

## Benefits of 100% human milk diet in preterm infants: NICU Nurses Survey

Sahni M.<sup>1</sup>, Chandra P.<sup>2</sup>, Sharma DM.<sup>3</sup>, Pejaver RK.<sup>4</sup>, Thomas B.<sup>5</sup>, Cardoza F.<sup>6</sup>, Reddy K. V.<sup>7\*</sup>

DOI: <https://doi.org/10.17511/ijpr.2020.i06.05>

<sup>1</sup> Mohit Sahni, Consultant Neonatologist, Nirmal Hospital Private Limited, Surat, Gujarat, India.

<sup>2</sup> Prathap Chandra, Consultant Neonatologist and Paediatrician, Motherhood Hospital, Bengaluru, Karnataka, India.

<sup>3</sup> Deepa Mohan Sharma, Consultant Neonatologist and Paediatrician, Motherhood Hospital, Bengaluru, Karnataka, India.

<sup>4</sup> Ranjan Kumar Pejaver, Chief Neonatologist, Department of Neonatology, People Tree Hospitals @ Meenakshi, Bengaluru, Karnataka, India.


<sup>5</sup> Betty Thomas, NICU Nursing Head, Nirmal Hospital Private Limited, Surat, Gujarat, India.

<sup>6</sup> Flavia Cardoza, NICU Nursing Head, Motherhood Hospital, Bengaluru, Karnataka, India.

<sup>7\*</sup> Vikram Reddy K., Chief Scientific Officer, Neolacta Lifesciences, Bengaluru, Karnataka, India.

**Background:** Hundred percent human milk diet plays a vital part in the nutritional management of preterm infants in the Neonatal Intensive Care Unit (NICU). **Objective:** To understand the NICU nurses' perspectives on the benefits of 100% human milk diet through human milk-derived nutritional products in preterm infants. **Material and Methods:** Online survey was conducted through Google Forms which had nine questions on the benefits of human milk-based nutrition finalized by expert neonatologists. An online survey link was shared with the NICU nurses through emails and text messages. **Results:** All the participants rated that exclusive breastfeeding or using 100% Human Milk Diet is very important for preterm babies in NICU [n=152 (100%)]. 46.7% (n=71) participants reported that seventy calories pasteurized human breast milk, (PHBM – 70 Cal) is the best option for preterm infants when the mother's own milk (MOM) is unavailable. 84.9% (n=129) of the participants stated that the Human milk-based fortifier (HMDF) – Mother's Milk Fortifier (MMF) is the best option for fortification. **Conclusion:** The majority of the NICU nurses in India are aware of the benefits of human milk and 100% human milk diet in preterm infants. Human milk-derived nutritional products; HMDF (MMF) and 70 Calories are reported to be having good tolerance and safety in preterm infants by most of the NICU nurses.

**Keywords:** Human Milk, Human milk-derived fortifier, MMF, Seventy Calories PHBM, NICU Nurses

Corresponding Author	How to Cite this Article	To Browse
Vikram Reddy K., Chief Scientific Officer, Neolacta Lifesciences, Bengaluru, Karnataka, India. Email: <a href="mailto:dvikram@neolacta.com">dvikram@neolacta.com</a>	Sahni M, Chandra P, Sharma DM, Pejaver RK, Thomas B, Cardoza F, Vikram Reddy K., Benefits of 100% human milk diet in preterm infants: NICU Nurses Survey. <i>Pediatric Rev Int J Pediatr Res.</i> 2020;7(6):248-254. Available From <a href="https://pediatrics.medresearch.in/index.php/ijpr/article/view/612">https://pediatrics.medresearch.in/index.php/ijpr/article/view/612</a>	

Manuscript Received  
2020-07-21

Review Round 1  
2020-08-04

Review Round 2  
2020-08-17

Review Round 3

Accepted  
2020-08-24

Conflict of Interest  
No

Funding  
Nil

Ethical Approval  
Yes

Plagiarism X-checker  
4%

Note



© 2020 by Mohit Sahni, Prathap Chandra, Deepa Mohan Sharma, Ranjan Kumar Pejaver, Betty Thomas, Flavia Cardoza, Vikram Reddy K. and Published by Siddharth Health Research and Social Welfare Society. This is an Open Access article licensed under a Creative Commons Attribution 4.0 International License <https://creativecommons.org/licenses/by/4.0/> unported [CC BY 4.0].



## Introduction

Implementation of a hundred percent human milk diet is very critical for preterm infants. EHMD in NICU could provide multiple benefits for preterm infants such as the reduction in the rate and risk of mortality, late-onset sepsis, and necrotizing enterocolitis (NEC) with an advantage of overall development including enhanced neural connections [1-5].

A study by Sullivan et al. has provided evidence on the benefits of EHMD with HMDF had reduced the incidence of NEC and surgical NEC significantly in premature infants [6].

Breast milk fortifiers and formulas derived from bovine milk sources are commonly used in feeding preterm infants. Studies have provided evidence that bovine milk-based feeds are correlated to feed intolerance, NEC, sepsis, and bronchopulmonary dysplasia (BPD) in preterm infants [7].

