AMERICAN ACADEMY OF PEDIATRICS

POLICY STATEMENT

Organizational Principles to Guide and Define the Child Health Care System and/or Improve the Health of All Children

Section on Breastfeeding

Breastfeeding and the Use of Human Milk

ABSTRACT. Considerable advances have occurred in recent years in the scientific knowledge of the benefits of breastfeeding, the mechanisms underlying these benefits, and in the clinical management of breastfeeding. This policy statement on breastfeeding replaces the 1997 policy statement of the American Academy of Pediatrics and reflects this newer knowledge and the supporting publications. The benefits of breastfeeding for the infant, the mother, and the community are summarized, and recommendations to guide the pediatrician and other health care professionals in assisting mothers in the initiation and maintenance of breastfeeding for healthy term infants and high-risk infants are presented. The policy statement delineates various ways in which pediatricians can promote, protect, and support breastfeeding not only in their individual practices but also in the hospital, medical school, community, and nation. ***Pediatrics*** **2005;115:496–506;** ***breast, breastfeeding, breast milk, human milk, lactation.***

tus,[56–59] lymphoma, leukemia, and Hodgkin disease,[60–62] overweight and obesity,[19,63–70] hypercholesterolemia,[71] and asthma

is with the mother. The mother is an optimal heat source for the infant.[159,160] Delay weighing, measuring, bathing, needle-sticks, and eye prophylaxis until after the first feeding is completed. Infants affected by maternal medications may require assistance for effective latch-on.[156] Except under unusual circumstances, the newborn infant should remain with the mother throughout the recovery period.[161]

4. Supplements (water, glucose water, formula, and other fluids) should not be given to breastfeeding newborn infants unless ordered by a physician when a medical indication exists.[148,162–165]
5. Pacifier use is best avoided during the initiation of breastfeeding and used only after breastfeeding is well established.[166–168]
   - In some infants early pacifier use may interfere with establishment of good breastfeeding practices, whereas in others it may indicate the presence of a breastfeeding problem that requires intervention.[169]
   - This recommendation does not contraindicate pacifier use for nonnutritive sucking and oral training of premature infants and other special care infants.
6. During the early weeks of breastfeeding, mothers should be encouraged to have 8 to 12 feedings at the breast every 24 hours, offering the breast whenever the infant shows early signs of hunger such as increased alertness, physical activity, mouthing, or rooting.[170]
   - Crying is a late indicator of hunger.[171] Appropriate initiation of breastfeeding is facilitated by continuous rooming-in throughout the day and night.[172] The mother should offer both breasts at each feeding for as long a period as the infant remains at the breast.[173] At each feed the first breast offered should be alternated so that both breasts receive equal stimulation and draining. In the early weeks after birth, nondemanding infants should be aroused to feed if 4 hours have elapsed since the beginning of the last feeding.
   - After breastfeeding is well established, the frequency of feeding may decline to approximately 8 times per 24 hours, but the infant may increase the frequency again with growth spurts or when an increase in milk volume is desired.
7. Formal evaluation of breastfeeding, including observation of position, latch, and milk transfer, should be undertaken by trained caregivers at least twice daily and fully documented in the record during each day in the hospital after birth.[174,175]
   - Encouraging the mother to record the time and duration of each breastfeeding, as well as urine and stool output during the early days of breastfeeding in the hospital and the first weeks at home, helps to facilitate the evaluation process. Problems identified in the hospital should be addressed at that time, and a documented plan for management should be clearly communicated to both parents and to the medical home.
8. All breastfeeding newborn infants should be seen by a pediatrician or other knowledgeable and experienced health care professional at 3 to 5 days of age as recommended by the AAP.[124,176,177]
   - This visit should include infant weight; physical examination, especially for jaundice and hydration; maternal history of breast problems (painful feedings, engorgement); infant elimination patterns (expect 3–5 urines and 3–4 stools per day by 3–5 days of age; 4–6 urines and 3–6 stools per day by 5–7 days of age); and a formal, observed evaluation of breastfeeding, including position, latch, and milk transfer. Weight loss in the infant of greater than 7% from birth weight indicates possible breastfeeding problems and requires more intensive evaluation of breastfeeding and possible intervention to correct problems and improve milk production and transfer.
9. Breastfeeding infants should have a second ambulatory visit at 2 to 3 weeks of age so that the health care professional can monitor weight gain and provide additional support and encouragement to the mother during this critical period.
10. Pediatricians and parents should be aware that exclusive breastfeeding is sufficient to support optimal growth and development for approximately they i(for)-1e6xt(p1tric397t[((p)-3

