The UNICEF UK Baby Friendly Initiative
Orientation to Breastfeeding for
Paediatric Medical Staff

Orientation handbook
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The Baby Friendly Initiative is a global programme of UNICEF and the World Health Organisation which works with the health services to improve practice so that parents are enabled and supported to make informed choices about how they feed and care for their babies. Health care facilities which adopt practices to support successful breastfeeding receive the prestigious UNICEF/WHO Baby Friendly award. In the UK, the Baby Friendly Initiative is commissioned by various parts of the health service to provide advice, support, training, networking, assessment and accreditation.

For more information about all aspects of the UNICEF UK Baby Friendly Initiative's work, visit our web site at www.babyfriendly.org.uk

UNICEF UK Baby Friendly Initiative, Africa House, 64-78 Kingsway, London WC2B 6NB
Tel: 020 7312 7652   Fax: 020 7405 2332   E-mail: bfi@unicef.org.uk

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An orientation to breastfeeding for paediatric medical staff

This booklet is intended to be used as a quick reference guide for paediatric medical staff. It has been designed chiefly as an aide-memoire to support breastfeeding orientation sessions.

The booklet provides basic information on why breastfeeding is important, how breastfeeding works and what paediatricians can do to support breastfeeding whilst still protecting the safety of the neonate. Some of the commonly-faced challenges to successful breastfeeding encountered by medical staff on the postnatal wards are outlined, with suggestions for appropriate management.

Although the management recommendations are based on strong evidence, Trust policies and procedures must also be referred and adhered to.

Implementing best practice: the paediatrician’s role

Active support to enable babies to benefit from breastfeeding is an important part of the paediatrician’s role. This can be summarised as follows:

- Discussing the benefits of breastfeeding with new mothers and outlining the particular benefits for vulnerable and preterm infants
- Supporting and encouraging practices known to facilitate breastfeeding
- Avoiding and discouraging practices which have been shown to jeopardise breastfeeding
- Referring breastfeeding problems to appropriately-skilled members of staff

Further information

The Baby Friendly Initiative web site (www.babyfriendly.org.uk) is the best place to find up to date information about the work of the Initiative, synopses of the latest research and links to other useful sites.
For World Health Organisation publications, follow the links at www.who.int/health_topics/breastfeeding/en/
1. Benefits of breastfeeding

There is strong evidence that breastfeeding reduces the risk of **gastroenteritis** in babies. There is also evidence for a reduction in the incidence of:

- Respiratory illness
- Ear infections
- Urinary tract infections
- Atopic disease
- Diabetes

Additionally, there is evidence that breastfeeding may be protective against necrotising enterocolitis (NEC). Research by Lucas and Cole (1990) found up to a 20-fold increase in the incidence of NEC among babies who received no breastmilk. A possible mechanism for this effect is suggested by Minekawa (2004) who reported that breastmilk dramatically suppresses the activation of interleukin (IL)-8 (a proinflammatory cytokine which plays an important role in the pathophysiology of NEC). A Cochrane review (2001) found no evidence of an effect of breastfeeding on the incidence of NEC, but the authors note that only one of the six trials reviewed evaluated NEC as a pre-defined outcome.

Breastfeeding has been linked to a lower plasma cholesterol and low density lipoprotein in childhood, as well as lower blood pressure. These findings suggest a protective effect extending into adulthood, with implications for the health of the nation.

In contrast to almost all other health outcomes, there is now evidence to suggest that breastfed babies born into the lowest socio-economic groups have better health outcomes than formula-fed babies born into the highest groups. Increasing breastfeeding rates in the poorest families would therefore do much to address inequalities in health.

There is also evidence that breastfeeding has health benefits for the mother. In particular, that it reduces the incidence of:

- Breast cancer
- Ovarian cancer
- Hip fractures

For a fuller list of evidence for the health advantages of breastfeeding, visit www.babyfriendly.org.uk/health


2. What's in breastmilk?

Breastmilk is a complex living fluid containing numerous ingredients specifically designed to meet the needs of the newborn human infant. Breastmilk varies from woman to woman and changes over time to meet the baby’s growing needs. It cannot be replicated and the full effect on human health of not receiving breastmilk - or of not receiving enough breastmilk - is still not fully understood.

