving standards and increasing breastfeeding rates by encouraging hospitals to implement the "Ten Steps to Successful Breastfeeding" (see Appendix 1) as a minimal standard, adopt practices that "protect, promote and support" breastfeeding and adhere to the WHO Code.

In Australia in 2006, the Baby Friendly Hospital Initiative became the Baby Friendly Health Initiative in order to more accurately reflect the expansion of the initiative into community health settings. In 2008 the Seven Point Plan for Community facilities, based heavily on the plan from Canada and the UK was endorsed, with the first Australian community health service accreditation awarded in 2013.

Health Services can apply for this status and are assessed by an external team of trained assessors. Once awarded, this accreditation lasts for three years at which time a further reassessment must be undertaken to retain the status. Health services who are awarded this status can then be easily identified as being up to date in their approach to breastfeeding.

The NSW Ministry of Health Breastfeeding policy (2011) supports the implementation and maintenance of Baby Friendly Health Accreditation for health services, including compliance with the WHO Code for the Marketing of Breastmilk Substitutes.

This whole of District Policy Compliance Procedure meets the requirements of the BFHI to 'have a written breastfeeding policy' in Maternity, Paediatric and Community Health Services.

1. World Health Organization. *Infant and young child nutrition. Global strategy on infant and young child feeding*. Geneva: WHO, 2002.
2. National Health and Medical Research Council (2012) *Infant Feeding Guidelines*. Canberra: National Health and Medical Research Council , 2012
3. Australian Institute of Health and Welfare 2011. 2010 Australian National Infant Feeding Survey: indicator results. Canberra: AIHW
4. Centre for Epidemiology and Evidence. *The Health of Children and Young People in NSW: Report of the Chief Health Officer 2014.* Sydney: NSW Ministry of Health, 2014.
5. Centre for Epidemiology and Evidence. Health Statistics New South Wales. Sydney: NSW Ministry of Health http://www.healthstats.nsw.gov.au/Indicator/mab_feed_cat/mab_feed_cat_atsi_trend accessed 1/2/17
6. NSW Ministry of Health PD2011_042 Breastfeeding in NSW: Protection, Promotion and Support.
7. Breastfeeding. Report of the NSW Chief Health Officer provides an overview of the health of the people of NSW. 18 Dec 2008.
8. NSW Centre for Public Health Nutrition 2007. *Report on breastfeeding in NSW: Populations Health Survey 2003 - 2004.*
9. Protecting, Promoting and Supporting Breastfeeding: The Special Role of Maternity Services. WHO/UNICEF Statement. Geneva 1989

11. Infant Formula Company Representatives

SLHD promotes exclusive breastfeeding for infant nutrition for the first six months of life and support to continue breastfeeding with the appropriate introduction of solids for as long as the mother chooses. SLHD also supports a mother's informed choice in the use of infant formula but does not support the promotion of infant formula to the general public. This includes the display of any material which refers to a product that is within the scope of the World Health Organisation Code for the Marketing of Breastmilk Substitutes (WHO Code)

Under no circumstances are promotional material or product samples to be left with or accepted by any staff member.

Principles/Guidelines

Managers of Maternity & Community Health Services require product information for the education of staff and therefore the following standards have been formulated:

Formula company representatives are only to contact the nominated personnel below, at each facility, for the purpose of making an appointment to discuss their products. If any clinical staff member is contacted he/she must refer the formula company representative to the nominated personnel at their facility. This nominated person is then responsible for ensuring that the information is disseminated to staff without being in breach of the WHO Code.

Nominated personnel are:

- Clinical Manager – Women's Health and Neonatology
- Nurse Managers – Maternity Services, Paediatrics & Community Health Services
- Nursing/Midwifery Unit Managers – Women's Health & Community Health Services
- Clinical Nurse/Midwifery Consultant – Women's Health & Community Health Services
- Clinical Nurse Consultant/Specialist (Lactation) – Women's Health & Community Health Services
- Designated Neonatologist
- Dieticians

1. WHO/UNICEF (1989) Protecting, Promoting and Supporting Breastfeeding: The Special Role of Maternity Services. Geneva
2. NSW Ministry of Health (2011) PD2011_042 Breastfeeding in NSW: Promotion, Protection

12. Work Health & Safety

Breastfeeding Procedures to assist in reducing Manual Handling Injuries

Goal: The midwife or health worker will assist the mother with breastfeeding and

a) Position herself so that her/his spine remains in alignment

b) Sustain no manual handling injury during the procedure

Assisting the mother to breastfeed when she is sitting in the chair

When called to assist the mother with breastfeeding, check the type of assistance she requires e.g. how much the mother herself is able to manage with feeding.

- Ensure that mother is comfortable with good support e.g. a pillow or footstool
- Sit on the breastfeeding stool, if available.
- **Adjust** the breastfeeding stool so that it is slightly higher than the seat of the mother's chair
- Assess the mother's ability to latch the baby

- Explain the physiology as required

Mother requiring verbal support only

If the mother requires only **verbal** assistance,

- The midwife or health worker is to observe the baby feeding and
- Sit on the breastfeeding stool in an erect position while observing so that the shoulders and hips are in line

Mother requiring hands on physical support with attachment

If the mother requires physical support to attach baby while she sits in a chair:

- Sit on the breastfeeding stool in an erect position and bring it as close as possible to the mother.
- **Adjust** the height of the stool according to:

  a) the maternal needs e.g. maternal height, level of breasts
  b) the midwife or health worker's needs e.g. height

The midwife is to sit in an erect position on the stool so that shoulders and hips are in a line.

For the ***cradle position for feeding***, have the breastfeeding stool as close as possible to the mother so that the midwife sits at a ***90-degree angle to the mother's shoulder***. This may mean the nurses will need to spread their knees wide to accommodate the mother's knees or arm of the chair to avoid the need to lean forward excessively and to avoid twisting of the spine.(see diagram).

If the mother requires physical support to attach baby while she remains in bed.

- Adjust the height of the bed so that it is at hip height and the midwife is not bending down.
- Assist the mother as necessary ***but*** when physical assistance is required the midwife or health worker should only maintain the selected posture for ***a maximum of 3 minutes only. Stretches are to be performed after 3 minutes and then the selected posture may be re-adopted.***
- At no time is the midwife or health worker to twist her spine.
- Shoulders and hips are to be kept in line.
- Once the baby is successfully feeding, the midwife is to stand up straight, put her hands behind her hips, place feet well apart and bend backwards 2-3 times.

Outcomes: The midwife or health worker assisted and observed for correct positioning and attachment, her/his spine remained in alignment and he/she sustained no manual handling injury

Compiled by: Doreen Pawley (OH&S, TCH, 2009) Amended by C. Kelly CMC Lactation RPA Women and Babies 2014
Reviewed by Jacqueline Myers, RPAH Work Health and Safety Women, Babies and Children Workgroup (2014)

12.1 Standard Precautions

The NSW Health Infection Control Policy (PD2007_036) states that "Standard Precautions apply to all patients receiving care in health organisations regardless of their diagnosis or presumed infection status".

Included in this are "all body substances, secretions and excretions (excluding sweat), regardless of whether or not they contain visible blood"**. Breastmilk is not specifically mentioned, despite the fact that both the World Health Organisation and The Centre for Disease Control in the USA specify that these precautions should not apply to breastmilk.**

Human breastmilk has been implicated in perinatal transmission of HIV, and HBsAg has been found in breastmilk of mothers infected with HBV. However, occupational exposure to human breastmilk has not been implicated in the transmission of HIV nor HBV or HCV infection to health care workers. Moreover, the health care worker will not have the same exposure to breastmilk as the breastfeeding neonate. In areas where universal or standard precautions do not apply to human breastmilk, gloves may be worn by health care workers in situations where exposures to breastmilk might be frequent, for example, in breastmilk banking.

1. NSW Health, Infection Control Policy. PD2007_036.
2. Lawrence, RA & RM, Breastfeeding, *A Guide for the Medical Profession,* 2005, Mosby Co, St Louis. p630-631.
3. Hepatitis NSW, Hepatitis C factsheets : Pregnancy Babies and Children, 2013
4. Riordan, J. *Breastfeeding and Human Lactation 3rd edition* Jones and Bartlett p171

13. How Does Breastfeeding Work

Endocrine (Hormonal) Control

Milk is produced in the glandular epithelial cells within the breast and is stored in clusters of alveoli. Each alveolus is surrounded by myoepithelial (muscle) cells. Adequate milk production is thought to be initially dependent on two main factors:

- Prolactin release from the anterior pituitary which stimulates milk production.
- Oxytocin release from the posterior pituitary causes the myoepithelial cells to contract and allow the produced milk to be released and pushed down the ductal system towards the nipple. The baby's sucking stimulates nerve endings in the nipple and areola triggering this oxytocin release which is known as milk-ejection reflex or "let-down". Removal of milk is then made possible by the rhythmical, negative pressure of the baby's sucking. (It was always thought that the milk drained into lactiferous sinuses situated close to the nipple, but research using ultrasound has been unable to successfully identify these "sinuses"[1]).

Autocrine (Local) Control

The two most important factors in successful ongoing lactation are:

a) the efficient removal of milk from the breasts and

b) the ability of the correctly latched baby to feed to need.

The lactating breast exercises a local feedback control known as autocrine control. Two local mechanisms are thought to control this: feedback inhibitor of lactation (FIL) which is a component of whey fraction in the breastmilk and prolactin receptor theory. When FIL reduces as the milk is removed from the breast the milk synthesis speeds up and when the alveoli cell is distorted due to milk fullness the prolactin cannot bind to the receptor at the base of the cell. This action is thought to match the rate of milk production to the amount of milk removed and comes into play in the early weeks of lactation.

The average mother's potential for milk production is much greater than the average baby's appetite. The wide range of milk intake by babies is due more to variations in demand than to limitations in milk production.

Variations in Breastmilk Content

The volume of milk available to the baby is greater in the early part of the feed however breastmilk fat levels rise as the milk flow lessens with subsequent let-downs. The change in fat content highlights the importance of baby-led feeding and letting the baby finish the feed in his own time rather than according to the clock.

1. Geddes DT. *Inside the lactating breast: the latest anatomy research*. Journal of midwifery & women's health. 2007;52:556-63
2. Ramsay D, *Ultrasound Visualises Breastfeeding Problems,* 2002. Australasian Science, April p34-35
3. Royal College of Midwives, *Successful Breastfeeding,* 2001, 3rd Edition, Churchill Livingstone, P1
4. Kent, J. *How Breastfeeding works* 2007 Journal of Midwifery Women's Health 52:564–570
5. *ICLA Core Curriculum for Lactation Consultant Practice 3rd edition* 2013, Jones & Bartlett

14. Antenatal Care

Needs and/or Problems	Action	Rationale
Antenatal breastfeeding education	Discuss feeding intention and importance of breastfeeding at booking and include the mother's partner / support person. Give the mother written information about breastfeeding. Encourage mother and her partner or support person to attend antenatal classes	Mother and her partner / support person receive information about the importance of breastfeeding to make an informed decision. Partner support and breastfeeding education during pregnancy has been shown to improve breastfeeding outcomes.
Antenatal education content	The following information should be discussed in a non-judgemental manner by the antenatal care provider and included in antenatal classes: • Why breastfeeding is important for mother and baby • The risks associated with not breastfeeding • The benefits of having a support person of the mother's choice throughout labour and birth • Ways to help with comfort and non-pharmacological pain relief during labour • Importance of early uninterrupted skin-to-skin particularly the first hour • How to recognise when the baby is ready to attach to the breast for the first feed • Basic breastfeeding management including positioning and attachment, feeding cues and frequency of feeding • Why staying with the baby (rooming in) is important • Why bottles and teats and dummies are discouraged while breastfeeding is being established (4–6 weeks) • Recommendation: exclusive breastfeeding for the first six months with introduction of other foods at around 6 months. Continue breastfeeding until at least 12 months with 2 years and beyond benefiting mothers and babies. • Basic breastfeeding management, including positioning and attachment, feeding cues and frequency of feeding, supply and demand • Indications that a baby is getting enough milk • Breastfeeding peer support in the community – Australian Breastfeeding Association • Professional support -Child and Family Health Centres • Advice on prenatal nipple care - avoid drying agents on nipples. Specific nipple preparation is not considered necessary, however there are advantages in encouraging women to be comfortable with handling their own breasts	• To make an informed decision parents need to be informed of the significant importance breastfeeding contributes to the physical, psychological and developmental wellbeing of infants, mothers, and society. They also need to be informed of the cost of alternatives • Parents need to be aware of the recommendation around breastfeeding exclusivity and duration • Empowering the mother by teaching her practical skills will increase her confidence and she will have an awareness of what is normal

Antenatal care (continued)		
Needs and/or Problems	**Action**	**Rationale**
History relevant to breastfeeding	• Explore previous breastfeeding experience: o How many children o Duration of breastfeeding o Reason for ceasing • History of postnatal depression / mental health issues • Previous breast surgery, infections, trauma, etc • Chronic diseases or conditions • Regular medication or tobacco use • Plans to return to work • Family Support • History of abuse	Appropriate anticipatory guidance and consider referral to Lactation Consultant if available. • Correct information on overcoming difficulties will empower the woman and increase her confidence to succeed • If a history of postnatal depression/ mental health the mother may need individualised breastfeeding advice and support including strategies to ensure she gets enough rest – consider referral to Lactation, if available to develop individualised breastfeeding plan May need advice on how medication and/or tobacco use may impact on lactation. Possible referral to appropriate resources for example - Quit program (if available)
Breast Examination	Systematic inspection and assessment of breasts and nipples noting any of the following: • Lumps • Scars • Eczema or dermatitis • Breast hypoplasia • Nipple anomalies • Extra-large breasts • Clinical features of breast hypoplasia • Any other breast pathology • Reinforce the information that no breast/nipple preparation is necessary	Specific problems may be addressed early and appropriate counselling given. Referral to appropriate resources such as Lactation Consultant or Specialist Breast Physician if necessary No evidence has been found to support any form of nipple preparation including the application of creams

1. Lawrence, RA & RM, Breastfeeding, *A Guide for the Medical Profession,* 2005, Elsevier Mosby, St Louis, p 754-755
2. Riordon J & Wambach K, *Breastfeeding and Human Lactation*, 2010, 4th edition, Jones & Bartlett, USA, p 280-281
3. Australian College of Midwives 2016, *BFHI Handbook for Maternity Facilities* Updated 2016 incorporating the World Health Organisation (WHO) and UNICEF Global standards for BFHI, p 4.
4. Brodribb W (ed) 2006, Breastfeeding Management in Australia, Australian Breastfeeding Association
5. *National Health and Medical Research Council (2012) Infant Feeding Guidelines. Canberra: National Health and Medical Research Council , 2012*

14.1 Antenatal expression of colostrum

Needs and/ or Problems	Action	Rationale
Baby at higher risk of supplementation in the early postnatal period	**Consider** discussing antenatal expression of breastmilk with women (whose babies may require supplementary feeds) in the following circumstances: • Diabetes type 1 or 2 • Gestational diabetes • Nipple anomalies • Antenatal diagnosis of a baby with a medical condition that will most likely require supplementation such as cleft lip or palate, cardiac condition • Woman is an inpatient having induction of labour or planned caesarean section within 24 hours especially if baby is expected to be admitted to Newborn Care	If the mother is able to express and collect colostrum her baby is less likely to receive formula should supplementation be required.
	Contraindications: • History of threatened premature labour • History of cervical incompetence • Cervical suture insitu • Multiple pregnancy • Antepartum haemorrhage • Placenta Praevia • Women who decide not to breastfeed	The evidence on the safety of antenatal expression for high risk obstetric women has not been established.
	Discuss with the woman the benefits of having breastmilk available if her baby is at risk of supplementation with formula	Women are informed of the benefits to their baby when receiving EBM instead of formula so they can make an informed decision
	Explore the woman's feelings about antenatal expressing and collection of EBM	Not all women are comfortable with antenatal expression
	Ensure the woman is aware that many women do not get any EBM but this does not impact on their ability to breastfeed after the baby is born	Evidence shows many women are not able to express and collect any EBM in the antenatal period. It is important that the woman's confidence in her ability to breastfeed is maintained.
	If the woman wants to attempt to express and collect colostrum: • Educate her on hand expressing, labelling, storage of EBM with a new container for each expression session • 5 mins each side once a day and may increase to twice a day • Commence at 36 weeks • Give the woman a starter pack of 7 oral syringes (1 or 2 ml),, caps , MRN labels. She may require more at next visit • Give the woman written instructions on expressing, storage and transport of EBM	
	Ensure she has been given information on freezing, storing and transport of the EBM	

1. Cox S. (2006) *Expressing and storing colostrum antenatally for use in the newborn period.* Breastfeeding Review vol 14 (3) pp11-16
2. Moorehead A. (2016) Perinatal Society of Australia and New Zealand Conference proceedings 2016
3. Forster D.A., McEgan K., Ford R., Moorhead A., Opie G., Walker S., McNamara C., (2009) *Diabetes and antenatal milk expressing: a pilot project to inform the development of a randomised controlled trial* Midwifery doi:10.1016/j.midw.2009.05.009

4. Chapman T, Pincombe J., Harris M. (2012) *Antenatal Expression: A critical review of the literature* Midwifery doi:10.1016/j.midw.2011.12.2013

14.2 Breastfeeding during Pregnancy and Tandem Feeding

Needs and/or Problems	Action	Rationale
Mother is pregnant and wishes to continue breastfeeding another child	Reassure mother that she can continue to breastfeed during the pregnancy without any known risk to the baby she is expecting	In mothers with no history of miscarriage or premature labour, breastfeeding through pregnancy carries no added risk Breastfeeding the toddler does not deprive the unborn child of any nutrients needed to grow
Maternal nutrient and energy needs	Encourage mother to have a well-balanced diet and plenty of rest	Both pregnancy and breastfeeding increase requirements for energy, protein, iron, folic acid and vitamin C
Nipple discomfort	Reassure mother that some degree of nipple discomfort may occur during breastfeeding, varying greatly in degree and duration.	Appears to be related to hormonal changes during pregnancy and is unlikely to respond to any special treatment
Decline in milk supply	Reassure mother that this is common during pregnancy but if her older baby is growing well there is no problem. May need to increase the number of breastfeeds	70% mother report a decrease in milk production during a subsequent pregnancy
Change in taste of milk	Reassure mother that this is normal	Lactose in milk decreases, whilst sodium increases, changing the taste
Child decides to wean	Reassure mother	Some children wean because of decline in milk volume and change in taste
Uterine Contractions	Reassure mother that unless the contactions are painful there are no problems. If the contractions become painful or she is concerned she should cpntact her antenatal care provider	There is no documented danger to fetus or mother when mothers breastfeed through a healthy pregnancy and no other risk factors are present
Preparation of toddler for baby's arrival	Encourage mother to develop some pattern with breastfeeding the toddler eg. morning and night	This may make managing the breastfeeding post birth a little easier
After delivery Availability of colostrum	• Reassure mother that colostrum is available for the newborn post birth for a short period • Mother should consider having 24 hours of getting to know her newborn and ensuring positioning and attachment are correct • Mother should be encouraged to feed the newborn before the toddler.	Mother has the opportunity to concentrate on the newborn's needs
Ongoing Abundant milk supply – baby not coping with fast flow	• Consider giving each child their own breast or feed the toddler first until the flow subsides	Each child's needs are being met

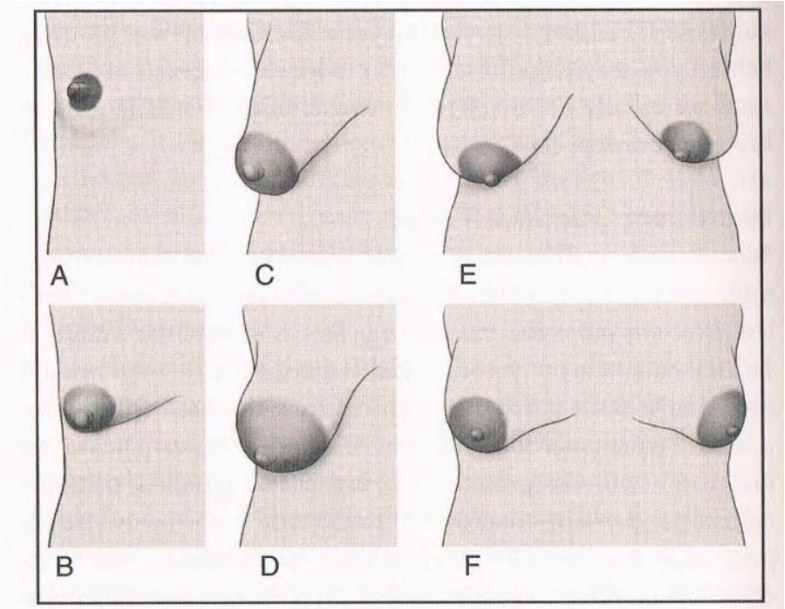
1. Australian Breastfeeding Association, https://www.breastfeeding.asn.au/bf-info/breastfeeding-through-pregnancy-and-beyond (accessed 5/2/17)
2. ICLA Core Curriculum for Lactation Consultants 3rd edition 2013 Jones & Bartlett

14.3 Breast Hypoplasia

Breast hypoplasia is insufficient development of the mammary glands. Small breasts do not mean hypoplasia. Clinical features include:

- Greater than 4 cm spacing between the breasts,
- Breasts may be asymmetrical
- Small breast base (less distance than between the 2nd and 6th rib)
- Areola may be disproportionately large or bulbous,
- Many women report few if any breast changes during pregnancy,

Whilst breast hypoplasia is associated with low supply, it has been found that 39% of women with clinical features of breast hypoplasia were able to meet their baby's nutritional needs with exclusive breastfeeding when they had early lactation support postnatally.
If breast hypoplasia is suspected adopt a "wait and see" approach. The mother should be encouraged to breastfeed but also informed of the importance of early post discharge support including follow up for her baby to ensure adequate nutrition. In the antenatal period discuss postnatal strategies to optimise her supply such as frequent breastfeeding in the first few days as well as hand expressing after breastfeeds. Motilium may also be used from early as 5 days (see increasing your supply and motilium handout). If long term supplementation with a breast milk substitute is necessary, consider use of a supply line.



Hypoplasia variations: A—incomplete development before puberty; B—poorly developed upper portion, scant lower tissue; C—tubular with bulbous areola; D—long, bowed to outside, with extra-large areola; E—classic wide-spaced and uneven; F—wide-spaced with scant tissue.

1. *The Breastfeeding Mother's Guide to Making More Milk, P 110 Diana West and Lisa Marasco 2009*
2. *Huggins K., Petok E., Mireles O., "Markers of Lactation Insufficiency: a study of 34 mothers". Current Issues in Clinical Lactation*

15. Initiating Breastfeeding

Skin to Skin Contact

Babies are born with innate reflexes that allow them to search and attach to the breast ie. the rooting and sucking reflexes. Uninterrupted skin to skin during the first hour is very important for maternal release of oxytocin and allows time for the baby to become neuro – hormonally organised. Evidence shows babies who are given early skin-to-skin contact and are kept with their mothers from birth are breastfed for longer.[1] They learn to suckle at the breast when their instincts are switched on in that first hour following birth.

Early skin-to-skin contact involves placing the naked baby prone on the mother's bare chest at birth or soon afterwards (within 5 minutes). This is a 'sensitive period' for priming mothers and infants to develop a synchronous, reciprocal, interaction pattern, provided they are together and in intimate contact. Routine separation shortly after hospital birth e.g. to weigh the baby, is a uniquely western cultural phenomenon that may be associated with harmful effects including discouragement of successful breastfeeding.

15.1 Skin-to-Skin Contact and the First Feed

1. Ensure mother is in a comfortable position. If she requires perineal suturing or has had a caesarean section, ensure that she is well supported and remains comfortable throughout. On average, it takes approximately 1 hour for a baby to self-attach after birth.
2. Ensure the positioning of the baby enables a patent airway
3. After the initial birth cry, the baby may rest vertically on mother's chest between mother's breasts, before he/she displays signs of the awakening stage, opening eyes, moving the head and mouthing.
4. The baby will begin an active stage – looking at mother and breast, salivating and rooting, hand to mouth movements, crawling and bobbing his head around mother's chest.
5. Baby starts to initiate rooting reflex:
    - Turns head towards breast and opens mouth with flanged lips.
    - The tongue will drop and curl and the tip of the tongue anchors behind the gum.
    - The baby's gag reflex is inhibited to allow the baby to accept the nipple
    - He draws it into his mouth to brush across the junction between the hard and soft palate. initiating the suck reflex.
6. During this time, it is important for staff to encourage the mother to recognise her baby's feeding cues and respond and staff only assist if necessary. Encourage the mother to support the baby behind the shoulder blades and allow baby to move his head freely around breast. It may be necessary for the mother to assist the baby so that his chin and lower lip are directed towards the lower segment of the areola. The baby's head will normally be extended when going to the breast.

1. Moore ER, Anderson GC, Bergman N, Dowswell T. Early skin-to-skin contact for mothers and their healthy newborn infants. *The Cochrane Database of Systematic Reviews* 2012 Issue 5. Art. No.: CD003519. DOI: 10.1002/14651858.CD003519.pub3.
2. Widström A.M., Lilja, G., Aaltomaa-Michalias, P., Dahllö, A., Lintula, M., Nissen, E., *Newborn behaviour to locate the breast when skin-to-skin: a possible method for enabling early self-regulation* 2011. Acta Pædiatrica DOI:10.1111/j.1651-2227.2010.01983.x

15.2 Ongoing Positioning & Attachment Facilitation

If mother and baby are having difficulty with latching, start by facilitating skin-to-skin contact.

