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WHAT DOES AFFECT THE EFFICACY OF SKIN-TO-SKIN CONTACT IN PRETERM INFANTS?

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Developmental care for preterm infants

Developmental care is an approach that uses a range of medical and nursing interventions with the aim to reduce the mismatches between extra- and intrauterine environment that decrease the stress of preterm neonates in neonatal departments, and therefore promote optimal healthy growth and neurobehavioral development of the infant

[Heidelise Als, 2004].



KANGAROO MOTHER CARE (KMC) IS A CORNERSTONE OF DEVELOPMENTAL AND FAMILY-ORIENTED CARE FOR VERY LOW-BIRTH-WEIGHT PRETERM INFANTS

Kangaroo mother care (KMC), originally defined as **skin-to-skin contact** between a mother and her newborn, frequent and exclusive or nearly exclusive breastfeeding, and early discharge from hospital, has been proposed as an alternative to conventional neonatal care for low birthweight (LBW) infants.



[Conde-Agudelo A, Díaz-Rossello JL.,
Cochrane Database of Systematic Reviews, 2016]

Historical remarks about skin-to-skin contact

- **1978** – pediatrician **Edgar Rey Sanabria** in **Bogotá**, Colombia firstly introduced Kangaroo care, the main component of which is SSC, as an alternative method of care for extremely premature infants in low-income countries.
- **1984** – UNICEF firstly reported:
“Intriguing and incredible survival of “kangaroo babies” unparalleled in medical literature “
- **1985** - **Professor Andrew Whitelaw** (UK) visited Bogotá
 - 1st description of KMC in English medical literature
 - Continued KMC research - found many benefits
- **Since 1985**
 - KMC practiced in many parts of the world
 - Supported by WHO and many organizations as a **LIFE SAVING METHOD OF CARE**



*Similar to kangaroo care giving the human infant is also immature and especially the LBW infant benefits from skin-to-skin care because it provides **WARMTH, SAFETY AND FOOD***

[Whitelaw, 1985]



Benefits of skin-to-skin contact

- Enhances physiologic stability
- Improves weight gain
- Shortens length of stay
- Decreases stress
- Enhances bonding
- Increases success of breastfeeding
- Reduces minimizes pain
- Improves sleep
- Improves brain, cognitive and psychom



What should be the optimal SSC duration per day in order to achieve maximum effect?

Even 1 hour a day of Kangaroo care may have positive long-term outcomes

[Feldman et al., 2014].

THE PURPOSE OF OUR STUDY:

to investigate the effectiveness **of skin-to-skin contact** depending on its **duration** in preterm babies



RESEARCH DESIGN



26 premature babies with GA < 29 weeks

According to the duration of skin-to-skin contact



37 premature babies with GA 29-32 weeks

According to the duration of skin-to-skin contact



Benefits of the SSC depending on its duration in preterm infants with *GA < 29 weeks*

	I group (n=10)		II group (n=16)		p	Odds Ratio (95% CI)
	n	%	n	%		
BPD	3	(20.0)	0	(0.0)	0.428	2.33 (0.44-12.40)
Nosocomial infection	3	(30.0)	12	(75.0)*	0.043	7.00 (1.20-40.83)
NEC	0	0.0	2	(12.5)	0.508	-
Cholestasis	0	0.0	4	(25.0)	0.136	-
Artificial feeding at discharge	3	(30.0)	12	(75.0)*	0.043	7.00 (1.20-40.83)
Oxygen -dependence at discharge	1	(10.0)	5	(31.25)	0.352	4.09 (0.40-41.66)
Daily weight gain (g)	23.03 [20.48; 26.81]		20.18 [18.58; 23.07]		0.140	

* p value <0,05; 95% CI – 95 % Confidence Intervals

Benefits of the SSC depending on its duration in preterm infants with *GA 29-32 weeks*

	1 group (n=15)		2 group (n=22)		P	Odds Ratio (95% CI)
	n	%	n	%		
BPD	3	(20.0)	0	(0.0)	0.059	
Artificial feeding at discharge	2	(13.3)	13	(59.1)*	0.016	9.39 (1.69-52.13)
Nosocomial infection	0	(0.0)	3	(13.6)	0.257	

* p value <0,05; 95% CI - 95 % Confidence Intervals



Conclusions

Regular and prolonged SSC has a positive impact on the preterm baby's health preventing the nosocomial infections and promoting breastfeeding.

«Never separate mother and her newborn. The benefits are even more crucial for a premature baby.»

[Dr. Nils Bergman, 2007]

