International Lactation Consultant Association

Evidence-Based Guidelines for Breastfeeding Management during the First Fourteen Days

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Preface

The American Academy of Pediatrics, the American Academy of Family Medicine, and the American College of Obstetricians and Gynecologists recommend breastfeeding as the appropriate way to feed infants.[1,3,4] Nonetheless, studies show that as many as 50% of infants are weaned from the breast within the first 14 days.[22,65] Therefore, this document focuses on the establishment and maintenance of breastfeeding during this time period. These guidelines are for healthy, term infants. Common problems that often lead to untimely weaning are addressed. Referral to a skilled lactation professional, such as an International Board Certified Lactation Consultant (IBCLC), physician, midwife, nurse, or dietitian is always appropriate.

Breastfeeding management guidelines must be evidence-based, as well as consistent, accurate, and clinically appropriate to effectively impact breastfeeding initiation and continuation.[91] Management strategies presented herein include both clinical and educational components. To effectively facilitate breastfeeding, the health care professional must determine an appropriate clinical strategy and discern the mother's need for specific information relative to its implementation. Often, commonly held beliefs and misconceptions need to be addressed before an appropriate clinical strategy can be implemented.

Evidence to support these guidelines comes from research when available. Some management strategies are not amenable to the control and randomization of true experimental design, but are based on clinical experience and logical deductions from known scientific facts. Supporting documentation ranges from original research to works based on years of clinical experience. Using the model developed by the U.S. Preventive Services Task Force, the quality of the evidence for each standard is ranked (see Appendix 1).[95]

These guidelines are the culmination of the efforts of a multidisciplinary panel of experts with input from consumers. It is hoped that these management strategies, which are designed to give guidance in providing optimal care to mothers and infants, will improve both breastfeeding initiation and duration rates.

* In this document, the term "breastfeeding" means "exclusive" or "almost exclusive" breastfeeding.[57]

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Expected Outcomes for Breastfeeding Mothers and Infants

Healthy, term, breastfeeding infants will:

- exclusively feed at the breast
- lose no more than 7% of birth weight
- regain to birth weight by 14 days of age
- have at least 3 bowel movements and 6 wet diapers per 24 hours by day 4
- gain 4-8 ounces per week (approximately 1 ounce or 30 grams per day)

Mothers of healthy term breastfeeding infants will:

- exclusively breastfeed
- recognize and respond appropriately to early infant feeding cues
- recognize signs of effective breastfeeding
- have breasts and nipples that are pain-free
- confirm knowledge of appropriate breastfeeding management

1 Management Strategy	Rationales and References	Quality of Evidence
Facilitate breastfeeding as soon as possible after birth, ideally within the first 2 hours · Provide continuous skin-to-skin contact for at least the first 2 hours after birth or until after the first breastfeeding · Delay unnecessary procedures for at least the first 2 hours after birth or until after the first breastfeeding	Early initiation of breastfeeding is associated with: · earlier establishment of effective suckling and feeding behaviors[29,82,98,99] · enhanced maternal-infant interaction[97] · improved neonatal temperature control[13] · stabilized neonatal blood sugar levels[34,105] · increased bowel movements and decreased jaundice[106] · longer duration of breastfeeding [18-20,86,92,106] Routine procedures, such as prophylactic administration of vitamin K and erythromycin, interrupt maternal-infant interaction and delay breastfeeding [52,54,82,98]	 I, II-1, II-2, III II-1 II-1 II-2 II-3 I, II-1, II-3 I, II-1, II-2, III

2 Management Strategy	Rationales and References	Quality of Evidence
Help the mother choose a comfortable position Observe infant for correct positioning: · held at the level of the breast · body facing the breast with head and body aligned	Milk transfer occurs more readily with appropriate positioning and latch-on (attachment). The position that best facilitates correct latch-on will vary from mother to mother and infant to infant.[70,83,89]	II-3, III

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2 Management Strategy	Rationales and References	Quality of Evidence
Observe infant for signs of correct latch-on: · wide opened mouth · flared lips · nose, cheeks, and chin touching, or nearly touching, the breast Observe infant for signs of milk transfer: · sustained rhythmic suck/swallow pattern with occasional pauses · audible swallowing · relaxed arms and hands · moist mouth · satisfied after feedings Observe mother for signs of milk transfer: · strong tugging which is not painful · thirst · uterine contractions or increased lochia flow during or after feeding for the first 3-5 days · milk leaking from the opposite breast while feeding · relaxation or drowsiness · breast softening while feeding · nipple elongated after feeding but not pinched or abraded	Correct positioning and latch-on minimizes nipple tenderness and trauma.[108]	III