1. Since all mothers' bodies are different there is not one posture that will fit all. Adopting a comfortable position where she has good back and neck support as well as support for her arms and legs will assist her to relax and sustain the position for long periods of time. She may need a foot stool if sitting out of bed.
2. Often, the most comfortable position is semi – reclined or leaning back a little so her body takes some of her baby's weight and the baby does not display anti-gravity reflexes.
3. Encourage mother to follow the baby's lead with her baby unwrapped to allow her baby to get much closer to the mother's breast and body, avoid overheating and use his/her hands.
4. Encourage the mother to lay the baby prone/ facing her with his/ her face near the breasts and allow the baby to begin searching for her nipple.
5. If necessary, suggest the mother supports her baby behind the shoulder blades with his/ her body in close contact with the rest of her torso.
6. The mother may need to bring the baby's lower arm around under the breast to get closer to the breast and allow the weight of his head to tilt back, presenting his chin first to her breast.
7. A wide gape can be encouraged by allowing baby to feel the underside of the nipple and areola with his bottom lip. The baby's nose may be level with the nipple.
8. The mother may need to shape her breast to enable the baby to take a good mouthful of breast. When baby gapes widely, he should be brought to the breast with the nipple aimed towards the roof of his mouth and his chin kept well tucked into the breast. This will enable the underside of the nipple to fold past the top lip. His head will remain slightly extended and the breast should be kept still during this process.
9. After an initial short burst of sucking, the rhythm will be slow and even with deep jaw movements. This should not cause the mother any discomfort. Pauses are a normal part of the feed and these become more frequent as the feed progresses.
10. When the mother feels comfortable with this process she can bring her other arm around to cradle her baby in a more natural position if she has not already done so. The baby often adopts an oblique lie across the mother's body.
11. Baby should finish the feed of his own accord by coming off the breast spontaneously. The nipple will appear slightly elongated but there should be no evidence of nipple trauma or compression.

NB. If the baby is unable to latch please see Sucking Problems

1. Colson, S. *Maternal Feeding positions: Have we got it right?* 2005 The Practising Midwife vol 8.,no11
2. Colson, S. *What happens to breastfeeding when mothers lie back? Clinical Applications of biological nurturing.* 2010. *Clinical Lactation Journal of US Lactation Consultation Association*
3. Watson- Genna, C. *Supporting Sucking Skills in Breastfed Infants 3nd edition*2017 Jones & Bartlett
4. ICLA Core Curriculum for Lactation Consultants 3rd edition 2013 Jones & Bartlett

15.3 Sucking Code for Breastfed Neonates

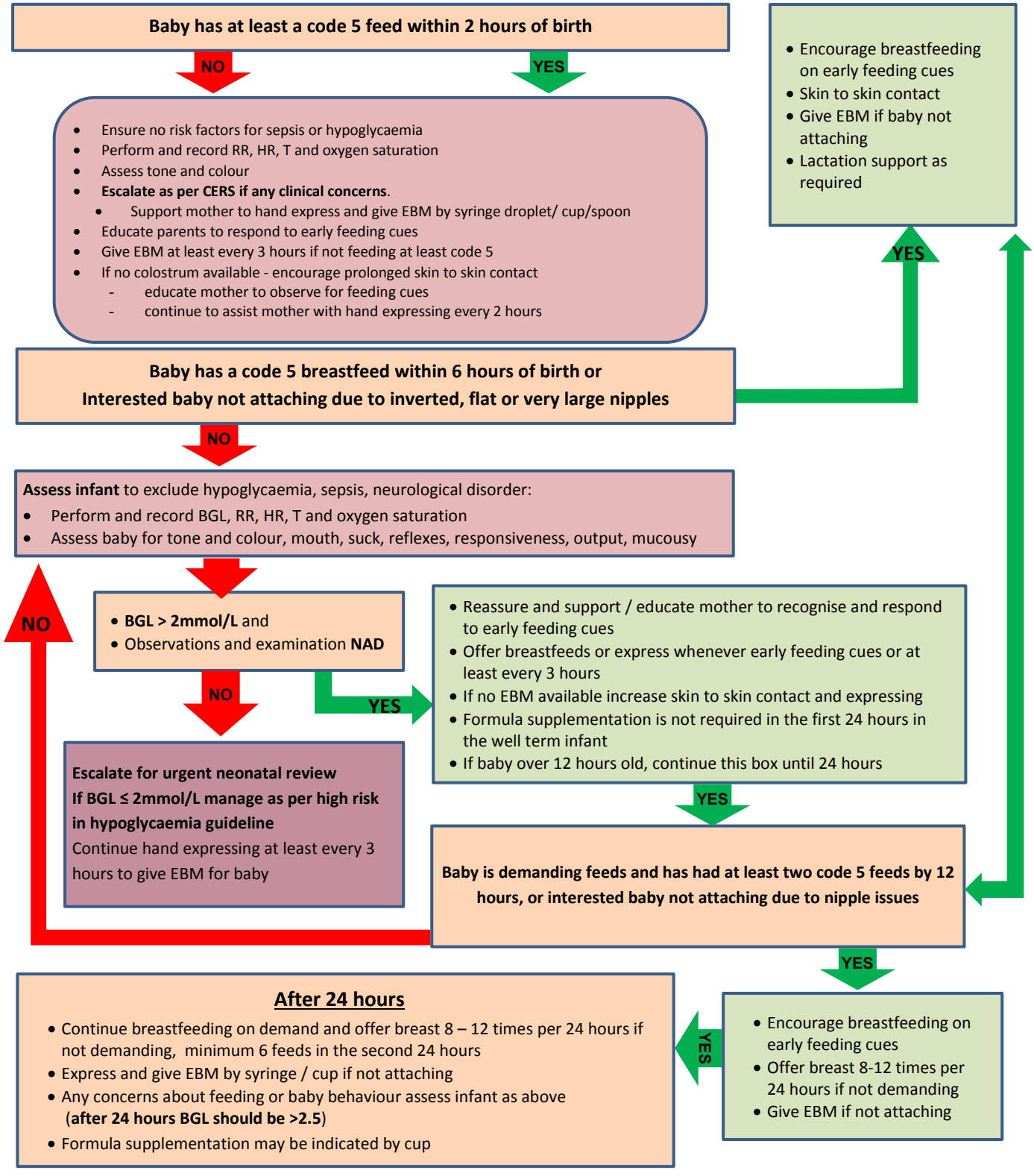
1. Offered but does not attach	• Deeply asleep, drowsy, could not be roused • Search reflex poor or not at all	
2. Interested but does not attach	• Rooting, mouthing, sucking fists, crying	
3. Attaches on and off	• Rooting effectively with or without coaxing • Attaches, but does not sustain	
4. Attaches but has an uncoordinated suck	• Chomping at the breast • Audible clicking whilst sucking • Dimpling of the cheeks	
5. Good nutritive sucking, short feed.	• Long, slow, bursts of nutritive sucking, followed by a pause in response to the release (let-down) of milk into the baby's mouth. • Feeding takes less than 15 minutes.	
6. Good nutritive sucking, long feed	• Long, slow, bursts of nutritive sucking, followed by a pause in response to the release (let-down) of milk into the baby's mouth. • Feeding takes more than 15 minutes	
A= Assisted	**O=Observed**	**U= Unobserved**

1. Lantry M, Smith A, Worgan R, 1990, Sucking Code (unpublished work)
2. Harris H, 1999, Minor Thesis for Masters Midwifery (unpublished work)

16. Breastfeeding flowchart for babies ≥ 37 weeks with no identified risk factors

Uninterrupted skin to skin contact is encouraged for at least an hour or until the first breastfeed

NB: If a baby has not had at least one code 5 breastfeed by 6 hours or at least two code 5 breastfeeds by 12 hours and is not showing active feeding behaviours then a BGL and full assessment should be attended. If BGL and full assessment is satisfactory, no more are required unless there are clinical concerns.



17. Monitoring Baby's Progress- First Week

Baby should be alert and responsive when awake with bright eyes and good skin turgor.

Feeding Needs: A full term healthy baby should be **fed to need**. Needs will vary according to the individual baby. A baby may have less feeds in the first 24 hours. After 24 hours, it is normal for a baby to feed 8 – 12 times/day, however, some may feed less. There should be no less than 6 feeds. Encourage the mother to be aware of baby's early feeding cues and respond e.g. awake, alert, searching, sucking on fingers and starting to cry. Baby's attachment to the breast and sucking ability should be observed, along with the mother's comfort during the feed. Baby should be offered both breasts in the first few days to maximise volume of milk available and stimulate breasts. Length of each feed is variable and can take up to an hour. Once the milk "comes in" mother should be advised to finish the first breast prior to offering the second breast i.e. if the first breast remains full and lumpy after the feed, baby should be encouraged to reattach to the same breast before changing breasts. Breasts should become softer and more comfortable over the next few days.

Baby's behaviour: Baby should appear satisfied after the feed but will not always sleep immediately. Encourage mother to cuddle the baby for a little while before putting him/her into the cot and to respond to him promptly when he displays feeding cues. Just prior to the milk "coming in" the baby usually seems very hungry and wants to feed more frequently. This is often called the "feeding frenzy". The baby may also have a low-grade temperature. Mother should be encouraged to respond to the baby and see this as normal.

After the first week, there will usually be one period during the day when baby does not settle in his cot but is often happy being held.

Urine output: Urinary output is spasmodic in the first 48 hours. As long as the baby is voiding one or more times per 24 hours during this time there is usually no cause for concern and the presence of urates is not clinically significant. As milk volume increases around day 4-5, baby's urinary output should be colourless and increase to a minimum of six wet nappies in 24 hours.

Bowel actions: For the first 24-48 hours the baby passes meconium that is greenish-black in colour. This changes to greenish brown transitional stools by day 3 and by day 4 the stools should be loose and mustard/yellow in colour. A baby who is still passing meconium at this stage may be signalling a problem with attachment to the breast or ability to suck correctly and this should be observed.

Weight: It is normal for babies to lose up to 10% of their birth weight in the first 3 – 5 days, however a baby who is not breastfeeding well will show other signs of being dehydrated from about the third day and weighing should not be seen as the main indicator. It is expected that a breastfed baby will regain birth weight by day 10-14.

17.1 Use of Dummies

The use of dummies in full term breastfed babies is discouraged for the following reasons:

- Sucking at the breast differs from sucking on a bottle or dummy
- May reduce baby's sucking capacity
- Reduces breast stimulation so can reduce breastmilk supply
- May lead to problems such as: - engorgement, breast refusal, cracked nipples, and dehydration in the baby

NB: The hospital does not supply dummies in the post-natal ward

1. National Health and Medical Research Council (2012) *Infant Feeding Guidelines*. Canberra: National Health and Medical Research Council, 2012
2. Australian College of Midwives 2016, *BFHI Handbook for Maternity Facilities* Updated 2016 incorporating the World Health Organisation (WHO) and UNICEF Global standards for BFHI, p 4.

18. Weight loss more than 10 % in the normal term baby

An initial weight loss of up to 10% of birth weight in the first week of life is normal[1]. Between days 4 and 6 the baby usually starts to regain weight and should have returned to birthweight by 2 weeks of age[1]. Delayed lactogenesis has been shown to strongly correlate with increased weight loss[2]. Recent studies have shown that intravenous fluids during the intrapartum period may influence excessive weight loss in the baby in the first week[3].
Babies should be weighed at 72 hours coupled with appropriate lactation support as this has been shown to have higher breastfeeding rates in the short and long term[4].
If a normal term baby has lost more than 10% of birth weight it is important to assess both mother and baby. Observing a feed for optimal attachment and nutritive sucking is essential. Frequency of feeds, baby's output and behaviour and mother's breasts and history are also important. An appropriate management plan can then be implemented. Weight loss of more than 12% indicates a medical review is necessary. Weight loss over 10% can often be managed without the need for formula supplementation - see below.

Observe a breastfeed and assess the following	
Maternal factors • Breastfeeding history – has the mother successfully breastfed a previous child • Any medical maternal issues such as PPH or hypertension in pregnancy • Breasts for normal growth and development during pregnancy • Breast changes since birth • Nipples (normal, intact) • Responding to early feeding cues • Offering both breasts	**Baby Factors** • Baby's age in hours • Percentage of weight loss • Output particularly colour of stools • Frequency of feeds (8-12 is normal) • Behaviour (alert and eager to feed) • Skin tone and colour • Optimal attachment • Nutritive sucking • Oral assessment • Dummy use

Weight < 12% at 72 hrs (with no adverse findings)	Weight Loss ≥ 12% at 72 hours
If mother reports breast changes: • Reassure mother • Encourage frequent feeding on early feeding cues • At least 8 feeds in 24 hours • Ensure mother is offering both breasts • Ensure nutritive sucking with at least a short, settled period after feeding • Consider expressing after feeds and give EBM via cup	• Reassure mother • Encourage frequent feeding on early feeding cues • At least 8 feeds in 24 hours • Ensure mother is offering both breasts • If baby is non-nutritively sucking, then limit time at the breast • Express after breastfeeds, give EBM after breastfeeds preferably by cup • Consider formula supplementation dependent on amount of EBM expressed and baby behaviour • Paediatric review - exclude medical issues • **Do not discharge - review weight in 12 - 24 hours**
If no breast changes: • Encourage expressing after all feeds • Give EBM via cup if possible • Consider formula supplementation • Weigh and review in 12 - 24 hours	

1. National Health and Medical Research Council (2012) *Infant Feeding Guidelines*. Canberra: National Health and Medical Research Council , 2012
2. Thulier D. (2016) *Weighing the Facts: A Systemic Review of Expected Weight Loss in Full-Term, Breastfed Infants*, Journal of Human Lactation,
3. Chantry C, et al (2011) *Excess Weight Loss in First-born Breastfed Infants Relates to Maternal Intrapartum Fluid Balance,* Pediatrics Vol. 127 (1)
4. Iyer NP et al. (2008) *Impact of an early weighing policy on neonatal hypernatraemic dehydration and breastfeeding.* Arch.Dis.Child:93:297-299

19. Supplementary Feeds for Breastfed Babies

There is no place for routine use of supplementary feeds in a healthy term newborn

In assessing the wellbeing of a newborn, it is important to look at the full picture including the baby's age, colour, feeding patterns, change in stools, behaviour and level of hydration. If the baby is not feeding, EBM should be given to the baby. Discourage dummy use until milk supply is well established, approximately 6 weeks[5].

The unnecessary use of infant formula will decrease the baby's need to breastfeed, delay initiation of a full milk supply and increase the risk of maternal engorgement. Supplementation with formula in hospital is associated with shorter breastfeeding duration[1,5]. It will also alter the flora of a baby's gut making it more susceptible to bacterial invasion for two to four weeks. The mother is undermined with her ability to breastfeed and becomes very focused on control and "measured amounts"[2]. The baby expects an instant reward when initiating sucking and a very full stomach on completion of the feed. In families with allergy history and up to 15% of those who have no history, a breastfed baby can be sensitised to a cow's milk protein by giving one supplementary feed during the first few days of life. Exclusive breastfeeding is the norm. In a small number of situations there may be a medical indication for supplementing breastmilk or for not using breastmilk at all.

19.1 Acceptable Medical Reasons for Supplementary Feeding:

- Infants who cannot be fed at the breast but for whom breastmilk remains the food of choice e.g. premature babies.
- Infants who may need other nutrition in addition to breastmilk e.g. hypoglycaemia
- Infants who should not receive breastmilk, or any other milk, including the usual breastmilk substitutes and need a specialised formula e.g. galactocaemia
- Infants for whom breastmilk is not available e.g. unable to provide sufficient EBM
- Maternal conditions that affect breastfeeding e.g. mammary hypoplasia, breast reduction surgery.
- Maternal conditions that may justify the temporary avoidance of breastfeeding eg. severe illness that prevents a mother caring for her infant [4]

Suggested intake per feed of a healthy term breastfed baby is outlined below [3]. Feeding should be varied to suit the individual baby's cues, satiation and/or if the baby is breastfeeding prior to having the supplementary feed:

Avoid bottles and teats by giving supplementary feed by cup or teaspoon.

First 24 hours	24 – 48 hours	48 – 72 hours	72 – 96 hours
5 -10 mls / feed	5 -15mls / feed	15 – 30mls / feed	30 – 60mls / feed

If mother's milk supply is not adequate by discharge, the formula should be continued and mother should be encouraged to express after all feeds or feed attempts until the baby is seen by the appropriate community support person for help with lactation.

1. Perez-Escamilla R, Martinez J, Segura-Perez S 2016, *"Impact of Baby-friendly Hospital Initiative on breastfeeding and child health outcomes: a systemic review"* Maternal and Child Health Nutrition DOI:101111/mcn.12294
2. Steinlein E, Hunter H & Heads J, 2002 (March), "*Complementary Feeding of Breastfed Babies"*, Midwifery Matters
3. ABM Clinical Protocol #3: "*Hospital Guidelines for the Use of Supplementary Feedings in the Healthy Term Breastfed Neonate"*, Revised 2009
4. UNICEF/WHO "*Acceptable Medical reasons for the use of Breast-milk substitutes* "2009 World Health Organisation, Department of Nutrition for Health and Development
5. National Health and Medical Research Council (2012) *Infant Feeding Guidelines*. Canberra: National Health and Medical Research Council , 2012

19.2 Droplet Feeding EBM (Temporary Measure Only)

NB: formula is not to be droplet feed with a syringe

Rationale for procedure

A baby has difficulty latching to the breast and:

1. Skin- to- skin contact has been tried without success
2. Baby is alert and interested, but unable to latch

Goals

- To aid the initiation of milk supply by early and regular expression
- To ensure that baby safely receives all expressed breastmilk available
- To lessen the incidence of nipple confusion

Potential Hazard

Aspiration of breastmilk (although research shows that this may not be an irritant to baby's lungs)

Equipment

- Gloves, if required
- Clean container to collect milk - 2ml syringe

Procedure

- Observe all preliminary standards appropriate to the procedure e.g. hand washing
- Latching at the breast should be attempted for 5-10 minutes at each feed time unless baby becomes distressed. If the baby does not latch, encourage/assist the mother with hand expressing both breasts. The electric pump may be used after 24 hours in combination with hand expressing, starting on a low setting and increasing according to mother's comfort.
- Droplet feed a small amount (no more than 10mls) of expressed breastmilk (EBM) directly into the front of the baby's mouth with the following precautions:
- The baby must be alert
- Do not use a larger than 2ml sterile disposable syringe
- Place the baby should be in a semi upright position
- Drip EBM slowly into the front of the baby's mouth and observe for swallowing
- Discourage the baby from sucking on the syringe

Outcome

- Milk supply initiated by early and regular expression
- The baby safely receives all expressed breastmilk available
- Reduced incidence of nipple confusion

1. Steinlein E, Hunter H & Heads J, 2002 (March), Complementary Feeding of Breastfed Babies, Midwifery Matters
2. Lawrence, RA & RM, Breastfeeding, *A Guide for the Medical Profession,* 2005, 6th Edition, Mosby Co, St Louis. P 516

19.3 Cup / Spoon Feeding (Temporary Measure Only)

Rationale for procedure

- Skin-to-skin contact has been tried without success
- Baby is alert and interested, but unable to latch
- Baby requires nutritive fluids in addition to breastfeeding
- Cup feeding has been shown to be safe and may help preserve breastfeeding duration in situations where multiple supplemental feedings are required[3]
- Step 9 of "The Ten Steps to Successful Breastfeeding" implementation standards require that when a woman is unable to breastfeed the use of a teat should be avoided[4].

Contraindications

Spoon and cup feeding is contraindicated in babies with marked neurological defects[5].

Goals

An alternative feeding method is provided to newborns when unable to directly breastfeed
Additional nutritive fluids are provided to the breastfed baby utilising a method that supports Baby Friendly Health Initiative implementation standards.

Potential Hazard

Aspiration of breastmilk / breastmilk substitute

Equipment

- Clean container to collect milk - 30ml plastic feeding cup or medication cup or plastic spoon
- Expressed breastmilk
- Infant formula (if required)
- Gloves, if required

Procedure

- Observe all preliminary standards appropriate to the procedure e.g. hand washing
- Assess each mother and baby's needs individually and discuss reason for cup/spoon with parents
- Consider whether adequate volume can be fed in 20 – 30 minutes[3]
- Determine the use of a spoon or cup dependent of the volume and viscosity of milk
- Obtain verbal consent for procedure and written consent if using infant formula
- Staff are to educate and supervise parents on cup feeding until they are proficient and confident
- Wrap baby securely and support the baby in an upright position on your lap
- If possible have the cup at least half full for the beginning of the feed.
- Rest the cup / spoon on the baby's lower lip and allow the baby to sip milk from the rim of the cup.
- Tilt the spoon or the cup so the milk is just touching the lips. As the baby opens his/her mouth a small amount of the feed will be taken and swallowed, either by lapping or sipping
- DO NOT POUR MILK INTO THE BABY'S MOUTH
- Hold the spoon or cup steady while the baby is actively drinking. Remove when the baby stops
- Return the spoon or cup when the baby is showing signs of readiness to feed again

- Repeat procedure until feed completed – should be completed within 20 – 30 mins
- Assess parent's understanding and comfort with spoon or cup feeding procedure
- Provide parent with Cup Feeding Parent Handout
- Document indication for use, feed and outcome, revise feeding plan as required
- Wash the feeding cup or spoon after each use and replace or disinfect every 24 hours.

1. Adapted from *Spoon and Cup feeding – alternative feeding methods in the early postnatal period*, Royal Hospital for Women Local Operating Procedure Clinical Policies, Procedures & Guidelines. 2012.
2. Howard et al. Randomised Clinical Trial of Pacifier Use and Bottle-feeding or Cup feeding and their Effect on Breastfeeding. Paediatrics 2003; 111(3): 511-518
3. Academy of Breastfeeding Medicine Clinical Protocol #3 – Hospital Guidelines for the Use of Supplementary Feedings in the Healthy Term Breastfed Neonate (Revised 2009) Breastfeeding Medicine 4 (3): 175-182
4. WHO and UNICEF (1991) *Baby Friendly Hospital Initiative.* World Health Organization and United Nations International Children's Emergency Fund, Geneva http://who.int 3
5. Smilie C.(2017) How infants learn to feed: a neurobehavioural model in Watson- Genna, C. *Supporting Sucking Skills in Breastfed Infants 3nd edition* 2017 Jones & Bartlett.

19.4 Expressing Breastmilk

Needs and/or Problems	Action	Rationale
Antenatal - inpatient Risk of mother - baby separation (eg. Type 1 diabetic, threatened premature labour, planned neonatal admission to SCN /NICU)	• Discuss the benefits of colostrum for baby with the woman and her family. • Discuss the importance of early expressing within 1-2 hours of birth (at least within 6 hours of birth). • Educate mother and support people on the importance of frequent expressing 8 times per day if separated from baby postnatally • Educate the woman and her family on the technique of hand expressing, collection and labelling of EBM in oral syringes • Consider encouraging the mother to express and collect her colostrum if over 36 weeks, being induced or planned caesarean within 24 hours	• Family gains information of importance of colostrum in improving heath of their baby. Also, that early expressing promotes adequate initiation of lactation to assist long term milk supply • Family will be more independent with the procedure and welcome the early initiation of hand expressing • Mother will know what to expect
Postnatal - inpatient Mother wishes to **initiate** lactation but is unable to put baby to the breast successfully eg. baby in nursery, sleepy baby, uncoordinated suck, inverted nipples	• All mothers should be educated on hand expressing • Use a hands-off approach when educating and supporting the mother to express • Discuss the current situation / reason for expressing with the mother and her supports • Encourage early initiation of hand expressing within 1-2 hrs of birth and continue 8 or more times daily or if baby is with mother – each time baby has attempted a feed • Ensure mother has Expressing and Storing Breastmilk handout • If expressing continues beyond 24 – 48 hours introduce the electric pump **in combination with hand expressing** and aim for 8 times/24 hours	• Mothers need to know how to hand express if: • separated from her baby • attachment difficulties arise • breasts are very full and uncomfortable and baby is asleep • Increasing the mother's understanding increases her self-efficacy • During the colostrum phase hand expressing is the most effective method of breast milk removal and stimulates improved breastmilk production. • Written information increases understanding • After 48 hours combining breast pump with hand expressing increases and maintains

		breastmilk production
Mother wishes to **maintain** lactation but is unable to put baby to the breast at some or all feeds eg. mother working. Mother being discharged from care still expressing	• Discuss pump options with the mother eg. hiring hospital grade / purchase of electric or hand pump • Encourage mother to express at the time baby would normally feed • Try to get one feed ahead • Double pumping may be encouraged	• Hospital grade breast pumps are generally better at establishing lactation than other breast pumps which maintain lactation once established • The breastmilk needs to be regulated by the baby's need • Double pumping may save time for the mother so she expresses more often

1. Parker, LA, Sullivan S, Kruger, C. Kelechi, T, Mueller, M. *Effect of early breast milk expression on milk volume and timing of lactogenesis stage II among mothers of very low birth weight infants: a pilot study*. Journal of Perinatology 2012 32, 205 – 209
2. Hill, PD, Aldag JC, Chatterton, RT, Zinaman, M *Primary and Secondary Mediators' Influence on Milk Output in Lactating Mothers of Preterm and Term Infants* Journal of Human Lactation 2005
3. Morton J, Hall J.Y.,Wong R.J., et al.(2009), Combining hand techniques with electric pumping increases milk production in mothers of preterm infants. *J Perinatol* vol. 29 pp. 757 – 764.
4. Australian College of Midwives 2016*, BFHI Handbook for Maternity Facilities* Updated 2016 incorporating the World Health Organisation (WHO) and UNICEF Global standards for BFHI, p 4
5. Watson- Genna, C. *Supporting Sucking Skills in Breastfed Infants 3rd edition*2017 Jones & Bartlett p78

19.5 Expressing and breastmilk hygiene

Needs and/or Problems	Action	Rationale
Mother is expressing her breastmilk by hand	• Educate mother on importance of hand washing prior to expressing • Express into a clean container • Use a lid to store the breastmilk • Ensure mother has written instructions on expressing and storing breastmilk	• Reduces risk of contamination of breastmilk
Mother is expressing with a breast pump at home	• Educate mother on the importance of hand washing prior to using or cleaning the breast pump kit. • The breast pump kit must be sterilised prior to the first use • Thoroughly wash the kit after each use by: o Following the manufacturer's instructions o Rinse in cold water, o Wash parts thoroughly with a bottle / teat brush in warm soapy water (dishwashing liquid is appropriate) o Remember to go around the grooves in the neck of the bottle as milk often collects there o Rinse thoroughly with warm running water. o Invert and air dry or dry with a paper towel and store in a clean covered container. NB: If the baby is unwell or in hospital it is advised to sterilise the breast pump at least once every 24 hours – see cleaning and sterilising parent handout.	• Reduces risk of colonisation of pathogens • A baby who is unwell or preterm may be at greater risk of infection

1. ABM Clinical Protocol #8: Human Milk Storage Information for Home Use for Full-Term Infants (Original Protocol March 2004; Revision #1 March 2010)
2. Price et al, 2015, *Decontamination of breast pump milk collection kits and related items at home and in hospital: guidance from a Joint Working Group of the Healthcare Infection Society and Infection Prevention Society* Journal of hospital Infection http://dx.doi.org/10.1016/j.jhin.2015.08.025
3. McArthur A, Peters MDJ, Munn Z, Chu WH. *Safe management of Expressed Breast Milk (EBM): An Evidence Check r*eview brokered by the Sax Institute (www.saxinstitute.org.au) for NSW Kids and Families, December 2014.