A few of the significant ingredients which help protect the baby from infection are:

- **Immunoglobulins** including:
  a) antibodies against infections the mother has had in the past.
  b) Secretory IgA (sIgA), most of which remains on the surface of the baby’s gut to prevent pathogens sticking to the mucosal surface.
  c) antibodies provided via the entero- and broncho-mammary pathways, which work specifically to protect the infant in its own environment. If a mother is exposed to a pathogen via her digestive or respiratory system, she creates antibodies which are immediately transferred to her breastmilk to protect her infant.

- **Bifidus factor**: This carbohydrate facilitates the growth of lactobacillus bifidus to create an acidic environment in the gut. Pathogens tend to prefer an alkaline environment.

- **Lysozyme** which breaks down and kills susceptible pathogens.

- **Hormones** including insulin, thyroid stimulating hormone and growth hormone, which help the immature baby to adjust to extra-uterine life and to stimulate growth. Epidermal growth factor helps the gut to mature - and so become more resistant to pathogens.

- **Lactoferrin** which assists with the absorption of iron. It also binds free iron to make it unavailable to iron-dependent bacteria. 70% of the iron in breastmilk is absorbed compared with 10% of the iron in breastmilk substitutes.

- **White cells**.

- **Viral fragments** which are thought to trigger the baby’s immune response.

The formula-fed infant lacks this protection, making him vulnerable to infection. This is over and above the risks posed by the possible contamination of the feeds and feeding equipment used.
3. The Baby Friendly Initiative

The UNICEF/WHO Baby Friendly Initiative is a worldwide initiative which aims to improve standards of care within the health service by supporting health professionals to implement best practice in relation to breastfeeding.

Best practice is represented by the Ten Steps to Successful Breastfeeding, which summarize the practices necessary to support breastfeeding. All standards set down in the Ten Steps have a strong evidence base.

1. Have a written breastfeeding policy that is routinely communicated to all staff.
2. Train all health care staff in skills necessary to implement the policy.
3. Inform all pregnant women about the benefits and management of breastfeeding.
5. Show mothers how to breastfeed and how to maintain lactation even if they are separated from their infants.
6. Give newborn infants no food or drink other than breastmilk, unless clinically indicated.
7. Practise rooming-in, allowing mothers and babies to remain together 24 hours a day.
8. Encourage breastfeeding on demand.
9. Give no artificial teats or dummies to breastfeeding babies.
10. Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from hospital.

The UNICEF/WHO Baby Friendly initiative also requires health care staff to act in accordance with the International Code of Marketing of Breastmilk Substitutes. This means that they must not, either intentionally or unintentionally, promote the use of breastmilk substitutes, bottles, teats or dummies, as these have the potential to harm breastfeeding.
4. Anatomy and physiology of lactation

Milk is produced within the alveoli by the acini cells.

The myo-epithelial cells propel milk along the lactiferous ducts and out of the nipple.

Milk tends to pool in the area of the lactiferous ducts behind the areola.

Montgomery’s tubercles secrete a scented fluid which lubricates the nipple and attracts the baby.

The areola darkens during pregnancy to attract the baby.

Milk production is stimulated by prolactin, while delivery to the baby is triggered by oxytocin. Both hormones are secreted by the pituitary gland. Counter-balance is provided by the feedback inhibitor of lactation (FIL), an enzyme present in breastmilk, which acts to prevent over-production.

