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Sensory-Based Calming Strategies for Infants

by Lee Stadtlander, PhD

Abstract: Crying in infants is a normal physiological response; however, prolonged crying can produce a great deal of frustration and stress for new parents and has been found to be related to shaken baby syndrome. Offering parents a range of calming options for their infants gives them a sense of control and connection to the infant. The process of calming their crying baby boosts parents' confidence, creates a growing sense of trust within the infant, and sets the foundation for establishing a positive parent-infant relationship. This article explores sensory-based calming techniques and provides resources for parents as well as the childbirth professional.

Keywords: calming infant, soothing infant, calming strategies, soothing strategies

Crying in infants is a normal physiological response and is a form of communication with their caregivers. Crying can be caused by different stimuli, such as hunger, discomfort, pain, or simply the baby's need to approach the caregiver for emotional comfort and safety (Halpern & Coelho, 2016). Excessive crying occurs in up to 30% of infants before the age of three months (Kim, 2011; Reijneveld, Brugman, & Hirasing, 2001) and contributes to parental stress, often leading parents to exhaustion without solving the problem. Excessive crying is defined for a newborn up to 4 months of age as crying spells and irritability for three or more hours a day, three days a week, and at least for one week, while maintaining normal child development (Halpern & Coelho, 2016). The ongoing frustration and stress of continued crying can lead parents to take dangerous measures in an attempt to calm the infant (Reijneveld, van der Wal, Brugman, Sing,

& Verloove-Vanhorick, 2004), including the indiscriminate use of painkillers and sedative medications with the child as well as smothering or slapping the infant. There are several studies showing that excessive crying without quick resolution in infants is one of the causes of shaken baby syndrome (Duhaime, Christian, Rorke, & Zimmerman, 1998; Reijneveld et al., 2004).

Being able to calm their baby reinforces parents' continued use of specific techniques that calm the infant and reduce their frustration and stress. This process boosts parents' confidence, creates a growing sense of trust within the infant, and sets the foundation for establishing a positive parent-infant relationship (Dayton, Walsh, Oh, & Volling, 2014). Parental frustration may arise when a calming technique that had been effective previously with an infant becomes ineffective. However, if parents have a wide repertoire of strategies available and if they can flexibly adapt their strategies as the infant matures, they may be less upset and frustrated in response to infant crying (Dayton et al., 2014). This article explores sensory-based calming techniques that childbirth professionals may wish to recommend to new parents as well as additional resources for parents and professionals.

The Sensory Basis for Calming Infants

Before birth, the uterus tightly surrounds the infant into the fetal position. In this position, the infant is constantly massaged and touched by the walls of the uterus and rocked through the mother's movements. There is also a constant background noise of the mother's heartbeat and shushing sounds of blood through the umbilical cord and amniotic fluid (Karp, 2015). The sensory strategies discussed in this article all help the infant move from the pre-birth environment to the post-birth environment. It is important to note that combinations of these strategies are often necessary (particularly combined with touch and movement strategies) and parents should carefully watch for their baby's preferences. In addition, it tends to be much easier to practice the methods initially while the baby is calm, rather than attempting them in the midst of crying.

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Touch Calming Strategies

Massage. Infant massage (IM) is a traditional care practice particularly widespread in Africa and South Asia (Field, 2000) and over the past decades in Western countries (Underdown, Norwood, & Barlow, 2013). IM can be defined as “a systematic touch by human hands, which stimulates the tactile sense of the infant” (Abdallah, Badr, & Hawwari, 2013, p. 663). IM consists of an often standard sequence of traditional Swedish and Indian massage techniques, yoga, and reflexology, and it can be applied to the child’s arms, legs, back, chest, belly, and face, using vegetable odorless oil (e.g., see McClure, 2000).

IM may help to establish eye contact as well as a sensitive tone of voice and touch, which in turn may help both the development of the baby’s ability to regulate emotions (Belsky, 2001) and the parental attachment relationship (Beebe & Lachmann, 2002; Slade, 2005; Tronick, 2007). IM has been reported to help in decreasing depression in parents and aid in bonding with the infant (Gnazzo, Guerriero, Di Folco, Zavattini, & de Campora, 2015). The resource section of this article contains videos and books that go into detail on IM techniques.

