Newborn & Infant Nursing Reviews 13 (2013) 67–72

Contents lists available at SciVerse ScienceDirect

Newborn & Infant Nursing Reviews

journal homepage: www.nainr.com

The Sacred Hour: Uninterrupted Skin-to-Skin Contact Immediately After Birth

Raylene Phillips MD, IBCLC, FAAP*

Division of Neonatology, Loma Linda University Children's Hospital, Loma Linda, CA

ARTICLE INFO

Keywords:
Birth
Newborn
Skin-to-skin
Breastfeeding

ABSTRACT

The manner in which a new baby is welcomed into the world during the first hours after birth may have short- and long-term consequences. There is good evidence that normal, term newborns who are placed skin to skin with their mothers immediately after birth make the transition from fetal to newborn life with greater respiratory, temperature, and glucose stability and significantly less crying indicating decreased stress. Mothers who hold their newborns skin to skin after birth have increased maternal behaviors, show more confidence in caring for their babies and breastfeed for longer durations. Being skin to skin with mother protects the newborn from the well-documented negative effects of separation, supports optimal brain development and facilitates attachment, which promotes the infant's self-regulation over time. Normal babies are born with the instinctive skill and motivation to breastfeed and are able to find the breast and self-attach without assistance when skin-to-skin. When the newborn is placed skin to skin with the mother, nine observable behaviors can be seen that lead to the first breastfeeding, usually within the first hour after birth. Hospital protocols can be modified to support uninterrupted skin-to-skin contact immediately after birth for both vaginal and cesarean births. The first hour of life outside the womb is a special time when a baby meets his or her parents for the first time and a family is formed. This is a once-in-a-lifetime experience and should not be interrupted unless the baby or mother is unstable and requires medical resuscitation. It is a "sacred" time that should be honored, cherished and protected whenever possible.

The power of first impressions is well known. None may be more significant than the first experiences of a newborn baby exiting mother's womb. Our first impression of life outside the womb, the welcome reception we receive immediately after birth, may color our perceptions of life as difficult or easy, hostile or safe, painful or comforting, frightening or reassuring, cold and lonely or warm and welcoming. The events surrounding birth have the potential to set the stage for patterns of subconscious thought processes and behaviors that persist for a lifetime.

Second only to the experience of dying, the experience of being born may be the most mysterious. Since most adults have no conscious memory of what it was like to be a newly born infant, let alone what it was like to be a fetus in the womb, most have not bothered to speculate about the birth process from the baby's perspective. Yet, when the unconscious memory is open to recall during hypnosis, vivid and detailed memories of prenatal life, the birth experience and early events as a newborn infant readily emerge for many.

While the mechanism for how a fetus or a newborn can create such fully formed memories with such immature brains remains unknown, the reality of prenatal, birth and newborn memories cannot be denied. There are many accounts of young children (usually up to about age 3–5 years) who remember events that occurred around the time of their birth and feelings they experienced. The perceptions and interpretations are sometimes skewed, but the vividness and accuracy of specific details and events are often astounding.

In his groundbreaking book, "Babies Remember Birth," David Chamberlain, PhD, shares his research, which compared the birth stories of 10 different mothers with the birth memories of their children. During separate sessions under hypnosis, mothers and their children were asked to describe the birth process. Although the children, some now adults, had not been told about their birth history, their accounts of the events surrounding their births contained many specific and unique details in common with their mother's accounts, validating the accuracy of the children's birth memories.[1] Dr. Chamberlain's newest book, "Windows to the Womb" documents the large body of research exploring the many and varied ways that unborn and newly born babies are able to show us their capacities for learning and memory.[2]

Why is this important? If babies and even fetuses are, indeed, capable of forming memories that remain in their subconscious for life, how they are treated at birth and their early experiences outside the womb matter much more than we have been led to believe!

Because the first hour after birth is so momentous, we have named it "The Sacred Hour" at our hospital. Every culture has occasions and ceremonies it holds sacred that are honored, cherished and protected. In most cultures, for example, a wedding ceremony is considered a sacred occasion. This special event honors the symbolic union of two individuals who have chosen to share their lives together. No one

* Address correspondence to Raylene Phillips, MD, IBCLC, FAAP, Division of Neonatology, Loma Linda University Children's Hospital, 11175 Campus Street, Suite 11121, Loma Linda, CA 92354.
E-mail address: rphillips@llu.edu.

1527-3369/1302-0508$36.00/0 – see front matter © 2013 Published by Elsevier Inc.
http://dx.doi.org/10.1053/j.nainr.2013.04.001

would think of interrupting a wedding ceremony to give the bride and groom details about the flight arrangements for their honeymoon. Everyone recognizes that this information can wait until after the ceremony is completed. Birth is another sacred event. It is a time when a new member of the family arrives, is greeted for the first time and welcomed by his or her parents. Yet, in many hospital settings, this once-in-a-lifetime process is routinely interrupted for details that can easily wait until after the new baby has had time to adjust to life outside the womb in the loving arms of the mother, and after the baby and parents have had time to meet each other as a new family.

What might the first moments after birth be like for the newborn infant? If a fetus has been fortunate enough to spend his fully allotted 266 days in the womb since conception, he has had the luxury of having all his emerging developmental needs met. The uterus and the placenta have provided warmth, protection, nutrition and oxygen, as well as close and continual proximity to the mother's heart and voice. Being in the womb is the "natural habitat" for the unborn fetus. After birth, the mother's body and breasts take over the function of the uterus and placenta in providing warmth, protection, nutrition, and support for optimal oxygenation, as well as close and continual proximity to the mother's heart and voice. Being skin to skin with the mother is the newborn infant's "natural habitat" — the one place where all his needs are met.