20. Nipple issues

Needs and/or Problems	Action	Rationale
Painful nipples No obvious damage	• Ensure correct positioning and attachment • Assess baby for any structural abnormalities • Reassure mother that her nipples will not be damaged if her baby is well attached. • Some nipple tenderness may be experienced in first days postpartum. • Encourage mother to detach or reattach if pain persists into feed • Encourage to seek further assistance if pain increases	• A well attached baby is unlikely to cause nipple damage • Hormonal changes may cause tenderness • If pain persists nipple damage will increase
Damaged nipples Grazes, fissures or bleeding	• Obtain history and examine nipples • Try to offer breast at early feeding cues before baby starts crying • Observe breastfeed and offer support to ensure optimal attachment • Apply warmth and express a little milk by hand just prior to the feed • If breasts are full, may need to hand express to soften the areola prior to latching • Apply breastmilk after the feed and leave bra open for a few minutes and allow to dry • Any blood ingested by the baby will not cause harm unless mother has Hepatitis C	• Easier to achieve optimal attachment • May be able to suggest changes to attachment technique • Gets milk flowing so first sucking is not as strong • May enable deeper attachment • Assists the healing and helps prevent the breast pad / bra sticking to nipple
Pain persists	If pain persists, discuss the following options: • Continuing to feed • Offer less sore side first • Resting and expressing for 12 – 24 hours (1 or 2 feeds may be all that is necessary) then assist with feed. Alleviate the underlying cause of nipple damage by improved attachment technique • Offer symptomatic relief if required e.g. paracetamol and apply breastmilk post feed • If pain experienced detach and reattach • If using breast pads, change regularly (may need to express prior to removal to avoid sticking and further damage) • Ointment and creams should not be advised. • Avoid soap on nipples • Alternate position depending on area of damage e.g. Madonna, twin fashion	Mother can make an informed choice • To prevent further trauma which may lead to early weaning • To relieve the pain so that mother can tolerate attempting to attach baby correctly • To assist restoration of skin integrity and protect against infection • There is insufficient evidence to support the use of ointments, sprays or creams to prevent or treat nipple soreness • Soap washes away normal secretions and may have a drying effect • To prevent further damage and make attachment more comfortable
Other causes	Nipple Vasospasm Nipple White spot Thrush Baby tongue tie Baby has an unco-ordinate suck Eczema, psoriasis	

1. Royal College of Midwives, *Successful Breastfeeding,* 2002, 3rd Edition, Churchill Livingstone, p 101.
2. Brodribb W. *Breastfeeding Management in Australia 3rd edition* 2006 Australian Breastfeeding Association
3. Lawrence RA & RM, *Breastfeeding, A Guide for the Medical Profession 2005* 6th Edition Mosby Co, St Louis p 282-287.
4. Riordan J & Wambach K, *Breastfeeding and Human Lactation*, 2010, 4th edition, Jones & Bartlett, USA, p 305.
5. Sore/Cracked Nipples Australian Breastfeeding Association https://www.breastfeeding.asn.au/bf-info/common-concerns%E2%80%93mum/sore-cracked-nipples (accessed 5/2/17)

20.1 Eczema and Psoriasis

Needs and/or Problems	Action	Rationale
Eczema Lesions can be pruritic, painful or burning and may be secondarily infected with staphylococcus aureus causing weeping, yellow crusting and blisters	Acute dermatitis may be a suspected if there are blisters, weeping/oozing and crust formations Chronic dermatitis may present as dry, scaling, and thickened areas Reduce identifiable factors by examining the distribution of the irritation and lesions. • Atopic dermatitis - may be triggered by skin irritants, weather and temperature changes • Irritant contact dermatitis – agents may include creams used for nipple soreness, friction (such as breast pumps), infant oral medications, solid foods consumed by the infant, breast pads, laundry detergents, fabric softeners, fragrances • Allergic contact dermatitis – agents may include lanolin, topical antibiotics, chamomile, vitamin A and E, and fragrance Treatment usually includes: • Application of an emollient • A low/medium strength steroid ointment twice a day immediately after a breastfeed • Consider a short course (less than 3 weeks) of oral prednisone in resistant cases • Referral to a dermatologist may be necessary If the mother is unable to put the baby to the breast to feed, ensure she drains her breasts by hand or pump ensuring the breast shield does not further irritate the lesions	Removing the trigger to the eczema may assist in managing the eczema and reducing the recurrence The breasts will need to be drained regularly to minimise the risk of mastitis and give the EBM to the infant
Paget's disease of the nipple can mimic eczema Usually unilateral, slowly advancing, that begins on the face of the nipple. Other findings are ulceration, moist erythema vesicles and/or granular erosions	Consider skin biopsy if to eliminate Paget's disease of the nipple if: • Eczema is unresponsive to treatment and persists longer than 3 weeks • There is a palpable mass in the breast Refer to specialist if necessary	Paget's disease of the breast is a slow growing intraductal carcinoma that is more common in post-menopausal women but is observed in younger women
Psoriasis Erythematous plaques with clearly demarcated borders Fine silvery overlying scale	More common to flare up 4 – 6 weeks after birth	

1. Berens P et al *Persistent Pain with Breastfeeding ABM Protocol #26*, 2016, Breastfeeding Medicine vol.11, No.2,pp 46 - 53

20.2 Thrush

Needs and/or Problems	Action	Rationale
Maternal Nipple Thrush** **NB:** Differentiate between nipple vasospasm • Itchy pink/red painful nipples and areola sometimes associated with nipple damage that is slow to heal. Nipple and areola may be dry / flaky • Sore breast/nipple during and after feeds with no apparent nipple damage • May be in one nipple/breast or both • Shooting, burning pain radiating through the breast (only if in combination with other symptoms) • Recent antibiotic use in mother or baby • History of vaginal thrush or fungal infection in household	• Antifungal treatment (miconazole cream) thinly applied to nipples 4 times a day after feeds*, for 1 week then once a day for a further week after symptoms resolve. It does not need to be wiped off the nipples before a breastfeed • Hygiene eg. meticulous hand washing, wash underwear, towels etc in hot water and sundry. • Keep nipples dry by changing nursing pads frequently and air nipples when possible. • Change and wash bra daily • Ensure any dummies or teats are cleaned thoroughly and boiled for 5 mins after use	• May eliminate fungal infection • Risk of gel causing asphyxiation in babies if gel is applied to nipples especially prior to a feed • Good hygiene will prevent the spread of thrush should speed up resolution
If slow or no improvement	• Oral fluconazole: 150mg - 1 capsule every 2nd day for 3 doses followed by a course of nystatin 2 tablets, three times a day and miconazole oral gel to nipples x 4 per day and review in 1 week5 • If pain not improving, consider repeating fluconazole course as above or one capsule daily for up to 10 days5 • If no improvement after further course consider oral ketoconazole5 • Consider gentian violet 0.5% aqueous paint applied after breastfeeding twice a day for up to 7 days • Diet modification. Avoid foods containing yeasts, moulds, fungi, sugar and starchy foods. Additional acidophilus eg. yoghurt, probiotic	• If infection is chronic mother may require systemic treatment • Dietary changes have been shown to help resolve symptoms • Establishes a normal colonizing bacterial flora which will limit fungal growth • A specific oligosaccharide in human milk should protect the baby from thrush
Baby - Oral Thrush • White patches resembling milk curds on palate, tongue or inside cheeks	• If baby has oral thrush treat with antifungal medication • If using miconazole gel - use the spoon to measure a ¼ teaspoon dose. The spoon should not be used for administering the gel. Using a clean finger, apply small amounts of gel at a time to the inside cheeks and over the tongue. • IF the baby does not tolerate the miconazole gel, consider changing to nystatin drops 1 ml in the buccal cheek 4 times a day • Meticulous hand washing	• Should eliminate signs and symptoms of thrush • Large amounts of gel may cause asphyxiation especially if applied prior to a feed • Any introduction of further bacteria in baby's mouth will delay resolution

Thrush - continued

Baby - Anal Thrush • Raised red pustules or scalded looking buttocks	• Keep area clean and dry • Expose to air as often as possible • Topical application of antifungal cream	• Candida thrives in a warm, moist environment
Sterilisation of Feeding Utensils	• Boiling for 5 minutes is recommended	

*** It is unusual for <u>exclusively</u> breastfed infants from birth to be infected with thrush due to the oligosaccharides in breastmilk.**

**** Mammary ductal thrush has not been proven in the literature**

1. Amir L, et al, *Candida Albicans. Is it Associated with Nipple Pain in Lactating women,* 1996, Gyn & Ob Investigation, 41:30-34
2. Amir L, *Candida and the Lactating Breast, Predisposing Factors,* 1991, Jhum. Lact 7(4), p177-181
3. McVeagh P & Brand Miller J, *Human Milk Oligosaccharides, Only the Breast,* 1997, J Paediatrics Child Health, 33:281-28
4. Riordan J,& Wambach K, *Breastfeeding and Human Lactation*, 2010, 4th edition, Jones & Bartlett, USA, p 303
5. Medications in Pregnancy and Lactation service 2014 https://thewomens.r.worldssl.net/images/uploads/downloadable-records/clinical-guidelines/breast-and-nipple-thrush.pdf accessed December 2016
6. Mannel, Martens & Walker, *ILCA Core Curriculum for Lactation Consultant Practice,* 2013 3rd Edition, Jones and Bartlett p767
7. Moorhead AM, Amir LH, O'Brien PW, Wong S: A prospective study of fluconazole treatment for breast and nipple thrush. *Breastfeed Rev* 2011, 19(3):25-29.
8. Lantry M, *Lactational Breast Pain – Is it really Thrush? Exploring a Growing Concern*, 2003, International Lactation Consultants Conference, Sydney
9. Anderson P *Adverse Drug Reactions* 2016 Breastfeeding Medicine Lactmed Update

20.3 Nipple Vasospasm

Needs and/or Problems	Action	Rationale
Numbness, burning, tingling and pain of nipple occurring during / between feeds. Associated with nipple blanching post feed and maybe triphasic colour change to white to blue to red Appears to be associated with referred breast pain from 3-4 weeks	• Check for oral anomaly in the baby • Observe feed • Ensure positioning and attachment are optimal • Assess nipple post feed for signs of compression	• Blanching of the nipple due to mechanical compression may occur with poor positioning and attachment
Compression persists, despite optimal attachment Blanching and pain persist despite optimal attachment	• Manually reshape nipple after feed • Avoid cold air and apply warm compress to nipple immediately after feed • Avoid caffeine • Discourage smoking refer for extra support eg. Quit Program • Suggest that mother breastfeeds for as many feeds as she can and expresses at other feeds and offers EBM	• Attempt to minimise nipple compression • Encourages blood flow to nipple • Caffeine may induce vasoconstriction • Even 2 cigarettes per day may increase vascular resistance by 100% and decrease cutaneous blood flow by 40% • May encourage mother to continue with breastfeeding. Compression tends to improve as baby grows
Mother has family history of circulation problems/Raynauds phenomenon	As above • Breastfeed in a warm environment • Supplemental magnesium and calcium • Nifedipine (calcium channel blocker) in sustained release formulation providing 30-60mg per day are suggested • Refer to an Immunologist for full investigation	• May be induced by cold exposure or emotional stress • Has been found clinically useful for nipple vasospasm and transfer through breastmilk is clinically insignificant • Has been linked with auto-immune conditions

1. Laureen Lawlor Smith & Carolyn Lawlor Smith, 1996, *Nipple Vasospasm in the Breastfeeding Women* Breastfeeding Review: No1 May, p37-39
2. Mannel, Martens & Walker, *ILCA Core Curriculum for Lactation Consultant Practice,* 2013 3rd Edition, Jones and Bartlett p767
3. Hale, T. *Medications and Mother's Milk* 2014, 15th Edition, Hale publishing, USA

20.4 Use of Nipple Shields

Needs and/or Problems	Action	Rationale
Nipple shield should be tried if baby is **unable to latch** and feed effectively due to: • Breast refusal • Inco-ordinate suck • Inverted/flat nipples • Psoriasis, eczema of the nipple or areola • Extreme nipple pain (used as a last resort in preference to weaning) May sometimes be useful if: • Baby has a weak, disorganised suck or unable to open his/her mouth wide enough to get a deep latch • Congenital conditions eg, cleft palate, short frenulum • Upper airway problems such as laryngomalacia	Should **only** be used once milk supply has been established (usually day 3 onwards) If baby unable to attach and feed effectively, offer positioning and attachment support and encourage extended skin to skin. If unable to attach support mother to express until milk yield is 20 – 30 mls, (hand expressing for the first 24 – 48 hours then add pumping until expressing 20 -30 mls) Encourage use as a short-term measure Discuss information in nipple shield handout and give her a copy	Risk of poor transfer of highly viscous colostrum through the shield. This may lead to engorgement, increased weight loss in baby and low supply as well as frustration to mother and baby. Also, the baby may improve ability to attach to breast in the first few days and not require the nipple shield despite flat or inverted nipples. Nipple shield use during the postnatal stay has been associated with greater risk of weaning at less than 6 months. Short term use may preserve the breastfeeding relationship as it keeps baby at the breast and avoids the need for expressing. Long term use of nipple shields has been associated with 3 times higher risk of early cessation of exclusive breastfeeding than no nipple shield. Has information regarding use, cleaning and weaning off the shield.
Reduced milk transfer, further nipple damage and mastitis	Problems can be reduced by the following: • Use of a suitable appropriately sized silicone shield • Being shown how to use the shield correctly and ongoing follow up • Assessing baby's ability to latch well with the shield, not just the teat portion of the shield and observe for changes in baby's sucking pattern • Educate mother to palpate her breast before and after the feed to assess breast softening • Correct cleaning and storing of shield between uses • Ongoing follow-up to try baby directly to the breast. Ideally within 2-3 weeks. • Extra expressing may be necessary if there is evidence of reduced milk supply	• May need large or small shield dependant on nipple size • Lack of direct stimulation may lead to a lower milk supply and poor weight gain in the baby • Avoid any nipple damage and ensure adequate breast drainage and lessen the risk of mastitis • Lessen the risk of infection • Baby may prefer nipple shield and may be difficult to get directly onto breast • To increase milk supply

1. Brodribb W. Breastfeeding Management, 2006, Third edition, Minor revision. Australian Breastfeeding Association, Australia pp 71, 329-333
2. Core curriculum for Lactation Consultant Practice, 3rd Edition, Jones and Bartlett and International Lactation Consultants Association, 2013,
3. Riordan J & Wambach K, Breastfeeding and Human Lactation, 2010, 4th edition, Jones & Bartlett, USA, p 233.
4. Kronborg H. et al, 2016, Why do mothers use nipple shields and how does it affect duration of exclusive breastfeeding? Maternal and Child Nutrition 13, e12251, DOI:10.1111/mcn.12251
5. Pincombe J., et al 2006, Baby Friendly Hospital Initiative practices and breastfeeding duration in a cohort of first time others in Adelaide, Australia. Midwifery vol 24 pp. 55 - 61

20.5 Ductal Bleeding

Needs and/or Problems	Action	Rationale
Antenatal: Spontaneous bleeding from the ducts via the nipple	Previous breast history eg. surgery, infections, trauma Assess if discharge unilateral or bilateral Full breast examination and ultrasound if necessary to eliminate the following: • Trauma • Intraductal papilloma • Fibrocystic disease • Vascular engorgement	Single duct unilateral discharges are more likely to be surgically significant and referral to specialist may be warranted • Trauma - mother may have been expressing, nipple rolling or wearing breast shields • If intraductal papilloma the bleeding is usually spontaneous and unilateral – usually no palpable mass • Fibrocystic disease is common in childbearing years, often regresses during pregnancy • Vascular engorgement - may be pain, tenderness and palpable thickening associated with rapid development of the alveoli and increased vascularisation
Postnatal: Red tinged, pink or rusty breastmilk – commonly known as rusty-pipe syndrome	• Ensure latching is correct. If milk does not clear within 2-3 days further investigation may be necessary • Reassure mother that her milk will not harm baby	• Seems to be more common in primiparous women and does not cause any discomfort • Bleeding should stop spontaneously within the first few days

- Lawrence RA & RM, *Breastfeeding, A Guide for the Medical Profession* 2005, 6th Edition, Mosby Co, St Louis, p 604.
- Kline T & Lash SR, *The Bleeding Nipple of Pregnancy and Post Partum Period: A Cytologic and Histologic Study.,* 1964, Acta Cytol 8:336
- Riordan J & Wambach K, *Breastfeeding and Human Lactation*, 2010, 4th edition, Jones & Bartlett, USA, p 313.

20.6 White Spot/Milk Blister

Needs and/or Problems	Action	Rationale
Visible white spot on the nipple which may be accompanied by persistent pain especially during feeding and/or blockage. Usually occurs after milk supply well established and 4mm or less in diameter If **not** accompanied by pain or blockage	• Warm soaks and optimal attachment may assist the thin epidermis layer to shed spontaneously within a few days	• May improve spontaneously so the unnecessarily risk of infection is avoided
If accompanied by pain and blockage	• Prior to procedure advise mother there is risk of infection and gain her verbal consent. Encourage her to seek medical advice for antibiotics if signs of infection manifest Use aseptic technique, (thorough hand washing, sterile gloves, alcohol wipes to the area prior to procedure) • Peel away epidermis overlaying the milk spot with a sterile disposable 25-gauge needle using the bevelled edge of the needle not the point sterile • Gently compress around the areola and express any stringy plugs into a small bowl • Observe a feed – aim baby's chin towards any blockage	• Lower jaw is more active when baby sucks • Continued blockage will lead to further complications
Persistent White Spot	• Reassurance of mother • Give mother input on self -management technique • Regularly, rub the affected nipple gently with a damp cloth after softening skin (eg. in warm bath)	• Mother is able to self - manage

- Lawrence RA & RM, *Breastfeeding, A Guide for the Medical Profession*, 2005, 6th Edition, Mosby Co, St Louis, p 300-301
- Riordon J & Wambach K, *Breastfeeding and Human Lactation*, 2010, 4th edition, Jones & Bartlett, USA, p 306.
- Day J, Australian Breastfeeding Association, 2001, *White Spot Study*, Lactation Resource Centre, Victoria.

21. Breast Issues

21.1 Engorgement

Needs and/or Problems	Action	Rationale
Fullness/Engorgement **Normal fullness** Breasts full, heavy, slightly tender	• Counsel mother that this is normal physiology of establishing lactation • Keep breasts well supported between feeds eg. advise mother to wear a well-fitting nursing bra (not constricting) • Remove bra while feeding and allow 2nd breast to leak • Assist mother with gentle hand expression prior to latching baby • Ensure correct position and attachment aiming baby's chin towards fullest area • Ensure first breast is soft and comfortable before offering second breast	• There is an increase in blood supply and lymph in the breast tissue that subsides with an increase in milk production • Will support the heaviness and reduce pain and oedema • To maintain drainage and prevent back pressure in ducts, which would depress milk production • Will soften areola and produce a small amount of flow • Placing baby's bottom jaw adjacent to fullest area will encourage emptying of that area • This should avoid a blocked duct which may lead to mastitis
Engorgement (rare) Breasts hard, red, shiny, painful and milk does not flow	• See Action for Normal Fullness • Focus treatment on measures to reduce swelling and reduce pain • Apply and reapply cold packs if mother is agreeable and reassess in 2hours • Handle breasts as little as possible during this time • Offer regular paracetamol or anti-inflammatory medication • Attempt to breastfeed / hand express • If using a breast pump, ensure the pressure is low	• Will reduce vascularity and oedema and encourage milk flow • Unnecessary stimulation may increase supply further • Will relieve pain and alleviate any elevation in temperature • Vascularity and oedema should be reduced • May draw more oedema into the areola area and hinder breast draining
Unable to attach and feed or express milk by hand or pump due to true engorgement (ensure there are no signs of mastitis)	• Continue management as above • Advise intermittent compression around areola(reverse pressure softening**) Prior to attaching baby to breast or expressing o Press inward toward the chest o wall with fingers evenly around the o areola and hold for about a minute.	• Theorised that the areola is softer so the baby can attach better and remove milk from the breast and engorgement improves

* 1 Heat is not recommended in the first 10 days as it tends to increase venous engorgement, however may be used to assist with initial milk flow after this time.

**2 Advise with caution as Reverse Pressure Softening/ Gentle Positive Pressure- has been identified in the literature but is not based on scientific evidence.

- Riordan J & Wambach K, Breastfeeding and Human Lactation, 2010, 4th edition, Jones & Bartlett, USA, p239.
- International Lactation Consultants Association, Evidence Based Guidelines for the Establishment of Exclusive Breastfeeding 2005.
- Lawrence RA & RM, Breastfeeding, A Guide for the Medical Profession, 2005 6th Edition Mosby Co, St Louis p 278-281.
- National Health and Medical Research Council (2012) Infant Feeding Guidelines. Canberra: National Health and Medical Research Council, 2012
- Academy of Breastfeeding Medicine Protocol #20: Engorgement Breastfeeding Medicine Volume 4, Number 2, 2009 © Mary Ann Liebert, Inc.DOI: 10.1089/bfm.2009.9997
- ILCA core curriculum for lactation consultants 2013 Jones and Bartlett p 747 - 750

21.2 Axillary breast tissue

Needs and/or Problems	Action	Rationale
Breast tissue extending into the axilla which becomes swollen, engorged and painful during lactogenesis II.	• Encourage mother to raise her arm and attempt to gently massage towards the breast if the tissue appears to be connected to the rest of the breast. • Do not try to massage firmly or "squeeze" the milk out • Apply ice compress for comfort • Pain relief such as paracetamol • Observe for signs of mastitis and treat with appropriate antibiotics if necessary • Reassure mother the engorgement and milk will reabsorb with time	• May be separate from the rest of the breast tissue or be connected to the tail of spence • Potential area of milk pooling and mastitis • If unconnected to the rest of the breast vigorous massage will increase the risk of mastitis and cause pain • The milk will be reabsorbed and the swelling will settle with time
• ICLA Core Curriculum for Lactation Consultants 3rd edition 2013 Jones & Bartlett • Riordan J & Wambach K, Breastfeeding and Human Lactation, 2010, 4th edition, Jones & Bartlett, USA,		

21.3 Blocked Milk Ducts

Needs and/or Problems	Action	Rationale
Mother has a palpable breast lump with well-defined margins. Milk or cast-off cells accumulate within a duct and form a localised blockage or plug. May be caused by: • Poor drainage of the breast • External pressure eg. finger or bra • A missed feed May be accompanied by: tenderness, heat and possible redness	• Eliminate nipple "white spot" pxx as a possible cause. • Avoid restrictive clothing. • Encourage continued breastfeeding with good positioning and attachment. • Moist heat prior to feed (if baby >10 days) • Feed on affected breast first • Aim chin towards area of blockage. • Very gentle massage over affected area during the feed. If not resolved after feeding, manual expression with fingers in alignment with blockage. • A milk plug may be released which may be brown or green in colour, thick and stringy. It is not dangerous to the baby • Discuss diet & rest	• Should ensure optimal drainage • Encourages milk flow while baby is sucking. Directly works on affected ducts
***NB Heat is not recommended in the first 10 days as it tends to increase venous engorgement** • Academy of Breastfeeding Medicine. Protocol #4 Mastitis revision March, 2014 • Lawrence RA & RM, Breastfeeding, A Guide for the Medical Profession, 2005 6th Edition Mosby Co, St Louis, p 563. • Riordan J & Wambach K, Breastfeeding and Human Lactation, 2010, 4th edition, Jones & Bartlett, USA, p 293.		