Swaddling. Some degree of infant restraint, known as swaddling (also called binding or bundling), with or without the use of a cradleboard, was an almost universal childcare practice before the 18th century (Lipton, Steinschneider, & Richmond, 1965). Swaddling is still common in some countries in the Middle East and South America, and it is gaining popularity in the United Kingdom, the United States, and the Netherlands (van Sleuwen, Engelberts, Boere-Boonekamp, Kuis, Schulpen, & L’Hoir, 2007). Swaddling infants and sleeping on the back appears to promote a better efficiency of sleep, more quiet sleep, and fewer spontaneous awakenings compared to sleeping on the back unswaddled (Franco, Seret, van Hees, Scaillet, Groswasser, & Kahn, 2005).

It is important for caregivers to accomplish a secure swaddle to ensure the blanket does not become loose and the baby remains wrapped during the sleep period. The act of swaddling does carry a risk of the baby overheating if the caregiver uses multiple blankets that are too thick or uses thick fluffy fabric that creates excessive thermal insulation (van Gestel, L’Hoir, ten Berge, Johannes, Jansen, & Plötz, 2002).

To avoid hip dysplasia risk, the swaddle should be wrapped in such a way that the baby is able to move his or her legs freely at the hip (Baby Center, 2016). This is more easily done with a large blanket that can keep the arms in place while allowing the legs flexibility, all while allowing for proper hip development.

Movement Calming Strategy

Rhythmic movements or swinging mimics the feeling of movement within the womb and is a powerful calming strategy (Karp, 2015). The use of slings and rocking chairs provide a natural motion for parents to soothe their infant; typically, jiggles or small movement calms better than larger movements. Other options for busy parents are infant swings and rocking or jiggly smart sleepers.

Visual Calming Strategies

Low light. There has been some empirical evidence from newborn intensive care units that low light calms infants (Zavgorodnii, Semenova, Chehovskaya, Piontkovska, & Besh, 2007). Low light has also been recommended in the popular press as a mechanism to calm fussy infants (Voss, 2014).

Auditory Calming Strategies

Shushing. Within the womb, infants hear a constant white noise-like sound similar to shhhh. Making this noise at a level similar to their crying level next to the baby’s ear will often calm them (Karp, 2015). Machines making a continuous low white noise (similar to the sounds of vacuum cleaners or fans) are also effective and commercially available.

Singing. The singing of infant directed songs (e.g., *Itsy Bitsy Spider*, *Frère Jacques*), with higher pitches, slower tempos, and more regular timing than adult songs, has been found to be soothing to infants (Corbeil, Trehub, & Peretz, 2015). Singing by the parent, typically also accompanied by movement, is most effective, but recordings of infant directed songs can also be used for calming.

Gustatory Calming Strategies

Pacifiers. Sucking is a basic reflex in infants and forms the basis for nutrition; however, it also provides a calming technique with pacifiers. Sucking a pacifier has been reported to lower the infant’s heart rate, blood pressure, and stress levels. The use of a pacifier has also been reported to lower the risk of sudden infant death syndrome (SIDS; Fleming et al., 1999). Pacifiers should not be introduced until breastfeeding is well established.

Implications for Childbirth Professionals

A crying infant can produce a great deal of frustration and stress for new parents. Offering parents a range of calming options for their infants gives them a sense of control and connection to the infant. There are a number of resources available to give additional advice and techniques, which are listed in the Resources section of this article.

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Suggested Resources

DVD

- *Infant Massage: The Power of Touch* - DVD (2003). Demonstrates the basic massage strokes and then devotes special time to massage techniques
- *Massage Practice for Infants* - DVD (2008). Step-by-step techniques that help relax the baby and relieve common physical discomforts.

Books

- Ady, M. (2008). *An infant massage guidebook: For well, premature, and special needs babies*. Bloomington, IN: AuthorHouse.
- Karp, H. (2015). *The happiest baby on the block*. New York, NY: Bantam Books.
- McClure, V. S. (2000). *Infant massage: A handbook for loving parents* (Rev. ed.). New York, NY: Bantam Books.
- Voss, A. (2014). Understanding your baby's sensory signals. Available at <http://www.ASensoryLife.com>.

Website

- SwaddleDesigns. (2014). How to Swaddle a Baby. Retrieved from <http://www.swaddledesigns.com/learn/how-to-swaddle.html>

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Lee Stadlander is a researcher, professor, and the coordinator of the Health Psychology program at Walden University. As a clinical health psychologist, she brings together pregnancy and psychological issues.