



Immediate and Sustained Skin-to-Skin Contact for the Healthy Term Newborn After Birth: AWHONN Practice Brief Number 5

An official practice brief from the Association of Women's Health, Obstetric and Neonatal Nurses

AWHONN 1800 M Street, NW, Suite 740 South, Washington, DC 20036, (800) 673-8499

AWHONN periodically updates practice briefs. For the latest version go to <http://www.awhonn.org>.

The information herein is designed to aid nurses in providing evidence-based care to women and newborns. These recommendations should not be construed as dictating an exclusive course of treatment or procedure. Variations in practice may be warranted based on the needs of the individual patient, resources, and limitations unique to the institution or type of practice.

Recommendations

The following recommendations represent the consensus of the AWHONN Power of Touch Scientific Advisory Panel. Although AWHONN recommends skin-to-skin contact for preterm infants in other resources, the focus of the literature review for this practice brief was full-term, healthy newborns.

- All stable infants greater than 37 weeks and 0 days gestation born by vaginal or cesarean birth should be placed in immediate skin-to-skin contact for at least the first hour of life or until the first breastfeeding is completed.
- All mothers of stable infants greater than 37 weeks and 0 days gestation should be offered the option of skin-to-skin contact during painful neonatal procedures, such as vaccinations and blood sampling, whenever possible.
- All parents of healthy infants greater than 37 weeks and 0 days gestation should be encouraged to have frequent, uninterrupted skin-to-skin contact with their newborns while in the hospital and after discharge.

benefits of immediate skin-to-skin contact after birth for the newborn include improved thermoregulation and cardiopulmonary stabilization (Beiranvand et al., 2014; Srivistava, Gupta, Bhatnagar, & Dutta 2014; Takahashi, Tamakoshi, Matsushima, & Kawabe, 2011). Full-term newborns who have immediate and sustained skin-to-skin contact with mothers also demonstrate short- and long-term improvements in feeding, such as shorter time to first successful breastfeed, better suckling at the breast, and overall longer duration of breastfeeding (Bramson et al., 2010; Mahmood, Jamal, & Khan, 2011; Srivistava et al., 2014). Erlandsson et al. (2007) compared full-term neonates born by cesarean and placed on their fathers' chests to those placed in cots. Those held on their fathers' chests stopped crying, became calmer, and reached a drowsy state more quickly than those placed in cots.

Skin-to-Skin Contact

Skin-to-skin contact is described as holding the unclothed, diapered newborn on the mother's or caretaker's bare chest, usually in an upright position (Jefferies & Canadian Paediatric Society, Fetus and Newborn Committee, 2012; Moore, Anderson, Bergman, & Dowswell, 2012). Skin-to-skin contact has also been referred to as kangaroo care.

Skin-to-Skin Contact for Full-Term Infants

Although there are many positive effects of skin-to-skin contact for healthy, term newborns, this method of care is not routinely practiced in all obstetric settings, especially for neonates born by cesarean (Beiranvand, Valizadeh, Hosseinabadi, & Pournia, 2014; Erlandsson, Dsilna, Fagerberg, & Christensson, 2007). The initial

During routine care practices, full-term, healthy infants are exposed to some interventions that are considered painful, including heel lance procedures for blood sampling and intramuscular injections. Skin-to-skin contact has been shown to reduce the responses of newborns to painful stimuli, including a decrease in facial grimace, heart rate, and crying time when compared to those who were not in skin-to-skin contact during the same procedures (Gray, Watt, & Blass, 2000; Kostandy, Anderson, & Good, 2013; Liu, Zhao, & Li, 2015).

In addition to the benefits of skin-to-skin contact for the newborn, there are many benefits for the mother. For mothers who choose to breastfeed, earlier and longer sessions of skin-to-skin contact support exclusive and extended breastfeeding (Bramson et al., 2010; Marín Gabriel et al., 2010;

Mikiel-Kostyra, Mazur, & Bołtruszko, 2002). Skin-to-skin contact can reduce symptoms of depression and physiological stress in the postpartum period (Bigelow, Power, MacLellan-Peters, Alex, & McDonald, 2012), increase feelings of bonding and attachment (Stevens, Schmied, Burns, & Dahlen, 2014), and improve mothers' confidence in their ability to breastfeed (Aghdas, Talat, & Sepideh, 2014).

Timing of Skin-to-Skin Contact

Uninterrupted skin-to-skin contact should be encouraged for at least the first hour of life after birth and until the first breastfeeding is completed as long as the mother and newborn remain stable. If desired, skin-to-skin contact can be extended to the first two to three hours of life if the mother and infant remain stable. Routine care practices should ideally be delayed until the initial skin-to-skin session is completed. Although the evidence remains inconclusive about how long infants should remain in skin-to-skin contact, improved breastfeeding outcomes have been reported with sessions as short as 20 minutes in duration (Mikiel-Kostyra, 2002). Most researchers recommend sessions lasting at least one to two hours and as long as five hours per day for the first week of life (Bigelow et al., 2012; Bramson et al., 2010; Suzuki, 2013).