- There is no upper limit to the duration of breastfeeding and no evidence of psychologic or developmental harm from breastfeeding into the third year of life or longer.[197]
- Infants weaned before 12 months of age should not receive cow's milk but should receive iron-fortified infant formula.[198]

11. All breastfed infants should receive 1.0 mg of vitamin K_1 oxide intramuscularly after the first feeding is completed and within the first 6 hours of life.[199]
    - Oral vitamin K is not recommended. It may not provide the adequate stores of vitamin K necessary to prevent hemorrhage later in infancy in breastfed infants unless repeated doses are administered during the first 4 months of life.[200]
12. All breastfed infants should receive 200 IU of oral vitamin D drops daily beginning during the first 2 months of life and continuing until the daily consumption of vitamin D-fortified formula or milk is 500 mL.[201]
    - Although human milk contains small amounts of vitamin D, it is not enough to prevent rickets. Exposure of the skin to ultraviolet B wavelengths from sunlight is the usual mechanism for production of vitamin D. However, significant risk of sunburn (short-term) and skin cancer (long-term) attributable to sunlight exposure, especially in younger children, makes it prudent to counsel against exposure to sunlight. Furthermore, sunscreen decreases vitamin D production in skin.
13. Supplementary fluoride should not be provided during the first 6 months of life.[202]
    - From 6 months to 3 years of age, the decision whether to provide fluoride supplementation should be made on the basis of the fluoride concentration in the water supply (fluoride supplementation generally is not needed unless the concentration in the drinking water is <0.3 ppm) and in other food, fluid sources, and toothpaste.
14. Mother and infant should sleep in proximity to each other to facilitate breastfeeding.[203]
15. Should hospitalization of the breastfeeding mother or infant be necessary, every effort should be made to maintain breastfeeding, preferably directly, or pumping the breasts and feeding expressed milk if necessary.

ADDITIONAL RECOMMENDATIONS FOR HIGH-RISK INFANTS

- Hospitals and physicians should recommend human milk for premature and other high-risk infants either by direct breastfeeding and/or using the mother's own expressed milk.[13] Maternal support and education on breastfeeding and milk expression should be provided from the earliest possible time. Mother-infant skin-to-skin contact and direct breastfeeding should be encouraged as early as feasible.[204,205] Fortification of expressed human milk is indicated for many very low birth weight infants.[13] Banked human milk may be a suitable feeding alternative for infants whose mothers are unable or unwilling to provide their own milk. Human milk banks in North America adhere to national guidelines for quality control of screening and testing of donors and pasteurize all milk before distribution.[206–208] Fresh humanFresI-488.uld7mp1eors

sufficient information throughout the perinatal period to make a fully informed decision about infant feeding.

- Work collaboratively with the dental community to ensure that women are encouraged to continue to breastfeed and use good oral health practices. Infants should receive an oral health-risk assessment by the pediatrician between 6 months and 1 year of age and/or referred to a dentist for evaluation and treatment if at risk of dental caries or other oral health problems.[212]

3. American Academy of Pediatrics, Medical Home Initiatives for Children With Special Needs Project Advisory Committee. The medical home. *Pediatrics.* 2002;110:184–186

107. Robinson PS, Barker P, Campbell A, Henson P, Surveyor I, Young PR. Iodine-131 in breast milk following therapy for thyroid carcinoma.

