



Skin-to-Skin Holding (Kangaroo Care)

.....

The power of skin-to-skin
care for newborns, parents
and families

March of Dimes Mission

To improve the health of babies by preventing birth defects, premature birth and infant mortality.



Fund Research
to understand the
problem and **discover**
answers.



Help Moms
have full-term
pregnancies and
healthy babies.



Support Families
comforting them when
their baby needs help
to survive and thrive.



Parenthood begins with that first touch.



Did you know...

...According to some NICU parents, the first time they considered themselves real parents was the first time a nurse encouraged them to hold their baby skin-to-skin?



How soon can we encourage this bonding activity between baby and parent?



What are some obstacles
stopping you from suggesting
skin-to-skin holding to a parent?

Common obstacles

- Inconsistent criteria/standards
- Difficulty assessing newborn readiness
- Staff concern about adverse events (extubation, etc.)
- Lack of knowledge about depth of benefits
- Staff concern about workload, time, space, multiple staff needed

(Engler et al., 2002)



Kangaroo care enables moms to regain the temporarily lost relationship with their child, and enables fathers to experience the beginning of a new relationship.

(Fegran et al., 2008)



“If a baby can be transferred to a scale for weighing, a baby can be transferred to a parent for skin-to-skin holding.”

Robert White, M.D., Neonatologist
Pediatrix Medical Group
Memorial Hospital, South Bend, Indiana

What is skin-to-skin holding?

- A holding technique, skin-to-skin, chest-to-chest, in an upright position where the baby is only wearing a diaper on the parent's bare chest (Ludington-Hoe et al., 1998)
- A non-invasive, supportive, and natural early intervention for preterm infants (Dombrowski et al., 2000)
- It's also known as "kangaroo care" and has been the subject of more than 263 studies.



A mother in Nebraska enjoying a special skin-to-skin moment with her daughter, Ava.

Who thinks skin-to-skin holding is important?

- March of Dimes (2001-current) promotes skin-to-skin holding in its educational literature, program materials and throughout the NICU Family Support® program.
- World Health Organization (WHO, 2003) *Kangaroo Mother Care: A Practical Guide*.
- American Academy of Pediatrics (AAP, 2005) *A Sample Hospital Breastfeeding Policy for Newborns*. Cites the benefits of skin-to-skin holding on milk letdown and parental bonding.
- National Association of Neonatal Nurses. *Transfer Procedure for Ventilated Kangaroo Care* (NANN, 2008) at www.nann.org.

Selected, proven benefits to baby: apnea, brady, O2 sat, heart rate

- Four-fold decrease in apnea; mechanically ventilated babies able to tolerate transfer and position changes without increased oxygen requirements. (Cleary et al., 1997; Hunt, 2008)
- Holding skin-to-skin did not increase bradycardia episodes. (Gale, Vandenberg, 1998)
- Heart rate was more regular for infants held skin-to-skin. (Aucott et al., 2002)
- Kangaroo care has proven successful in improving survival rates of premature and low birth weight newborns and in lowering the risks of nosocomial infection (Conde-Agudelo, Diaz-Rossello, & Belizan, 2003).



Selected, proven benefits to baby: body temperature and lactation

- Thermal synchrony between mothers and their babies was shown. (Ludington-Hoe et al., 2006)
- Mothers increased their milk volume, doubled rates of successful breastfeeding and increased duration of breastfeeding with skin-to-skin holding. (Mohrbacher & Stock, 2003)
- Physiologically a mother's breasts respond to her infant's thermal needs. (Ludington-Hoe et al., 2006)
- Babies held skin-to-skin had fewer breastfeeding difficulties. (Tessier et al., 2003)

Selected, proven benefits to baby: sleep, memory, neurodevelopment

- Enhanced neurological development was shown. (Ferber, Makhoul, 2004)
- Babies spent more time in sleep; shown as necessary for neurosensory development, preservation of brain plasticity, learning and long-term memory. (Graven, 2008)
- Skin-to-skin holding increased the maturation rate of circadian system; secondary to favorable oscillation between quiet sleep and wakefulness. (Feldman et al., 2002)
- Skin-to-skin holding accelerated autonomic maturation, as shown by greater gains in vagal tone. (Feldman et al., 2003)

Benefits to mom & dad: bonding, attachment, confidence

- Holding skin-to-skin and breastfeeding increase levels of oxytocin in mothers, enhancing attachment to their infant and their sense of motherhood. (Ferber, Markhoul, 2004; Morrison, 2006)
- Holding skin-to-skin improved bonding and attachment in babies of teen parents. (Wang YH, Kuo HH, 2006)
- Increased confidence in parenting skills was shown with skin-to-skin holding. (Charpak et al., 2005)
- Skin-to-skin holding increased sense of control in parents. (VandenBerg, 2000)

Benefits to mom & dad: parental comfort and healing

- “Skin-to-skin holding may lessen maternal depression.” (De Alencar et al., 2009)
- Skin-to-skin holding promotes a sensory dialogue between parents and infants. (Gayle & Vandenberg, 1998)
- Holding skin-to-skin reduced postpartum depression and anxiety symptoms. (Anderson et al., 2003)
- A reduction in father’s fears of “breaking baby” was shown with skin-to-skin holding. (Bauer et al., 1996)

Benefits to mom & dad: bereavement and palliative care

- Palliative care embraces the baby as a whole, taking into consideration physical, emotional, spiritual and social needs, along with the needs of the family.
- Offer the option of skin-to-skin holding and photography with a family whose baby is dying. Invite the whole family to participate. These may be the only family photographs they receive.