21.4 Mastitis

Needs and/or Problems	Action	Rationale
Symptoms • Fever >38.5ºC • Flu-like joint aches and pains • Chills or rigors • Red, tender hot area on breast	If there is no nipple damage, encourage continued breastfeeding with good positioning and attachment – refer mother for further input with this if necessary. (it is important that the whole feed is observed). Antibiotics may be required depending on severity of symptoms.	If the milk is not removed at the rate it is being produced, there is a rise in pressure in the alveoli and this forces milk into the surrounding tissue
	If nipples are cracked antibiotics should be commenced and breastfeeding or regular expressing continued	• When the nipple is cracked, organisms pass through the protective barrier of the skin and infective mastitis is more likely • There should be noticeable improvement within 48 hours with redness subsided, and breast soft and comfortable post feed or expression.
Baby/pump not draining breast adequately Contributing factors include stress, fatigue, poor attachment, cracked nipples, external pressure eg; finger or bra, missed feed	• Moist heat prior to feed (if baby >10 days). • Rotate breasts normally, but ensure that the affected side is well drained. If baby does not go the 2nd breast, mother may need to express for comfort only • Aim chin towards area of blockage very gentle massage over affected area during the feed • Paracetamol as required and cold packs • Discuss nutritious diet, extra fluids and bed rest • Avoid restrictive clothing (91)	• Should promote letdown and aid milk flow and noticeable improvement after several feeds • The area of the breast adjacent to the baby's jaw will always be the best drained area • Mother may experience pain
Requiring Antibiotics (Antibiotic treatment alone without adequate breast drainage will not resolve mastitis)	**Flucloxacillin, Cephalexin** • 500mg four times a day for 5-7 days. Discuss potential side effects. • Advise mother to attend by GP for review if all symptoms are not completely resolved when course of antibiotics are completed as she may require a second course of antibiotics to prevent re-occurrence • If no improvement in 48 hours – consider admission to hospital for intravenous antibiotics	• A broad spectrum antibiotic is needed to work on gram positive organisms • There should be significant improvement within 24 - 48 hours • Recurrent mastitis puts the woman at risk of breast abscess

***NB Heat is not recommended in the first 10 days as it tends to increase venous engorgement. Therapeutic ultrasound in the treatment of mastitis has not been scientifically demonstrated to be effective.**

- Lawrence RA & RM, *Breastfeeding, A Guide for the Medical Profession,* 2005, 6th Edition Mosby Co, St Louis p 562
- Hale T, *Medication and Mothers' Milk,* 2014, 16th Edition, Hale Publishing, USA,
- Academy of Breastfeeding Medicine. Protocol #4 Mastitis revision March 2014
- ILCA Core Curriculum for Lactation Consultant Practice, 2013, Jones & Bartlett p751
- National Health and Medical Research Council (2012) *Infant Feeding Guidelines*. Canberra: National Health and Medical Research Council , 2012
- eTg complete / Therpeutice guidelines https://tgldcdp.tg.org.au.acs.hcn.com.au/viewTopic?topicfile=skin-soft-tissue-infections-bacterial&guidelineName=Antibiotic#toc_d1e1310

21.5 Lactating Breast Abscess

Needs and/or Problems	Action	Rationale
Suspected Breast Abscess: a well-defined hard tender area / erythema despite antibiotic therapy indicating a possible localised collection of pus encapsulated in the breast tissue. Usually associated with a recent episode of mastitis and a history of inappropriate or delayed treatment	• Commence or recommence appropriate antibiotics (p37) • Diagnostic ultrasound • Refer mother to breast surgeon • Encourage continued breastfeeding or expressing if unable breastfeed	• Arrests the progress of the abscess • To confirm presence of abscess • (Differential diagnosis may be a galactocele)
Confirmed Abscess Discuss options for management with mother	• Needle aspiration under ultrasound guidance (usually requires multiple repeats) • Culture and sensitivity of aspirate • Mother should remain on an appropriate antibiotic cover • Repeat ultrasound / repeat aspiration in 5 – 7 days. Earlier if mother reports symptoms worsen • Avoid indwelling catheter drainage as much as possible	• Good option if abscess is small (< 3cm and not multiloculated) but can be attempted on larger abscesses. This can be done on an outpatient basis and does not require a general anaesthetic • Antibiotics can be adjusted accordingly • There is an ongoing risk of infection during aspiration procedure • Often requires 3 – 5 repeat aspirations • Increases risk of fistula and decreases patient comfit. Repeated aspiration can be as effective as indwelling catheter drainage
	• Surgical incision and drainage requires hospitalisation • Admission with baby • If the wound is large a daily saline wick dressing may be necessary to allow granulated healing (handout p.99) • Milk may leak from wound during feed.	• May be dependent on size of abscess, availability of options at time of presentation and mother's choice • Slow wound healing avoids formation of milk fistula • Wound remains sterile • Continued breastfeeding is supported
Mother requires lactation support	• Appropriate referral & assessment of any feeding problems	• Mother will have improved outcome if breastfeeding continues
Mother thinking of weaning	• Discuss option of weaning from affected breast only ie winding down expressing	• Mother is able to feed from unaffected breast while slowing the milk production from the affected breast gradually
Mother elects to fully wean before or during treatment	• Should be prescribed medication for suppression of lactation eg. Cabergoline (Dostinex®) & no expressing (p98)	• Continued milk secretion without milk removal or medication will increase risk of complications

- Lawrence RA & RM, *Breastfeeding: A Guide for the Medical Profession,* 2005, 6th Edition, Mosby & Co, St Louis, p569
- Lantry M, *Review of Management of Lactational Breast Abscess,* 1998 (unpublished work), International Lactation Consultant Association Conference, Florida USA
- ILCA Core Curriculum for Lactation Consultant Practice, Third edition, 2013, p757.
- The Academy of Breastfeeding Medicine Protocol Committee, *ABM Clinical Protocol #4: Mastitis. Revision March 2014*
- Trop I. et al *Breast Abscess Evidence-based Algorithms for Diagnosis, Management and Follow Up,* 2011 Radiographics vol 31 pp 1683 – 1699 published online 10.1144 /rg316115521

21.6 Lactational Breast Pain

Needs and/or Problems	Action	Rationale
Mother breastfeeding and experiencing breast or nipple pain. Need to obtain full history and examination of mother and baby	Full history: • Breastfeeding history – previous problems, nipple/breast sensitivity before pregnancy, supply, patterns of breastfeeding, expressing • Pain history – onset, nipple trauma, location, duration, character, context, (with attachment, during feeds, between feeds, expression), exacerbating factors/ameliorating factors, severity, treatment thus far • Maternal history – pregnancy, labour and birth, medical conditions (Raynauds, cold sensitivity, dermatitis, eczema, chronic pain syndrome, candida infections), depression, anxiety, medications, allergies, herpes simplex or zorster in the nipple/breast region, breast infections • Infant history – birth trauma or abnormalities, current age and gestational age at birth, birth weight, weight gain, general health, behaviour at the breast, gastrointestinal problems, previous diagnosis of tongue tie, medications Examination: • Mother – general appearance, nipples (skin integrity, sensitivity, purulent discharge, lesions, rashes), breast (masses, tenderness) sensitivity to light or sharp touch on body of breast, areola, nipple, manual expression (assess for pain), maternal mood (Edinburgh Postnatal Depression Scale) • Infant – symmetry of head and facial features (include jaw angel, eye/ear position), oral anatomy (tongue tie, thrush, palate abnormality, submucosal cleft), airway (nasal congestion), muscle tone Assess a breastfeed: • Maternal and infant positioning and attachment • Pattern of feeding (nutritive, non-nutritive sucking, sleeping) • Shape and colour of nipple after the feed Pathology testing – Consider milk / nipple swabs or if appropriate ultrasound based on history and examination • Mastitis that is not resolving with antibiotics • Persistent nipple trauma or discharge • Erythema or rashes • Breast pain out of proportion to examination	Pain is associated with earlier than intended cessation of breastfeeding and postpartum depression. Appropriate treatment and support may enable a mother to continue to breastfeed and improve her psychological well-being. A detailed history and examination is necessary to determine possible differential diagnosis (see below), suggest management /treatment and refer as appropriate. • Abnormal attachment/suck p51 • Tongue tie p52 • Breast pump trauma / misuse • Breast fullness/ engorgement p34 • Blocked ducts p36 • Nipple white spot p47 • Mastitis p37 • Breast abscess p38 • Thrush p43 • Nipple vasospasm p45 • Dermatological causes – eczema, psoriasis, mammary paget's disease pxx • Infection – bacterial, viral pxx • Allodynia / functional pain pxx
• Riordon J & Wambach K, Breastfeeding and Human Lactation, 2010, 4th edition, Jones & Bartlett, USA, p 305 • Berens P et al Persistent Pain with Breastfeeding ABM Protocol #26, 2016, Breastfeeding Medicine vol.11, No.2, pp 46 - 53		

21.7 Breast Augmentation/Reduction Surgery

Needs and/or Problems	Action	Rationale
Breast Augmentation Surgery Appropriate Antenatal Assessment	Full history including: • Reason for surgery- rule out breast Hypoplasia (p13) • Age at which surgery carried out • Breast development • Breast changes during pregnancy	• If limited breast tissue present prior to augmentation, supply is likely to remain insufficient • May all impact on breastfeeding success
	Breast examination assess: • Surgical technique used eg. infra mammary, axillary incision • Location of implant e.g. behind or in front of chest muscles. • Discuss above implications with the mother • Never guarantee full breastfeeding success • Suggest a "wait and see" approach • Refer to hospital Lactation Consultant (if available) for additional support in the postnatal period. An antenatal consult may be helpful to counsel the mother on postnatal management	• Method of surgery may impact on breastfeeding success – behind the muscle is less likely to affect the nerve supply to the nipple/areola and thus the milk ejection reflex • Previous breast surgery has a greater than 3 fold risk of lactation insufficiency, compared with women who have not had surgery
Breast Augmentation by Injection e.g. hyaluronic acid- (Macrolane). A more recent and common technique originating in Asia).	Full history as above May impact on breastfeeding	Effects are not permanent, usually last 18 months to 2 years. Does not transfer into breastmilk. Increased risk of mastitis due to multifocal injection sites and the products unique ability to retain water.
Breast Reduction Surgery Appropriate Antenatal Assessment	Full history as for Breast Augmentation Breast examination to assess: • Surgical technique used (not always possible to determine): o pedicle technique o free-nipple technique • Discuss above implications with the mother • Never guarantee full breastfeeding success • Suggest a "wait and see" approach Refer to hospital Lactation Consultant (if available)	• Method of surgery may impact on breastfeeding success • Success cannot be predicted. Breastfeeding success rates vary from 19- 72 percent. • Removing the nipple and areola entirely severs the blood supply and damages the nerves and makes breastfeeding success less likely **NB:** Previous breast surgery has a greater than 3 fold risk of lactation insufficiency, compared with women who have not had surgery

Breast Augmentation / Reduction Surgery (continued)		
Needs and/or Problems	**Action**	**Rationale**
Postnatal support	Requires progressive assessment **Mother:** • Encourage frequent feeds and hand expressing after feeds in the first few • Aware of breast changes over first few days • Aware of signs of milk let-down • Ability to drain breasts adequately once mature milk is "in" **Baby:** • Observed change in baby's sucking pattern during feed • Observe for change in stools • Monitor output • Assess behaviour • Ongoing weights	• Unable to predict success • Promotes breastmilk production • May be an increased risk of mastitis • Need to ensure adequate nutrition
Baby requires complementary feeding	• Ongoing monitoring of baby's weight • Discuss the use of a lactational aid (p41) • Suggest extra expressing after feeds. Combine hand and pump after 48 hours (p25, 87) • Discuss use of Domperidone (p90)	• Baby's progress guides amount of supplementation required • Use of supply line may keep baby at the breast so that breastfeeding continues as the baby may prefer the faster flowing bottle feeding • Extra stimulation to the breast may help increase supply and keep baby familiar with the breast

1. Neifert M et al, The Influence of Breast Surgery, Breast Appearance and Pregnancy Induced Breast Changes on Lactation Sufficiency by Infant Weight, 1990, Birth: 17: 31-38
2. Riordon J & Wambach K, *Breastfeeding and Human Lactation*, 2010, 4th edition, Jones & Bartlett, USA, p 307-311
3. Hale, T. *Medications and Mother's Milk* 2014, 16th Edition, Hale Publishing USA
4. *The Breastfeeding Mother's Guide to Making More Milk, P 110 Diana West and Lisa Marasco 2009*

22. Supply Issues

22.1 Low Supply of Breastmilk

Needs and/or Problems	Action	Rationale
Low supply suspected due to any combination of the following: • Limited nutritive sucking when breastfeed observed • Minimal wet nappies (less than 6 wet cloth or 5 heavy disposable per day) • Unsatisfied baby post feed • Poor weight gain -see on-going monitoring of progress **NB: It is important to differentiate between perceived low supply and real low supply. Assess mother's understanding of normal baby behaviour, number of feeds etc and give appropriate education if required.**	**Observation of a breastfeed to assess attachment and milk transfer** • If indicated support mother to improve positioning and attachment	• Poor attachment will decrease breastmilk transfer and milk removal contributing to low supply • Limited nutritive sucking when baby is latched well is a reliable indicator for low supply
	Attain a full history in an attempt to eliminate the following: **Maternal Considerations** • Mother on medication • Mother feeding to schedule (rather than need) • Limiting time at the breast, unrelieved engorgement • Only offering one breast per feed • Inappropriate formula supplementation • Early introduction of solids • Inadequate diet/fluids • Inadequate rest • Over exercise • Overuse of alcohol • Overuse of caffeine • Overuse nicotine	Factors may impede on mother's ability to produce sufficient milk
	Baby Considerations • Overuse of dummy • Baby extending periods of sleep overnight • Sucking problems and oromotor dysfunction eg tongue tie(pxx) • Any medical condition that may affect weight gain eg cardiac • Airway problems eg larngo/ trachea malacia,	Decrease in stimulation to the breast and inadequate removal of milk will decrease supply
	Other contributing factors: • Breast Hypoplasia • Breast surgery • Retained products • Postpartum haemorrhage • Anaemia • Endocrine problems eg. diabetes • Mother/baby separation	• Mother's milk production capacity may be reduced if there are hypoplasia or breast surgery • Retained products inhibit prolactin levels from rising • Postpartum haemorrhage or anaemia may impact on milk production and mother may require additional support to increase breastmilk production • May cause a 15-20 hour delay in Lactogenesis II • Expressing is not as stimulating as the baby feeding at the breast

Low Supply (continued)

Needs and/or Problems	Action	Rationale
Low supply identified	• Feed more frequently, finishing the first breast and offer second. • Use breast compression during feeds • Encourage mother to express breasts after each feed either by hand, manual pump or electric pump. A realistic guide is 5-10 mins per breast,- total 20-30 mins. Consider double pumping • Encourage skin-to-skin contact between feeds • Resume overnight feeding • Cease unnecessary solids/formula • Ensure mother has a good diet • Discuss with mother her ability to get adequate rest • Check that mother has a good support network • Lower caffeine/alcohol/nicotine intake • Consider option of supply line use	• More frequent and proper feeds will increase stimulation of the breast • Will increase stimulation of the breast and any extra EBM may be offered to baby • Increases baby's natural instinct to breastfeed More stimulation to breast • Exclusive breastfeeding may increase supply • A good basic diet is essential • Fatigue contributes to inadequate milk supply. • A breastfeeding mother needs support and someone to care for her • Let-down response may be inhibited by caffeine/alcohol/nicotine • Baby will provide better stimulation
No improvement in supply with above management	Discuss use of galactagogues with mother Prescription drugs • Domperidone (Motilium®) – see Parent Handout Guidelines for Use NB These drugs have not been approved by the manufacturer's for this use • Herbal (mother's choice) • Acupuncture (mother's choice) **Medication should not replace breastfeeding management. Each mother should have close follow-up by a clinician**	Domperidone acts primarily in the periphery with minimal access across blood/brain barrier-now considered drug of choice Metoclopramide is no longer the preferred choice as it is associated with causing depression and herbal remedies of unknown composition should be avoided. There should be noticeable difference 3 – 5 days into the course
As above with a history of PPH, fatigue, hair loss, continuing amenorrhoea	Investigate for Sheehan's syndrome (rare)	Severe PPH may cause infarction of the pituitary gland
Baby requires supplementary feeds with a breastmilk substitute	If supplementary feeds are temporarily necessary offer both breasts first, then offer just enough volume for the baby to be satiated preferably via cup. Express after feeds. If ongoing supplementation is indicated consider a Lactation Aid or bottle and continue to offer both breasts first	Supplementation may be essential for the baby's wellbeing while the mother's milk supply is increased. Extra stimulation to the breast will help increase supply and keep baby near breast

1. Lawrence RA & RM, *Breastfeeding, A Guide for the Medical Profession,* 2005, 6th Edition Mosby Co, St Louis p310.
2. Li, K. *A Pilot Study to Evaluate the Effect of Acupuncture on Increasing Milk Supply of Lactating Mothers, 2003.* Coursework Master Thesis, Victoria University.
3. Hale, T. *Medications and Mother's Milk* 2014, 16th Edition, Hale Publishing, USA
4. Marsha Walker. *Breastfeeding Management for the Clinician- Using the Evidence*. 2006. Jones and Bartlet Publishers p 415-417
5. ILCA Core Curriculum for Lactation Consultant Practice, 2013,Jones & Bartlett p 860

22.2 Use of a Lactation Aid (Supply Line)

Needs and/or Problems	Action	Rationale
Mother is unable to supply sufficient breastmilk for her baby's needs and her baby requires extra nutrition and she would like to use a lactation aid. May be related to: • Maternal issues eg. breast hypoplasia or surgery or mother may wish to induce lactation or relactate. • Baby issues may include weak, disorganised or dysfunctional suck A lactation aid may be either: • Trial use: an infant feeding tube attached to a bottle with formula or 20 ml syringe. • Mother decides to use at breast supplementation and purchases the manufactured model. It is a vented system with a bottle or breast milk bags and notched cap that enables pinching off of the tubing as required. It hangs by a cord around the mother's neck.	• An experienced health care professional should discuss suitability, available options, benefit and cost in feeding lines with the mother. • Explain it may keep baby feeding at the breast for longer and may reduce the need for as much expressing after feeds due to the baby sucking for longer • A decision is made about appropriate supplementation eg. EBM or infant formula and the amount required • Demonstrate the use feeding tube for at breast supplementation • Mother is shown how to use the supply line appropriately • A full feed is observed and assessed • Check baby's weight and progress regularly.	• A baby using a feeding tube must be able to latch-on and do some form of sucking. • Creates a behaviour-modification situation that shapes baby's sucking pattern to one suitable for obtaining milk from the breast • Adding flow at the breast using a feeding –tube device can improve the sucking pattern and efficiency • Sucking stimulation by the baby lessens the need for extra expressing. • Gives mother and baby opportunity to trial feeding at breast supplementation before deciding to use the manufactured model • Aim to maximise mother's milk production by minimising the amount of supplementation required. • Adjust amount of supplementation according to individual progress
• Riordan J & Wambach K, Breastfeeding and Human Lactation, 2010, 4th edition, Jones & Bartlett, USA, p414 • Watson-Genna , C, Supporting Sucking Skills in breastfeeding Infants 3rd Edition 2017 Jones and Bartlett, USA		

22.3 Oversupply of Breastmilk

Needs and/or Problems	Action	Rationale
Maternal symptoms: • Breast not draining adequately • Breast remaining hard/lumpy post feed • Mastitis **Baby symptoms** • Gulping or having difficulty coping with milk flow • Short, frequent feeds • Frequent loose stools (often green and frothy) • Posseting/vomiting after feeds • Extremely unsettled • Minimal weight loss post birth followed by large weight gains	**If baby under 4 weeks** • May need to express some milk prior to latching baby if breast very full • Optimise positioning and attachment • Encourage baby to finish the first breast prior to being offered the second breast. May require the baby to go back to the same breast several times at the same feed rather than offer the other side • Monitor other breast for signs of mastitis. May need to express a small amount from the other breast to relieve pressure if baby does not feed from that breast • Aim for minimum three hours from commencement of one feed to commencement of the next • Gentle handling post feed • Discuss settling techniques with parents and reassure them that supply should settle over a few weeks	• Initiation of breastfeeding reliant on endocrine factors as well as milk removal • Encourages good breast drainage • This management strategy resulted in partial or complete resolution of problems in 79% of babies • Higher risk of mastitis • Should help to reduce supply and encourage a longer feed • Minimise posseting • Parents are more aware of how to pacify baby
	If baby over 4 weeks Avoid extra expressing if possible As above plus: • Feed baby in an upright, laid back or straddle position • Do not force feed • If baby detaches when letdown occurs allow milk flow to settle before re-offering	• Breasts more reliant on removal of milk (autocrine control). Extra expressing more likely to increase supply • Baby should manage fast flow a little better

1. Lawlor-Smith C & Lawlor-Smith L, 1998, Lactose Intolerance, Breastfeeding Review Vol 6 No1, 1998, p29-30
2. Woolridge MW & Fisher C, 1988, Colic Overfeeding and Symptoms of Malabsorption in the Breastfed Baby: A Possible Artefact of Feed Management, Lancet, Aug13, p383-384
3. Livingstone V. 1996, Too Much of a Good Thing, Canadian Family Physician, Vol 42, p89-99
4. Australian Breastfeeding Association Too Much Milk. https://www.breastfeeding.asn.au/bfinfo/toomuch.html (accessed 21/12/2016)
5. Wilson-Clay B, 2006 Milk Oversupply Journal of Human Lactation, vol. 22, 2: pp. 218-220. First Published May 1, 2006.

23. Baby Related Issues

23.1 Breast Refusal

Needs and/or Problems	Action	Rationale
Baby refusing both breasts	Full history • Age of baby • How long has baby been refusing • Feeding, sleeping pattern • Solids/formula use, when and how much • Dummy use • Assess baby for signs of (a) Illness (b) Lethargy (c) Teething (d) Recent immunisation Assess mother and eliminate/treat obvious causes: • Mastitis • Breast changes • Oversupply • Strong milk ejection reflex • Commencement of contraception • Pregnancy • Low supply • Menstruation **Never force-feed. Reassure mother it is usually temporary** Offer suggestions for encouraging baby to feed: • Minimise distractions • Try different positions • Skin to skin contact • Offer breast when baby is sleepy • Suspend solids • Reduce sucking from other sources eg; dummy **NB Maintain milk supply by expressing**	• May be age appropriate eg. baby may be self weaning, attracted by another source • Baby may be tired not hungry • Baby may be disinterested due to illness • Milk may taste hotter and saltier • Hormonal changes of pregnancy can affect taste of breastmilk
Refusing one breast only, after previously having both breasts	Examine breast fully to assess for breast changes and refer for further investigation if necessary	May be an early sign of breast cancer.

1. Goldsmith HS, Milk Rejection Sign of Breast Cancer, 1974, Am J Surg, 127: p 280-281.
2. Lawrence RA & RM, Breastfeeding, A Guide for the Medical Profession, 2005, 6th Edition, Mosby Co, St Louis, p301-303

23.2 Sucking Problems and Oral Anomalies

Needs and/or Problems	Action	Rationale
Baby is unable to latch to the breast and feed effectively despite skilled assistance Examples include: • Audible clicking • Cheeks sucked in • Uncoordinated or abnormal tongue movements, • Baby is pulling on and off the breast, • Effortful swallow/s or gurgling sounds during/post swallow • Baby appears uninterested at the breast.	If baby is unable to breastfeed successfully, teach and assist mother to express her breastmilk and refer to **appropriate** health professional for assessment and follow up.	Mother can be actively involved and her supply can be initiated and maintained. Baby receives breastmilk Many neonatal sucking problems can be corrected with specialist / skilled help e.g. Speech Pathology.
Identify any risk / contributing factors: Acute illness	Ensure consultation and collaboration with appropriate allied / other health professional/s at all times. In addition to this: 1. Work closely with medical team and only proceed with breastfeeds once baby is medically well enough to do so. 2. Proceed cautiously with breastfeeds with close monitoring at all times of baby's ability to cope with breastfeeds and milk flow.	Baby may be acutely ill and require further investigation and treatment.
Maternal drugs in labour	Investigate potential effect of specific drugs used in labour on infant state and activity levels and time expected for effect to lift. Consult with medical team as appropriate.	Some medications in labour may depress sucking skills in the short term
Birth Trauma	Investigate area of trauma and potential impact on breastfeeding. Handling, positioning and attachment techniques may have to be modified according to area /extent of trauma See below for altered oral facial sensation and tone if relevant.	This will avoid direct touch or pressure to bruising.
Structural abnormality eg: cleft condition	See cleft palate	
Altered oral facial sensation and tone: **Increased tone** (hypertonia) e.g. resulting from neurological insult or injury **Decreased tone** (hypotonia) e.g. associated with Down Syndrome	Consult Physiotherapist or Occupational therapist & Speech Pathologist for individualised, specific guidelines on positioning, handling and reducing / building tone. Try placing baby in prone on feeder's lap before feed to encourage overall relaxation and flexion. Position for feed with focus on flexion and support; swaddling in a wrap may facilitate this.	This will reduce the potential for hypertonic reactions and patterns in the case of hypertonia, by facilitating greater organisation and control (sucking is a flexor skill, flexed positioning helps reduce the occurrence and effects of oral facial hypertonia).

1. Evans Morris, S and Dunn Klein, M. (2000) Pre-Feeding Skills – Second Edition USA: Therapy Skill Builders
2. McCurtin, A (1997) The Manual of Paediatric Feeding Practice UK: Winslow Press
3. Riordon J & Wambach K, Breastfeeding and Human Lactation, 2010, 4th edition, Jones & Bartlett, USA, p 98-101.

23.3 Tongue Tie

Needs and/or Problems	Action	Rationale
Tongue tie is suspected	Perform oral assessment • appearance of tongue eg heart shaped, frenulum short and tight • tongue function – tongue lift, lateralisation, protruding forward, cupping around finger and ability to suck with peristaltic movement and sustain sucking movement • palate – high arched palate is associated with tongue and can contribute to painful attachment painful and poor milk transfer Assess nipple and observe a breastfeed • nipple damage evident? • Painful attachment? • Attaching on and off? • Milk transfer evident? • If any of the above suggest a laid-back breastfeeding position and as deep a latch as possible If improvement with attachment with positioning advice, then reassure mother and watch and wait May need to express and give EBM at some or all feeds to ensure breastmilk supply, drainage of the breasts and allow damaged nipples to heal If unable to improve attachment with positioning, then discuss options and refer for frenotomy if appropriate. Follow up post frenotomy for attachment support	It is estimated tongue tie is present in approximately 5% of babies. Research suggests that 50% of babies with tongue tie have breastfeeding problems. Tongue function is the most important indicator for referral for frenotomy. Medical opinion remains divided about frenotomy, however, if baby is unable to attach and feed well despite positioning and attachment support then frenotomy by appropriate qualified health professional may be indicated. Frenotomy is not always effective in improving attachment issues and lactation support post procedure is usually necessary.