Safety Measures

AWHONN recommends that an appropriately trained health care professional (e.g., registered nurse, midwife, nurse practitioner, physician) be in attendance for all immediate skin-to-skin sessions during the first two hours of life and that the infant and mother be observed frequently during this time. While most researchers suggest that there are no risks to the mother or newborn during skin-to-skin sessions (Moore et al., 2012; Kostandy et al., 2013), there are case reports of sudden, unexpected postnatal collapse of healthy term infants who were positioned prone during skin-to-skin contact (Ludington-Hoe & Morgan, 2014; Pejovic & Herlenius, 2013). There is no agreed upon definition of sudden, unexpected infant collapse in the literature. However, Pejovic & Herlenius (2013) described it as an incident in which a healthy, previously vigorous infant with Apgar scores of 8 suddenly becomes apneic, which necessitates medical intervention and often resuscitation measures.

Health care professionals should be trained how to manage skin-to-skin contact in obstetric and

postpartum settings. This training should include proper positioning, maternal and newborn safety measures, and physiologic indicators that should be monitored during immediate and ongoing skin-to-skin contact (Stevens et al., 2014). Although the use of neonatal assessment tools to monitor infants in skin-to-skin contact have been suggested, such as respiratory effort, activity, perfusion, position (Ludington-Hoe & Morgan, 2014), no assessment tools have been validated at this time. Parents should be educated on proper positioning for the parent and newborn and how to avoid distractions during skin-to-skin sessions.

Infant Massage Therapy

Currently, insufficient data exists upon which to base recommendations for routine infant massage therapy during the hospitalization period immediately after birth. However, some researchers found that infant massage therapy performed on stable infants of greater than 37 weeks gestation resulted in increased stooling and decreased bilirubin levels (Chen, Sadakata, Ishida, Sekizuka, & Sayam, 2011; Dallili, Sheikhi, Shariat, & Haghazarian, 2016; Lin, Yang, Cheng, & Yen, 2015), improved sleep patterns (Ferber, Laudon, Kuint, Weller, & Zisapel, 2002), and enhanced growth and development (Field et al., 2004). Before routine recommendations can be made for infant massage therapy, more research is needed in this population.

REFERENCES

- Aghdas, K., Talat, K., & Sepideh, B. (2014). Effect of immediate and continuous mother-infant skin-to-skin contact on breastfeeding self-efficacy of primiparous women: A randomised control trial. *Women and Birth*, 27(1), 37–40. <http://dx.doi.org/10.1016/j.wombi.2013.09.004>
- Beiranvand, S., Valizadeh, F., Hosseinabadi, R., & Pournia, Y. (2014). The effects of skin-to-skin contact on temperature and breastfeeding successfulness in full-term newborns after cesarean delivery. *International Journal of Pediatrics*. <http://dx.doi.org/10.1155/2014/846486>. article 846486.
- Bigelow, A., Power, M., MacLellan-Peters, J., Alex, M., & McDonald, C. (2012). Effect of mother/infant skin-to-skin contact on postpartum depressive symptoms and maternal physiological stress. *Journal of Obstetric, Gynecologic, & Neonatal Nursing*, 41(3), 369–382. <http://dx.doi.org/10.1111/j.1552-6909.2012.01350.x>
- Bramson, L., Lee, J. W., Moore, E., Montgomery, S., Neish, C., Bahjri, K., & Melcher, C. L. (2010). Effect of early skin-to-skin mother-infant contact during the first 3 hours following birth on exclusive breastfeeding during the maternal hospital stay. *Journal of Human Lactation*, 26(2), 130–137. <http://dx.doi.org/10.1177/0890334409355779>
- Chen, J., Sadakata, M., Ishida, M., Sekizuka, N., & Sayam, M. (2011). Baby massage ameliorates neonatal jaundice in full-term newborn infants. *Tohoku Journal of Experimental Medicine*, 223(2), 97–102.