<table>
<thead>
<tr>
<th>Hormone/factor</th>
<th>Functions</th>
<th>Practice implications</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Prolactin</strong></td>
<td>• Works by touch alone</td>
<td>• Encourage frequent and prolonged access to the breast and skin contact to stimulate milk production</td>
</tr>
<tr>
<td>Stimulates milk production</td>
<td>• Levels highest in the early post-partum period</td>
<td>• Encourage early and frequent feeding/expressing to maximise milk production</td>
</tr>
<tr>
<td></td>
<td>• Levels rise during a breastfeed and peak after the feed</td>
<td>• Ensure effective attachment and allow the baby to feed for as long as he chooses to maximise milk supply</td>
</tr>
<tr>
<td></td>
<td>• Stimulates mothering</td>
<td>• Keep mothers and babies together and encourage frequent breastfeeding to promote a strong mother-baby bond</td>
</tr>
<tr>
<td><strong>Oxytocin</strong></td>
<td>• Breastfeeding stimulates oxytocin release to deliver milk for this feed</td>
<td>• Ensure effective attachment to encourage the milk to flow</td>
</tr>
<tr>
<td>Stimulates milk ejection</td>
<td>• Sight, sound, touch of baby will increase levels</td>
<td>• Keep mothers and babies together and encourage skin contact. Encourage regular visits to the neonatal unit and kangaroo care if mothers and babies are separated</td>
</tr>
<tr>
<td></td>
<td>• Induces well-being but inhibited by stress</td>
<td>• Provide skilled help and support with breastfeeding to increase confidence</td>
</tr>
<tr>
<td><strong>Feedback inhibitor of lactation</strong></td>
<td>• Acts within the breast to inhibit milk production when the breasts become full</td>
<td>• Encourage frequent effective breastfeeding to remove breastmilk and so ensure continued production</td>
</tr>
</tbody>
</table>
5. The value of colostrum

During the first few days of life, a healthy, term baby will excrete the extra intracellular fluid which he or she has stored during gestation. The degree of fluid excretion is controlled by anti-diuretic hormone (ADH). The small volumes in which colostrum is produced during this time are appropriate for the baby’s needs and help prevent the kidneys being overloaded.

The volume of the average feed in the first 24 hours is just 7mls. Feed volumes then gradually increase to meet the baby’s changing requirements. In contrast, the kidneys of formula-fed babies are given an extra load to deal with. It appears that babies adjust to being fed large volumes via a compensatory lowering of circulating ADH.

At-risk babies may release too little ADH, resulting in them losing too much fluid and therefore requiring extra fluid intake. Colostrum should always be given to these infants first and other fluids given only if colostrum is not adequate.

Average quantities of colostrum are as follows:

<table>
<thead>
<tr>
<th>Day</th>
<th>Normal volume range per day</th>
<th>Average volume per day</th>
<th>Average volume per feed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>7-123 ml</td>
<td>37 ml</td>
<td>7 ml</td>
</tr>
<tr>
<td>2</td>
<td>44 -335 ml</td>
<td>84 ml</td>
<td>14 ml</td>
</tr>
<tr>
<td>3</td>
<td>98 -775 ml</td>
<td>408 ml</td>
<td>38 ml</td>
</tr>
<tr>
<td>4</td>
<td>378 - 876 ml</td>
<td>625 ml</td>
<td>58 ml</td>
</tr>
<tr>
<td>5</td>
<td>452 -876 ml</td>
<td>700 ml</td>
<td>70 ml</td>
</tr>
</tbody>
</table>

Key points to note

1. Colostrum is particularly rich in anti-infective factors such as secretory IgA
2. Colostrum acts as a laxative which speeds up the passage of meconium, thus reducing re-absorption of bilirubin through the gut wall and helping to minimise jaundice.

6. How a baby feeds at the breast

How a baby attaches to the breast determines how much milk he is able to take during the feed.

The baby on the left of this picture is effectively attached. He has used his tongue to scoop up a large mouthful of breast tissue which is formed into a large teat comprising one-third nipple and two-thirds surrounding breast tissue. The breast tissue fills his mouth and is held in place by the tongue. The lactiferous ducts are in the mouth and can be compressed with the tongue against the palate to expel the milk. He will be seen and heard to swallow with a rhythmic movement while feeding.

The baby on the right is ineffectively attached. He has only the nipple in his mouth. He will get little milk (even though he may ‘feed’ for a long period) and he may make his mother sore because the nipple will rub against his hard palate and tongue. Since a significant quantity of milk will be left in the breast after the feed, milk production will be slowed down.

Ineffective attachment is usually caused by the mother not positioning her baby at the breast in a way which will allow him to scoop up a large mouthful of breast. Help from a skilled practitioner is often required to teach a new mother how to position and attach her baby effectively for breastfeeding.

