

# KANGAROO MOTHER CARE

## Abstract

Kangaroo mother care is a method of care of preterm infants and low birth weight infants. The method involves infants being carried usually by mother with skin-to-skin contact. Baby should be dressed with front-open sleeveless shirt, cap, socks, nappy and hand gloves or mitten while giving kangaroo mother care. It satisfies all five senses of the infant. Baby feels warmth of the mother through skin-to-skin contact (touch), listen to mother's voice and heartbeat (hearing), sucks the breast to feed (taste), smells the mother's odor (olfaction) and makes eye contact with mother's (vision). KMC can be continued until the baby gains weight around 2500 g or reaches 40 weeks of post conception age. After discharge the baby is followed up once or twice a week till 37 to 40 weeks of gestation or till the baby reaches 2.5 to 3 kg of weight.

**Keywords:** Kangaroo, mother care.

## Author

**Ms. Ishita Nath**  
Senior Tutor  
Charnock Healthcare Institute  
Kolkata, India.

## I. INTRODUCTION

Caring low birth weight baby is a great challenge for the neonatal care unit and the family. Number of low birth weight baby is still far beyond the expected target in our country. The cost of quality management of the babies is increasing day-by-day. Kangaroo mother care is low cost approach for the care of low birth weight baby.<sup>1</sup>

Kangaroo mother care (KMC) is a special way of caring low birth weight infants by skin to skin contact. It promotes their health and wellbeing by effective thermal control, breastfeeding and bonding.<sup>1</sup>

## II. COMPONENTS OF KMC

- 1. Skin-to-skin contact:** The baby is placed vertically on the mother's chest, with the baby's skin in direct contact with the mother's skin. The baby is usually dressed in just a diaper and covered with a blanket to maintain warmth.
- 2. Exclusive breastfeeding:** Kangaroo Mother Care promotes exclusive breastfeeding. The baby is allowed to breastfeed whenever they show signs of hunger or need to be comforted.
- 3. Kangaroo position:** The baby is positioned in an upright, vertical manner on the mother's chest or between the mother's breasts. This position enables the baby to feel the mother's heartbeat and warmth, which can be soothing and calming.
- 4. Supportive clothing and blankets:** The baby is dressed in a diaper and, if needed, a hat to regulate body temperature. A blanket is used to cover the baby, ensuring they stay warm during the skin-to-skin contact.
- 5. Kangaroo care for an extended period:** Kangaroo Mother Care is not limited to short durations. Ideally, it should be practiced for several hours a day, and for premature infants, it can continue until they reach the term-corrected age.
- 6. Monitoring and medical care:** Babies under Kangaroo Mother Care are regularly monitored by healthcare professionals to ensure their well-being and development. They may still require medical attention or treatments specific to their health conditions.<sup>2</sup>

## III. PREREQUISITES OF KMC

- 1. Support to the mother:** Mother needs support in hospital and home from caregivers and family members. Counseling and supervision should be provided to the mother by the health personnel in hospital, whereas mother requires assistance and cooperation from her family members at home.
- 2. Postdischarge follow-up:** KMC should be continued at home after discharge from hospital. For safe and successful KMC at home, a regular follow-up should be arranged to solve problem and to evaluate health status of the infant.<sup>1</sup>

#### IV. BENEFITS OF KMC

Skin-to-skin contact with the mother's chest helps regulate the baby's body temperature more effectively than in an incubator, reducing the risk of hypothermia and providing a stable thermal environment. Infants under KMC tend to gain weight more rapidly, as the close contact with the mother encourages more frequent and successful breastfeeding, leading to improved nutrition. Kangaroo Mother Care promotes exclusive breastfeeding, as the baby is allowed to breastfeed whenever they show hunger cues, leading to a better-established breastfeeding relationship. Kangaroo Mother Care has been associated with a lower incidence of infections in premature infants, possibly due to better temperature regulation and the transfer of protective antibodies through breast milk. Skin-to-skin contact has been shown to help stabilize the baby's heart rate, respiratory rate, and oxygen saturation levels, leading to better overall physiological stability. The close contact with the mother's body and the soothing environment created through KMC can have positive effects on the baby's brain development and neurological outcomes. Regular breastfeeding and close maternal contact can help prevent episodes of low blood sugar in premature infants. Kangaroo Mother Care has been linked to reduced stress levels in both the baby and the mother, which can have positive effects on the overall well-being of both. Babies in KMC often experience improved sleep patterns, which are vital for their growth and development. The close physical contact and emotional interaction between the mother and the baby during Kangaroo Mother Care promote strong bonding and emotional attachment. Kangaroo Mother Care empowers mothers and caregivers by involving them directly in the care of their infants, leading to increased confidence in their ability to nurture and care for their baby. KMC can be a cost-effective alternative to using expensive incubators in resource-limited settings, making it accessible to a broader range of families.<sup>3</sup>

