

IAP - IJPP CME 2025

PRETERM AND LOW BIRTH WEIGHT CARE - EVIDENCE BASED PRACTICES***Sindhu Sivanandan**

Abstract: Preterm and low-birth-weight babies are at higher risk of neonatal morbidity and mortality, particularly in low and middle-income countries. Evidence-based, low-cost, and scalable interventions that can be implemented across all levels of newborn care are essential to improve survival and long-term outcomes. This article shall review evidence-based recommendations issued by World Health Organization on kangaroo mother care, feeding practices, supplementation, probiotics and supportive skin care for this vulnerable population.

Keywords: Preterm, Kangaroo mother care, Nutrition, Survival, Feeding practices.

Points to Remember

- *Immediate initiation of kangaroo mother care should be routinely provided to all preterm and LBW infants, as it significantly improves survival.*
- *Mother's own milk is the preferred feed and donor human milk is recommended as the first-line alternative if mother's milk is unavailable.*
- *Scheduled feeding is appropriate for very preterm infants in facilities; responsive feeding after discharge.*
- *Early initiation and faster advancement of enteral feeding are safe and beneficial.*
- *Exclusive breastfeeding until six months is strongly recommended. Complementary feeds should not be initiated before 6 months of age in preterm infants.*
- *Targeted supplementation addresses micronutrient deficiencies; routine multivitamins are not recommended.*
- *Probiotics may be considered for selected very preterm infants.*
- *Gentle emollient therapy may support skin integrity as part of supportive care.*

References

1. Ohuma EO, Moller AB, Bradley E, Chakwera S, Hussain-Alkhateeb L, Lewin A et al. National, regional and global estimates of preterm birth in 2020, with trends from 2010: a systematic analysis. *Lancet*. 2023; 402(10409):1261-1271. doi: 10.1016/S0140-6736(23)00878-4.
2. World Health Organization. WHO recommendations for care of the preterm or low-birth-weight infant. Geneva: WHO; 2023. <https://www.who.int/publications/i/item/9789240058262>. Last accessed Jan 1, 2026.
3. Conde-Agudelo A, Díaz-Rossello JL. Kangaroo mother care to reduce morbidity and mortality in low birthweight infants. *Cochrane Database Syst Rev*. 2016;8:CD002771.
4. Sivanandan S, Sankar MJ. Kangaroo mother care for preterm or low birth weight infants: a systematic review and meta-analysis. *BMJ Glob Health*. 2023 Jun;8(6):e010728

* Chief Neonatologist,
Kauvery Hospital,
Chennai.
email : drsindhusivanandan@gmail.com

5. WHO Immediate KMC Study Group; Arya S, Naburi H, Kawaza K, Newton S, Anyabolu CH, Bergman N, et al. Immediate “kangaroo mother care” and survival of infants with low birth weight. *N Engl J Med.* 2021; 384 (21):2028-2038.
6. Chellani H, Mittal P, Arya S. Mother-neonatal intensive care unit (M-NICU): a novel concept in newborn care. *Indian Pediatr.* 2018; 55(12):1035-1036. doi:10.1007/s13312-018-1436-8.
7. Taylor SN, Buck CO. Post-discharge nutrition to optimize preterm infant short- and long-term outcomes. *Semin Fetal Neonatal Med.* 2025; 30(2):101637. doi:10.1016/j.siny.2025.101637.
8. Quigley M, Embleton ND, Meader N, McGuire W. Donor human milk for preventing necrotising enterocolitis in very preterm or very low-birthweight infants. *Cochrane Database Syst Rev.* 2024; 9(9): CD002971. doi:10.1002/14651858.CD002971.pub6.
9. Brown JV, Lin L, Embleton ND, Harding JE, McGuire W. Multi-nutrient fortification of human milk for preterm infants. *Cochrane Database Syst Rev.* 2020; 6(6): CD000343. doi:10.1002/14651858.CD000343.pub4.
10. Chinnappan A, Sharma A, Agarwal R, Thukral A, Deorari A, Sankar MJ. Fortification of breast milk with preterm formula powder vs human milk fortifier in preterm neonates: a randomized noninferiority trial. *JAMA Pediatr.* 2021; 175(8):790-796. doi:10.1001/jamapediatrics.2021.0678.
11. Yang WC, Fogel A, Lauria ME, Ferguson K, Smith ER. Fast feed advancement for preterm and low birth weight infants: a systematic review and meta-analysis. *Pediatrics.* 2022; 150(Suppl 1):e2022057092G. doi:10.1542/peds.2022-057092G.
12. Manapurath RM, Gadapani Pathak B, Sinha B, Upadhyay RP, Choudhary TS, Chandola TR, et al. Enteral iron supplementation in preterm or low birth weight infants: a systematic review and meta-analysis. *Pediatrics.* 2022; 150 (Suppl 1):e2022057092I. doi:10.1542/peds.2022-057092I.
13. Kumar M, Shaikh S, Sinha B, Upadhyay RP, Choudhary TS, Chandola TR, et al. Enteral vitamin D supplementation in preterm or low birth weight infants: a systematic review and meta-analysis. *Pediatrics.* 2022; 150(Suppl 1):e2022057092K. doi:10.1542/peds.2022-057092K.
14. Embleton ND, Moltu SJ, Lapillonne A, van den Akker CHP, Carnielli V, Fusch C, et al. Enteral nutrition in preterm infants (2022): a position paper from the ESPGHAN Committee on Nutrition and invited experts. *J Pediatr Gastroenterol Nutr.* 2023; 76(2):248-268. doi:10.1097/MPG.0000000000003642.
15. Sharif S, Meader N, Oddie SJ, Rojas-Reyes MX, McGuire W. Probiotics to prevent necrotising enterocolitis in very preterm or very low birth weight infants. *Cochrane Database Syst Rev.* 2020; (10): CD005496.
16. Cleminson J, McGuire W. Topical emollient for preventing infection in preterm infants. *Cochrane Database Syst Rev.* 2021; 5(5):CD001150. doi:10.1002/14651858.CD001150.pub4.