Consequences of ineffective attachment

Rubbing of the nipple can cause the mother pain and the nipple to become sore and cracked. The inability of the baby to compress the lactiferous ducts and stimulate hormone production will result in the baby not receiving enough breastmilk. This may result in prolonged frequent feeds, breast refusal and poor weight gain. The mother’s breasts may initially become engorged; this will cause the feedback inhibitor of lactation to suppress milk production, with the result that the mother will not produce enough milk to feed her baby.

It is therefore crucial that all mothers are taught how to effectively position and attach their babies for breastfeeding. Medical staff who suspect that a baby is not breastfeeding effectively should urgently refer the mother to a suitably-trained midwife or neonatal nurse for skilled help and support.
7. Skin-to-skin contact

Skin-to-skin contact between a newborn and his mother provides a crucial start to breastfeeding because it:

- Stimulates hormone release in the mother, so triggering the onset of lactation;
- Stimulates instinctive feeding behaviour in the baby;
- Facilitates the mutual bonding process.

In addition, skin contact:

- Is the most effective way to regulate the baby’s body temperature;
- Calms both mother and baby;
- Steadies the baby’s heart and respiration rates.

These benefits exist equally for the baby who is to be bottle fed. Also, experience has shown that many mothers who did not imagine they would breastfeed have changed their mind when given their baby to hold in skin contact. For these reasons, skin contact should be the default method of care at delivery for all mothers and babies.

Immediately the baby is born, or as soon afterwards as possible, he should be placed on his mother’s chest in skin-to-skin contact for an unlimited, unhurried period. A blanket can be tucked around both of them so that heat is not lost.

After an initial quiet period, the normal newborn will begin to search for the breast, attach and feed. An early breastfeed:

- Provides the baby with both food and protection from infection;
- Triggers lactation in the mother;
- Increases the chances of effective attachment at subsequent feeds.

Where possible, examination and care of the baby following delivery should be carried out without removing him from his mother. If the baby needs to be removed, it is the paediatrician’s responsibility to ensure that he is placed in skin contact with his mother as soon as possible.

Babies who are sedated at birth (through maternal medication) tend to take longer to exhibit breast-seeking behaviour. It is important that the period of skin contact be allowed to continue uninterrupted until the first breastfeed has taken place.

Kangaroo care

If the baby needs to be admitted to the neonatal unit, skin-to-skin contact should be facilitated as soon as the baby’s condition allows, and as frequently as possible thereafter. Ideally, the mother can be helped to hold the baby securely on her chest beneath her clothes. This is known as kangaroo care (or kangaroo mother care).


8. Understanding demand feeding

Demand feeding means allowing the baby to feed whenever he wants for as long as he wants. Along with effective attachment, demand feeding is essential for successful breastfeeding as it ensures an adequate milk supply and a satisfied baby.

Both frequency and length of feeds vary over time and from baby to baby. The following is a guide only.

<table>
<thead>
<tr>
<th>Age of baby</th>
<th>Frequency of feeds</th>
<th>Length of feeds</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;24 hours</td>
<td>Infrequent, commonly as few as 3 feeds in first 24 hours.</td>
<td>Variable.</td>
</tr>
<tr>
<td>&lt;7 days</td>
<td>Rapidly increasing in frequency, commonly peaking around day 5. May be as many as 12 or more feeds a day.</td>
<td>Very variable, both between babies and from feed to feed.</td>
</tr>
<tr>
<td>&gt;7 days</td>
<td>Frequent feeds continue, most babies feeding 8 or more times in 24 hours. ‘Cluster’ feeding is common.</td>
<td>Still variable, but each baby will begin to develop his own unique pattern over a 24-hour period.</td>
</tr>
</tbody>
</table>


9. Supporting and protecting breastfeeding

Medical staff can support and protect breastfeeding by being aware of the practices which enhance breastfeeding and those which can make it more difficult for mothers to achieve.