Management Strategy	Rationales and References	Quality of Evidence
Facilitate rooming-in 24 hours a day	Rooming-in facilitates the breastfeeding process.[6, 17,19,66,80]	I, II-1,III
Conduct examinations and routine tests of the infant in the mother's room	Hospital routines often interfere with the development of effective breastfeeding.[19,101,104]	I, II-2
	Hospital routines and staff attitudes influence long-term behavior more than verbal teaching.[80,101,104]	I, II-2, III
	Breastfeeding frequency is greater and supplementation with artificial baby milk (formula) occurs less often when mothers and infants room-in compared with when they do not.[26,106,107]	II-1, II-2, II-3
	Mothers do not get more sleep when the infant is taken to the nursery at night.[50]	II-3

4 Management Strategy	Rationales and References	Quality of Evidence
Facilitate unrestricted breastfeeding 8-12 times per 24 hours	Unrestricted breastfeeding (as opposed to timed feedings on a schedule):	
	· helps prevent pathologic engorgement[29,40]	II-3, III
	· decreases the incidence of jaundice[16]	II-3
	· stabilizes neonatal serum glucose levels [34,105]	II-2
	· decreases initial infant weight loss and increases rate of weight gain[17,106]	II-1, II-3
	· promotes earlier onset of mature milk production (lactogenesis)[46,86,106]	I, II-3
	· increases the duration of breastfeeding[86,90]	

5 Management Strategy	Rationales and References	Quality of Evidence
Confirm that parents know to respond to early feeding readiness cues: · sucking movements · sucking sounds · hand-to-mouth movements · rapid eye movements · soft cooing or sighing sounds · fussiness	Attention to early feeding cues facilitates correct latch-on and effective suckling which reinforces the mother's response to her infant[17,30,36,78]	II-1, II-2, III

6 Management Strategy	Rationales and References	Quality of Evidence
Confirm the parents' understanding that the amount of milk removed from the breast determines the amount of milk produced. To facilitate milk production: · breastfeed when infant exhibits feeding readiness cues · feed on the first breast without time restriction (approximately 15-20 minutes) before offering the second breast · feed until the infant is satisfied (some infants are satisfied with one breast)	Milk volume increases with increased feeding frequency during the first 14 days. Prolactin receptors that regulate milk production are established during this early period.[15,17] Total time breastfeeding remains positively correlated with infant intake and weight at 3 months of age.[21] Fat content of milk increases during the feeding; therefore time limits or enforced change from the first to the second breast should be avoided.[103] Infants whose mothers' milk has a lower fat content will breastfeed longer to obtain sufficient calories.[94]	II-1, II-3 II-3 II-1 II-2

7 Management Strategy	Rationales and References	Quality of Evidence
Confirm that parents know when and how to wake a sleepy infant: · wake at least every third hour, or when any feeding readiness cues are exhibited (see #4) · stimulate the infant by: removing blanket and clothing; changing diaper; putting baby skin-to-skin with the mother or father; massaging back, arms, and legs.	Some infants shut-down (sleep) to cope with discomfort, including hunger.[10] Infants have several states: deep sleep, light sleep, drowsy, quiet alert, fussing or active alert, and crying. It is easiest to initiate feedings when the infant is in the drowsy, quiet alert, or active alert states.[11]	II-2 III

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Management Strategy	Rationales and References	Quality of Evidence
Encourage parents to avoid the use of pacifiers, artificial nipples, and supplements, unless medically indicated, until breastfeeding is well established. For most infants, this is after 4-6 weeks. Some infants never use pacifiers or bottles.	Human milk provides all of the fluid and nutrients necessary for optimal infant growth.[35,46,94,103]	II-1, II-2, II-3
	Use of supplements or pacifiers in the hospital is associated with a risk for early weaning.[7,37,41,55,84, 96,101]	II-2, II-3

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Management Strategy	Rationales and References	Quality of Evidence
Observe at least one breastfeeding in each 8 hour period during the hospital stay and document the following: · condition of breasts and nipples · position of mother and infant · correct latch-on · signs of milk transfer · mother/infant interaction · frequency of feedings · number of wet diapers · number and character of bowel movements · weight gain/loss pattern	Direct observation is part of assessment. Assessment is a prerequisite to intervention and provides opportunity for positive reinforcement and reassurance.[3,85]	III
	The healthy, term, newborn infant should gain at least to birth weight by 14 days.[17,73,88]	II-1, II-2