This is true for all mammals and can readily be seen in the animal world. Everywhere one looks in nature, mother and newborn mammals are as close as they can get to each other skin to skin or fur to fur. Nature is wise and provides instincts that drive behaviors designed to assure survival of the species.

There are many well-documented benefits of skin-to-skin contact between a newborn infant and its mother. Skin-to-skin contact improves physiologic stability for both mother and baby in the vulnerable period immediately after birth, increases maternal attachment behaviors, protects against the negative effects of maternal–infant separation, supports optimal infant brain development, and promotes initiation of the first breastfeeding, resulting in increased breastfeeding initiation and duration rates. Although a complete review of all the benefits of early postpartum skin-to-skin contact between mother and newborn is beyond the scope of this article, we will briefly explore several of them.

Skin-to-Skin Contact Provides Physiologic Stability

Being skin to skin with mother stabilizes the newborn's respiration and oxygenation, increases glucose levels (reducing hypoglycemia), warms the infant (maintaining optimal temperature), reduces stress hormones, regulates blood pressure, decreases crying and increases the quiet alert state.[3]

Thermal synchrony is a phenomenon whereby the temperature of mother's chest increases to warm a cool baby and decreases to cool an overly warm baby. While often seen with premature infants who are skin to skin in kangaroo care, this phenomenon is equally important for the newborn infant who has just exited the warmth of mother's womb into the cooler extra-uterine environment, wet and easily chilled. In a study done with babies after cesarean delivery, babies held skin to skin by their fathers had higher temperature and glucose levels compared to those of babies left alone under warmers.[4]

Skin-to-Skin Contact Promotes Maternal Attachment Behaviors

Attachment is so necessary for survival of the newborn mammal, that nature has not left it to chance, and has provided biochemical activators that prime the brain's reward circuitry to increase maternal care-giving behaviors. Hormones known to influence attachment behaviors are increased by skin-to-skin contact. This is true in adults as well, but is especially important in the vulnerable newborn period. Oxytocin is one such hormone that has been particularly well studied in relationship to attachment and is often referred to as the "love hormone." It has been shown to increase relaxation, attraction, facial recognition, and maternal care-giving behaviors, all necessary to ensure infant survival. Oxytocin is increased during skin-to-skin contact and levels spike whenever the newborn's hand massages mother's breasts.[5]

Multiple studies in the 1970–1980s compared behaviors of mothers who had short periods (as little as 15 minutes) of skin-to-skin contact with their newborns to those who briefly viewed their infants and then were reunited every 4 hours for feeding while the babies were otherwise kept in a nursery separate from their mothers. At the end of the postpartum hospital stay, mothers who had even brief early skin-to-skin contact with their infants were more confident and comfortable handling and caring for their babies than mothers who had been separated from their babies.[6]

Results lasted well beyond the neonatal period. At 3 months, mothers with early skin-to-skin contact kissed their babies more and spent more time looking into their infant's faces. At 1 year they demonstrated more touching, holding, and positive speaking behaviors, kept more follow-up appointments with their primary care providers and breastfed their babies longer. One study showed double the breastfeeding duration associated with only 15 minutes of skin-to-skin holding immediately after birth.

Skin-to-Skin Contact Protects From the Negative Effects of Separation

Babies are born ready to interact with mother. If a newborn has not been exposed to excessive medication, its alert awareness and intense focus on its mother's face is obvious to all who are present. Until the moment the cord is cut, a mother and her baby are literally a single biological organism. Until several months after birth, mother and baby remain a single "psychobiological organism." The experience of an infant who is separated from the mother is graphically described by Gallager. "Mother and offspring live in a biological state that has much in common with addiction. When they are parted, the infant does not just miss its mother. It experiences a physical and psychological withdrawal from a host of her sensory stimuli not unlike the plight of a heroin addict who goes 'cold turkey.'" (p 13)[7]

From a baby's perspective, separation is life threatening! The universal response of baby mammals to separation from the mother is biphasic; first protest, then despair. The initial response to separation from the mother is to protest with loud cries and intense activity. This is an instinctive response to being outside the newborn's "natural habitat," the place of warmth, nutrition and safety. Loud cries and intense activity are protests designed to bring the newborn's plight to the mother's attention so she can bring the newborn back into contact with her body, providing rescue from cold, starvation, potential harm, or even death.

While this is readily seen in the animal world, the same instinctive response is also clearly seen in newborn human infants. When the crying behavior of human infants who are separated from their mothers is compared to those who are skin to skin with their mothers, it has been found that separated infants have 10 times the number of cries and 40 times the duration of crying.[8] Because separation is the cultural norm in the developed world and newborn crying is so common, many see it as normal behavior, yet frantic crying is not good for newborns. It impairs lung functioning, increases intra-cranial pressure, jeopardizes the closure of the foramen ovale, and increases stress hormones.

If separation continues for a prolonged period, the newborn mammal's response is "despair". The baby's cries eventually stop, intense activity ceases and the infant becomes still — the baby gives up. This is also an instinctive behavior to avoid attracting attention from potential predators. All systems slow down for prolonged survival. Temperature drops, heart rate decreases and metabolism slows down. Hypothermia, bradycardia, and hypoglycemia are all common complications of newborns that are separated from their mothers even in Special Care Nurseries. Short periods of separation resulting in protest is not thought to be harmful to the developing