The following practices enhance milk production

<table>
<thead>
<tr>
<th>Practice</th>
<th>Outcomes</th>
<th>Additional benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin-to-skin contact between mother and baby</td>
<td>Hormonal response triggers prolactin release, Spontaneous behaviour of mother and baby leads to breastfeeding</td>
<td>Calms baby, Regulates temperature, breathing and heart rate</td>
</tr>
<tr>
<td>Teaching mothers positioning, attachment and hand expressing</td>
<td>Increases chance of effective attachment and thus effective feeding</td>
<td>Increases mothers’ confidence, Prevents engorgement</td>
</tr>
<tr>
<td>Frequent feeding</td>
<td>Increases circulating prolactin, Reduces levels of FIL</td>
<td>Enables practice of new skills, Prevents engorgement</td>
</tr>
<tr>
<td>Unrestricted length of feeds</td>
<td>Ensures adequate fat intake, Allows baby to regulate milk supply</td>
<td>Ensures a 'satisfied' baby, Reduces 'colic'</td>
</tr>
<tr>
<td>Rooming-in</td>
<td>Permits frequent feeding, Raises oxytocin levels</td>
<td>Allows mother and baby to get to know each other - especially feeding cues</td>
</tr>
</tbody>
</table>

The following practices may jeopardise milk production

<table>
<thead>
<tr>
<th>Practice</th>
<th>Outcomes</th>
<th>Additional risks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supplementary feeds</td>
<td>Fills stomach and reduces appetite, so reducing stimulation of the breast, Longer digestion time further dampens desire to feed at the breast</td>
<td>Increases risk of many adverse health outcomes, Supplementary feeds suggested by health professionals have been shown to reduce mothers’ confidence in the adequacy of breastfeeding</td>
</tr>
<tr>
<td>Drinks of water</td>
<td>Fills stomach and reduces appetite, so reducing stimulation of the breast</td>
<td>Increases risk of gastroenteritis</td>
</tr>
<tr>
<td>Use of a teat</td>
<td>May cause difficulty with attachment at the breast, so reducing milk transfer and future milk production</td>
<td>Risk of infection</td>
</tr>
<tr>
<td>Use of a dummy</td>
<td>May cause difficulty with attachment at the breast, so reducing milk transfer and future milk production, Pacifies baby, so reducing number of breastfeeds and hence breast stimulation</td>
<td>Risk of infection, Risk of orthodontic and speech problems</td>
</tr>
</tbody>
</table>
It is recognised that supplementary feeds may sometimes be clinically indicated and that, in a neonatal unit, dummies may also sometimes be required. However, even when the circumstances are less than ideal, it is important that medical staff make an effort to convey to mothers their support for breastfeeding and their belief that it is worthy of protection. It is worth remembering that the word of a doctor can carry far more weight than that of any other health professional and that their overt support of breastfeeding can therefore do much to increase confidence and the value placed on breastmilk.

10. The frequent feeder

It is very common for parents and health professionals to believe that a ‘normal’ feeding pattern is for a baby to feed every 3-4 hours. In reality a breastfed baby may feed much more frequently than this and at irregular intervals. This can cause much unnecessary anxiety about the adequacy of the breastmilk supply.

There are many reasons why babies may demand feeds frequently, for example:

- As part of a natural feeding pattern which includes ‘clusters’ of feeds;
- For thirst, in a warm environment;
- For comfort, or as a way to enjoy mother’s company;
- As a means to increase the milk supply (usually a temporary phase).

Management of the frequent feeder

Although frequent and irregular feeding is quite normal, there is also the possibility that the frequent feeding is a result of the baby not being effectively attached to the breast. Therefore, babies who demand very frequent breastfeeds, or who show unsettled behaviour while at the breast, should be referred to a suitably-trained member of staff for assessment of their feeding technique. The following management may also be indicated:

- Exclude any underlying illness or condition which may be causing the baby to be distressed/unsettled. This may be as simple as a blocked nose or a more complex medical condition.
- Refer to an infant feeding specialist for help with the feeding technique.
- Ask the mother to express her milk and give by cup or syringe.

If feeding has been observed to be effective, the following may help:

- Reassure the mother that this is her baby’s normal feeding pattern. It may not always be this way but it is important to let the baby lead the way.
- Skin-to-skin contact may help to calm both mother and baby.