1. Power RF et al (2014) Tongue-Tie and Frenotomy in Infants with breastfeeding difficulties: achieving a balance Arch Dis Child
2. Buryk et al (2011) Efficacy of Neonatal Release of Ankyloglossia:A Randomized Trial Pediatrics doi:10.1542/peds.2011-0077
3. Webb et al (2013) The effect of Tongue tie and speech articulation: A Systematic Review, International Journal of Paediatric Otorhinolaryngology pp.635 - 646

23.4 Babies born before 37 weeks

Needs and/or Problems	Action	Rationale
Babies born before 37 weeks may require care in a NICU/SCN and not be mature enough to breastfeed or have any oral feeding for a period of time.	• Encourage extended skin to skin with parents / kangaroo mother care (KMC) as soon as possible and appropriate • Support mother to initiate and maintain lactation as soon as possible after birth – within 1 hour of birth -see expressing • Use fresh colostrum for oral care in the nil by mouth baby • Breastfeeding plans individualised by nursing/medical staff caring for baby	• KMC improves short and long term outcomes, promotes stability of HR, respiratory effort, temperature, BGL and metabolic stability and BF • Early initiation of lactation will benefit the establishing of mother's milk supply and enable baby to receive breastmilk as soon as possible • Using colostrum for oral care reduces risk of infection and secretory IgA is absorbed through the oral mucous membranes
Late preterm infant 34 – 37 weeks **(in hospital)** Risk of: Insufficient intake of milk	• Encourage early breastfeeding and hand expressing within 1 hour of birth • Encourage skin to skin between feeds • Encourage feeding at early feeding cues - at least 8 feeds / 24 hours • Consider breast compression during feeds if poor milk transfer is suspected • Do not persist > 10 – 15 mins if not interested (Do **not restrict feeds if sucking vigorously)** • Encourage mother to hand express after each breastfeed even if it is a Code 5- 6 feed -allows collection of EBM to give baby after the next BF • Give any available EBM after feeds or feeding attempt even if baby feed well • After 24 hours combine hand expressing and pump to stimulate supply • If baby does not feed at least code 5, supplement with EBM/ formula (small quantities -see supplementary feeds • If weight loss > 7% at 72 hours of age full feeding assessment is required and baby should not be discharged • Gradually reduce expression and supplementation according to weight gains – usually some expressing until term	• Early hand expressing has been shown to be better than pump expression immediately after birth to get colostrum • Baby can be easily over stimulated and becomes tired. • Expressing ensures stimulation of lactation as these mothers are at increased risk of low supply due to baby not sucking well enough at the breast • Provides EBM for additional energy for the baby and reduces the need for formula supplementation • Promotes adequate intake as LPI babies may appear to suck well but often do not transfer adequate breastmilk and have less energy reserves • Risk of readmission within 7 – 10 days is increased in this cohort and almost always due to feeding related problems.
Late preterm infant 34 – 37 weeks **(Post discharge)**	• Early follow/up (ideally within 3 days) for assessment of feeding and weight gain and adjustment of feeding plan • Ongoing regular follow up (at least weekly) until baby is at his/her due birth date or maintaining adequate weight gain with demand exclusive at breast feeding • Adjust feeding advice, expressing and topping up with EBM pc as baby gains weight	• Ongoing risk of feeding problems and insufficient milk transfer

1. Academy of Breastfeeding Medicine (2016) Clinical Protocol # 10 Breastfeeding the late preterm infant ($34^{0/7}$ to $36^{6/7}$ weeks gestation) and Early Term infants (37 – $38^{6/7}$ Weeks of Gestation, Second revision 2016
2. Morton J. *Preventative Management Guidelines for Babies at Risk* Standard University School of Medicine

23.5 Breastfeeding Multiples

Needs and/or Problems	Action	Rationale
Both babies with mother postnatally	• Encourage individual rather than tandem feeding until at least one baby is assessed for effective feeding • Feed both babies from the breasts at all feeds although may be one baby at a time. • Allocate one breast per baby per feed • Mother to decide - rotate breasts on a day to day basis or alternate breasts and babies at each feed • Only feed babies together if awake and additional help available • Progress to tandem feeding when mother feels ready and attempt this prior to leaving hospital unless mother prefers not to • Attach more difficult baby first **NB** if < 37- 38 weeks gestation mother may not be able to successfully tandem feed until the babies are older due to less ability to suck effectively. May need to alternate each baby at the breast / EBM and express after feeds for other baby.	• Encourages mother to become familiar with individual baby's needs • Both breasts are evenly stimulated • Baby gets slower flowing high fat milk • Mother gains experience whilst there is professional assistance available
One baby in nursery	• Allocate one breast per baby per day. Express other breast and take EBM to nursery if baby is not going to the breast	• Ensures both babies receive breastmilk and both breasts are evenly stimulated
Both babies in nursery	• Initiation early of hand expressing progressing to use of double pump in combination with hand expressing on day 2 • See Expressing Breastmilk	• Should provide maximum stimulation to breasts
Mother has triplets	• As above • Discuss options with mother eg breastfeeds two and bottle feeds one or fully breastfeeds three babies – will need to limit feeding time of first two babies and feed the third from both breasts using a system of "triangular rotation"	• Supply should equal demand

1. Australian Breastfeeding Association, *Breastfeeding Twins, Breastfeeding Higher Order Multiples, 2009,* Booklet Series, Victoria
2. Kerfhoff Gromada K, *Mothering Multiples,* 2003, La Leche League International, IL, p113-119
3. ILCA Core Curriculum for Lactation Consultant Practice 2013 Jones & Bartlett p567 - 569

23.6 Breastfeeding a Baby with Down Syndrome

Needs and/or Problems	Action	Rationale
Baby with Down Syndrome (Trisomy 21)	• Ongoing monitoring of progress • Encourage mother breastfeed • **Keep mother and baby together during hospital stay** (unless baby is unwell)	• Regular review of growth paying particular attention to weight and length • Baby is at increased risk of upper respiratory tract infection and otitis media
	• Initiate breastfeeding in the usual manner with early skin to skin. • Assess baby's ability to suck efficiently and transfer milk	• May take longer to establish successful breastfeeding due to: increased incidence of poor muscle tone small mandible reduced energy and alertness large tongue relative to jaw impaired coordination of sucking movements
Positioning at breast if muscle tone poor	• Attempt to latch baby in a more upright position supporting baby's chin and mother's breast • Stabilise the baby's head and neck - avoid excessive head extension or flexion	• Assists in maintaining attachment Baby is better able to cope with the flow of milk • May be laxity or malformation of the ligaments of first two cervical vertebrae (atlantoaxial instability)
	• Oral exercises may be of benefit	• Builds tone and strength around face and mouth
	• Position supportively in flexed position • Semi reclined (laid back) or side lying position	• Flexed positioning assists with co-ordination and control by providing greater stability • Use of subtle gravitational forces improves stability
Baby unable to breastfeed effectively	• Encourage mother to express and offer EBM from bottle with soft teat • Offer chin and cheek support with bottle feeds.	• Soft teat makes it easier to transfer milk • Chin and cheek support during sucking bursts increases sucking strength
Ongoing monitoring of progress	• Regular review of growth paying attention to weight and length	• These babies may grow at a slower rate

1. Watson – Genna C, *Supporting Sucking Skills in Breastfeeding Infants 3rd Edition,* 2017 Jones and Bartlett Learning
2. Australian Breastfeeding Association, *Breastfeeding Your Baby with Down Syndrome,* Booklet Series, 2002, Victoria
3. Marmet C & Shell E, *Training neonates to Suck Correctly*, 1984, MCN, Vol 9 No 6
4. Cronk C et al, *Growth Charts for Children with Down Syndrome,* 1998, Paediatrics, Volume 81, No 1
5. Wolf, L and Glass, A.R, 1992, Feeding and swallowing disorders in infancy: Assessment and management Tuscan, AZ: Therapy Skill Builders

23.7 Breastfeeding a Baby with a Cleft Palate/Lip

Needs and/or Problems	Action	Rationale
Baby has a **cleft palate** May be identified by clicking noise during breastfeeding due to air entry (baby is not able to breastfeed successfully when there is any air entry)	• Examine cleft to establish size and position • May be unilateral or bilateral • May extend to the hard and soft palate • Cleft may be sub-mucous • Encourage giving breastmilk • Mother may need encouragement and support to express long term • If small cleft in the hard palate – try feeding with nipple shield • Discuss other options of feeding baby expressed breastmilk • Encourage mother to familiarise baby with her breasts and have skin-to-skin contact from birth. Offer the breast in both right and left-handed underarm positions, keeping baby as upright as possible. • Consider breast compression during feeds at the breast • Express after breastfeeding attempts and discuss options of feeding baby the expressed breastmilk • Monitor weight regularly • Try using a normal bottle and teat • If baby is unable to transfer milk with a normal teat - use an appropriate teat and squeeze bottle • Encourage mother to enlist as much help and support as she can from family, friends, ABA and the Child and Family Health Nurse. • If mother has decided to formula feed, position baby in a more upright position for feeding.	• The prognosis for successful feeding greatly depends on the size and position of the cleft as positive and negative pressures involved in sucking are affected. • Breastmilk lessens the development of otitis media • Nipple shield may occlude the cleft • Skin to skin may be helpful to keep baby familiar with the breast and give him some suckling experience, which will help to satisfy him and help to strengthen the oral structure • Upright positioning will allow milk to move into the pharynx and away from the nasal cavity • Breast compression may increases milk transfer • If extra expressing is not commenced supply will be reduced • Higher risk of growth deficiencies • Timing of surgery may be dependent on baby's weight gain as well as age (may be >6 months) • Some of these babies will manage without special equipment, depending on the severity of the cleft. • Mother can assist milk delivery by squeezing the bottle. • It can be a very time consuming and emotional experience to provide enough EBM and feed a baby with a cleft palate • Minimises problems of milk entering the baby's nose and prevents fluid getting into baby's ears
Baby has a **cleft lip**	• Encourage mother to familiarise baby with her breasts and skin contact from birth with skin to skin contact. Feed baby in both right and left handed positions and bare breasted when practical. • Assess and observe a breastfeed • Attempt to position baby so that the breast is able to fill the cleft or the mother may use her finger to occlude the cleft so the baby can create suction	• This should make it easier to introduce breastfeeding after surgery • Success dependant on size of cleft, success is more likely if unilateral cleft lip in isolation. • This will prevent air entry and the baby should establish a satisfactory seal to maintain sucking strength
Baby has a **cleft lip and a cleft palate**	• Baby will be unable to breastfeed successfully • Management as described for cleft palate according to mothers wishes	• Baby is unable to provide a seal and extract milk from the breast

- Watson Genna, C. *Supporting Sucking skills in Breastfeeding Infants 3rd Ed.* 2017 Jones and Bartlett Learning
- Lawrence, RA & RM, Breastfeeding, *A Guide for the Medical Profession,* 2005, 6th Edition, Mosby Co, St Louis, p 542-545
- Australian Breastfeeding Association, *Increasing Your Supply,* Booklet Series, 2002, Victoria
- Riordon J & Wambach K, *Breastfeeding and Human Lactation*, 2010, 4th edition, Jones & Bartlett, USA, p640-643.

23.8 Breastfeeding and Gastro-Oesophageal Reflux

Needs and/or Problems	Action	Rationale
Baby is suspected to have gastro-oesophageal reflux. Some symptoms include: • Regurgitation or posseting (may be overt or silent) • Sleep disturbances • Crying and irritability between feeds • Maybe restless during the feed - pulls away and arches back • May have problems gaining weight • Respiratory symptoms	If baby is happy, gaining weight then do nothing as baby will grow out of it • Encourage mother to continue breastfeeding by discussing the importance of breastmilk and risks associated with formula feeding • Assess if associated with an oversupply of breastmilk • Encourage mother to feed baby in semi upright position with head higher than the baby's stomach • Give short feeds, more often • Feed at baby's pace with pauses to rest or burp during the feed • Gentle handling after a feed – wait for few minutes before rubbing or patting baby's back • Cuddle baby and keep baby in the semi upright position for approximately 30 minutes after feed • Avoid use of thickened feed	• Physiological gastro-oesophageal reflux is less, and has a shorter duration in breastfed babies compared with formula-fed babies. • Symptoms may be associated with volume of milk baby receives and may be lessened with good management • Upright positions and gentle handling may lessen baby's symptoms as the milk is less likely to come up into the baby's oesophagus • Thickened feeds may reduce frequency of reflux episodes, but increases exposure of the oesophagus to acidic gastric material, as it does not clear as quickly.
Symptoms do not resolve	• Consider referring baby for further investigation eg oesophageal pH probe or an endoscopic examination to determine extent of reflux. • Medication may be required if diagnosis confirmed.	• Baby is not treated unnecessarily.

- Tan, JCH & Jeffery, HE 1995, *Factors that influence the choice of infant feeding.* Journal of Paediatric Child Health, 31, pp375-378
- Heacock H et al, 1992, *Physiological gastroesophageal reflux in healthy newborn infants.* Journal of Paediatric Gastroenterology & Nutrition 14, pp 41-46
- Australian Breastfeeding Association, Topics in Breastfeeding *Gastro-oesophageal Reflux and the Breastfed Baby,* Set XX1, 2009, Lactation Resource Centre, Victoria
- Riordon J & Wambach K, *Breastfeeding and Human Lactation*, 2010, 4th edition, Jones & Bartlett, USA, p647
- Lawrence, RA & RM, *Breastfeeding, A Guide for the Medical Profession,* 2005, 6th Edition, Mosby Co, St Louis, p546
- Australian Breastfeeding Association website: Reflux https://www.breastfeeding.asn.au/bfinfo/reflux.html (accessed 10/2/17)
- Kombol K, *Soothing your baby with reflux* ILCA's Inside Track – a resource for breastfeeding mothers , 2009, International Lactation Consultant's Association

23.9 Lactose Intolerance in the Breastfed Baby

Needs and/or Problems	Action	Rationale
Baby is fully breastfed and has **symptoms** of lactose intolerance: • Irritable and unsettled • Loose frothy/watery/ often green stools • Scalded anal area • Passes flatus frequently • Stools may test positively to reducing substances if mother has an oversupply of breastmilk making this test of questionable use Lactose Overload Lactase levels in the baby's gut are insufficient to digest the lactose intake and may be associated with feeding mismanagement. Primary Lactose Intolerance is an extremely rare genetic condition which requires medical intervention from birth.	• Reassure mother that this not an indication to wean. • Assess if it is an oversupply of breastmilk (lactose overload) and manage accordingly • If Lactose overload is suspected the reassure parents that it is likely to settle with time. • May need to have one breast per feed for a period of time until symptoms settle or the baby shows signs of needing the second side. • Aim for minimum three hours between feeds	• Functional lactase deficiency (incomplete absorption of lactose) commonly occurs in babies who are obtaining large amounts of breastmilk and may be evidenced by larger than expected weight gains • May settle spontaneously with good breastfeeding management • Giving one breast per feed resulted impartial or complete resolution of problems in 79% babies • Usually associated with an oversupply of breastmilk and this will help to reduce supply **NB:** There is no relationship between lactose intolerance in adult family members and babies, including the mother.
Secondary Lactose Intolerance An uncommon and usually transient condition which can be due to anything that damages the gut lining damaging the cells that produce lactase such as gastrointestinal illness, antibiotic use, bowel surgery or celiac disease. A protein intolerance (cow's milk or soy in the mother's diet) may be mistaken for lactose intolerance.	• Continued breastfeeding is recommended during intestinal infection • Post infection if a completely lactose free diet has been advised, the mother can express to maintain her supply. The baby may be fed with EBM treated with lactase or a lactose free formula until resolved. Untreated breast milk can be tried on a weekly basis until tolerated. • If due to protein intolerance – remove the protein out of the mother's diet. • Gut recovery may take 4 – 8 weeks in babies under 3 months	• In most cases the intolerance due to infection persists for less than one week in older infants but may last longer in younger babies. • Damage to the baby's intestine is extreme and causing malnutrition. • The baby's intestine can heal and the symptoms will resolve.

- Lawlor-Smith C & Lawlor-Smith L, 1998, *Lactose intolerance,* Breastfeeding Review Vol 6 No 1, 1998, p29-30
- Woolridge MW & Fisher C, 1988, *Colic, overfeeding and symptoms of malabsorption in the breastfed baby: A possible artifact of feed management*, Lancet, Aug1 13p 383-384
- Lawrence R & R *Breastfeeding for the Medical Professional 6th Ed 2005* Elsevier Mosley p308
- Brodribb, W. *Breastfeeding Management 3rd Ed 2006* Australian Breastfeeding Association P377 – 381
- Lactose intolerance in the breastfed baby Australian Breastfeeding Association website https://www.breastfeeding.asn.au/bf-info/lactose accessed 4/2/2017

23.10 Ongoing Monitoring of Baby's Progress

Needs and/or Problems	Action	Rationale
Baby's behaviour	Adequacy of breastfeeding can be assessed by baby's behaviour as well as other assessments – a non - demanding baby may not be getting enough milk and an unsettled baby may be getting adequate breastmilk. • Assessing feeding patterns, urine output, bowels, weight as well as behaviour • If all assessments are reassuring and baby unsettled - support mother and offer options: - Rocking - Patting - Use of pram or sling - Offering breast for comfort	Unexplained crying periods between 1-4 hours per day can occur in 80% of babies with 10-35% of healthy babies crying for a long period regardless of the method of feeding From 3 weeks to 3 months' babies become more wakeful and unsettled. A young baby needs the comfort of an adult to assist with moving to a more organised state
Bowel Motions	• Typical stools are loose mustard yellow but can sometimes be orange or green • Frequent runny stools do not mean the baby had diarrhoea • Prior to 6 weeks it is normal for the baby to open bowels 2 – 3 /24 hrs • Between 6 weeks and 3 months the frequency often decreases. There can be intervals of several days or more between stools	Bowel motions are a good indicator of baby getting enough milk in the first week. After breastfeeding is established urine output is a better indicator
Urinary Output	After day 4-5 there should be 5-6 or more pale odourless nappies over 24 hours	Adequate urine output is an indicator of adequate breastmilk supply
Baby's Weight	• Weight should not be used alone to determine progress and should be used with clinical assessment • Weight should be assessed over an average of four weeks on the same calibrated scales • If using growth charts the WHO 2006 Growth Charts should be used. Only bare weights should be plotted on the growth charts • Breastfed babies have a lower velocity of growth after 2-3 months: when plotted on a growth chart they may appear to be faltering, even if thriving • A normal baby may cross percentiles (to attain their genetic potential) and this should be correlated with length	Baby should regain birth weight by 2 weeks Approximate weekly weight gain averaged over 4 weeks: 2 weeks-3 months --- 150-200gms 3-6 months --- 100-150gms 6-12 months --- 70-90gms
Baby's unsettled behaviour	• Increase mother's awareness of baby's tired signs and sleep needs • Soothing techniques such as massage, sling wearing, cuddling, feeding, rocking, patting and bathing, soothing sounds. • Rule out Neonatal Abstinence Syndrome (NAS)	• Unexplained crying for short periods for 1-4 hours every 24 hours occurs in approximately 80% of babies • It is estimated that 10-35% of babies cry for periods in excess of 4 hours daily with no apparent reason • Baby's do not have the ability to settle themselves • Unsettled behaviour may indicate drug withdrawal including excessive amounts of caffeine

Ongoing Monitoring of Baby's Progress (continued)

Frequent feeding	• Feed as the baby demands, average is between 8 – 12 times per 24 hours. • Ensure positioning and attachment is correct • Reassure mother that baby may need to feed frequently to maintain an adequate supply • Encourage rest between feeds when possible	• Exclusively breastfed babies up to 6 months of age were found to feed on average 8 – 12 times per 24 hours. Babies will vary taking one breast or two at each feed. • If the baby is not attached well and nutritively sucking then insufficient breastmilk will be removed from the breast for the baby's growth and for maintaining a good breastmilk supply • Breastfeeding works on supply and demand • If the baby is spending a long period of inactivity on the first breast, encourage mother to change to the second breast
Baby's need for stimulation	• Encourage the parents to be interactive with their baby • Interactive floor play should be encouraged	• Babies are naturally attracted to faces • Babies need appropriate stimulation to enhance brain development and attachment as well as develop gross motor, visual and language skills

- National Health and Medical Research Council (2012) *Infant Feeding Guidelines.* Canberra: National Health and Medical Research Council
- Cadwell, Turner-Maffei, O'Connor & Blair, *Maternal Assessment for Breastfeeding and Human Lactation,* 2002, Jones and Bartlett
- Your Social Baby, Murray and Andrews, 2001, ACER
- Kent et al (2006), *Volume and Frequency of Breastfeedings and Fat Content of Breast Milk Throughout the Day*, PEDIATRICS, Vol. 117, No. 3

24. Paediatric Ward Flowchart for the Breastfeeding Mother/Baby

- Bare weigh baby as soon as possible after admission
- Is the baby **exclusively** breastfed?

- Calculate baby's expected weight gain (indicator for feeding / milk supply)
- Observe baby feeding at the breast and note the following:
  - Breast fullness prior to and after a feed
  - Correct positioning and attachment
  - Baby's ability to suck and transfer milk
  - Baby's contentment post feed
  - Baby's output

Baby is feeding well **+ normal observations** *NB. If the baby is unwell the feeds may be shorter and more frequent*	**Baby is not feeding well**	**Baby is unable to feed**
Encourage mother to continue her normal feeding pattern and offer support as required (pump is not needed)	●Offer both breasts at each feed ●Assist with latching as required ●Express after each feed and offer baby any EBM	●Work out baby's fluid requirement on 8 feeds per day ●Encourage mother to express 3rd hourly ●Offer baby EBM as required

Allocate an electric breast pump to the mother and explain the following:

- How the pump works and the frequency and duration of use
- How to clean the equipment
- How to collect and store the breastmilk
- Document in the notes that this has been explained

If mother's milk supply is low:

- Express after each feed for extra stimulation
- Consider recommending Motilium® to increase milk supply
- Judicial use of formula if considered necessary
- Refer to Lactation Staff if available. Refer to Child and Family Health on discharge

25. Maternal Issues

25.1 Caesarean Section and Breastfeeding

Needs and/or Problems	Action	Rationale
Post-operative breastfeeding difficulties due to pain, anxiety and lack of mobility	• Initiate skin-to-skin contact as soon as possible • Educate mother re appropriate analgesia • Discuss/educate mother re various breastfeeding positions to alleviate incision pain. Some suggestion are a pillow on mother's lap to protect wound, side lying and underarm hold • Encourage mother to ask for assistance with feed	• Skin to skin encourages oxytocin release and onset of lactogenesis 2 which can be delayed after caesarean section • Maintain comfort of mother and baby during breastfeeds • Should encourage an efficient let-down reflex and reassure mother
Mother requiring extra and ongoing physical and emotional support	• Facilitate and plan with practical methods of help and support in partnership with the family	• To have a well-rested mother to promote physical and emotional recovery and become d=confident
Unfulfilled expectations eg disappointment re birthing experience (leading to conflicting feelings re mothering)	• Reassurance and debriefing • Empower mother so that breastfeeding meets her expectations and goals • Refer to appropriate services eg counselling, lactation specialist if needed	• To promote emotional wellbeing and support breastfeeding
After effects of anaesthetics/analgesics e.g. sleepy baby	• Discuss/give information so that mother can identify babies feeding cues • Give adequate education re: supply/demand usually 8 or more feeds per 24 hours from day 2	• Mother will be able to maximise feeding opportunities • To ensure baby has adequate nourishment
Delayed Lactogenesis II	• Reassure mother that the milk may take longer to "come in", but this is common after a caesarean and the baby may require feeding more frequently. • Encourage extended skin to skin between feeds	• Explanation may reassure mother and encourage her to persist and feed more frequently. • Skin to skin contact is comforting to babies and assists with mother's oxytocin release

1. Renfrew M et al. *Breastfeeding*: *Getting Breastfeeding Right for You,* 2000, Celestial Arts California p32
2. Evans KC et al. *Effect of caesarean section on breastmilk transfer to the normal term infant over the first week of life,* Arch Dis Child Fetal neonatal Ed 2003; 88:F380-382.
3. Riordan J & Wambach K, *Breastfeeding and Human Lactation*, 2010, 4th edition, Jones & Bartlett, USA, p335.
4. Australian Breastfeeding Association, *Breastfeeding after a Caesarean Birth* https://www.breastfeeding.asn.au/bf-info/breastfeeding-after-caesarean-birth *(accessed 10/2/17*

25.2 Medication & Breastfeeding

Needs and/or Problems	Action	Rationale
Mother requires medication for a specific condition	• Use appropriate resource to evaluate transference into breastmilk and the degree of exposure to the baby. For example: Mothersafe 9382 6539 or 1800 647848 Lactmed database (via CIAP) • Consider purchase of an appropriate reference book *Medications and Mothers Milk* [1]	All medications penetrate milk to some degree, however concentrations of most medications are exceedingly low (usually<1%)
	General Rules: • Determine if drug is absorbed from GI tract	Many drugs eg; some antibiotics are poorly absorbed. Compare the paediatric dose and determine if amount absorbed by baby has been reported to produce side effects
	• Determine if milk/plasma ratio is high	If the milk concentration of the drug is high it should be avoided if possible
	• Be cautious of drugs that have long paediatric half-lives	Medications with shorter half-lives tend to peak rapidly and dissipate rapidly but may continually build up in the baby's plasma over time
	• Choose drugs that have a higher protein binding	These do not transfer as readily to the milk or the baby
	• Be cautious with drugs that affect the brain and CNS, such as lipid soluble drugs, which readily enter breastmilk e.g psychotherapeutic drugs.	Frequently transfers into breastmilk at higher levels due to their lipid solubility.
	• Consider peak time of drug and encourage breastfeeding just before the dose	This is when the drugs are in their highest concentration in the breastmilk **Do not exceed recommended doses**
	The benefits of breastfeeding often outweigh the risks to the baby's well being	
NB Pharmaceutical Manufacturers' inserts discourage breastfeeding for fear of litigation, not necessarily for well-founded pharmacological reasons		

1. Hale T, *Medication & Mothers' Milk, A Manual of Lactational Pharmacology 2014,* 16th Edition, Hale Publishing USA
2. ILCA Core Curriculum for Lactation Consultant Practice, 2013, p 427

25.3 Diabetes and Breastfeeding

Needs and/or Problems	Action	Rationale
Type 1 Diabetes (Insulin Dependent)	• Appropriate encouraging and supportive prenatal education including: - reduced risk of Type 1 diabetes for the baby if breastfed - challenges due to diabetes such as possibility of delayed lactogenesis 2 (24 hours) and extra expressing to promote supply as well as have EBM available if supplementation required - baby may require admission to Special Care Nursery - Discuss and educate on antenatal expression of colostrum • Advise mother to have a carbohydrate snack at hand whenever breastfeeding and care with driving after breastfeeding • Monitor baby's BGL according to hospital policy • Breastfeeding or expressing as soon as possible • Avoid use of infant formula unless medically indicated	• Mother may be more motivated to breastfeed. • Mother knows what to expect and be informed on strategies to use if there is delayed lactogenesis 2 • Mother will be reassured her milk will come in if delayed • Baby may require BGL management and monitoring as well as have co-morbidities eg. prematurity, perinatal asphyxia • Babies of mothers who expressed colostrum antenatally were found to be less likely to receive formula supplementation. • She is at risk of sudden onset of hypoglycaemia when feeding • Baby is at increased risk of hypoglycaemia • EBM is available for baby • Delayed feeding or expressing increases risk of undersupply • Breastmilk improves BGL • If a genetically pre-disposed baby is given standard infant formula in the first 3 months – 52% more likely to develop Type 1 diabetes
Gestational Diabetes May be Diet Controlled or Insulin Dependent	• Appropriate prenatal education for breastfeeding - Longer duration of breastfeeding may reduce the likelihood of mother getting type 2 diabetes - Longer duration of breastfeeding reduces the likelihood of childhood obesity which babies of GDM are at higher risk - Early and frequent feeding improves baby's BGL and promotes breastmilk production - Hand express EBM to give the baby if not feeding - Discuss and educate on antenatal expressing of colostrum Postnatal care • Skin-to-skin and early encouragement of breastfeeding • Keep mother and baby together • Avoid use of infant formula • Monitor baby's BGL according to hospital policy • On-going advice re diet and exercise for mother	• Mother may be more motivated to breastfeed • Women with Gestational Diabetes are twice as likely to develop Type 2 diabetes if they do not lactate following the birth of the baby whose pregnancy provoked Gestational Diabetes • Some studies show exclusive breastfeeding in the first 6 months and longer duration of breastfeeding is associated with reduction in childhood obesity for babies whose mothers have GDM. • Improves glucose metabolism • Infants of GDMs who were breastfed in delivery room had a significantly lower rate of borderline hypoglycaemia than those who were not breastfed early • Up to 50% of women who develop Gestational Diabetes will get Type 2 Diabetes later in life • Mother knows what to expect and strategies if baby not feeding • Babies of mothers who expressed colostrum antenatally were found to be less likely to receive formula supplementation