Management Strategy	Rationales and References	Quality of Evidence
Know the signs of ineffective breastfeeding · infant weight loss >7% · continued weight loss after day 3 · less than 3 bowel movements in 24 hours · meconium stools after day 4 · less than 6 wet diapers in 24 hours after day 4 · infant who is irritable and restless or sleepy and refusing to feed · no audible swallowing during feedings · no discernible change in weight or size of breasts and no discernible change in milk volume and composition by 3-5 days · persistent or increasingly painful nipples · engorgement unrelieved by feeding · infant who does not begin to gain weight by day 5 · infant who has not returned to birth weight by day 14	Although a single sign may not indicate a problem, further investigation and follow-up are indicated.[72,77] Normative clinical patterns of bowel movements in the breastfed newborn vary widely.[47,75,88] However, output is a key indicator of adequate intake. Continued weight loss on day 3 is strongly correlated with untimely weaning.[68] Incorrect positioning and/or latch-on can cause nipple trauma and pain.[83] If pain persists despite correct positioning and latch-on, consider other causes such as bacterial or fungal infections.[45] Audible swallowing is a positive sign of milk transfer.	III II-2, II-3 II-1 II-3

11 Management Strategy	Rationales and References	Quality of Evidence
If effective breastfeeding, as demonstrated by milk transfer, is not observed within the first 24 hours: · re-evaluate breastfeeding techniques (see Strategy # 2) and stimulate sucking with expressed colostrum or drops of water, if necessary · initiate pumping with a hospital-grade pump · if medically indicated, explore alternative methods of feeding (see #15) · delay discharge until effective breastfeeding has been observed · refer to a health care professional with breastfeeding expertise, such as an International Board Certified Lactation Consultant (IBCLC), physician, midwife, nurse, or dietitian · coordinate care with infant's primary care provider to schedule a weight check within 24-48 hours of discharge and assure sufficient breast stimulation with a hospital-grade pump to develop a milk supply, if necessary.	Breastfeeding duration increases when hospital and follow-up services support continued evaluation and appropriate intervention.[14,53] Adequate breast stimulation and milk removal is critical to developing a sufficient milk supply.[102] Infant liver stores of glycogen are 90% diminished by 3 hours of age and completely depleted by 12 hours.[76]	II-2, III I III

Management Strategy	Rationales and References	Quality of Evidence
Identify risk factors that can affect the infant's ability to breastfeed effectively. Provide necessary feeding assistance and monitor closely. Risk factors include:	Early weaning has been associated with ratings by nursing staff of infants having excessive crying, demanding personality, and trouble with feeding.[65,72]	III
· birth trauma · <38 weeks gestation · inconsistent ability to latch on · sleepiness or irritability · hyperbilirubinemia or hypoglycemia · small (SGA) or large (LGA) for gestational age, intrauterine growth retardation (IUGR) · tight frenulum · multiple birth · neuromotor problems (i.e.Down Syndrome) · oral anomalies (i.e. cleft lip/palate) · acute or chronic illness	There is no research to support that any of these risk factors are contraindications to breastfeeding.[60,72]	III

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Management Strategy	Rationales and References	Quality of Evidence
Identify maternal risk factors for breastfeeding difficulty. Provide appropriate assistance and follow-up. Risk factors include:	Mothers often cite one of these factors as the reason for discontinuing breastfeeding.[39,43]	II-2, II-3
	Most problems are amenable to treatment and intervention.[40,44,74,83,108,109]	II-2, II-3, III
· previous breastfeeding difficulty	· Few medications are contraindicated for the breastfeeding mother. [2,12,31]	III
· cracked or bleeding nipples	· Women who have had breast surgery (augmentation or reduction) have an increased risk of lactation insufficiency when compared to women who have not had breast surgery. [33,48,71]	II-3, III
· severe engorgement	· Treatment for breast cancer does not preclude breastfeeding after a subsequent pregnancy.[93]	III
· persistent breast pain		
· acute or chronic disease		
· medication use		
· breast or nipple abnormality		
· breast surgery or trauma		
· absence of prenatal breast changes		

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Management Strategy	Rationales and References	Quality of Evidence
Identify maternal & infant contraindications to breastfeeding, including	There are few contraindications to breastfeeding.[9,60,67,100]	II-2, III
Maternal:		
· HIV positive status		
· substance abuse		
· chemotherapy		
· tuberculosis (only until treatment is initiated and the mother is no longer infectious)		
Infant:		
· galactosemia		