Building confidence

Mothers are vulnerable to the belief that they do not have enough milk for their baby or that their milk is not good enough. If their baby is unsettled or demanding feeds more frequently than they think he should, they may be tempted to give formula feeds. This action, while offering a short-term solution, will have a detrimental effect on the milk supply and put the baby at risk of infection. All staff should encourage mothers to believe in the value of their milk and the importance of exclusive breastfeeding. As mentioned earlier, doctors can be particularly influential in this regard.
11. The reluctant feeder

It is very common for healthy, term babies to feed infrequently in the first 24 hours after birth and this is rarely a cause for concern. However, lack of interest in feeding can also be the first sign of illness in a baby and therefore it is essential that such babies are monitored closely to exclude underlying illness.

Following delivery a healthy, term baby will:

- Inhibit the secretion of insulin to help sustain blood glucose levels
- Break down glycogen reserves
- Synthesize glucose from stores in the liver
- Generate alternative fuels such as ketone bodies to provide protection for the brain and other vital organs.

Therefore, healthy term babies do not develop symptomatic hypoglycaemia as a result of simple underfeeding. If an infant develops signs suggesting hypoglycaemia look for an underlying condition. Detection and treatment of the cause is as important as correction of the blood glucose level (World Health Organisation, 1997).

Management of the reluctant feeder

- Regular monitoring of vital signs to exclude underlying illness.¹
- Skin-to-skin contact and frequent prolonged access to the breast to encourage feeding.
- Frequent hand expression of breastmilk to stimulate lactation and provide milk for the baby.
- Expressed breastmilk to be given via syringe for small amounts of colostrum, or by cup for larger volumes of milk.

1. If a previously healthy baby develops signs of illness then a full examination by a paediatrician should be carried out to determine the cause. A blood glucose estimation may or may not form part of this assessment. However, it should be remembered that in a term, previously healthy baby a low blood glucose value may be a sign of underlying illness but is not the cause.

Where blood glucose estimation is considered necessary, it should be noted that reagent strips have poor sensitivity and specificity at low levels. They should therefore not be relied upon as an alternative to laboratory measurements in the care of newborns.
12. The at-risk infant

Infants at risk of hypoglycaemia include those who:

- Are preterm
- Are small for gestational age
- Have suffered intrapartum asphyxia
- Are sick
- Were born to a diabetic mother

The risk of hypoglycaemia is greatest in the first 24 hours of life as the infant adapts to extra-uterine life. Regular blood glucose estimations are therefore appropriate for these babies.

Management of the well at-risk baby

- Skin-to-skin contact and an early first breastfeed. Expressed breastmilk to be given if the baby does not breastfeed. Formula milk to be given only if no breastmilk is available.

- The first blood glucose estimation to be taken prior to the second feed1.

- Breastfeed at least 3-hourly2, giving expressed breastmilk (EBM) supplements (by cup or syringe) if feeding is not effective. Formula milk to be given only if there is no breastmilk available.

- Pre-feed blood glucose estimations3 to be taken prior to feeds, then:
  - If blood glucose below 2.6mmol/l, feed the baby again. Repeat estimation in one hour.
  - If blood glucose still below 2.6mmol/l, consider admission to the neonatal unit.
  - Regular observations of vital signs and overall condition.
  - Reassessment at frequent intervals (see Trust guidelines).

If the at-risk infant is unwell or shows signs associated with hypoglycaemia (e.g. apnoea, cyanosis, jitteriness4 or convulsions), urgent blood glucose estimations are required and intravenous glucose should be considered.

Notes

1. There is an immediate fall in blood glucose concentration after birth. This normally rises significantly by around 3 hours of age, regardless of nutritional intake. Taking a blood glucose reading before this natural fall and rise has happened is of little value and can cause unnecessary alarm. Taking the first blood glucose estimation at around 4 hours of age (commonly prior to the second feed) will give the blood glucose level a chance to rise and will indicate how well the baby is coping with intermittent feeds.
2. There is no reason why the baby should not feed (or be fed) more frequently than every three hours, indeed this should be encouraged. However, there is no need to carry out blood glucose estimations more often than 3-hourly.