Diabetes and Breastfeeding (continued)

Type 2 Diabetes May be controlled by diet, oral medication or Insulin	Appropriate prenatal education for breastfeeding - Longer duration of breastfeeding reduces the likelihood of childhood obesity - Discuss and educate on antenatal expressing of colostrum - Early and frequent feeding improves baby's BGL and promotes breastmilk production - Hand express EBM to give the baby if not feeding Postnatal care • Skin-to-skin and early encouragement of breastfeeding • Keep mother and baby together • Avoid use of infant formula • Monitor blood glucose levels according to hospital policy • On-going advice re diet and exercise	• Mother may be more motivated to breastfeed • Mother knows what to expect • Babies of mothers who expressed colostrum antenatally were found to be less likely to receive formula supplementation • Improves glucose metabolism

1. Fava D et al, 1994, Relationship between dairy product consumption and incidence of IDDM in childhood in Italy, *Diabetes Care,* 17: 1488- 1490
2. Verge C et al, Environmental factors in childhood IDDM. A population-based, case-control study, 1994, *DiabetesCare,* 17: 1381-1389
3. Wah Cheung N et al, 2007 Diabetes Research and Clinical Practice, 77 (2), 333-334
4. Kjos SL et al, 1993. The Effect of Lactation on Glucose and Lipid Metabolism in Women with Recent Gestational Diabetes,*Obstet Gynaec,* 82: 451-455
5. Riordan J & Wambach K, *Breastfeeding and Human Lactation*, 2010, 4th edition, Jones & Bartlett, USA, p520
6. Crume T,L. et al 2011 *Long Term impact of neonatal breastfeeding on Childhood adiposity and fat distribution among children exposed to diabetes in utero* Diabetes Care vol 34, no 3 pp641 – 5
7. Chertok et al 2009, *Effects of early breastfeeding on neonatal glucose levels of term infants born to women with gestational diabetes* Journal of Human Nutrition and Dietetics vol 22, no 2 pp166-9
9. Soltani H. & Arden M, 2009 *Factors associated with breastfeeding up to 6 months postpartum in mothers with diabetes* .JOGNN vol. 38, no. 5, pp.586-94
10. Moorehead A. (2016) Perinatal Society of Australia and New Zealand Conference proceedings 2016

25.4 Hepatitis B and Breastfeeding

Needs and/or Problems	Action	Rationale
Risk of transmission of Hepatitis B at birth through breastfeeding	• All women receive Hepatitis B testing during pregnancy as part of routine antenatal care	• To identify HbsAg positive women
	• All neonates born to Hepatitis B Surface Antigen (HbsAg) positive women should be given immunoglobulin and 1st dose of Hepatitis B vaccine as soon as possible after birth. Baby then has second and third vaccines as per normal Hepatitis B protocol.	• This protocol has been successfully in reducing the risk of neonatal transmission during birth and breastfeeding
	• Mother is encouraged to breastfeed	• Benefits of breastfeeding outweigh risks of transmission
Mother has cracked/bleeding nipples	• Educate and assist as necessary to improve positioning and attachment • If unable to attach and feed then mother to rest/express for 24 hours or until completely healed • If baby has been given Hepatitis B vaccine and immunoglobulin the baby can receive the expressed breast milk, continue feeding	• Support mother through attachment difficulties and damaged nipples • Hepatitis B vaccination and Hepatitis B immunoglobulin virtually eliminates the risk of transmission via breastmilk
Risk of transmission of HBV from patient to health worker	• Practice standard precautions when handling breastmilk and other body fluids see p14 • Hepatitis B immunisation for Health workers	• Prevent transmission of HBV from patient to health workers • NHMRC recommends all health workers involved in patient care or in the handling of human milk or human blood/tissue be vaccinated

- National Health & Medical Research Council (2013). The Australian Immunisation Handbook, 10th Edition
- NSW Health Department Factsheet, 2007. Hepatitis B.
- NSW Health, Infection Control Policy. PD2007_036.
- Riordon J & Wambach K, *Breastfeeding and Human Lactation*, 2010, 4th edition, Jones & Bartlett, USA, p 205
- Hale T. W, *Medications and Mothers' Milk, A Manual of Lactational Pharmacology* 2012, 15th Edition , Hale Publishing, L.P. p539

25.1 Hepatitis C and Breastfeeding

Mother has Hepatitis C and wishes to breastfeed. Elevated risk of transmission: • Acute phase of illness • High viral load • Serious liver damage	• Inform mother re benefits of breastfeeding • Inform mother re known methods of Hepatitis C transmission and that there is no greater risk of transmission for breastfed babies compared to artificially fed babies • Consider reviewing viral load if PCR positive	• Mother can make an informed decision re breastfeeding • Hep C RNA is has not been found in breastmilk and the transmission via breastfeeding has yet to be documented Increased risk of transmission with high viral load but unknown if breastfeeding increases this risk •
Woman Is co-infected with HIV	• See HIV and Breastfeeding	
Mother has cracked/bleeding nipples	• Rest/express for 24 hours or until completely healed • Discard EBM if blood visible on nipple or in milk.	• Lessens the chance of transmission to baby
Risk of transmission to staff	• Practice standard precautions when handling breastmilk and other body fluids, see p14	• Prevent Hepatitis C transmission from mother to staff
• NSW Health, Infection Control Policy. PD2007_036 • Hepatitis Australia, 2014. *Women and Hepatitis C*- A Resource for Women with Hepatitis C. (funded by Commonwealth Department of Health) • Hale T. W, *Medications and Mothers' Milk, A Manual of Lactational Pharmacology* 2012, 15th Edition , Hale Publishing, L.P. p 541		

25.2 HIV and Breastfeeding

Needs and/or Problems	Action	Rationale
Mother has HIV Risk of transmission of HIV from mother to baby via breastmilk	• Inform mother regarding the known risks of transmission of HIV via breastmilk • Inform mother regarding factors likely to increase risk of transmission • Discuss and recommend formula feeding	• In Australia where safe alternatives to breastfeeding are available breastfeeding is not recommended to a HIV positive mother
Mother has HIV and is determined to breastfeed Risk of transmission is minimised if "exclusive breastfeeding" is practiced.	• Inform mother regarding the known risks of transmission of HIV via breastmilk and the Australian recommendation. • Early initiation of antiretroviral therapy (ART) from 14 weeks gestation and continuing to the end of the breastfeeding period (abrupt weaning is not necessary) • Inform mother regarding factors likely to increase risk of transmission eg. mixed feeding, if not receiving ART • If not receiving ART, when mother is ready to introduce other food to the baby she should be advised to abruptly wean baby from the breast	• Several clinical trials have shown the efficacy of antiretroviral in preventing transmission to the infant while breastfeeding • Babies of HIV+ women who are "exclusively breastfed" are not statistically different from those "never breastfed" at six months. However, both these groups are statistically significant from those who are "mixed fed" i.e. given any additional fluids or solids while being breastfed, as this may lead to gastrointestinal injury and disruption of immune barriers

- National Health and Medical Research Council (2012) Infant Feeding Guidelines. Canberra: National Health and Medical Research Council
- Coutsidis et al, AIDS (2001),15: 379-387
- General Health Promotion/ Department of Health UK (2004), HIV and Infant Feeding: Guidance from the UK Chief Medical Officers' Expert Advisory Group on AIDS, p17.
- Covadia HM et al, 2007, Mother-to child transmission of HIV-1 infection during exclusive breastfeeding in the first 6 months of life: an intervention cohort study. Lancet March 31; 369: 1107-1116
- World Health Organisation, Rapid Advice – Use of antiretroviral drugs for treating pregnant women and preventing HIV infection in women, November 2009. www.who.int

25.3 Alcohol Considerations when Breastfeeding

Needs and/or Problems	Action	Rationale
For the mother who wishes to consume alcohol	• Advise mother that the safest option is to avoid alcohol while breastfeeding • Particularly avoid alcohol in the first 4 weeks and while breastfeeding is being established • If mother chooses to drink alcohol –advise her to limit alcohol intake to no more than 2 standards drinks per day and only after a feed.	• Alcohol enters the breastmilk and may persist for several hours after maternal consumption • The alcohol may harm the developing baby if ingested via the breastmilk • Large quantities of alcohol decrease the volume of breastmilk produced by interfering with the let down reflex. An intake of 10 to 20 gms in a day is considered safe (<2 standard drinks). • One standard drink = 250ml beer 375ml light beer 100ml wine 60ml fortified wine 30ml spirits • Drinking > 2 standard drinks per day may affect the baby's psychomotor development and disrupt their sleep – wake behavioural patterns • Alcohol may make the baby drowsy or unsettled and may reduce the intake of breastmilk
	• It is best to consume the alcoholic drink just after a feed when the baby may not be feeding again for a few hours • Consider expressing in advance if the mother intends to drink alcohol and express and discard her milk when drinking alcohol	• Alcohol is transferred through the breastmilk at a level similar, or just lower than, that in the mother's blood. Consumption of alcohol just after the baby has been breastfed (and, therefore, a few hours before the next feed) ensures that the breastmilk the baby consumes at the next feed will contain less/no alcohol

- Brodribb W 3rd Ed, Breastfeeding Management in Australia. Australian Breastfeeding Association, 2006 p.232
- Mennella JA, Beauchamp GK. The transfer of alcohol to human milk. Effects on flavour and the infant's behaviour. NEJM 1991: 325(14):981-985
- Australian Government – Department of Health and Ageing, New Guidelines for alcohol consumption, 2009, www.alcohol.gov.au
- National Health and Medical Research Council (2013) Australian Dietary Guidelines. Canberra: National Health and Medical Research Council
- NSW Health 2014 Clinical Guidelines for the Management of Substance Use During Pregnancy, Birth and the Postnatal Period

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25.4 Tobacco Smoking and Breastfeeding

Needs and/or Problems	Action	Rationale
Mother is a smoker	• Encourage the mother to breastfeed and explain the benefits • Discuss strategies to manage smoking while breastfeeding such as: - smoke straight after a breastfeed and not just before a feed - do not smoke in the house or car - consider having a smoking "outfit" eg jacket, scarf, and after the cigarette remove the outfit, wash hands and rinse mouth • Encourage the mother to cease smoking and explain the risks associated with smoking for the baby • Refer mother to a suitable program eg. Quit program • Nicotine replacement therapy (NRT) is acceptable during breastfeeding - Intermittent delivery methods are preferred (inhalator, gum, lozenge, mouth spray) - Advise the mother to breastfeed first then use one method above to maximise the time between the use of NRT and the next feed to reduce the baby's exposure to nicotine - If mother insists on nicotine patches advise the lower dose – 7 or 14 mg	• Smoking is not a contraindication to breastfeeding • Women who smoke are less likely to breastfeed and to breastfeed for a shorter time than non-smokers • Breastfed babies of smoking mothers have less incidence of respiratory illness than formula fed babies of smoking mothers. • It takes 95 mins for half of the nicotine to be excreted from the mother's system • Smoke is trapped in clothing, hair and on hands • Babies are exposed to secondary smoke and at an increased risk of SIDS • Smoking can decrease milk volume and fat content and depress the milk ejection reflex prior to breastfeeding • Nicotine absorbed from breastmilk is less than 5% of the adult daily dose • No untoward effects were noted in the baby in a Nicotine patch study
Partner is a smoker	• Explain the risks to the baby associated with passive smoking • Encourage the partner to join a suitable program with the baby's mother • If partner continues suggest the same strategies as above – smoke outside, smoking outfit etc	• A baby exposed to tobacco smoke has a higher risk of SIDS however breastfeeding is protective • Baby is at greater risk of pneumonia, bronchitis, meningococcal disease, asthma and middle ear infection

- Riordan J & Wambach K, Breastfeeding and Human Lactation, 2010, 4th edition, Jones & Bartlett, USA, p 543
- ILCA Core Curriculum for Lactation Consultant Practice, 2013, pp. 463-464
- Quit because you can, 2007, NSW Health Tobacco and Health Branch, North Sydney
- Hale, T. Medications and Mother's Milk 2012, 15th Ed Hale Publishing
- NSW Health 2014 Clinical Guidelines for the Management of Substance Use During Pregnancy, Birth and the Postnatal Period
- Breastfeeding and Smoking, Australian Breastfeeding Association website https://www.breastfeeding.asn.au/bfinfo/breastfeeding-and-smoking accessed 4/2/1

25.5 Cannabis and Breastfeeding

Needs and/or Problems	Action	Rationale
Mother wishes to smoke cannabis and breastfeed *Also referred to as: marijuana, pot, herb, weed, boom, Mary Jane, gangster and chronic	• Inform mother re benefits of breastfeeding • Advise mother cannabis is contraindicated while breastfeeding for the following reasons THC (tetrahydrocannabinol): - is stored in fat tissue for long periods (weeks to months) - is excreted and may accumulate in milk - reduces the quantity and quality of breastmilk	• Terminal elimination half-life approx. 4.3 days (2.6-12.6). The content of cannabis cigarettes is highly variable. • THC inhibits gonadotropin, prolactin, growth hormone and thyroid stimulating hormone release and stimulates release of corticotropin • Mother can make an informed decision re breastfeeding
	• Inform mother that we do not know what harmful effects it may have on baby and remind her of the short-term effects on herself eg memory, difficulty with problem-solving, panic attacks.	• Analysis of breastmilk in a chronic heavy user showed an eight-fold accumulation in the milk compared to plasma • Baby may excrete THC is urine for 2-3 weeks • Studies have shown delayed motor development in babies although this is highly dose dependent • There have been anecdotal reports of drowsiness in babies where mothers have smoked cannabis
	• If the mother uses cannabis: - Discuss alternative methods of feeding as she should be advised to express and discard her breastmilk for at least 48 hours - Ensure safe sleeping practices are in place - Explain that the risk of SIDS is increased	• Cannabis use increases the risk of SIDS • Limited evidence regarding cannabis and breastfeeding

- National Cannabis prevention and Information Centre. Cannabis and Pregnancy updated 2011 www.ncpic.org.au
- NSW Health 2014. Clinical Guidelines for the Management of Substance Use during Pregnancy, Birth and the Postnatal Period
- Jaques SC et al, (2014) Cannabis, the pregnant woman and her child: weeding out the myths Journal of Perinatology
- Nice, F.J. & Luo A.C. *201 Medications and Breastfeeding*: Current Concepts. Journal of American Pharmacists Association 52:1, pp.86 - 94
- Hale T, *Medication and Mother's Milk,* 2014, 16th Edition, Hale Publishing
- Riordon J & Wambach K, *Breastfeeding and Human Lactation*, 2010, 4th edition, Jones & Bartlett, USA, p 187

25.6 Methadone or Buprenorphine and Breastfeeding

Needs and/or Problems	Action	Rationale
Mother is on Methadone and wishes to breastfeed	Inform mother about the benefits of breastfeeding Women should not be discouraged from breastfeeding if on a methadone program	Most studies show that only small amounts of methadone pass into breastmilk (approximately 2.8% of maternal dose) despite doses as high as 105mg/day. Benefits of breastfeeding outweigh the risk
	Watch baby for adverse effects (neonatal abstinence syndrome) such as sedation, poor feedings, withdrawal, addiction, respiratory depression	These symptoms may be slow in onset and require as much as 2-6 weeks of observation
Mother is on Buprenorphine and wishes to breastfeed	Inform mother about the benefits of breastfeeding Inform the woman the safety of Buprenorphine in breastfeeding is not yet established but it is considered safe in breastfeeding	Buprenorphine is associated with better outcomes for neonate with improved fetal development The amount of buprenorphine in breastmilk is small and considered to be insignificant. The woman can make an informed decision
Mother breastfeeds	Observe baby for Neonatal Abstinence Syndrome (NAS) – eg poor feeding, irritability, withdrawal symptoms as well as sedation and respiratory depression for longer than 72 hours	NAS usually commences within 72 hours of birth

- ILCA Core Curriculum for Lactation Consultant Practice, 2013, pp. 465 - 466
- Hale T, Medications and Mothers' Milk 2014, 16th edition, Hale Publishing
- Riordon J & Wambach K, Breastfeeding and Human Lactation, 2010, 4th edition, Jones & Bartlett, USA, p 175
- NSW Health 2014 Clinical Guidelines for the Management of Substance Use During Pregnancy, Birth and the Postnatal Period

25.7 Heroin and Breastfeeding

Needs and/or Problems	Action	Rationale
Mother is using heroin* and wishes to breastfeed *Also referred to as: smack, TNT, white junk, snow, Mexican brown, horse, Harry, boy, H.	Review by Drug Health Medical Services to provide support in stabilisation eg. opioid substitution program Encourage referral to Drug Health Counsellor Breastfeeding is contraindicated if the mother is using heroin Inform mother about the benefits of breastfeeding but advise her heroin is contraindicated due to the following facts: • Heroin crosses into milk in sufficient quantities to have effects on the baby • Baby may suffer effects such as sedation, tremors, vomiting, constipation, poor feeding and respiratory depression • Baby may suffer addiction and/or withdrawal • If mother uses heroin during breastfeeding, she must express and discard the EBM for 24 - 48 hours	• May be opportunity for lifestyle changes • Addicts and recreational users may use extraordinary large doses of heroin • Concentrations in milk vary greatly but may be as high as 0.5mg per litre

- Andriske L *Drugs and Breastfeeding 1997-1998.* Pharmacy Department The Royal Womens Hospital Melbourne Australia
- Hale T, *Medications and Mothers' Milk* 2014, 16th edition, Hale Publishing
- Riordon J & Wambach K, *Breastfeeding and Human Lactation*, 2010, 4th edition, Jones & Bartlett, USA, p 175
- ILCA Core Curriculum for Lactation Consultant Practice, 2013 p 465
- NSW Health 2014 Clinical Guidelines for the Management of Substance Use During Pregnancy, Birth and the Postnatal Period

25.8 Cocaine and Amphetamine Type Substances (ATS) and Breastfeeding

Needs and/or Problems	Action	Rationale
Mother is a cocaine user and wishes to breastfeed	Review by Drug Health Medical Services to provide support in stabilisation eg. opioid substitution program, rehabilitation or detox • Encourage referral to Drug Health Counsellor • Cocaine use should be strongly discouraged and inform the mother of risks • Regular users should be discouraged from breastfeeding • It is contraindicated when breastfeeding	• May be opportunity for lifestyle changes
	• If mother uses cocaine she must express and discard her milk for 24- 48 hours after last ingestion • Ensure the mother has an alternative feeding method while she is discarding her breastmilk	• Baby may test urine positive to cocaine for days to weeks as the inactive metabolite (benzoecgonine) will still be found
	Reminder for mother: **Topical application of cocaine to the nipples is <u>extremely</u> dangerous and must be avoided**	• Can cause extreme toxicity in the baby
Mother uses amphetamine type substance (ATS) Includes ICE, speed, methamphetamine	• Mothers who are stable and not using ATS should be supported to breastfeed • Mothers who use ATS rarely or in binges should be recommended to abstain from substance use and informed of the risks • Express and discard for 24 – 48 hours and have an alternative feeding method • Mothers should be encouraged to have mechanisms/ support persons in place to protect their infants • Regular users should be advised against breastfeeding	• Methamphetamine crosses the blood brain barrier more readily than amphetamine • Report of cardiopulmonary failure in an infant attributed to amphetamine in breastmilk

- Hale T, *Medications and Mothers' Milk* 2014, 16th edition, Hale Publishing
- ILCA Core Curriculum for Lactation Consultant Practice, 2013. p. 466
- Nice, F.J. & Luo A.C. *2012 Medications and Breastfeeding*: Current Concepts. Journal of American Pharmacists Association 52:1, pp.86 – 94
- NSW Health 2014 Clinical Guidelines for the Management of Substance Use During Pregnancy, Birth and the Postnatal Period
- Bartu et al, 2009 *Transfer of methylamphetamine and amphetamine into breast milk following recreational use of methylamphetamine* Br Journal Clin Pharm doi: 10.1111/j.1365-2125.2009.03366.x

25.9 Benzodiazepines and Breastfeeding

Needs and/or Problems	Action	Rationale
Mother taking a benzodiazepine and wishes to breastfeed Often used to treat anxiety and other disorders	• Advise mother to not to abruptly cease taking the medication • Undergo gradual reduction of benzodiazepines • Do not breastfeed immediately after taking the medication due to risk of falling asleep and smothering the baby • Breastfeed in a seated chair to reduce the risk to baby • Newborn baby should be monitored for NAS symptoms	• Abrupt stopping may be harmful to mother's health
• . NSW Health 2014 Clinical Guidelines for the Management of Substance Use During Pregnancy, Birth and the Postnatal Period		

26. Contraception and Breastfeeding

Needs and/or Problems	Action	Rationale
Effective method of contraception that is compatible with breastfeeding Consider the mother's medical history. Some contraception options are restricted for use with certain medical conditions.	Discussion with mother regarding methods of contraception available, including: • how they work • when they can be used • benefits/risks • effect on breastfeeding • previous experience with contraceptives • future childbearing plans • partner's experience and opinions • social situation • previous lactation experience and medical conditions	• 33% of lactating women have had a menstrual period by the end of the third month, • bleeding is unlikely to indicate a return to fertility before 8 weeks in women who are exclusively breastfeeding • If a woman is not comfortable with a contraception method, she may not use it effectively • Partners impact on compliance particularly for barrier methods, LAM and natural family planning • Number of partners and sexual activity may impact on compliance • A history of prior insufficient milk supply / breast hypoplasia indicates caution be used with hormonal methods (including Implanon and Mirena) due to possible impact on milk supply until > 6 weeks postpartum
Use of combined pill	The combined oral contraceptive pill contains oestrogen and progestin and not recommended for breastfeeding mothers	The oestrogen component although unlikely to have a hormonal effect on the baby may significantly milk production if used less than 6 months postpartum.
Progestogen-only pill (mini pill)	It can be commenced from 2-6 weeks postpartum **NB:** Caution with mothers with a history of low supply or breast hypoplasia if using < 6 weeks postpartum	The dose is quite low. Some women report a slight initial reduction in milk production, but this usually responds to a short term increase in feeding frequency
Intramuscular medroxyprogesterone acetate (Depo Provera®)	Should not be considered until after 6 weeks	If used immediately postpartum an impaired milk supply may result.
Etonogestral Implant (Implanon®)	Subdermal Implant that is effective for three years. Effects reversible immediately after removal of device **NB:** Caution with mothers with a history of low supply or breast hypoplasia if inserting < 6 weeks postpartum	May impact on early milk production ie in the first 6 weeks.
Emergency Contraception(Levonorgestrel)	Given within 24-72 hours after unprotected intercourse	Thought to have minimal effect on milk production
IUCD- Inrauterine Levonorgestrel (Mirena®)	Can be inserted > 4 weeks postpartum. Effects reversible immediately after removal of device **NB:** Caution with mothers with a history of low supply or breast hypoplasia if inserting < 6 weeks postpartum	Compatible with breastfeeding

Contraception and Breastfeeding (continued)

Lactational Amenorrhea (LAM) Identification of women for whom LAM is a viable method of contraception	Discussion with mother re methods of contraception available, including LAM If **all** the following criteria are met the mother has 98% protection against pregnancy with breastfeeding alone: • The mother remains amenorrhoeic • The baby is less than 6 months old • The baby is not receiving any supplementary food • The baby feeds at night **Whenever any of the above criteria are not met the mother needs to initiate another form of contraception to prevent pregnancy** **NB:** If women are expressing or giving supplemental feeds daily she should be advised LAM may not be an effective If mother interested in LAM, then information given should include: a) how it works: sucking stimulates prolactin -suppresses ovulation b) when it can be used: see above c) benefits: no hormones absorbed by mother, can delay need for other forms of contraception d) failure rate – 2% e) the more intensively the woman breastfeeds the less likely it is for ovulation to occur prior to the first menstrual-like bleed	Mother can make informed decision regarding her choice of contraception LAM effectiveness has not been adequately tested for women who are expressing instead of breastfeeding

- Academy of Breastfeeding Medicine ABM Protocol#13: Contraception During Breastfeeding, Revised 2015
- Hale T, Medications and Mothers' Milk 2014, 16th edition, Hale Publishing
- Queenan JT. Contraception and breastfeeding. Clin Obstet Gynecol. 2004;47:734-9. PMID: 15326435
- World Health Organization. Medical eligibility criteria for contraceptive use, Fifth edition. Geneva: Reproductive Health and Research, World Health Organization. 2016 ISBN: 978 92 4 154915 8
- ILCA Core Curriculum for Lactation Consultant Practice, 2013. pp.71-72
- Family Planning NSW, 2008. Health Information Sheet. Natural Family Planning
- Riordon J & Wambach K, Breastfeeding and Human Lactation, 2010, 4th edition, Jones & Bartlett, USA, p 723
- ILCA Core Curriculum for Lactation Consultant Practice, 2013.pp. 71-72
- Academy of Breastfeeding Medicine ABM Protocol#13: Contraception During Breastfeeding, Revised 2015

27. Dietary Considerations when Breastfeeding

Needs and/or Problems	Action	Rationale
For the mother who wants to meet all her dietary needs	**Refer to Dietician if on a vegetarian diet or any variable diet.** • Recommendations for calcium during pregnancy and breastfeeding are the same as for non-pregnant women (1000mg per day). See Lactation Dietary Requirements • 2.5 serves of meat/ protein daily • 9 serves cereal-based foods/bread daily • 2 or more fruit serves daily • 7 or more vegetable serves per day • Iodine supplement – 150mcg / day	• A fully breastfeeding woman will require an extra 2,000-2100 kJ/day in the first 6 months but this amount will depend on the mother's level of milk production and changes in physical activity • Lactation increases the recommended dietary intakes for adults by between 0 (for iron) and 1.5 times (vitamin C). Most nutrient needs increase by a factor of 50% • The composition of the breastmilk does not vary greatly with a change in the mother's diet, but an inadequate diet may lower the mother's nutrient stores • Including a variety of foods and normal portion sizes should ensure baby does not react to a specific food