#### V. ELIGIBILITY CRITERIA FOR KMC

- 1. For Baby:** Babies who are born prematurely, typically before 37 weeks of gestation, are often eligible for KMC. The earlier the baby is born, the higher the likelihood that KMC will be considered. Babies with a low birth weight, usually less than 2.5 kilograms (5.5 pounds), are commonly eligible for KMC. However, eligibility might vary based on the specific healthcare facility's policies and guidelines. The baby's health condition should be stable, and the infant should not require intensive medical interventions or continuous respiratory support. The baby should be capable of breathing on their own without the need for mechanical ventilation or continuous respiratory support. The infant should have a developed sucking reflex, which is essential for breastfeeding and proper feeding during KMC. Babies with severe infections or serious medical conditions might not be eligible for KMC until their condition improves.
- 2. For Mothers:** The mother should be in stable physical health to engage in KMC. Any medical conditions that might interfere with her ability to hold the baby skin-to-skin for extended periods would be taken into consideration. The mother should be willing and motivated to practice KMC. KMC requires a significant commitment from the mother to hold the baby on her chest for several hours a day, as it provides essential warmth, comfort, and nourishment to the infant. The mother should be physically able to hold the baby against her chest, ideally in a reclined or semi-reclined position to ensure the baby's safety and comfort during KMC. KMC is often encouraged to facilitate breastfeeding.

Mothers who are able and willing to breastfeed or provide expressed breast milk for their baby are generally eligible for KMC. Emotional support is essential for mothers practicing KMC, as the process can be physically and emotionally demanding. Mothers should have access to emotional support from healthcare providers, family members, or support groups.<sup>4</sup>

## **VI. PREPARATION FOR KMC**

Before starting KMC, it's crucial to consult with the healthcare team, including neonatal specialists and nurses. They can assess the baby's eligibility for KMC and provide guidance on how to perform it correctly based on the baby's specific medical condition. The mother should be in stable physical health to participate in KMC. If the mother has any health issues that might affect her ability to hold the baby for extended periods, these should be addressed and managed appropriately. KMC is often combined with breastfeeding. Encourage and support the mother in establishing breastfeeding or providing expressed breast milk for the baby, as breast milk is essential for the baby's development and well-being. During KMC, the baby is placed skin-to-skin against the mother's chest. The mother should find a comfortable position, such as a semi-reclined or reclined position, which allows her to hold the baby securely and safely. KMC requires a calm and supportive environment for both the mother and the baby. Minimize noise and disturbances in the area where KMC will take place to ensure a peaceful experience. Baby should be dressed with cap, socks, nappy and hand gloves or mitten during KMC to facilitate skin-to-skin contact with the mother's chest. The mother can wear a comfortable gown or loose-fitting clothing that allows easy access for the baby. Since premature or low birth weight babies have difficulty regulating their body temperature, it's important to monitor the baby's temperature regularly during KMC. The mother's body warmth helps keep the baby warm, but additional measures like blankets may be necessary if the baby's temperature drops. Provide the mother with adequate education on KMC, including its benefits and the correct way to practice it. Offer emotional support and reassurance, as KMC can be emotionally and physically demanding for mothers. Encourage the involvement of family members in supporting the mother during KMC. Having a supportive network can make the experience more manageable and rewarding for the mother and the baby. Always follow the healthcare team's advice and recommendations regarding the frequency and duration of KMC sessions, especially if there are specific medical considerations for the baby.<sup>5</sup>

## **VII. KMC PROCEDURE**

The mother should find a comfortable position, such as a semi-reclined or reclined position, where she can comfortably hold the baby against her chest. This position allows for skin-to-skin contact and provides warmth and comfort to the baby. Remove the baby's clothing, leaving only the diaper, cap, socks and hand gloves or mitten on, to ensure direct skin-to-skin contact between the baby and the mother's chest. Gently place the baby on the mother's bare chest, ensuring that the baby's entire front is in contact with the mother's skin. The baby's head should be turned to one side, and the mother's breast is an excellent place to support the baby's head. Baby's hip should be flexed and abducted in a frog-like position. The arms should also be flexed and placed on mother's chest. Baby's abdomen should be placed at the level of mother's epigastrium. Use a blanket or cloth to cover the baby's back and keep them warm. The mother's body heat will also help regulate the baby's temperature.