160. Van Den Bosch CA, Bullough CH. Effect of early suckling on term neonates' core body temperature. *Ann Trop Paediatr.* 1990;10: 347–353
161. Sosa R, Kennell JH, Klaus M, Urrutia JJ. The effect of early mother-infant contact on breast feeding, infection and growth. In: Lloyd JL, ed. *Breast-feeding and the Mother*. Amsterdam, Netherlands: Elsevier; 1976: 179–193
162. American Academy of Pediatrics, American College of Obstetricians and Gynecologists. Care of the neonate. In: Gilstrap LC, Oh W, eds. *Guidelines for Perinatal Care*. 5th ed. Elk Grove Village, IL: American Academy of Pediatrics; 2002:222
163. Shrago L. Glucose water supplementation of the breastfed infant during the first three days of life. *J Hum Lact.* 1987;3:82–86
164. Goldberg NM, Adams E. Supplementary water for breast-fed babies in a hot and dry climate—not really a necessity. *Arch Dis Child.* 1983;58: 73–74
165. Eidelman AI. Hypoglycemia in the breastfed neonate. *Pediatr Clin North Am.* 2001;48:377–387
166. Howard CR, Howard FM, Lamphear B, de Blieck EA, Eberly S, Lawrence RA. The effects of early pacifier use on breastfeeding duration. *Pediatrics.* 1999;103(3). Available at: www.pediatrics.org/cgi/content/full/103/3/e33
167. Howard CR, Howard FM, Lanphear B, et al. Randomized clinical trial of pacifier use and bottle-feeding or cupfeeding and their effect on breastfeeding. *Pediatrics.* 2003;111:511–518
168. Schubiger G, Schwarz U, Tonz O. UNICEF/WHO Baby-Friendly Hospital Initiative: does the use of bottles and pacifiers in the neonatal nursery prevent successful breastfeeding? Neonatal Study Group. *Eur J Pediatr.* 1997;156:874–877
169. Kramer MS, Barr RG, Dagenais S, et al. Pacifier use, early weaning, and cry/fuss behavior: a randomized controlled trial. *JAMA.* 2001;286: 322–326
170. Gunther M. Instinct and the nursing couple. *Lancet.* 1955;1:575–578
171. Klaus MH. The frequency of suckling. A neglected but essential ingredient of breast-feeding.

209. Kaplan M, Hammerman C. Severe neonatal hyperbilirubinemia: a potential complication of glucose-6-phosphate dehydrogenase deficiency. *Clin Perinatol.* 1998;25:575–590, viii
210. Kaplan M, Vreman HJ, Hammerman C, Schimmel MS, Abrahamov A, Stevenson DK. Favism by proxy in nursing glucose-6-dehydrogenase-deficient neonates. *J Perinatol.* 1998;18:477–479
211. Gerk PM, Kuhn RJ, Desai NS, McNamara PJ. Active transport of nitrofurantoin into human milk. *Pharmacotherapy.* 2001;21:669–675
212. American Academy of Pediatrics, Section on Pediatric Dentistry. Oral health risk assessment timing and establishment of the dental home. *Pediatrics.* 2003;111:1113–1116
213. Fewtrell MS, Lucas P, Collier S, Singhal A, Ahluwalia JS, Lucas A. Randomized trial comparing the efficacy of a novel manual breast pump with a standard electric breast pump in mothers who delivered preterm infants. *Pediatrics.* 2001;107:1291–1297
214. American Academy of Pediatrics, Breastfeeding Promotion in Physicians' Office Practices Program. Elk Grove Village, IL: American Academy of Pediatrics; 2001, 2004
215. Freed GL, Clark SJ, Lohr JA, Sorenson JR. Pediatrician involvement in breast-feeding promotion: a national study of residents and practitioners. *Pediatrics.* 1995;96:490–494
216. Brown LP, Bair AH, Meier PP. Does federal funding for breastfeeding research target our national health objectives? *Pediatrics.* 2003;111(4). Available at: www.pediatrics.org/cgi/content/full/111/4/e360

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