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## Care Practices that Promote Normal Birth

### #6: No Separation of Mother and Baby with Unlimited Opportunity for Breastfeeding

Lamaze International Education Council

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With commentary by Phyllis H. Klaus, CSW, MFT, and Marshall H. Klaus, MD



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**#6: No Separation of Mother and Baby with Unlimited Opportunity for Breastfeeding**

*A new mother is staying in the mother/baby unit of the hospital where she gave birth. Her friend suggests that she send her baby to the nursery at night so she can get more sleep, but her nurse recommends that she keep her baby with her. What do research studies reveal about the needs of mothers and babies after birth?*



#### Abstract

In this position paper—one of six care practice papers published by Lamaze International and reprinted here with permission—the value of keeping mothers and their babies together from the moment of birth is discussed and presented as an evidenced-based practice that helps promote, protect, and support normal birth. The paper is written for childbearing women and their families. Babies held skin-to-skin with their mothers cry less often, breathe easier, and stay warmer than babies who are separated from their mothers. They also instinctively attach to the breast and begin breastfeeding, usually within one hour of birth. The advantages of rooming-in for mother and baby are also discussed. The accompanying commentary—written by two leading professionals in the field of maternity care and pediatrics—provides further evidence to support the practice of keeping mothers and their babies together after birth. Lamaze International encourages women to give birth in settings that do not separate mothers and babies after birth.

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*A new mother is staying in the mother/baby unit of the hospital where she gave birth. Her friend suggests that she send her baby to the nursery at night so she can get more sleep, but her nurse recommends that she keep her baby with her. What do research studies reveal about the needs of mothers and babies after birth?*

Throughout most of history, mothers and their new babies stayed together after birth. Babies stayed safe and warm, with easy access to breastmilk, and mothers and babies learned about each other. Beginning in the 20th century, as birth moved from homes to hospitals, most babies no longer stayed with their mothers following birth. The mother was sent to a hospital room, while her baby was cared for in a nursery. Mothers waited long hours to see their babies, and their newborns' visits often occurred only during scheduled feeding times. The medical community believed that babies were safer and mothers rested more with babies in the nursery.

In recent years research has shown that it is best for mothers and their babies to stay together after birth.<sup>1</sup> Interrupting, delaying, or limiting the time that a mother and her baby spend together may have a harmful effect on their relationship and on breastfeeding success. Babies stay warm and cry less, and breastfeeding gets off to a good start, when mothers and their babies have frequent time together beginning at birth. Mothers learn to recognize their babies' needs, responding tenderly and lovingly. A connection that endures a lifetime begins to form.

### Early Contact

Nature prepares a mother and her baby to need each other from the moment of birth. *Oxytocin*, the hormone that causes a woman's uterus to contract, also causes the temperature of her breasts to rise and helps her feel calm and responsive.<sup>2</sup> This hormone stimulates "mothering" feelings as the woman touches, gazes at, and breastfeeds

her baby. More oxytocin is released as she holds her baby skin-to-skin. Endorphins, narcotic-like hormones, are also released and enhance mothering feelings. High levels of adrenalin, which are normal in babies at birth, make the baby alert and prepare him to look for his mother, find his way to her breast, and breastfeed. During the hours and days following birth, a mother learns to understand her baby's cues and his unique way of communicating with her.

Experts recommend that following birth a healthy newborn be placed skin-to-skin on his mother's abdomen or chest, dried, and covered with warm towels.<sup>1,3,4,5,6</sup> Some researchers call this skin-to-skin contact "kangaroo mother care" or "kangaroo care." Being placed naked against his mother's skin is the perfect way for a baby to adapt to his new life outside her body.<sup>7</sup> The mother's temperature adjusts naturally to keep her baby from getting cold. Newborns placed skin-to-skin with their mothers cry less and stay warmer than newborns placed in warmers or cribs.<sup>8,9,10</sup> Also, babies who are cold, including premature babies, return to a normal temperature more quickly when held skin-to-skin by their mothers.