15 Management Strategy	Rationales and References	Quality of Evidence
If medically indicated, provide supplementation utilizing a method of feeding that does not compromise transition to the breast: · use mother's own colostrum or milk as a first choice · determine volume of supplement based on infant's age and weight; allow for any intake from the breast · reassure mother that infant benefits from any amount of breast milk provided · if using formula, select one which takes into account any family history of allergies	Appropriate growth is supported by 108 kcal per kilogram of weight per day, or 2.5 ounces milk per pound of weight per day.[21] A nursing supplementer allows supplementation at the breast while providing the mother with suckling stimulation to appropriately increase milk production.[24] This also decreases time feeding and pumping, since everything is being done at once. Using a cup to supplement an infant decreases the likelihood of causing nipple confusion.[59]	II-3 III III

16 Management Strategy	Rationales and References	Quality of Evidence
Confirm parents' knowledge of: · appropriate breastfeeding behavior · signs of effective breastfeeding · appropriate elimination patterns · management of common concerns including engorgement and sore nipples	Anticipatory guidance regarding common concerns increases duration of breastfeeding.[42,47] Awareness of appropriate signs of milk transfer is associated with breastfeeding success.[38]	II-3 II-3

17 Management Strategy	Rationales and References	Quality of Evidence
Confirm that parents have scheduled a follow-up visit with the infant's primary care provider within 2-3 days of hospital discharge.	The primary care provider evaluates weight gain and other clinical factors that indicate effective breastfeeding.[3]	III
Schedule additional visits as needed until an appropriate weight gain pattern has been established.	Positive and knowledgeable breastfeeding support increases the incidence, duration, and exclusivity of breastfeeding [14,58,64,65,81,87,104]	II-1, II-2, II-3, III
Identify lactation support resources within the community.		

18 Management Strategy	Rationales and References	Quality of Evidence
Provide educational materials that: · are clinically accurate · are consistent · are reading-level appropriate · are culturally sensitive · are free of commercial advertising · include a list of available community breastfeeding resources: - IBCLC lactation consultants - WIC program staff - health department staff - volunteer breastfeeding support groups - knowledgeable breast pump rental and sales outlets	Adult learners are more likely to utilize materials that are relevant to a specific learning need.[79]	III
	Printed or other audiovisual materials reinforce verbal instruction.[27]	I
	Some audiovisual materials may transmit subtle, undesirable messages, reinforce stereotypes or contradict verbal messages.[101]	II-2
	Women breastfeed longer when support systems are available.[14,53]	II-2, III

19 Management Strategy	Rationales and References	Quality of Evidence
Support continued breastfeeding during any re-hospitalization of mother or infant.	Continued breastfeeding during hospitalization is important for the well-being of mother and infant.[3]	III

20 Management Strategy	Rationales and References	Quality of Evidence
Avoid distribution of sample packs that include infant feeding products or advertising for such products.	Distribution of infant feeding products decreases breastfeeding duration.[8,27,104]	I, II-2

21 Management Strategy	Rationales and References	Quality of Evidence
Include family members or significant others in breastfeeding education.	Support of family members and significant others increases the duration of breastfeeding.[14,47,87]	II-1, II-3, III

Management Strategy	Rationales and References	Quality of Evidence
Provide anticipatory guidance for common problems that can interfere with continued breastfeeding.		
Nipple pain		
· initially, mild discomfort can occur at the beginning of each feeding when the infant latches on to the breast · often pain is the result of incorrect positioning and latch-on · pain that persists during or after the feeding, or between feedings, should be evaluated · consider other causes such as bacterial or fungal infections	Sore nipples, engorgement, pain and mother's perception of insufficient supply, are the most common reasons given for stopping breastfeeding in the first two weeks.[25,65] Inconsistent or inaccurate information given by health care professionals contributes to maternal confusion and premature weaning.[5,62,63]	I, III I, III
Engorgement		
· occurs in some mothers approximately 3-5 days after birth · swelling is minimized with frequent, effective feedings · treatment should focus on measures to reduce swelling, such as cold compresses (ice, bags of frozen vegetables, cabbage leaves), breast massage, milk expression (pumping), and ibuprofen or acetaminophen for pain · avoid use of heat unless breasts are freely leaking	Previous breastfeeding experience and current feeding routine may play an important role in the timing and level of breast engorgement.[40,69]	II-3, III

