

## PSYCHOSOCIAL SUPPORT

### Maternal Preterm Skin-to-Skin Contact Enhances Child Physiologic Organization and Cognitive Control Across the First 10 Years of Life

#### Background

Premature birth includes the risk factors of brain immaturity and maternal separation, assumed to have long-term negative effects on development. There are cascading interactions of infant biological dispositions and parental provisions, so that difficulties in physiologic regulation and parenting behavior can enhance each other over time, leading to maladaptive outcome. Feldman and colleagues follow the hypothesis that maternal-infant body contact may ameliorate some of the difficulties in contact-sensitive systems among premature infants. 73 premature infants and their mothers were in the Kangaroo Care (KC) intervention group receiving maternal-newborn skin-to-skin contact for 14 consecutive days. Comparison group includes 73 case-matched control subjects receiving standard incubator care. Measures of multiple physiologic, cognitive, parental mental health, and mother-child relationship were assessed seven times across the first ten years of life.

#### Summary of results

Parent-infant dyads in the intervention group showed increased autonomic functioning and maternal attachment behavior in the postpartum period, also reduced maternal anxiety and enhanced child cognitive development and executive functions from 6 months to 10 years. By ten years of age, premature infants who received skin-to-skin contact as neonates showed attenuated stress response, more autonomic functioning, organized sleep, better cognitive control and more reciprocal mother-child relationship.

#### Strength

As a prospective longitudinal study using a low-cost touch intervention, it confirmed for the first time that maternal-infant bodily contact during the postpartum period has favorable impact on stress physiology and behavioral control and so bears long-term benefits for child development.

#### Limitations

Due to ethical reasons no randomization between groups was possible. Also, no full-term group was included, so that no direct comparisons with normative controls were available for physiological data. Bodily contact between infants and fathers or even other relatives or trained volunteers was not taken into account, so that differential effects of maternal vs. non-maternal KC should be further studied.

#### Practical conclusion

Findings underline that a low-cost intervention, offering bodily contact and thereby reducing experience of separation for infant and the mother, can have lasting gains for infants and families. Professionals in preterm care should be aware of this and respect KC and other bodily contact interventions as body-massage offered by parents and breastfeeding as relevant elements of developmental care.

**Feldman R., et al.** Maternal-preterm skin-to-skin contact enhances child physiologic organization and cognitive control across the first 10 years of life. *Biol Psychiatry*. 2014;75(1):56–64. doi:10.1016/j.biopsych.2013.08.012.

Written by: Patricia Hinner, Psychologist