Keep the baby in skin-to-skin contact with the mother for an extended period. KMC sessions can typically last for several hours at a time, but the duration may vary based on the baby's health and the mother's comfort. During KMC, monitor the baby's breathing, temperature, and overall well-being regularly. If the baby shows any signs of distress or discomfort, adjust the position or seek assistance from healthcare providers. KMC is often combined with breastfeeding. If the baby is ready to feed, encourage breastfeeding during the skin-to-skin session. Breastfeeding provides essential nourishment and supports the baby's health and development. When the KMC session is complete, gently transition the baby back to the crib or incubator, ensuring they are wrapped in a warm blanket. Depending on the baby's health and medical condition, KMC sessions can be repeated several times a day. Consistency in practicing KMC can lead to better outcomes for the baby's growth and development.<sup>4</sup>

### **VIII. DURATION OF KMC**

KMC can be initiated as soon as the baby's health condition stabilizes, even if they are still in the neonatal intensive care unit (NICU). It is often recommended to start KMC as soon as possible after birth to maximize its benefits. KMC sessions often involve prolonged skin-to-skin contact between the baby and the mother, lasting several hours at a time. Some experts recommend at least 1 to 2 hours of continuous skin-to-skin contact per session, but longer sessions, such as 2 to 3 hours, are also beneficial. For optimal results, KMC is usually practiced multiple times throughout the day. Depending on the baby's needs and the mother's availability and comfort, KMC sessions can be performed two to four times a day or more. In some cases, KMC sessions may begin with shorter durations and gradually increase over time as the baby and the mother become more accustomed to the practice. KMC can be continued for as long as it remains beneficial for the baby and the mother. Some babies may require KMC for a few weeks or months until they gain enough weight and show improved health, while others may continue to benefit from KMC for an extended period.

It's essential to note that the duration of KMC sessions may be influenced by the baby's ability to tolerate skin-to-skin contact and the mother's comfort, especially if she needs to balance KMC with other responsibilities and self-care. Healthcare providers and neonatal specialists will work closely with the mother to determine the most appropriate schedule and duration of KMC sessions based on the specific needs and circumstances of both the baby and the mother.<sup>1</sup>

### **IX. DISCHARGING CRITERIA**

The baby should be transferred from the Neonatal Care Unit to the postnatal ward, when the baby is stable and gaining weight and the mother is confident to look after the baby. The baby should be discharged from hospital when the baby is having the following conditions:

1. General health is good and there is no evidence of infection and apnea.
2. Feeding well exclusively with breast milk. Gaining weight 15 to 20 g/kg/day for at least three consecutive days.
3. Maintaining normal body temperature satisfactorily for at least three consecutive days in room temperature.

4. Mother and family members are confident to take care of the baby at home and would be able to come regularly for follow-up visits.
5. Home environment should be suitable and congenial for continuation of KMC.<sup>2</sup>

## **X. DISCONTINUATION OF KMC**

1. KMC can be continued until the baby gains weight around 2500 g or reaches 40 weeks of postconception age.
2. KMC can be discontinued if the baby starts wriggling to show discomfort or pulls limbs out, cries and fusses every time, when mother tries to put the baby back into skin contact.
3. When mother and baby are comfortable, KMC can be continued as long as possible at health facility or at home.
4. Mother can provide skin-to-skin contact occasionally after the baby bath and during cold nights.<sup>6</sup>

## **XI. POST DISCHARGE FOLLOW-UP**

Each neonatal care unit should formulate its own policy for follow-up.

1. In general a baby is followed up once or twice a week till 37 to 40 weeks of gestation or till the baby reaches 2.5 to 3 kg of weight.
2. There after a follow-up once in 2 to 4 weeks may be sufficient till 3 months of post conceptional age. After that 1 to 2 months during first year of life. The baby should gain adequate weight 15 to 20 g/kg/day up to 40 weeks of conceptional age and 10 g/kg/day subsequently.<sup>1</sup>

## **XII. CONCLUSION**

Kangaroo mother care improves growth, reduces morbidities and decreases hospital stay in low birth weight infants. It is simple, acceptable, affordable, and feasible to mothers and can be continued at home. Nurses play an important role in directly educating and encouraging family to provide kangaroo mother care.

## **REFERENCES**

- [1] Pal P. Textbook of Paediatrics. Paras Medical Publishers. 2016. 1<sup>st</sup> ed.
- [2] Datta P. Paediatric Nursing. Jaypee Brothers Medical Publishers. 2018. 4<sup>th</sup> ed.
- [3] Hockenberry M. J., Wilson D. Wong's Nursing Care of Infants and Children. Elsevier 2015. 10<sup>th</sup> ed.
- [4] Sharma R. Essentials of Pediatric Nursing. Jaypee Brothers Medical Publishers (P) Ltd 2013. 1<sup>st</sup> ed.
- [5] Pillitteri A. Child Health Nursing, Care of child and family. Lippincott. 1999. 1<sup>st</sup> ed.
- [6] Dutta D.C. Textbook of Obstetrics. Jaypee brothers medical publishers (P) Ltd. 2018. 9<sup>th</sup> ed.