



## Background

- Skin-to-skin contact is the first step in The Breastfeeding process
- Only few studies of skin-to-skin contact with extremely premature infants
- More evidens is needed

**The Breastfeeding Process:**

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## Aim of the project

- To determine if extremely premature infants, with post menstrual age less than 28 weeks, can maintain adequate body temperature during skin-to-skin contact with their parent without negative effects when transfer from incubator and position are optimized.
- To eliminate barriers for early parent-infant contact and strengthen parental competence.

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## Materials and Methods

Triangulation between

- A prospective clinically interventions study, where the infants serve as their own control group, in a pre-test, test, post-test design.
- Individually semi-structured interviews with the parents.

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## Materials and Methods

- Continually measurements of 22 stabile infants' physical parameters

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## Criterion for stability

Inclusion	Exclusion
<ul style="list-style-type: none"> <li>• Can be on conventional mechanical ventilation or have nasal-CPAP treatment</li> <li>• Can need oxygen up to 70% before transfer</li> <li>• Can have umbilical catheters or intravenous lines</li> <li>• Can get pressure-support, but should have stabile blood pressure with the treatment</li> <li>• Minimum temperature 36,5° C before transfer</li> </ul>	<ul style="list-style-type: none"> <li>• Labile infant with many stimulation required bradycardies/desaturations or ventilation required apnoeas the 3 hours ahead of pre-test period</li> <li>• If the infant is labile when manipulated, during suction or disconnection from the ventilator</li> <li>• Pleura drainage</li> <li>• Advanced mechanical ventilation (HFO, NO)</li> <li>• Febrile (infant or parent)</li> </ul>

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## Data collection

- Continuously measurements of skin temperature, heart frequency, respiration frequency and oxygen saturation
- Change in FiO<sub>2</sub>
- Axillar temperature measurements

Pre-test		Test		Post-test	
X	X	X	X		X

- Setting is described



## Guideline for optimal transfer

- The staff and parent have warm hands.
- The warm blanket is placed around the infant.
- Heat loss is prevented by using the shortest way between incubator and parent, preferable with the parent standing by the incubator, taking the infant up to her chest, and afterwards sitting down.



## Guideline for optimal position and moisture

- Placed on the parent's chest
- Prone (or side) position with flexed hips and knees
- Covered by the warm transfer blanket
- A "U" blanket is placed around the infant in order to create a warm and moist microclimate.
- Upon this the warm duvet from the incubator is placed.
- The infant is only wearing cap and diaper.



## Reliability and validity

- The pre-test, test, post-test design can test the hypothesis
- 22 infants will enable statistical judgment
- Triangulation with parent interviews will add a user-perspective to the study
- Their own control group
- Takes place in praxis



## Ethical considerations

- Research will improve treatment
- Approved by The Biomedical Research Ethics Committee Capital Region
- Written consent
- Randomization would be unethical



## No results yet

The first 17 infant

- GA: 24+1 – 27+0 (weeks + days)
- Days at study: 1 – 27
- PMA at study: 25+1 – 27+6
- Weight at study: 435 – 900 grams
- Skin-to-skin contact for 50 min. - 6½ hours
- More mothers than fathers
- More sitting transfers than standing transfers



## Interviews with parents

- Semi-structured
- After the transcription, the parents will finally approve the text.
- The interviews will give us knowledge about the parent's perspective, which can improve the co-operation between parents and staff.



## Themes from the interviews

- My infant is calmer
- It is easier to feel like a parent
- Bonding is enhanced



- "You are happier afterwards because it is so difficult a situation to have a baby, where the future is so uncertain. It was a very positive experience, and there haven't been many of them since she was born. In fact, nothing has change in her condition, I am just happier".



- "You love them more, when you can feel them on your body, and when his small hands are moving. The more contact you get, the more you love him, and the more you get worried for him. But it is better to care too much."



- "You bond much more to the babies and feel useful as a parent."



## Bibliography

- Charpak N, Ruiz JG, Zupan J, Cattaneo A, Figueroa Z, Tessier R, Cristo M, Anderson G, Ludington S, Mendoza S, Mokhachane M, Worku B. 2005a Kangaroo Mother Care: 25 years after. *Acta Paediatr.* 2005 May;94(5):514-22.
- Bergman NJ, Linley LL, Fawcus SR. Randomized controlled trial of skin-to-skin contact from birth versus conventional incubator for physiological stabilization in 1200- to 2199-gram newborns. *Acta Paediatr.* 2004 Jun;93(6):779-85
- Nyqvist KH. How can kangaroo mother care and high technology care be compatible? *J Hum Lact.* 2004 Feb;20(1):72-4
- Bauer K, Pyper A, Sperling P, Uhrig C, Versmold H. Effects of gestational and postnatal age on body temperature, oxygen consumption, and activity during early skin-to-skin contact between preterm infants of 25-30-week gestation and their mothers. *Pediatr Res.* 1998 Aug;44(2):247-51