Years ago, medical professionals thought that babies were safer in the nursery because there was less chance that they would be exposed to germs. We now know that skin-to-skin contact provides an opportunity for a baby to be exposed to the normal bacteria on his mother's skin, and decreases the risk of the baby becoming sick due to harmful germs.<sup>6</sup>



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Other benefits to babies from skin-to-skin contact include easier breathing, higher blood sugar levels, and a natural progression to breastfeeding.<sup>8,11,12</sup> Most babies placed skin-to-skin with their mothers immediately after birth will instinctively attach to the breast and begin breastfeeding, usually within 1 hour.<sup>13,14</sup> Mothers who hold their babies skin-to-skin after birth are more likely to continue breastfeeding<sup>15</sup> and less likely to give their babies formula.<sup>7</sup> However, when babies are separated from their mothers for 20 minutes or more after birth, the babies are less likely to breastfeed during the first hour after birth.<sup>13</sup>

Many researchers who study animal behavior believe that, as with animals, human babies who are separated from their mothers at birth cry significantly more out of distress, physically needing the warmth, protection, and access to breastmilk that can be found in their mothers' arms.

### Rooming-In

Whether a woman has her baby in a hospital, at a birth center, or at home, it is best for her to be with her baby as much as possible. In the hospital setting, a mother and baby staying together is called rooming-in. Experts recommend that mother and baby room together throughout their hospital stay and that the two be cared for as a "couple."<sup>3,4,6</sup>

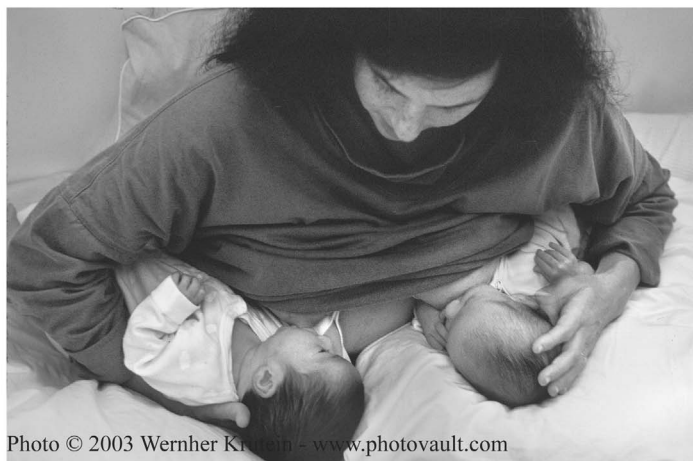


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Rooming-in with her baby makes breastfeeding easier for a mother. When she and her baby are together, she learns to recognize her baby's first "requests" for comfort and food, and to offer quickly what he needs. Mothers who room-in with their babies breastfeed sooner and more often compared to mothers who have limited contact with their babies or whose babies are in the nursery at night.<sup>16, 17,18,19</sup> Mothers who room-in have better milk supplies<sup>19</sup> and are more likely to be breastfeeding successfully when their babies are 4 months old.<sup>20</sup>



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Well-meaning friends and family may advise a woman to let her baby stay in the nursery at night so that she can get more sleep. However, some studies have found that mothers whose babies are cared for in the nursery do not get more sleep than mothers who room-in with their babies at night.<sup>21,22,23</sup> A mother may sleep more peacefully knowing that her baby is with her.

It makes sense that the more time two people spend together, the sooner they get to know each other. Mothers who are with their babies for longer periods of time, including during the night, have higher scores on tests that measure the strength of a mother's attachment to her baby.<sup>24,25,26</sup>

Rooming-in is also better for babies. Babies who room-in with their mothers cry less and spend more time in quiet sleep,<sup>22, 23</sup> gain more weight per day,<sup>18</sup> and are less likely to become jaundiced.<sup>19</sup> Rooming-in may have other long-term benefits for mothers and babies. Studies suggest that rates of child abuse, neglect, and separation are lower for mothers who have frequent and extended contact with their newborns during the early postpartum period.<sup>27</sup>

### Recommendations from Lamaze International

You will have waited 9 months to meet your baby. You will have dreamt about your baby and looked forward to the moment of birth with excitement. After birth, you and your baby will want and need to be together. And research shows that being together is best for both of you. Choose to have your baby in a place where this need will be met. If you are having your baby in a hospital, tell your caregiver that you wish to hold your baby skin-to-skin after birth and to keep your baby with you throughout your postpartum stay. You can reassure your friends and family that the best place for your baby is with you.