3. Reagent strips have poor sensitivity and specificity in newborns and should not be relied upon as an alternative to laboratory measurements.

4. It is essential to differentiate between true jitteriness and the normal Moro or startle reflex. Jitteriness is an unprovoked movement of one or more limbs, indicating cerebral irritation. It does not occur in isolation in healthy, term neonates as a result of simple underfeeding but is indicative of a more serious underlying problem.
13. Breastfeeding and jaundice

Some degree of jaundice in the early postnatal period appears to be a normal physiological phenomenon. Physiological jaundice typically begins on the second or third postnatal day and peaks on Day 3 or 4.

The prompt resolution of physiological jaundice relies on the early establishment of effective and frequent feeding. Without this, slowing of the infant’s metabolism results in further poor feeding responses and prolongation and/or worsening of the jaundice through re-absorption of bilirubin from the gut.

Management of the breastfed jaundiced baby

- Assessment of the baby to exclude underlying illness.
- Frequent breastfeeds - at least 3-hourly but more frequent if possible.
- Expressed breastmilk to be given after breastfeeds if the baby does not feed adequately or if extra fluid is required.¹
- Mother and baby to be kept together and skin contact encouraged to facilitate frequent feeding.²
- Assessment of breastfeeding by an appropriately-trained member of staff and extra help provided with positioning and attachment if needed.

Notes

1. Supplements of water do nothing to reduce bilirubin levels and may even make them rise by reducing the intake of milk and thus the rate at which meconium is passed.

2. Phototherapy should, wherever possible, be carried out by the mother’s bedside.


14. Weight loss

Babies commonly lose up to 10% of their birth weight in the first 3 days of life. Some or all of this may be accounted for by excretion of the extra intracellular fluid which he or she has stored during gestation, passing meconium and taking in only small volumes of colostrum.

While all mothers and babies should receive help and support to establish early and effective breastfeeding, weight loss in excess of 10% should trigger a full assessment of both the baby’s general condition and feeding technique.

Possible causes of excessive weight loss

Insufficient milk intake. This may be the result of:

- Inadequate milk transfer from mother to baby, through ineffective attachment at the breast or infrequent or restricted feeding
- Inadequate milk production in the mother (rare in the immediate postnatal period)

Illness or infection in the baby. In this case weight loss may be the result of:

- Inadequate feeding responses and behaviour, or
- The process of the illness itself

Inaccurate measurement. This may be the result of:

- Use of inaccurate scales
- Inaccurate interpretation or recording of weight
- Failure to weigh baby naked
- Failure to weigh at the same time on each occasion (e.g. in relation to feeding)

Finding the cause

It is important to establish the reason for excessive weight loss so that the correct management can be implemented. This involves:

- Full clinical assessment to exclude underlying illness
- Assessment of breastfeeding (including a full feeding history) by an appropriately-trained member of staff
- Monitoring of urine output
- Monitoring of frequency and consistency of stools (NB: This is less valuable as a guide in babies over a month old.)
Management of the healthy, term breastfed baby with a weight loss >10% in the first 3 days

- Assessment of breastfeeding by an appropriately-trained member of staff
- Help with positioning and attachment as needed
- Frequent breastfeeds - at least 3-hourly but more frequent if possible
- Expressed breastmilk to be given after breastfeeds by cup or syringe
- Close monitoring of urine and stool output to assess breastmilk intake
- Reweighing after a few days

Notes

1. The baby may not pass much urine in the first 24 hours, but as the milk supply increases so the urine output should also increase. The urine should be pale and dilute.

2. A breastfed baby’s stools may take longer to change from black to yellow than an artificially fed baby’s stools because the volume of feeds in the first 48 hours is smaller. However, if a healthy, term baby is breastfeeding well the stools should have started to change by 48 hours and be yellow by 72-96 hours. A delay in changing stool colour can be a sign that the baby is not feeding adequately.

3. Maternal diet, exercise and stress levels are very unlikely to have any direct effect on milk supply.

4. Supplementation with formula will further compromise the mother’s milk supply and increase the risk of infection for the baby. This should be considered only if the baby’s health is at risk.