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Management Strategy	Rationales and References	Quality of Evidence
Perceived insufficient milk supply		
· in the second week of life, initial breast swelling decreases but this does not signal a decrease in milk production	Perceived insufficient milk supply is a significant cause of untimely weaning and occurs in up to 50% of all breastfeeding mothers.[43]	II-3
· when an infant has a growth or appetite spurt, more frequent feedings for about 48 hours will increase total milk production. The first appetite spurt is often in the second week of life.	Research has shown that support of the mother to continue breastfeeding through this perceived low milk supply "crisis" increases breastfeeding duration and that infant growth is not affected.[44]	II-2
· stool and urine output by the infant are the best indicators of adequate intake		
· if the fussy infant is having appropriate output and gaining weight, low milk supply is not the cause of fussiness		
Infant crying		
· no crying should go unattended	Infants whom hospital nurses identified as crying excessively or having a demanding personality were significantly less likely to be breastfed at 2 weeks of age.[65]	II-2
· not every cry is a hunger cry —infants will cry to signal other needs; if the infant is not exhibiting feeding cues, parents can try other comfort measures before offering the breast	A crying infant needs attention.[61]	
· reassure parents that, as infants mature, they sleep longer between feedings		

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22 Management Strategy	Rationales and References	Quality of Evidence
Maternal diet · dietary restrictions are seldom necessary; few infants are affected by foods eaten by the mother · the mother should eat a variety of foods from all the food groups and drink to satisfy thirst	Myths about dietary rules are a barrier to breastfeeding and have no basis in fact.[28]	III
	Increased maternal fluid intake does not affect the quantity of milk produced.[23]	I
	Fluid intake beyond natural inclination may negatively affect milk production.[49]	II-1
Going out with or without the baby It is possible to: · plan feedings around mother's or family's activities · learn to breastfeed discreetly · learn to express, collect, and store breast milk · provide breast milk using an alternative feeding method · introduce a supplement		

23 Management Strategy	Rationales and References	Quality of Evidence
Reinforce the following important facts and help parents establish realistic expectations regarding: Frequency and duration of feedings: · expect a minimum of 8-12 feedings in 24 hours · some infants will breastfeed every 3 hours day and night · others will cluster-feed, feeding every hour for 4-6 feeds then sleeping 4-6 hours · expect to feed 15-20 minutes on the first breast and 10-15 minutes on the second but do not be concerned if the infant is satisfied after one breast · if necessary, wake a sleepy infant for feedings until an appropriate weight gain pattern is established · expect feeding frequency to decrease as the infant gets older Infant output · expect at least 3 bowel movements each 24 hours; some infants have a bowel movement with every feeding · expect at least 6 urinations a day by day 4 · expect bowel movements to change from meconium to a yellow, soft, and watery consistency by day 4	Realistic expectations of the breastfeeding process prevent premature weaning. [36,72,87] Use of anticipatory guidance as a primary intervention positively influences the breastfeeding process.[3,37,39] Positive, knowledgeable support promotes breastfeeding satisfaction and duration.[14,18,32,47,53,58] Early identification of problems facilitates early intervention.[3]	I, II-1, III II-3, III I, II-3, II-2, III III

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Management Strategy	Rationales and References	Quality of Evidence
Infant weight loss/gain · expect < 7% weight loss the first week · expect return to birth weight by 14 days of age · expect weight gain of 4-8 ounces (120 - 240 grams) a week until the infant has doubled birth weight		

Management Strategy	Rationales and References	Quality of Evidence
Discuss contraceptive options, including: · barrier devices · hormonal methods · lactational amenorrhea method (LAM)	Barrier devices do not introduce synthetic hormones into the woman's system and, therefore, do not interfere with milk production. Synthetic hormones taken by the breastfeeding mother may affect milk production. Specifically, · estrogen-containing pills often decrease milk production and should be avoided · progestin-only pills, injections or implants inhibit milk production if given before lactogenesis occurs, and should be delayed for at least 6 weeks · progestin-only methods begun after a milk supply is well established, usually do not interfere with milk production, however, pills which can easily be discontinued are preferred over injections or implants.[51]	III
	The lactational amenorrhea method (LAM) focuses on use of the body's own rhythms. Used appropriately, it is 98% effective in preventing pregnancy.[56]	I

Appendix 1

Evaluation Criteria for Type of Evidence

(based on U.S. Preventive Services model[95])

Code	Criteria
I	Evidence obtained from at least one properly randomized study.
II-1	Evidence obtained from well-organized, controlled trials without randomization.
II-2	Evidence obtained from well-designed cohort or case-control analytic studies preferably from more than one center or research program.
II-3	Evidence obtained from multiple time series with or without the intervention. Dramatic results in uncontrolled experiments (such as the results of the introduction of penicillin treatment in the 1940s) could also be regarded as this type of evidence.
III	Opinions of respected authorities, based on clinical experience,descriptive studies and case reports, or reports of expert committees.

Appendix 2

Technical Advisory Group

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