## References

1. Anderson, G.C., Moore, E., Hepworth, J., & Bergman, N. (2003). Early skin-to-skin contact for mothers and their healthy newborn infants (Cochrane Review). In *The Cochrane Library*, 3. Oxford: Update Software.
2. Uvnas-Moberg, K. (1998). Oxytocin may mediate the benefits of positive social interactions and emotions. *Psychoneuroendocrinology*, 23(8), 819–838.
3. American Academy of Pediatrics (AAP) and American College of Obstetricians and Gynecologists (ACOG). (2002). *Guidelines for perinatal care*. Elk Grove Village, IL: ACOG. Washington, DC: 4.
4. Academy of Breastfeeding Medicine Protocol Committee: Chantry, C., Howard, C.R., & McCoy, R.C. (2003). Clinical protocol #5: Peripartum breastfeeding management for the healthy mother and infant at term. *Academy of Breastfeeding Medicine News and Views*, 9(1).
5. Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN). (2000). *Evidence-based clinical practice guideline: Breastfeeding support: Prenatal care through the first year*. Washington, DC: AWHONN.
6. World Health Organization (WHO). (1998). *Evidence for the 10 steps to successful breastfeeding* (rev. ed., WHO/CHD/98.9). Geneva, Switzerland: WHO.
7. Mikiel-Kostyra, K., Mazur, J., & Boltruszko, I. (2002). Effect of skin-to-skin contact after delivery on duration of breastfeeding: A prospective cohort study. *Acta Paediatrica*, 91(12), 1301–1306.
8. Christensson, K., Siles, C., Moreno, L., Belaustequi, A., De La Fuente, P., Lagercrantz, H., et al. (1992). Temperature, metabolic adaptation and crying in healthy full-term newborns cared for skin-to-skin or in a cot. *Acta Paediatrica* 81(6–7), 488–493.
9. Christensson, K., Bhat, G.J., Amadi, B.C., Eriksson, B., & Hojer, B. (1998). Randomised study of skin-to-skin versus incubator care for rewarming low-risk hypothermic neonates. *Lancet*, 352(9134), 1115.
10. Bystrova, K., Widstrom, A.M., Matthiesen, A.S., Ransjo-Arvidson, A.B., Welles-Nystrom, B., & Wassberg, C., et al. (2003). Skin-to-skin contact may reduce negative consequences of “the stress of being born”: A study on temperature in newborn infants subjected to different ward routines in St. Petersburg. *Acta Paediatrica*, 92(3), 320–326.
11. Christensson, K., Cabrera, T., Christensson, E., Uvnas-Moberg, K., & Winberg, J. (1995). Separation distress call in the human neonate in the absence of maternal body contact. *Acta Paediatrica*, 84(5), 468–473.
12. Johanson, R.B., Spencer, S.A., Rolfe, P., Jones, P., & Malla, D.S. (1992). Effect of post-delivery care on neonatal body temperature. *Acta Paediatrica*, 81(11), 859–863.
13. Righard, L., & Alade, M.O. (1990). Effect of delivery room routines on success of first breast-feed. *Lancet*, 336(8723), 1105–1107.
14. Widstrom, A.M., Wahlberg, V., Matthiesen, A.S., Eneroth, P., Uvnas-Moberg, K., & Werner, S. (1990). Short-term effects of early suckling and touch of the nipple on maternal behavior. *Early Human Development*, 21(3), 153–163.
15. DiGirolamo, A.M., Grummer-Strawn, L.M., & Fein, S. (2001). Maternity care practices: Implications for breastfeeding. *Birth*, 28(2), 94–100.
16. Flores-Huerta, S., & Cisneros-Silva, I. (1997). Mother-infant rooming-in and exclusive breast feeding. *Salud p'ublica de Mexico*, 39(2), 110–116.
17. Perez-Escamilla, R., Pollitt, E., Lonnerdal, B., & Dewey, K.G. (1994). Infant feeding policies in maternity wards and their effect on breast-feeding success: An analytical overview. *American Journal of Public Health*, 84(1), 89–97.
18. Yamauchi, Y., & Yamanouchi, I. (1990). The relationship between rooming-in/not rooming-in and breast-feeding variables. *Acta Paediatrica Scandinavica*, 79(11), 1017–1022.
19. Syafruddin, M., Djauhariah, A.M., & Dasril, D. (1988). A study comparing rooming-in with separate nursing. *Paediatrica Indonesiana*, 28(5–6), 116–123.
20. Lindenberg, C.S., Cabrera Artola, R., & Jimenez, V. (1990). The effect of early post-partum mother-infant contact and breast-feeding promotion on the incidence and continuation of breast-feeding. *International Journal of Nursing Studies*, 27(3), 179–186.