For the mother who follows a **vegetarian** diet	• Ascertain type of vegetarian diet being/to be followed:
	  • **Semi-vegetarian** diet – usually avoids only red meat but has fish/chicken/eggs and dairy foods
	  • **Ovo-lacto and lacto vegetarian diet** – avoid all flesh foods (meats/fish/poultry) but have dairy foods +\- eggs. Ensure normal blood iron and zinc levels are maintained
	• Encourage regular consumption of iron-containing foods such as nuts, legumes, seeds and wholegrain cereal, eaten with a fruit/vegetable high in Vitamin C
	• Avoid drinking tea/coffee with meals
		• Lactation does not increase iron levels, and these may be low after giving birth
		• Low iron levels increase tiredness and may affect milk supply
		• Vegetarian diets contain non-haeme iron, which is not as easily absorbed as haeme-iron from animal foods. Non-haeme iron absorption is increased if a high vitamin C food is eaten at the same meal. Tea/coffee interfere with iron absorption
		• Vegan diets are high in fibre and low in fat and rapid weight loss during lactation will decrease milk production, therefore the energy needs must be met

For the mother who follows a **vegan** diet Vegan and strict macrobiotic diets - avoid all animal foods At risk for vitamin B_{12} deficiency	• Ensure normal blood vitamin B12 by use of vitamin B12 fortified soy drinks or supplements. Baby may need vitamin B_{12} supplements	• Long term vegan mothers produce breastmilk containing very low, or no, vitamin B_{12}. • Babies without adequate vitamin B12 rapidly develop neurological problems. Plants do not contain active vitamin B12 and can only provide this vitamin if contaminated with vitamin B12 synthesising bacteria. As the food supply in Western countries is sold under strict hygiene standards, plants to not provide a reliable source of vitamin B12. • Therefore, vitamin B12 supplemented foods or B12 vitamin supplements are recommended for vegans
	• Ensure enough energy (kj) from diet by use of high fat foods like nuts, vegetable oils and ground seeds • Ensure normal blood iron and zinc levels are maintained. Encourage iron-containing foods as per ovo-lacto vegetarians. Ensure adequate calcium intake: eg from calcium-fortified soy drinks	• Vegan diets are high in fibre and low in fat and rapid weight loss during lactation will decrease milk production" therefore the energy needs must be met • Vegan diets contain non-haeme iron, which is not as easily absorbed as haeme-iron from animal foods. Non-haeme iron absorption is increased if a high vitamin C food is eaten at the same meal. Tea/coffee interfere with iron absorption

Dietary Considerations when Breastfeeding (continued)

For the mother who wants to lose weight	Ascertain pre-pregnancy (usual) weight and monitor current weight and any changes. Aim for <2kg weight loss per month by: • Regular moderate exercise (eg walking) • Avoiding high fat/high sugar foods that have a low nutritional content • Encourage fresh fruits and vegetables, low fat dairy foods • Wholemeal cereal foods and lean meats/fish, chicken and legumes	Crash diets with rapid weight loss increases tiredness and affects milk supply. Rapid weight loss also increases the level of environmental contaminants and trans fatty acids in breastmilk • Modest regular weight loss (2kg per month) does not affect lactational performance
	• Encourage continued breastfeeding past 6 months	• Continued lactation into second six months appears to enhance weight loss
For the mother who wants to commence/restart an exercise regime	Normal medical clearance. Also include the following: • Ascertain pre-pregnancy weight and monitory current weight and any weight changes • Advice on maintaining joint stability • Need to increase exercise gradually and to always "warm up" • Need for adequate breast support • Need to maintain hydration/fluid intake	• Rapid weight loss impairs lactational performance • Exercise, including vigorous exercise, does not seem to affect breastmilk production/lactation performance – **as long as energy needs are being met** Increasing breast size can make exercise uncomfortable, therefore good breast support is essential

- National Health and Medical Research Council (2013) Australian Dietary Guidelines. Canberra: National Health and Medical Research Council
- ILCA Core Curriculum for Lactation Consultant Practice 2013 p324American Dietetic Association. *Manual of Clinical Dietetics.* ADA, Chicago; 1988
- Chappell JE, Clandinin MT and Kearney-Volpe C *Trans fatty acids in human milk lipids: influence of maternal diet and weight loss* Am J Clin Nutr 1985; 42: 49-56
- Stevens MF, Ebel GF and Psaila-Savona P *Organochloride pesticides in Western Australia Nursing Mothers.* MJA 1993; 158: 238-241
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- Herbert V. *Staging vitamin B12 (cobalamin) status in vegetarians* Am J Clin Nutr 1994; 59 (suppl): 1213S – 1222S
- Craig, WJ Iron *Status of vegetarians.* Am J Clin Nutr 1994; 59(supp): 1233S-1237S

27.1 Vitamin D and Breastfeeding

Needs and/or Problems	Action	Rationale
Mother is suspected to be at risk of Vitamin D deficiency which would increase her baby's risk of rickets At risk factors for mothers: • Dark-skinned • Inner city dwelling • Clothing deters skin exposure • Limited meat, fish & dairy in diet	• Assess Mother's Vitamin D levels and supplement as required. Currently 400 IU(10mcg) is the recommendation • Review maternal diet to include milk, butter, eggs & oily fish • Encourage normal exposure of baby to the sun ie. arms and legs only in the early or late hours of the day	• Vitamin D is necessary for calcium absorption and breastmilk has very little fat soluble Vitamin D • Increased Vitamin D intake results in increased levels in breastmilk • Usually enough to stimulate adequate stores of Vitamin D

1. National Health and Medical Research Council (2013) Australian Dietary Guidelines. Canberra: National Health and Medical Research Council
2. Riordan J & Wambach K, *Breastfeeding and Human Lactation*, 2010, 4th edition, Jones & Bartlett, USA, p 128 & 599
3. ILCA Core Curriculum for Lactation Consultant Practice, 2013, p325

27.2 Caffeine Consideration during Lactation

Needs and/or Problems	Action	Rationale
For the mother who wishes to consume caffeine containing food/drinks	• Moderate consumption of tea, coffee, cola drinks and chocolate – 3 cups a day – preferably after a breastfeed • If cola drinks are consumed, encourage use of decaffeinated cola drinks	• Caffeine is excreted in breastmilk in low levels and reaches a maximum concentration about one hour after consumption. Large quantities may accumulate in the baby and result in jittery, wakeful baby and may decrease the baby's absorption of iron • In moderate amounts caffeine has been shown to stimulate milk production (4)
	• Avoid sudden changes in the caffeine intake	• Sudden changes in caffeine intake are more likely to have a noticeable effect on the baby, as the body becomes accustomed to a certain level of intake

1. Nehlig A, Debry G. *Consequences on the newborn of chronic maternal consumption of coffee during gestation and lactation: a review* J Am Coll. Nutr. 1994; 13(1):6-21
2. Hale T, *Medications and Mothers' Milk* 2014, 16th edition, Hale Publishing
3. National Health and Medical Research Council (2012) Infant Feeding Guidelines. Canberra: National Health and Medical Research Council

28. Returning to Work

Needs and/or Problems	Action	Rationale
Mother planning to breastfeed when she returns to work	• Discuss with employer well in advance of the return date • Dependent upon how well breastfeeding is established and flexibility and support in the workplace eg. a satisfactory place to express and store breastmilk • Suggest she seek information and support such as the Australian Breastfeeding Association	• Allow time to plan and organise • If breastfeeding is well established mother will have a greater flexibility in considering options • Helps prepare mother and gives practical information which she can access
Prevention of breastfeeding problems associated with return to work	Discuss various options available to mother: • Replacing breastfeeds during work hours with EBM • Replacing breastfeeds during work hours with infant formula • Replacing breastfeeds during working hours with solid food when the baby is 6 months or older. • Weaning – if weaning or replacing breastfeeds with formula, slowly reduce the number of breastfeeds • If offering EBM and supply adequate, express at time baby would normally be fed • Monitor breasts for any signs of lumps or discomfort • Education re expressing and storing	• If able to express at work the mother will be able to keep up her supply and baby receives more breastmilk • If unable to express, giving the baby formula when at work and breastfeeds when mother able to feed continues the breastfeeding relationship • Slow weaning decreases the possibility of engorgement, blocked ducts or mastitis • The rate of milk production matches the amount removed from the breast • Close monitoring of breasts while reducing number of feeds or expressions reduces the likelihood of problems
Separation anxiety /distress	• Discuss with mother • Needs to ensure the following: • Support of partner and family • Adequate child minding facilities • Baby comfortable with alternative feeding method eg. bottle, cup	• Mother will be more relaxed with work arrangements • Mother knows that baby is able to feed while she is absent

1. Australian Breastfeeding Association website, *Can you return to work and still breastfeed* https://www.breastfeeding.asn.au/bf-info/breastfeeding-and-work/can-you-return-work-and-still-breastfeed accessed 5/2/17
2. Australian Breastfeeding Association, *Breastfeeding, Women and Work,* Booklet Series. 2002. Victoria
3. Riordon J & Wambach K, *Breastfeeding and Human Lactation*, 2010, 4th edition, Jones & Bartlett, USA, p 551-574

29. General Anaesthetic and Breastfeeding

Needs and/or Problems	Action	Rationale
Breastfeeding mother requires General Anaesthetic	See "Medication and Breastfeeding" for **basic information**	Interrupting breastfeeding for long periods is discomforting to the mother, difficult for the baby and may permanently interrupt breastfeeding.
	The drug would need to be present in a pharmacologically significant amount eg. agents that produce active metabolites with long half-lives.	This is rarely the case with anaesthetic medications
	Mothers with normal term or older infants can generally breastfeed when they are awake and alert.	Many anaesthetic medications either have brief half-lives and/or rapid redistribution from the plasma compartment to other remote compartments eg muscle. This reduces the overall degree of exposure to the baby. Some data is available on most medications used in anaesthetics and if exposure to the baby via milk is brief this does not allow sufficient time for clinically relevant levels to build up. Drugs enter milk and in most cases exit milk as a function of the mother's plasma level
Baby is young or premature	The age of the baby is variable and must be considered, as young or premature babies may be more susceptible to medication transfer	The intracellular junctions of the alveolar cells have wide gaps in the first four days post partum and for a longer period if the baby was premature. These gaps permit medications to penetrate breastmilk more readily.

1. Hale T, Medications and Mothers' Milk, 2014, 16th Edition, Hale Publishing
2. Hale T. Anaesthetic Medications in Breastfeeding Mothers, 1999, J Hum Lact 15(3)
3. Academy of Breastfeeding Medicine Protocol #15 Analgesia and Anaesthesia for the breastfeeding woman, revised 2012 http://www.bfmed.org/Media/Files/Protocols/Protocol_15_revised_2012.pdf

30. Radiological Procedures and Breastfeeding

Needs and/or Problems	Action	Rationale
• Mother requires a diagnostic procedure	• Identify the contrast to be used so that transference and bioavailability to the baby can be evaluated • Use appropriate resource to evaluate transference into breastmilk and the degree of exposure to the baby. For example: -Lactmed database - Medications and Mothers Milk - or phone Mothersafe: 9382 6539 (Sydney metropolitan) 1800 647848 (Non metropolitan area) • If mother needs to interrupt breastfeeding she should express to maintain her milk supply • Provide mother with the appropriate information so that she may make an informed decision	• Manufacturers' inserts may discourage breastfeeding without the latest lactation research • Should be weighed against the risk of interrupting breastfeeding and the potential risks to both mother and baby particularly if baby is "at risk" eg. Premature • Interrupt breastfeeding for 5 – 7 radioactive half- lives
Procedure requires the use of a Radio-opaque agent: • Gadolinium-based eg. MRI • Iodine-containing contrast medium (ICCM) eg. CT scan, intravenous pyelogram	• No interruption to breastfeeding[4] • No interruption to breastfeeding[5]	• Excreted into breastmilk in extremely small amounts usually less than 0.04% • MRI is considered a safe procedure for a baby • Less than 1/1000th of the ICCM dose gets into the breastmilk and it has poor bio-availability to the baby
• Thyroid scan – Radioactive I^{131}	• Breastfeeding should be discontinued	• Enhanced risk of thyroid cancer in infant

1. Newman J, 2007, *Breastfeeding and radiologic procedures*, Can Fam Physician, Vol 53(4) April
2. Hale T, *Medication & Mothers' Milk,* 2014 16th Edition, Hale Publishing, p1168
3. ILCA Core Curriculum for Lactation Consultant Practice, 2013, p447
4. American College of Radiology Committee on Drugs and Contrast Media. Administration of contrast media to breast-feeding mothers. In, ACR manual on contrast media. 2012
5. Royal Australian and New Zealand College of Radiologists *Iodine-Containing Contrast Medium* Inside Radiology, 2009
6. Lactmed database http://toxnet.nlm.nih.gov/cgi-bin/sis/search
7.

31. Weaning

Needs and/or Problems	Action	Rationale
Request/desire to wean	• Explore reasons for weaning and support mother in her decision • Discuss with the mother the number of feeds she is giving and the circumstances and timeline she has for weaning • Discuss options and explain the risk of mastitis if she weans abruptly or too quickly and give options appropriate to her situation • Give the mother the suppression of lactation handout Abrupt – Immediate cessation of breastfeeding. Gentle expressing for comfort only, using hand or breast pump gradually decreasing each day. Gradual – Reducing the number of breastfeeds given to baby over a chosen period of time.	Mother can make informed decision on which type of weaning she will choose. Gradual weaning is the usual method of choice as this allows fat tissue to replace milk-providing tissue over a longer period of time
Breast discomfort	• Wear firm supportive bra • Analgesia (paracetamol if needed) • Apply cold compress • Observe for blocked ducts • Express for comfort only if breasts become too full and painful • Breastfeed and drain breast if gradual weaning	Prevent complications eg. Mastitis (breast infection)
Breast infection/mastitis present	• Commence antibiotic for 5 - 7 days: see Mastitis and handout for mother • Paracetamol as needed • Discuss diet and rest If gradually weaning do not reduce breast feeds further until infection cleared	
Support	• Offer support and counselling • Provide information regarding community support services eg Australian Breastfeeding Association 24 hour parents help line or local support meetings	To reduce the sense of loss and guilt
Use of medication to suppress lactation urgently e.g. mother requires cancer treatment or death of infant	• Prescribe appropriate medication eg Dostinex • Advise mother of side effects e.g. dizziness, headache • No expressing • Good breast support	Quicker resolution of milk secretion Allows mother to make an informed choice

1. Lauwers J & Woessner C, *Counselling The Nursing Mother,* 1990 Avery Publishing Group Inc. USA, p226-290
2. Australian Breastfeeding Association, *Weaning*, Booklet Series, 2002, Victoria.
3. Riordon J & Wambach K, *Breastfeeding and Human Lactation*, 2010, 4th edition, Jones & Bartlett, USA, p 606

32. Consultation

SLHD Breastfeeding Reference Group

33. Definitions

WHO Breastfeeding Definitions

Feeding Practice	Infant receives	Allows the infant to receive	Does not allow the infant to receive
Exclusive breastfeeding	Only breastmilk including expressed breastmilk	Medicines, vitamins, minerals	Anything else
Predominant breastfeeding	Breastmilk as the predominant source of nourishment	Water and juice, medicines, vitamins and minerals	Anything else (particularly non – human milk and food based drinks)
Complementary feeding*	Breastmilk including expressed breastmilk	Anything else including non-human milk and solid foods	NA
Breastfeeding	Breastmilk including expressed breastmilk	Anything else including non-human milk and solid foods	NA
Bottle feeding	Any liquid or semi - solid food from a bottle with a teat	Anything else including non-human milk and solid foods	NA
*Complementary feeding is no longer used to assess infant feeding practices. Previously, it was used to indicate timely complementary feeding with solid foods and now a different indicator is used “introduction of solid and semi-solid or soft foods” in breastfed children as it was difficult to interpret**.**			

1. World Health Organisation *Indicators for assessing infant and young child feeding practices. Part 1 definitions* WHO 2008

34. References

Ministry of Health Policy Directive PD2011_042 Breastfeeding in NSW: Promotion Protection and Support http://www0.health.nsw.gov.au/policies/pd/2011/pdf/PD2011_042.pdf

National Health and Medical Research Council (2012) Infant Feeding Guidelines. Canberra: National Health and Medical Research Council.

Baby Friendly Health Initiative Australia, Australian College of Midwives https://www.midwives.org.au/why-baby-friendly

35. Parent Handouts

Guidelines for Establishing Lactation
Supporting the Breastfeeding Mother: Role of Family and Friends
Suppression of Lactation: Immediately After Birth
Suppression of Lactation: after Lactation is Established
Cleaning and Sterilising Feeding Equipment
Expressing Breastmilk
Storing and Using Expressed Breastmilk
Nipple Shields
Cup Feeding
Increasing Breastmilk Supply
Motilium Guidelines
Mastitis
Lactation Diet Requirements
Information for Breastfeeding Mothers who are also giving Breastmilk Substitutes

35.1 Guidelines for Establishing Lactation page 1

Health
Sydney
Local Health District

Parent's handout

Guidelines for Establishing Breastfeeding

Breastfeeding is a very individual thing, no two mothers and babies are the same. It is important that you understand your baby and his/her needs. Feed your baby to need in the first few days and your breasts should start to feel full by day 3 or 4.

During each breastfeed the consistency of the breastmilk changes. Usually at the beginning of a feed the milk will look watery, at the end of the feed the milk tends to look creamier. At the completion of the breastfeed the breasts will feel softer. However, milk will always be present as the breasts start to refill as soon as the baby sucks at the breast.

Each mother's rate of milk transfer from the breast to the baby is different. Babies take varying times to feed, and the rate of transfer may also vary with the time of day. Mothers are encouraged not to time feeds, it is more important to know how the baby feeds. For example is the baby content after the feed.

Often mothers find that their breastmilk supply is greatest in the mornings and the baby MAY only need one breast, by the evening the supply may have decreased a little, so it may be necessary to offer both breasts to ensure that the baby is completely satisfied.

REMEMBER that babies are quite different, some babies will only ever need one breast and others will always need both. It is important that at every feed both breasts are offered.

Make sure that your baby is well attached to the breast to ensure an adequate feed

Some signs that the baby is well attached to the breast are:

- It will not hurt (after the initial attachment discomfort)
- The mouth still be wide open
- The sucking action will be rhythmical, after some quick short sucks the baby begins to take longer more rhythmical deep sucks taking a brief pause. This pattern will continue until he/she is satisfied. Whilst breastfeeding it is important not to distract this sucking pattern by tickling the baby under the chin or stroking the sole of the foot
- When the baby has had enough he/she will let go of the nipple, or you will notice that he/she is not longer having any deep rhythmical sucking.

If your baby is NOT well attached the following signs will be noticeable:

- It may hurt for the whole feed
- The baby's cheeks may dimple when he/she sucks
- Whilst the baby is sucking he/she may make a lot of noise
- The sucking pattern may be very short and fast
- The baby's mouth may NOT be open very wide.
- Your nipple may be misshapen when your baby comes off the breast.

Guidelines for Establishing Breastfeeding 2

Parent's handout

Tips to ensure a good start to successful breastfeeding:

- Have a comfortable place to breastfeed your baby, lean back with good back support, feet raised if this is more comfortable (phone books can be useful footstools)
- Have a glass of water close by
- Ensure that the baby is properly attached, have the baby's body near yours – his chest to your chest, with chin well in to your breast.
- Ensure the baby completely softens the first breast before offering the second breast

Initially as the milk comes in, your breasts will feel very full and uncomfortable for a few days.

Until the milk supply becomes established this 'fullness' may continue to happen for a few weeks.

The wearing of a well supporting maternity bra and using cold packs in the early days of breastfeeding maybe helpful.

Some women find their nipples feel sensitive after the birth of the baby but this is normal, generally only lasting a few days.

In 24 hours 8 feeds or more is normal. There is no need to time your baby's feeds, but it is important in the first 4-6 weeks to ensure that your baby has at least six feeds in 24 hours.

It normally takes about six weeks for lactation to become established

Resting during the day when possible to get adequate sleep, and a well balanced diet are all essential to get breastfeeding off to a good start and enjoy your baby

35.2 Supporting the Breastfeeding Mother: Role of Family and Friends

NSW GOVERNMENT Health
Sydney
Local Health District

Parent's handout

The Role of Family and Friends Support to the Breastfeeding Mother

For the mother

As a new mother, whether it is your first or fifth baby, you can always benefit from some extra help and support. If possible try to think about what type of support you may need before the birth of your baby. Some mothers may need more support with the day-to- day household chores while other mothers just like someone to talk to. Breastfeeding your baby is the best start for you and your baby. Even if you are an experienced mother, it can still take time to establish breastfeeding and to get to know your baby. Having extra help at this time can make establishing breastfeeding easier for you and your family. Below are some suggestions of the types of support which may benefit you. As you read the list, you may like to think about which of your family, friends or community support agencies would be the best suited for you should need it.

Physical Support

(May be needed if you have had a caesarean or intrumental delivery)

- Help with lifting heavy objects
- Help with other children
- Help with any breastfeeding problems

Practical Support

- Help with household tasks
- Help with shopping
- Help with older children
- Help so you can have extra time to yourself
- Help so you can have some time alone with your partner

Emotional Support

- Find support that is encouraging and positive
- Find support that you feel comfortable with
- Find out what supports are available in your area

For the helper

If you are a partner, friend or relative of a breastfeeding mother you can have an important role to play in supporting a mother and baby to enjoy and benefit from their experience. Included below are a few suggestions about the way this support can be provided:

- Provide emotional support
- Offer words of encouragement
- Respect the mother's judgement
- Respect the family privacy and space
- Do not place heavy demands on the mother. Allow her this time to breastfeed and rest.
- Provide practical help:
  - Help if mother wants help with household tasks such as cooking, cleaning and caring for other children
  - Offer drinks or snacks to the mother while feeding if possible
  - Encourage a positive, calm environment for breastfeeding e.g. comfortable room temperature, comfortable chair, footstool/pillows if preferred
  - Answer telephone or take phone off hook.
  - Perhaps mind the baby so the mother can have some time to herself to rest, sleep, take a bath, go for a walk, have some time to herself if she wants to spend some time with her partner or other children
  - Allow mother time to catch up on sleep
  - If you are actually assisting the mother to breastfeed, ensure you are in a comfortable position which then allows you to give the time it takes to help

Some Extra Hints

If someone offers to help, allow him or her to help you. Do not be tempted to look after them as a guest.

35.3 Expressing Breastmilk (page 1)

Health
Sydney
Local Health District
NSW GOVERNMENT

Parent's handout

Expressing and storing breastmilk

Hand expressing

It is important for you to know how to express your breastmilk. Hand expressing is a learned experience and is best done by you.

When you need to hand express:

- If you are separated from your baby.
- You are unable to give a breastfeed at the time your baby wants to feed.
- Your baby has difficulties attaching, and is demanding a feed.
- To soften your areola (darkened skin around nipple) to make attaching easier.
- To increase your milk supply.

How to hand express

Photo acknowledgements: ILCA's inside track, a resource for breastfeeding mothers, 2013
Yvette Dowd and the Australian Breastfeeding Association

1. Wash your hands with soap and water.
2. Gently massage your breasts, starting from the top and stroking towards your nipple, not forgetting the underneath.
3. Hold a clean container under your breast to collect your milk.
4. Put your thumb and first finger opposite each other on the your areola (coloured area surrounding your nipple), see picture above.
5. Gently push back towards the centre of your breast and rib cage, squeezing your thumb and finger together with the pad of your thumb and finger meeting behind the nipple. Repeat in a rhythmic action until the milk starts to flow. It should not be painful.
6. When the flow stops move your finger and thumb around your areola and repeat steps 4 - 6.
7. Aim to express the breasts for about 10 - 15 mins each side.
8. Then change to other breast and repeat above steps.
9. You may swap to the other breast after about 5 minutes if the milk has stopped flowing, or your hands are tired. By changing back and forth from breast to breast you may be able to improve the flow of milk, particularly if your supply is low.

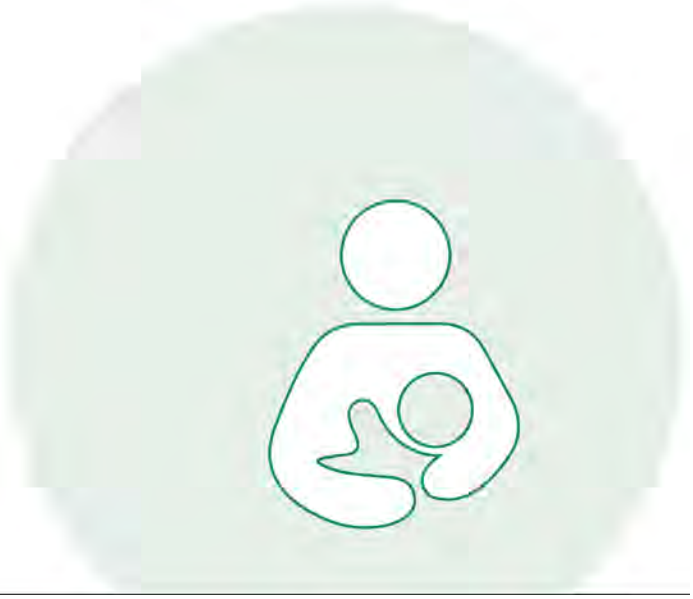
Expressing and storing Breastmillk (page 2)

Health
Sydney
Local Health District
NSW GOVERNMENT

Parent's handout

Expressing using a hand or electric breast pump

- Ensure the breast pump kit is sterilised before you use it for the first time.
- If you decide to use a breast pump it is better not to use it in the first 24 – 48 hours after birth. If you need to express in this time, you will need to hand express.
- Before using the breast pump wash hands and gently massage your breasts (see steps 1 – 2 in hand expressing section).
- Gently hand express for a minute or two to get your milk flowing.
- Centre the funnel of the pump over your nipple and follow manufacturer's instructions.
- If pump has adjustable suction pressures always start on minimum / low and build up to a comfortable level. If there is a rate setting, start on a fast rate, reducing the rate as milk flows.
- Your nipple should move freely in the pump flange without being squashed in around the edge.
- Higher pressures can be used as long as they cause no discomfort.
- The pump, if used correctly, should not cause pain, and will become easier to use with practice.
- It is important to clean the breast pump after each use by following the manufacturer's instructions (and see 'How to clean and sterilise expressing and feeding equipment' Parent's handout).
- After cleaning the breast pump parts, invert and air dry or dry with a paper towel.
- Place in a clean air-tight container.
- If your baby is in hospital it is advised to sterilise your breast pump at least once every 24 hours (see 'How to clean and sterilise expressing and feeding equipment' Parent's handout).
- If you have a well term baby at home it is important to thoroughly clean your pump after each use.



