

The loving touch is critical for premature infants

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The benefit that premature infants gain from skin-to-skin contact with their mothers is measurable even 10 years after birth, reports a new study in *Biological Psychiatry*.

Physical contact with babies is essential for their physical and psychological development. This lesson has been learned the hard way, as infants neglected in hospitals and orphanages developed many problems, ranging from depression to a more global failure to thrive. But, what types of contact are necessary and what are the beneficial effects of enriching [physical contact](#)?

In a new study, Dr. Ruth Feldman, a Professor at Bar-Ilan University, and her colleagues studied the impact of different levels of physical contact on prematurely born infants.

"In this decade-long study, we show for the first time that providing maternal-newborn skin-to-skin contact to premature infants in the neonatal period improves children's functioning ten years later in systems shown to be sensitive to early maternal deprivation in animal research," said Feldman.

Specifically, the researchers compared standard incubator care to a novel intervention called "Kangaroo Care" (KC), which was originally developed to manage the risk for hypothermia in prematurely born babies in Columbia, where they struggled with a lack of access to incubators. This method, in essence, uses the mother's body heat to keep

their babies warm.

They asked 73 mothers to provide skin-to-skin contact (KC) to their premature infants in the neonatal unit for one hour daily for 14 consecutive days. For comparison, the researchers also assessed 73 premature infants who received standard incubator care. Children were then followed seven times across the first ten years of life.

They found that during the first half-year of life, mothers in the KC group were more sensitive and expressed more maternal behavior toward their infants. Children in the KC group showed better cognitive skills and executive abilities in repeated testing from six months to ten years.

At ten years of age, children who received maternal contact as infants showed more organized sleep, better neuroendocrine response to stress, more mature functioning of the autonomic nervous system, and better cognitive control.

"This study reminds us once again of the profound long-term consequences of maternal contact," commented Dr. John Krystal, Editor of *Biological Psychiatry*. "The enhanced level of stimulation provided by this contact seems to positively influence the development of the brain and to deepen the relationship between mother and child."

Premature birth is a major health concern worldwide, with approximately 12% of infants born prematurely in industrial societies and significantly more in developing countries. While modern medicine has substantially increased the number of surviving premature infants, many suffer long-term cognitive difficulties and problems in neurobiological systems that support stress regulation and the organization of arousal and attention.

Feldman highlights that "Kangaroo Care is an easy-to-apply intervention

with minimal cost and its multi-dimensional long-term impact on child development calls to integrate this intervention in the care-practices of [premature infants](#) across the world."

More information: The article is "Maternal-Preterm Skin-to-Skin Contact Enhances Child Physiologic Organization and Cognitive Control Across the First 10 Years of Life" by Ruth Feldman, Zehava Rosenthal, and Arthur I. Eidelman ([DOI: 10.1016/j.biopsych.2013.08.012](https://doi.org/10.1016/j.biopsych.2013.08.012)). The article appears in *Biological Psychiatry*, Volume 75, Issue 1 (January 1, 2014)

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