21. Waldenstrom, U., & Swenson, A. (1991). Rooming-in in the postpartum ward. *Midwifery*, 7(2), 82–89.
22. Keefe, M.R. (1987). Comparison of neonatal nighttime sleep-wake patterns in nursery versus rooming-in environments. *Nursing Research*, 36(3), 140–144.
23. Keefe, M.R. (1988). The impact of infant rooming-in on maternal sleep at night. *Journal of Obstetric, Gynecologic, and Neonatal Nursing*, 17(2), 122–126.
24. Prodromidis, M., et al. (1995). Mothers touching newborns: A comparison of rooming-in versus minimal contact. *Birth*, 22(4), 196–200.
25. Klaus, M.H., Jerauld, R., Kreger, N.C., McAlpine, W., Steffa, M., Kennel, J.H., et al. (1972). Maternal attachment: Importance of the first postpartum days. *The New England Journal of Medicine* 286(9), 460–463.
26. Norr, K.F., Roberts, J.E., & Freese, U. (1989). Early postpartum rooming-in and maternal attachment behaviors in a group of medically indigent primiparas. *J Nurse-Midwifery*, 34(2), 85–91.
27. O'Connor, S., Vietze, P.M., Sherrod K., Sandler, H.M., & Altemeier, W.A. (1980). Reduced incidence of parenting inadequacy following rooming-in. *Pediatrics*, 66(2), 176–182.

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**Commentary by**  
**Phyllis H. Klaus, CSW, MFT**  
**Marshall H. Klaus, MD**

Several recent provocative behavioral and physiologic observations in both mothers and infants have stimulated a renewed interest in the first minutes, hours, and days of life. These assessments have been made during labor, birth, and the immediate postnatal period. They provide a compelling rationale for major changes in care for both mother and infant during the perinatal period. To understand how these pieces of the puzzle fit together, it is necessary to appreciate that this time period can probably be best defined in biology as a sensitive period. During this time, the mother and the father are especially open to changing their later behavior with their infant who is dependent on their care during the sensitive period.

The first change in care is the belief that every mother should be offered a doula during labor (Kennell, Klaus, McGrath, Robertson, & Hinkley, 1991). Mothers and fathers feel closer to their baby when they have the continuous emotional and physical support of a trained woman labor companion during the entire labor and delivery process. A labor companion (mother assistant, doula) provides the following elements during the often stress-filled events of labor: reassurance, information about what is occurring, and a variety of nonpharmacological comfort and pain-relieving practices. With a doula, women have significantly fewer cesarean sections, less medication (including epidurals), and shorter labors. These factors help the mother feel in control, fully supported, and never left alone; they also reduce pain and alleviate the fear, anxiety, and loneliness that labor often brings to both parents (Klaus, M., Kennell, & Klaus, P., 2002).

The calm presence and help a doula provides with her caring touch, appropriate massage, visualizations, and other techniques also enhance the mother's oxytocin levels. This type of support helps avoid elements that can make a birth traumatic for parents. A traumatic birth (Klaus et al., 2002)—one in which the mother feels helpless, no sense of control, inadequate, demeaned or humiliated, and betrayed or damaged—can affect the mother's perception of her infant. Research has also shown that, with continuous labor support, women have less depression and anxiety,

experience increased self-esteem (Wolman, Chalmers, Hofmeyer, & Nikodem, 1993), and feel closer to their babies and their partners 6 weeks after giving birth.

It is helpful to recognize the powerful physiological and psychological forces at work to enhance bonding. When giving birth without medication and without an epidural (which numbs the cervix), the mother produces the hormone oxytocin. This naturally produced hormone has a variety of important functions (Uvnäs-Moberg, 2003). First, it strengthens the labor contractions. After the birth, it helps contract the uterus to eject the placenta and prevent bleeding. When the baby breastfeeds, suckling creates an oxytocin spike in the mother, which produces the milk letdown. Oxytocin is extremely helpful in reducing the mother's pain both during and after labor by raising the pain threshold. It produces strong feelings of calmness, and women feel more relaxed and often sleepy. This hormone helps mother and baby feel closer (often called the "cuddle" hormone). Interestingly, oxytocin is a major nonstress hormone, which helps shift the stress system (sympathetic nervous system) to the nonstress system (parasympathetic system). Oxytocin helps activate 19 gastrointestinal hormones in both the mother and baby (Uvnäs-Moberg, 2003). Some of these hormones produce longer villae in the intestines (those tiny hairs that increase food absorption in the breastfed baby and in the mother). The increased motility with each period of suckling removes meconium with its large load of bilirubin.