Infants who are not ready

- Any clinically unstable infant
- Infant with a chest tube
- Post-op surgical infant
- Infant who would experience intense pain from being transferred (Osteogenesis Imperfecta diagnosis, etc.)
- Exceptions can be made on a case-by-case basis, with a physician's order.

If infants are not ready for skin-to-skin holding, encourage the following:

- Gentle, still touch
- Hand swaddling (hand hugs)
- Breast pumping
- Reading at the bedside



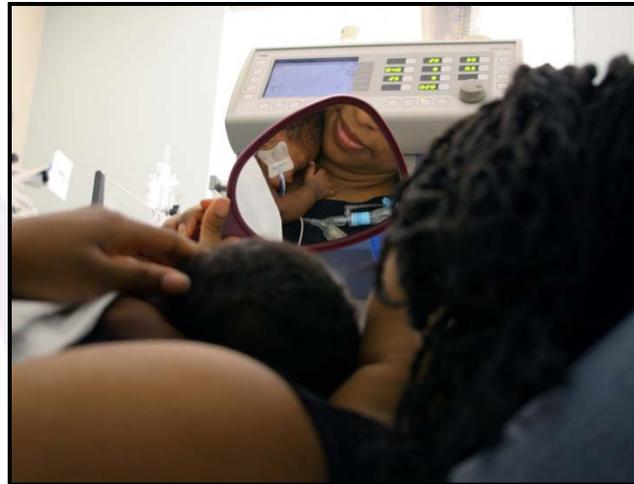
How can we improve our practice?

- Develop guidelines.
- Develop teaching plan for family.
- Develop ongoing teaching plan for staff.
- Develop teaching plan for mothers on the antepartum unit *before* NICU admission.
- Continue to encourage skin-to-skin holding even after a baby graduates to wearing clothes.
- Encourage families to hold skin-to-skin at home after discharge.



Enhancing the skin-to-skin experience

privacy screen
hand held mirror
standing mirror
zero gravity chair



Enhancing the transfer process

Transfer Procedure for
Ventilated Kangaroo Care
wall poster
Nann.org

Transfer Procedure for Ventilated Kangaroo Care

Before Transfer

1. Notify the receiving unit of the patient's condition, ventilator settings, and assessment.
2. Review the transfer orders carefully.
3. Notify the patient's family of the transfer and ensure that the family understands the process.
4. Notify the patient's primary care physician.
5. Notify the patient's primary care physician of the transfer and ensure that the family understands the process.
6. Notify the patient's primary care physician.

Transfer From Intensive Care Unit (ICU)

ICU Preparation (including ventilator and circuitry)

Standing transfer

1. Notify the receiving unit.
2. Review the transfer orders carefully.
3. Notify the patient's family of the transfer and ensure that the family understands the process.
4. Notify the patient's primary care physician.
5. Notify the patient's primary care physician of the transfer and ensure that the family understands the process.
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Sitting transfer

1. Notify the receiving unit.
2. Review the transfer orders carefully.
3. Notify the patient's family of the transfer and ensure that the family understands the process.
4. Notify the patient's primary care physician.
5. Notify the patient's primary care physician of the transfer and ensure that the family understands the process.
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Transfer From ICU to the Receiving Unit

Receiving Unit Preparation

1. Notify the receiving unit.
2. Review the transfer orders carefully.
3. Notify the patient's family of the transfer and ensure that the family understands the process.
4. Notify the patient's primary care physician.
5. Notify the patient's primary care physician of the transfer and ensure that the family understands the process.
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Sitting transfer

1. Notify the receiving unit.
2. Review the transfer orders carefully.
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Transfer Procedure for Ventilated Kangaroo Care wall poster

What We Say Can Help, Hurt or Heal

"Your baby's heart rate is dropping. It's time to put her back."

"He looks so peaceful in your arms."

"You're doing such a great job."

"You are not holding him right. He's not comfortable."



“I will never forget the first time my newborn was placed on my chest. She was so tiny, so fragile, but she curled right up into me, as if she instinctively knew that’s where she belonged. It was the closest I’d been to her since she’d been inside me. In that moment, I finally felt like a mother. This child was mine. Those moments (when we kangarooed) would fast become my favorite NICU moments. In those moments, nothing else existed but my daughter and me.”

Denise R, NICU mother



March of Dimes NICU Family Support®

March of Dimes Signature Program

Began in 2001 as a direct service program - We celebrated our ten year anniversary in 2011

We have a network of 106 NICU Family Support sites nationwide and we are growing every year in hopes to provide support to families and to help hospitals provide more family focused care. We have a program in every state, DC, and Puerto Rico, with a goal to reach 84,000 families by end of 2011.

Provides information and comfort to NICU families through an on-site family support person, programs, activities and materials

Core Program Goals

- Providing information and comfort to families during the NICU hospitalization of their newborn, during the transition home, and in the event of a newborn death
- Contributing to NICU staff professional development
- Promoting the philosophy of family-centered care in NICUs



Join more than 100 hospitals nationwide and
become a member of the
*National March of Dimes NICU Family Support
Network* today!

For more information, pricing or to request an
informational webinar with your team,
contact us at:

NICU@marchofdimes.com

March of Dimes Mission

To improve the health of babies by preventing birth defects, premature birth and infant mortality.



Fund Research
to understand the
problem and **discover**
answers.



Help Moms
have full-term
pregnancies and
healthy babies.



Support Families
comforting them when
their baby needs help
to survive and thrive.

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