35.4 Storing and Using Breastmilk

Health
Sydney
Local Health District

Parent's handout

Storing and using your breastmilk

Breastmilk	Room temperature (26° C or lower)	Refrigerator (4° C or lower)	Freezer
Freshly expressed into a closed container	When expressing at home for your baby in the hospital, your milk needs to be refrigerated within an hour of completing the expression. It can last up to 6 - 8 hours out of the fridge for use at home.	In hospital 48 hours. At home 3 days (72 hrs). Store in back of the fridge, where it is coolest.	2 weeks in freezer compartment inside refrigerator. 3 months in freezer section of refrigerator with separate door. 6 - 12 months in deep freeze (-20° C)
Previously frozen – thawed in refrigerator but not warmed	Once milk has thawed, use within 4 hours or less	Once milk has completely thawed, use within 24 hours	Do not refreeze
Thawed outside refrigerator in warm water	For completion of the feed. Use straight away do not store	4 hours or until next feeding	Do not refreeze
Baby has begun feeding	Discard when the feed is finished	Discard	Discard

- Breastmilk often separates when stored and may need to be shaken before use.
- Breastmilk can be stored in glass or plastic containers.
- Fresh breastmilk that is being refrigerated or frozen should be stored in a new container rather than being added to previously refrigerated or frozen milk.
- Only fill the container ¾ full with breastmilk as it will expand on freezing and the container may burst or leak in the freezer.
- Label the container with date and time and use the oldest milk first.
- Expressed breastmilk only needs to be warmed to room temperature to feed to your baby.
- **NEVER USE A MICROWAVE** to warm baby's milk, as this may cause burns in the baby's mouth and throat and may change the nutritional content of the milk.
- Transport breastmilk in an insulated container with an esky or freezer brick and put in the refrigerator or freezer (if still frozen) upon immediately upon arrival.

National Health and Medical Research Council Eat for Health: Infant Feeding Guidelines, 2012

35.5 Nipple Shields

Health
Sydney
Local Health District

Parent's handout

Nipple Shields

Nipple shields are silicone covers that are placed over the nipple and areola to assist with breastfeeding. Their use is usually temporary.

The most common reason for using a nipple shield is flat or inverted nipples when other attempts to attach baby have been unsuccessful.

Nipple shields should not be used

- Until milk is in and flowing well.
- When nipples are damaged from poor attachment to the breast.

How to breastfeed with a nipple shield

- Express a small amount of milk into the cone of the shield
- Apply the nipple shield centrally over the nipple and hold it in place with your fingertips on the outer edge of the shield as your baby attaches onto your breast
- Ensure your baby's mouth is wide around the nipple shield so the lips are not just on the teat part of the nipple shield
- Once on the breast you will need to move your fingers so your baby has plenty of room to attach well.
- It is important that the baby does not slip back off the shield as this will cause pinching and nipple damage.
- Make sure the baby is sucking and swallowing
- It should look like your baby is feeding as if the shield is not there

Cleaning

Make sure that the nipple shield is rinsed and washed in hot soapy water then rinsed again and kept in a clean airtight container between feeds. Sterilise once a day (eg boil for 5 mins) A teaspoon of citric acid may be added to water to avoid a build-up of limescale.

Problems associated with use of a nipple shield include:

- May prevent the breast draining properly thereby increasing the risk of mastitis
- Lack of direct stimulation to the breast may lead to a lower milk supply and poor weight gain in the baby
- Baby may prefer the nipple shield and may be difficult to get feeding directly at the breast

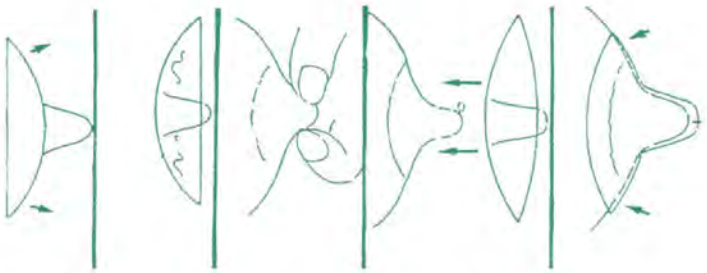
The likelihood of problems can be reduced by:

- Being shown how to use the shield correctly by an experienced midwife /nurse or lactation consultant.
- Assessing baby's ability to attach well with the shield and observing for changes in baby's sucking during the feed
- To ensure breasts are well drained it may be necessary to express for a few minutes after feeds
- Ensuring follow up with breastfeeding support so that baby's growth and progress may be checked

Weaning from the nipple shield

It is recommended that baby eventually feed directly from the breast. The transition from nipple shield to breast can sometimes take time. Removing the shield part way through a feed when the nipple is drawn out may make direct attachment easier.

Assistance can be obtained from a lactation consultant, or Child and Family Health Nurse.



Gently bend back rim of nipple shield | Draw out nipple | Place cone of shield as far onto nipple as possible | Flip rim of shield back against breast

Adapted from: - "Breastfeeding Matters" as supplied from John Radcliffe Hospital UK. September 2003; & *NSW Health Using Nipple Shields (SESIH Area Lactation Group 2010)*

35.6 Cup Feeding: a Handout for Parents

Health
Sydney
Local Health District
NSW GOVERNMENT

Parent's handout

Cup Feeding

- Cup feeding provides a safe alternative to bottles and teats when your baby is unable to breastfeed effectively or requires additional fluids.
- It can also be used if you are temporarily unable to breastfeed your baby.
- Expressed breastmilk should be used. Where medically indicated or at your request a breastmilk substitute (formula) may be given. A written consent for a breast milk substitute is required in the hospital setting.
- The cup used should be small and smooth edged, the capacity should be no more than 30 mls.

How To Cup Feed

1. Before starting, wash your hands thoroughly and place the milk into a clean and dry cup.
2. Ensure your baby is awake and alert prior to starting a cup feed.
3. Wrap your baby securely to prevent his/her hands from knocking the cup.
4. Place a bib under your baby's chin; the baby may dribble some of the milk.
5. Hold your baby in a supported sitting position on your lap, so that you are both comfortable.
6. Keep your baby in an upright position throughout the feed.
7. The cup should be no more than half full.
8. Place the cup so the rim is gently resting on your baby's lower lip.
9. Tilt the cup until the milk is at the rim.
10. Your baby will open his/her mouth and begin to sip or lap up the milk. You will hear swallowing.
11. Leave the cup in place while your baby is feeding actively. Your baby will regulate the pace and volume of the feed. Remove the cup when the baby stops drinking.
12. Return the cup when your baby is showing signs of being ready to feed again.
13. Repeat this process until the feed is finished, usually within 20 to 30 minutes.
14. Following the feed wash the cup in hot soapy water then rinse and dry. The cup can be stored in a clean container (with a lid) in the fridge for later use.

Acknowledgements:
1. *Spoon and Cup feeding – alternative feeding methods in the early postnatal period,* Royal Hospital for Women
2. *PR2011_353 Cup Feeding Breastfed Well Babies – NSLHD*

35.7 Increasing Supply

Health
Sydney
Local Health District

Parent's handout

Increasing your breastmilk supply

Production of breastmilk relies on the regular and effective removal of milk from your breasts.

This is best achieved by feeding your baby to his or her need. It is also important for your baby to be well positioned at your breast and attached correctly so you are comfortable when your baby sucks.

Your baby's suck should be slow and rhythmical with deep jaw movements and you may see swallowing. It is normal to have 8–10 breastfeeds in a 24 hour period.

If concerned about your supply, talk to a health professional such as your Child and Family Health Nurse, Lactation Consultant or an Australian Breastfeeding Association counsellor.

What you can do to increase your breastmilk supply

- Increase how often you feed your baby or express your breasts including during the night.
- Ensure you finish one side first (it should feel soft all over) then always offer the second.
- Do not use a dummy – use the breast to comfort your baby.
- Express your breasts for 5–10 mins each side after breastfeeding your baby. You can do this by hand or use a manual or electric pump. Consider double pumping for 5–10 mins.
  - This increases stimulation to your breast and may produce more milk.
- Any expressed breast milk you are able to express can be offered to your baby after feeds.
- Increase skin to skin contact time with your baby.
- Avoid giving your baby any fluids or foods other than breastmilk unless it is necessary for their health

Remember the breastmilk flows best when you are relaxed and calm. Accept any practical help at home as you try to rest, drink adequate fluids and have a well balanced diet. Limit caffeine, including tea, coffee, cola and chocolate as these can decrease your breastmilk.

Use of medication to increase your supply would only be suggested if other methods have been unsuccessful after the first week. You must continue with increased stimulation and removal of milk while taking the medication for it to work effectively.

Contacts

Child and Family Health Centres – look up community services in the phone book

Australian Breastfeeding Association Helpline
1800 686 268

Mothersafe (Medications in Pregnancy and Lactation Service)
02 9382 6539
1800 647 848 (non-metropolitan)

35.8 Motilium (Domperidone) Guidelines for Use

Health
Sydney
Local Health District

Parent's handout

Guidelines for use of Domperidone (motilium®) tablets

While taking this medication ensure that your baby is fed whenever he/she is hungry expect at least 8 feeds in 24 hours (or every 3 hours during the day and 4 hourly at night) and you are expressing after feeds.

Presentation and storage: Domperidone is only available in oral medication in Australia and comes in a 10mg tablet. It is usually taken for about 28 days. If your supply does not increase or is not maintained after this then consult with the health professional who is supporting your breastfeeding.

The regime is as follows:

Dose

Day 1 – 7: 10 mgs (1 tablet) every 8 hours
After 1-2 weeks: decrease to 10 mgs every 12 hours for 7 days
Day 21 – 28 days: 10 mgs every morning for 7 days

How does Domperidone work

Domperidone increases the production of the milk making hormone prolactin and will only be effective along with good breastfeeding and / or expressing. It usually takes 3–5 days to show an increase in supply.

Side effects

If side effects such as dry mouth and thirst, skin rashes, headaches, depressed mood, abdominal cramping, constipation or diarrhoea occur then cease the medication and consult your GP.

Contraindications

While on domperidone the use of travel sickness or anti nausea medication should be discussed with a pharmacist or GP.

If there has been no effect after 3-4 days the domperidone dose can be increased to 20mgs (2 tablets) provided there are no side effects or risks

All women must be reviewed medically prior to being prescibed domperidone.
Although considered safe for use in breastfeeding mothers, oral domperidone prolongs the QTc interval so may exacerbate the action of other medications such as methadone.
It can also induce arrhythmias in hypokalaemic mothers, or women with a history of arrthymias.
(Hale 2010; MIMS 2010).

For further advice contact Mothersafe:

9382 6539 or 1800 647 848

35.9 Mastitis

Health
Sydney
Local Health District

Parent's handout

Mastitis

Possible causes

- Inadequate drainage of the breast and can be complicated by damaged nipples.
- Blocked ducts.

Symptoms of mastitis

- Red, painful and sometimes a 'hot' area on your breast.
- Feeling 'unwell' and having flu like symptoms such as aches and pains.
- High temperature.

Avoiding Mastitis

- Ensure good positioning and attachment for good breast drainage and to avoid grazed and cracked nipples.
- Ensure the first breast is soft and comfortable before offering the other side.
- Ensure strict hand washing to avoid bacteria from another area (eg sticky eye, wound infection) coming in contact with the breast.
- Feeding baby according to their needs. If there is a sudden change in baby's feeding needs and the breasts become very full such as your baby sleeps through the night or you are away for a feed then it is important to express your breasts or wake the baby to feed.

Treatment

- Continuing to breastfeed until the breast is soft and comfortable speeds up recovery.
- If unable to feed then it is important to hand express or pump to soften the breast.
- Feed your baby as often as the baby will feed.
- It is important that the baby is well attached to the breast and if possible aim chin to the area of the blocked duct.
- During the feed gently massage the breast to promote flow.
- Ensure that your bra is not tight and is not causing pressure on your breast.
- For lumps and tender areas manage as for blocked ducts.
- Try and get plenty of rest and increase your fluid intake.
- Take pain relief as required – for example, paracetamol.
- If there is no improvement in the next 2 - 3 feeds, see your doctor as you may need antibiotics.
- The current recommendations are *Flucloxacillin or Cephalexin (if allergic to penicillin) 500mg four times daily for 5 - 7 days. See your GP after the antibiotics are finished as you may need to repeat the antibiotics.
- This antibiotic can be used safely when you are breastfeeding. Your baby will not get ill as the infection involves the breast tissue not the breastmilk.

Contact your Child & Family Health Nurse or
the Australian Breastfeeding Association for further support (1800 686 268).

35.10 Suppression of Lactation: Immediately after Birth

Health
Sydney
Local Health District
NSW GOVERNMENT

Parent's handout

Suppression of Lactation (Immediately after delivery)

It is normal for your breasts to start to fill with milk by about the fourth day following the birth of your baby. In order to minimise the discomfort, it is advisable to take measures to suppress lactation as soon as possible after delivery.

- Firm breast support – wear a well fitting supportive bra even when resting
- Avoid heat on the breasts – try not to have long hot showers
- Avoid breast stimulation – try not to handle your breasts unnecessarily

On about day three or four following the birth, your breasts will become firm, uncomfortable and may be painful. Cold packs applied to the breasts may bring relief. For example, cold cabbage leaves or a pack of frozen peas (wrapped in a light cloth) are effective as they can be moulded around the breast.

If your breasts become too painful you may need to express a little milk for comfort. Observe for any hard red areas and if accompanied by fevers, joint aches and pains or hot and cold shivers it is advisable to see your doctor as you may require antibiotics.

During this period of discomfort pain relief may be needed. An analgesic such as paracetamol e.g. Panadol, may be taken, in accordance with the manufacturer's directions.

The Role of Medication

Medication, Cabergoline (Dostinex®), can be ordered by your doctor to suppress your breastmilk but is not seen as the first option for treatment.

Known side effects of this medication include: dizziness, headache, nausea and lowering of blood pressure.

If you decide you want to take this medication, it is most effective if given as a single dose, within 24 hours of delivery. The recommended dosage is:

1mg as single dose in the first 24 hours post-partum

Or

250 micrograms every 12 hours for two days (total of 1mg)
If given once the milk is "in"

1. Riordon J & Wambach K, Breastfeeding and Human Lactation, 2010, 4th edition, Jones & Bartlett, USA, p 606
2. Australian Breastfeeding Association, Weaning, Booklet Series, 2002, Victoria

35.11 Suppression of Lactation: After Lactation is Established

Health
Sydney
Local Health District

Parent's handout

Suppression of Lactation (Gradual)

If you have been breastfeeding and decide to wean, for whatever reason, it is better to do it slowly. Gradual weaning allows fat tissue in your breast to replace milk producing tissue over a longer period of time.

You can do this by:

- Reduce the number of breastfeeds given to your baby each day. This can be done by replacing one breastfeed with a breastmilk substitute bottle feed. When your breasts have adjusted to this reduction then another breastfeed can be reduced and so on. This may be every 3–4 days or longer.

Or

- Gradually reduce the number of time you express your milk each day. This can done by stretching the time between expressions. For example, if you are expressing every 3 hours stretch that to every 4 hours. When your breasts adjust and are comfortable again stretch to 5 hours and so on.
- When you are only expressing or breastfeeding once or twice a day, only express / breastfeed for comfort until this is no longer necessary

As all mothers are different, it is best to seek the guidance of a health professional for your particular situation.

The Role of Medication

Medication, Cabergoline (Dostinex®), can be ordered by your doctor to suppress your breastmilk but is not seen as the first option for treatment. Known side effects of this medication include: dizziness, headache, nausea and lowering of blood pressure. If you decide you want to take this medication, it is most effective if given as a single dose, within 24 hours of delivery.

If Cabergoline (Dostinex®) is deemed to be the only option in a specific circumstance the dosage is:

250 micrograms every 12 hours for two days (total of 1mg).

1. Riordon J & Wambach K, Breastfeeding and Human Lactation, 2010, 4th edition, Jones & Bartlett, USA, p 606
2. ILCA Core Curriculum for Lactation Consultant Practice 3rd Edition 2013
3. Australian Breastfeeding Association, Weaning, Booklet Series, 2002, Victoria.

35.12 Care of your breasts when your baby dies: (page 1)

Health
Sydney
Local Health District

Parent's handout

Care of your breasts when your baby dies

The time after the death of a baby is a time of deep sadness and can be physically and emotionally exhausting.

Colostrum (early breastmilk) is produced as early as 16 weeks into the pregnancy. Even when your baby has died, your breasts will make milk. This may start around 3 – 4 days after your baby's birth. Some women welcome this as proof their baby was real while other women find the reminder very painful. Caring for your breasts is important, as it will help make them more comfortable and reduce the risk of blocked ducts and mastitis.

As your breasts become uncomfortable

- A comfortable, supportive bra and breast pads may be useful.
- Apply cold packs and change often (e.g. chilled washers or a bag of frozen peas)..
- Avoid heat on your breasts.
- Take paracetamol as directed to relieve pain and discomfort.
- If your breasts become very full and painful you may need to express enough milk to relieve some of fullness and keep your breasts comfortable. This should not increase your supply because you are not emptying the breasts.
- It may be necessary to continue to express for several days to help prevent the pain of sudden engorgement or mastitis

Medication

Medication, Cabergoline (Dostinex®), can be ordered by your doctor to suppress your breastmilk but is not seen as the first option for treatment. Known side effects of this medication include: dizziness, headache, nausea and lowering of blood pressure. If you decide you want to take this medication, it is most effective if given as a single 1 mg dose, within 24 hours of delivery. If given once the milk is "in" the dose is 250 micrograms every 12 hours for two days (total of 1mg).

If your milk supply is established and your baby dies

Gradually decrease over several days the number of times you express and the amount of milk removed from your breasts while still maintaining breast comfort. This is particularly important for any mother who has been expressing with a pump for more than two weeks. Depending on your circumstances, this could take place either in hospital or at home. Restricting fluids is no longer recommended. If you are unsure about your particular situation seek the guidance of a healthcare professional or an Australian Breastfeeding Association counsellor.

How long will I have milk?

It may take some weeks (or even longer) for your milk to disappear completely. Leakage may continue for some time after the discomfit has settled. If you are unsure, talk with your midwife or doctor.

Mementos

Some mothers may like to freeze a small amount of breastmilk as a memento.

Care of your Breasts when your Baby Dies (page 2)

Caring for your breasts when your baby dies
Parent's handout

The day of the funeral

This will be a long and emotional day. These hints may help:

- Express milk for comfort before the funeral and during the day if needed.
- Your breasts may leak milk, so be prepared with breast pads and have some spare.
- Wear your bra comfortably firm but NOT tight.
- Dark-coloured or patterned tops are less likely to show wet patches.
- A cardigan or jacket may help hide wet spots.
- Paracetamol taken as directed will help ease breast pain.

Time is not a factor in the grieving process. After the loss of your precious baby, feelings of grief and sadness may come and go as you try to move on with your life. Family and friends will want to show they care even though they may not understand exactly how you feel.

It may be helpful to speak with others who have lost a child e.g. SIDSandKIDS or you may wish to contact a grief counsellor or counselling service e.g. NALAG- National Association for Loss and Grief

Contacts

NALAG – National Association for Loss and Grief.
Ph: 02 6882 9222

Early Childhood Centres
look under Community Health Services in telephone book.

Australian Breastfeeding Association Helpline
Ph: 1800 686 268 7 days a week
www.breastfeeding.asn.au

SIDSandKIDS
Ph: 02 9818 8400
Ph: 1800 651 186 24 Hour Bereavement Support

Adapted from: *Breast care when your baby dies* SESIH Area Lactation Group May 2009

35.13 Cleaning and Sterilising Feeding Equipment

Health
Sydney
Local Health District

Parent's handout

Cleaning and sterilising feeding equipment

Before sterilising any equipment including breast pump parts or bottles and teats, they must be cleaned.

Cleaning

- Wash hands thoroughly.
- All equipment including needs to be:
  - rinsed in cold water,
  - washed thoroughly with a bottle / teat brush in warm soapy water (dishwashing liquid is appropriate)
  - remember to go around the grooves in the neck of the bottle as milk often collects there
  - rinsed thoroughly with warm running water.

Sterilising

Two methods of sterilisation are:

- Boiling.
- Steam sterilising.

Boiling

- Choose a saucepan with a lid large enough to hold all the goods.
- Place all articles in saucepan and add sufficient water to completely submerge all articles.
- Bring water to boil and boil for five minutes. Turn off – don't allow it to boil dry.
- Remove saucepan from heat and allow to cool until it is hand hot and then remove items with clean hands - be careful if children are present.
- Invert and air dry or dry with a paper towel and store in a clean covered container.
- Store equipment that is not being used in a clean container in the fridge. It will need to be re-sterilised every 24 hours.

Steam Sterilising

There are two types of steam sterilisers available, they are:

Microwave steamers and Electric steamers.

- Place items in the steriliser, make sure any liquid will be able to drain from bottles, teats etc.
- Use steriliser according to manufacturer's instructions.
- Remove items with clean hands.

Sterilising unit needs to be cleaned regularly.

35.14 Lactation Diet Requirements

Cereals/breads

#9 serves daily
#1 serve
=1 slice bread
=½ medium roll or flat bread
=½ cup cooked rice, pasta, noodles, barley, quinoa, etc
= ½ cup cooked porridge
= 2/3 cup wheat cereal flakes
=¼ cup muesli
=3 crisp breads
=1 small English muffin or scone

Lean meats and poultry, fish, eggs, tofu, nuts and seeds, and legumes/beans

2 and half serves per day
#1 serve
=65g cooked lean meats
=80g cooked lean poultry
=100g cooked fish fillet or one small can of fish
=2 large eggs

Iodine needs = 270 mcg per day

Found in dairy, seafood and fortified bread

Daily supplements of 150mcg/day are recommended

Vegetables and legumes / beans

7 or more serves daily (5½ ≤ 18 yrs)
1 serve
= ½ cup cooked green or orange vegetables eg, broccoli, carrots
=½ cup cooked, dried or canned beans, peas or lentils
=1 cup green leafy or raw salad vegetables
=½ cup sweet corn
=½ medium potato or sweet potato, taro
=1 medium tomato
=1 cup (150g) cooked or canned legumes/beans such as lentils,
=170g tofu
=30g nuts, seeds, or nut or seed paste

Fruit

#2 serves per day
#1 serve
=1 medium piece of fruit
=2 small pieces of fruit

Dairy

2 ½ serves daily (4 if ≤ 18 yrs)
#1 serve
=1 cup milk
=2 slices (40g) of hard cheese,
=¾ cup (200g) yoghurt
=1 cup (250ml) soy, rice cereal drink

National Health and Medical Research Council (2013) *Australian Dietary Guidelines*. Canberra: National Health and Medical

35.15 Information for Breastfeeding Mothers who are also giving Breastmilk Substitutes

Information for Breastfeeding Mothers who are also giving Breastmilk Substitutes

Health authorities such as the National Health and Medical Research Council of Australia and the NSW Breastfeeding Policy advise that a mother's informed consent should be given prior to giving a breastmilk substitute to breastfed baby.

Breastfed infants should not be given breastmilk substitutes unless medically indicated because:

- Breastmilk substitutes (formula) interferes with the full protection against infection that breastmilk is able to provide for your baby
- Breastfeeding works on supply and demand. If feeds are missed or replaced by formula the breasts make less milk
- When milk is not removed from the breast they become painful and slow the making of milk
- Your baby may become sensitised to the protein in the formula.
- Research shows that giving the baby supplementary feeds in hospital is significantly associated with a decreased likelihood of continued breastfeeding after discharge

While your baby is receiving a breastmik substitute you can assist your breastfeeding and minimise the above effects by:

- Expressing regularly to stimulate breastmilk supply and remove milk to prevent engorgement. Use this breastmilk to give to your baby
- Spending time cuddling your baby skin to skin where possible

Adapted from the SLHD Breastfeeding Guidelines 2014

Appendix 1 - Ten Steps to Successful Breastfeeding

Every facility providing maternity services and care for newborn infants should:

1. Have a written breastfeeding policy that is routinely communicated to all health care staff
2. Train all health care staff in skills necessary to implement this policy
3. Inform all pregnant women about the benefits and management of breastfeeding
4. Place babies in skin-to-skin contact with their mothers immediately following birth for at least an hour and encourage mothers to recognise when their babies are ready to be breastfed, offering help if needed
5. Show mothers how to breastfeed, and how to maintain lactation even if they should be separated from their infants
6. Give newborn infants no food or drink other than breastmilk, unless **medically** indicated
7. Practice rooming-in. Allow mothers and infants to remain together 24 hours a day.
8. Encourage breastfeeding on demand
9. Give no artificial teats or pacifiers (also called dummies or soothers) to breastfeeding infants
10. Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic

Seven Point Plan for Community Health Services

1. Have a written breastfeeding policy that is routinely communicated to all healthcare staff
2. Train all staff involved in the care of mothers and babies in the skills necessary to implement the policy
3. Inform all pregnant women about the benefits and management of breastfeeding
4. Support mothers to initiate and maintain breastfeeding
5. Encourage exclusive and continued breastfeeding with appropriately-timed introduction of complementary food
6. Provide a welcoming atmosphere for breastfeeding families
7. Promote co-operation between healthcare staff, breastfeeding support groups and the local community

Paediatric Services Ten Steps

1. Have a written breastfeeding policy that is routinely communicated to all health care staff and provide people with training to acquire the skills necessary to implement this policy
2. Provide mothers with an environment and facilities, which meet their needs for privacy, information and appropriate nutrition
3. Support mothers in their choice of feeding method and assist in the establishment and maintenance of breastfeeding
4. Provide parents with written and verbal information about the benefits of breastfeeding and breastmilk
5. Use alternative techniques conducive to breastfeeding if a baby is unable to feed at the breast
6. Give no bottles or dummies to breastfeeding babies unless medically indicated and with parents' permission
7. Provide facilities that allow parents and babies to be together 24 hours a day in order to promote breastfeeding on demand
8. Plan all nursing and medical care to minimise disturbance to the breastfeeding relationship
9. Provide mothers with a dedicated facility that is appropriately furnished with well-maintained and sterilised equipment for the safe expression and storage of breastmilk
10. Provide parents with information about breastfeeding support groups during admission and on discharge from hospital