To prevent the baby from reacting to unnecessary suctioning, the resuscitation committee of the American Academy of Pediatrics has strongly recommended that, since nearly 90% of newborns are vigorous term infants with clear amniotic fluid, they do not need suctioning (Kattwinkel, 2000). Additionally, infants do not need to be separated from their mothers in order to receive the initial steps in resuscitation. Clearing of the upper airway can be accomplished by simply wiping the baby's mouth and nose. The baby should be allowed to decide when he would like to take his first drink and should never be pushed on the breast before he is ready.

To allow this first intimate encounter, we strongly urge that the injection of vitamin K, application of eye ointment, washing, and any measuring of the infant's weight, height, and head circumference be delayed for

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at least one and one-quarter hours. In a few moments, infants can be easily evaluated to assure that they are healthy. They can then, after thorough drying (except for their hands), be safely placed on their mother's chest if their parents wish for the breast crawl. When the parents feel supported, the birth is unmedicated, the baby thoroughly dried (except for the hands) and placed skin-to-skin on the mother's chest, and the parents are undisturbed during the first one and one-half hours of the baby's life, the parents can begin to behold the wonder of their infant.

The parent-infant bond is enhanced by early and continuous contact. The longest period of the quiet-alert state in the infant in those early days occurs right after birth. In this state and while acclimatizing to the outside world, the baby is especially interested in the faces of the mother and father, the sounds of their voices, and their smell and touch. Parents can be helped to learn about and appreciate the baby's natural abilities in this state, in which the baby can imitate the mother's tongue protrusion, follow the parents' faces or an object, turn to the mother's voice, and stop crying when held by the mother or father (Klaus, M., & Klaus, P., 1998).

We hypothesize that a cascade of interactions between the mother and baby occurs during this early period, locking the two together and ensuring further development of attachment. Many important factors contribute to the attachment of the parent to the infant. These include the remarkable change in maternal behavior with just the touch of the infant's lips on the mother's nipple, the reduction in abandonment (Lvoff, N., Lvoff, V., & Klaus, 2000) with early contact, suckling, rooming-in, and the raised maternal oxytocin levels shortly after birth in conjunction with known sensory, physiologic, immunologic, and behavioral mechanisms.

## References

- Kennell, J. H., Klaus, M., McGrath, S. K., Robertson, S., & Hinkley, C. (1991). Continuous emotional support during labor in a U.S. hospital. *Journal of the American Medical Association*, 265, 2197–2201.
- Klaus, M., Kennell, J., & Klaus, P. (2002). *The doula book: How a trained labor companion can help you have a shorter, easier, and healthier birth*. Cambridge, MA: Perseus Publishing.
- Klaus, M., & Klaus, P. (1998). *Your amazing newborn*. Cambridge, MA: Perseus Publishing.
- Kattwinkel, J. (Ed.). (2000). *Textbook of neonatal resuscitation* (4th ed.). Elk Grove Village, IL: American Academy of Pediatrics and American Heart Association.
- Lvoff, N. M., Lvoff, V., & Klaus, M. (2000). Effect of Baby-Friendly Initiative on infant abandonment in a Russian hospital. *Archives of Pediatrics and Adolescent Medicine*, 154, 474–477.
- Uvnäs-Moberg, K. (1989). The gastrointestinal tract in growth and reproduction. *Scientific American*, 7, 78–83.
- Uvnäs-Moberg, K. (2003). *The oxytocin factor: Tapping the hormone of calm, love, and healing*. Cambridge, MA: Da Capo Press.
- Wolman, W. L., Chalmers, B., Hofmeyr, G. J., & Nikodem, V. C. (1993). Postpartum depression and companionship in the clinical birth environment: A randomized, controlled study. *American Journal of Obstetrics and Gynecology*, 168, 1388–1393.

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