- Dalili, H., Sheikhi, S., Shariat, M., & Haghazarian, E. (2016). Effects of baby massage on neonatal jaundice in healthy Iranian infants: A pilot study. *Infant Behavior and Development, 42*, 22–26. <http://dx.doi.org/10.1016/j.infbeh.2015.10.009>
- Erlandsson, K., Dsilna, A., Fagerberg, I., & Christensson, K. (2007). Skin-to-skin care with the father after cesarean birth and its effect on newborn crying and prefeeding behavior. *Birth, 34*(2), 105–114. <http://dx.doi.org/10.1111/j.1523-536x.2007.00162.x>
- Ferber, S. G., Laudon, M., Kuint, J., Weller, A., & Zisapel, N. (2002). Massage therapy by mothers enhances the adjustment of circadian rhythms to the nocturnal period in full-term infants. *Journal of Developmental & Behavioral Pediatrics, 23*(6), 410–415.
- Field, T., Hernandez-Reif, M., Diego, M., Feijo, L., Vera, Y., & Gil, K. (2004). Massage therapy by parents improves early growth and development. *Infant Behavior and Development, 27*(4), 435–442. <http://dx.doi.org/10.1016/j.infbeh.2004.03.004>
- Gray, L., Watt, L., & Blass, E. M. (2000). Skin-to-skin contact is analgesic in healthy newborns. *Pediatrics, 105*(1), e14.
- Jefferies, A. L. Canadian Paediatric Society, Fetus and Newborn Committee. (2012). Kangaroo care for the preterm infant and family. *Paediatrics & Child Health, 17*(3), 141–143.
- Kostandy, R., Anderson, G. C., & Good, M. (2013). Skin-to-skin contact diminishes pain from hepatitis B vaccine injection in healthy full-term neonates. *Neonatal Network, 32*(4), 274–280. <http://dx.doi.org/10.1891/0730-0832.32.4.274>
- Lin, C. H., Yang, H. C., Cheng, C. S., & Yen, C. E. (2015). Effects of infant massage on jaundiced neonates undergoing phototherapy. *Italian Journal of Pediatrics, 41*(1). <http://dx.doi.org/10.1186/s13052-015-0202-y>
- Liu, M., Zhao, L., & Li, X. F. (2015). Effect of skin contact between mother and child in pain relief of full-term newborns during heel blood collection. *Clinical and Experimental Obstetrics & Gynecology, 42*(3), 304–308. <http://dx.doi.org/10.12891/ceog1831.2015>
- Ludington-Hoe, S. M., & Morgan, K. (2014). Infant assessment and reduction of sudden unexpected postnatal collapse risk during skin-to-skin contact. *Newborn & Infant Nursing Reviews, 14*(1), 28–33. Retrieved from <http://www.medscape.com/viewarticle/822017>
- Mahmood, I., Jamal, M., & Khan, N. (2011). Effect of mother-infant early skin-to-skin contact on breastfeeding status: A randomized controlled trial. *Journal of the Colleges of Physicians and Surgeons Pakistan, 21*(10), 601–605. <http://dx.doi.org/10.2011/JCPSP.601605>
- Marín Gabriel, M. A., Llana Martín, I., López Escobar, A., Fernández Villalba, E., Romero Blanco, I., & Touza Pol, P. (2010). Randomized controlled trial of early skin-to-skin contact: Effects on the mother and the newborn. *Acta Paediatrica, 99*(11), 1630–1634. <http://dx.doi.org/10.1111/j.1651-2227.2009.01597.x>
- Mikiel-Kostyra, K., Mazur, J., & Boltrusko, I. (2002). Effects of early skin-to-skin contact after delivery on duration of breastfeeding: A prospective cohort study. *Acta Paediatrica, 91*(12), 1301–1306. <http://dx.doi.org/10.1111/j.1651-2227.2002.tb02824.x>
- Moore, E. R., Anderson, G. C., Bergman, N., & Dowswell, T. (2012). Early skin-to-skin contact for mothers and their healthy newborn infants. *Cochrane Database of Systematic Reviews*, (5), CD003519.
- Pejovic, N. J., & Herlenius, E. (2013). Unexpected collapse of healthy newborn infants: Risk factors, supervision and hypothermia treatment. *Acta Paediatrica, 102*(7), 680–688.
- Srivastava, S., Gupta, A., Bhatnagar, A., & Dutta, S. (2014). Effect of very early skin to skin contact on success at breastfeeding and preventing hypothermia in neonate. *Indian Journal of Public Health, 58*(1), 22–26. <http://dx.doi.org/10.4103/0019-557X.128160>
- Stevens, J., Schmied, V., Burns, E., & Dahlen, H. (2014). Immediate or early skin-to-skin contact after a caesarean section: A review of the literature. *Maternal & Child Nutrition, 10*(4), 456–473. <http://dx.doi.org/10.1111/mcn.12128>
- Suzuki, S. (2013). Effects of early skin-to-skin contact on breastfeeding. *Journal of Obstetrics and Gynaecology, 33*(7), 695–696. <http://dx.doi.org/10.3109/01443615.2013.819843>
- Takahashi, Y., Tamakoshi, K., Matsushima, M., & Kawabe, T. (2011). Comparison of salivary cortisol heart rate, and oxygen saturation between early skin-to-skin contact with different initiation and duration times in healthy, full-term infants. *Early Human Development, 87*(3), 151–157. <http://dx.doi.org/10.1016/j.earlhumdev.2010.11.012>