Recent evidence from clinical research suggests that implementation of EHMD using nutritional products and fortifiers derived exclusively from donor human milk have resulted in significantly reducing the incidence of NEC, infections, and BPD in preterm infants. Human milk-derived nutritional products such as fortifiers (Neolact MMF), 70 calorie sachet and PHBM is now available in India which can be used for providing EHMD to preterm infants for whom it will benefit the most [8-10].

NICU nurses play an important role in the nutritional management of preterm infants, they devote substantial time in overseeing the feeding, nutrition, and growth measurements for premature infants, hence it is important to understand the benefits of human milk and human milk-derived products in preterm infants from NICU nurses perception.

The main objective of this survey was to understand the benefits and importance of a 100% human milk diet from the NICU nurses' perspective in India.

## Methodology

This survey was designed for NICU nurses to obtain their experiences on a 100% human milk diet in India. This study was an online cohort survey designed for NICU nurses was conducted for a duration of one month (April – May 2020). The study was estimated to receive 150 – 200 responses from across the country, the study was closed for analysis once the responses crossed 150 numbers.

Nurses working in NICU's in India were eligible to participate in the survey, Nurses without NICU experience, and nurses from other departments were excluded from the study.

**Data collection procedure:** Survey questionnaire was set up in Google Forms and the responses were collected in the google forms survey platform. This survey was open to all the NICU nurses in India. The google forms online survey link was shared with the NICU nurses through email and text messages. A request was made to the neonatologists and head nurses to disseminate the survey link with their counterparts and colleagues.

**Ethical considerations and permission:** This national survey was designed to obtain an overview of understanding the benefits and importance of human milk feeding for preterm infants from the representative sample of NICU nurses. Details and the objectives of the online survey were provided to the participants before the survey could begin. The survey was voluntary and anonymous. Consent was provided by the participants by completing and submitting the online survey questionnaire, Respondents had the option of entering their name and contact details. No statistical tests were used in analysis and all the study results were analyzed using numbers and percentages.

**Survey questionnaire:** Nine multiple choices (MCQ) based questionnaire was developed with suggestions from the Advisory Committee consisting of researchers and expert neonatologists.

The survey consisted of the following questions:

01. NICU nurses' opinion on feed tolerance with 100% Human Milk Diet for preterm infants.
02. NICU nurses' opinion on the importance of exclusive breastfeeding or using 100% Human Milk Diet for preterm babies in the NICU.
03. NICU nurses' opinion on the growth and development of preterm infants with 100% Human Milk Diet.
04. NICU nurses experience on time of initiation of trophic feeds for preterm infants.
05. NICU nurses experience on average feed volume of trophic feeds provided for preterm infants.
06. Demographic details: Hospital, City, and contact details.
07. NICU nurses' opinion on the best option for the fortification of breast milk in preterm infants.

- 08. NICU nurses' opinion on the best option for feeding the preterm infant when Mother's own milk is not available.
- 09. NICU nurses experience and satisfaction with the safety and tolerance of 100% human milk-based products like PHBM - 70 calorie and Human milk-based fortifier (MMF) for preterm infants.
- 10. NICU nurses' opinions on the suitability of different types of feeds for trophic feeding of preterm infants.

**Importance, feed tolerability, and growth of preterm infants receiving 100% human milk diet:**

All the participants rated that exclusive breastfeeding or using 100% Human Milk Diet is very important for preterm babies in the NICU [n=152 (100%)]. None of the participants selected the option of "Not Important"

97.4% (n=148) participants reported that feeds are better tolerated with 100% human milk diet in preterm infants. Whereas 2.6% (n=4) participants opined that 100% human milk diet is not better tolerated in preterm infants [n=4 (2.6%)].

75.7% (n=115) participants strongly agreed that the growth of preterm infants is better with 100% human milk diet (Table 1).

**Results**

**Demographics:** A total of 152 NICU nurses responded to the survey from 81 hospitals across 28 cities in India. Data received from all the completed survey questionnaire was included for analysis.

**Table-1: Growth of preterm infants receiving 100% human milk diet in the NICU.**

Parameter(n=152)	Number of NICU Nurses who answered				
	Strongly agree (%)	Agree (%)	Neither agree nor disagree (%)	Disagree (%)	Strongly disagree (%)
Growth is better when preterm infants received 100% Human Milk Diet in NICU	115 (75.7)	33 (21.7)	2 (1.3)	0 (0)	2 (1.3)

**Trophic feeding with human milk and suitability of different types of feeds as trophic feeds for preterm infants:** 67.1% (n=102) participants reported that trophic feeds were initiated within 24 hours of birth for preterm infants. All participants opined that the mother's own milk is suitable as trophic feeds for preterm infants in NICU. Whereas 44.07% (n=67) rated that donor human milk is suitable as trophic feeds while 17.76% (n=27) reported that formula feed is suitable as trophic feeds and 21.05% (n=32) participants have stated that formula feeds cannot be used as trophic feeds.

**Feeds for preterm infants in the absence of mother's own milk:** 46.7% (n=71) participants have reported that pasteurized human breast milk, seventy calories (PHBM - 70 Calorie) is the best option for preterm infants in NICU when MOM is not available (Table 2).

**Table-2: Nurses opinion on the best feeding option when Mother's Own Milk is not available.**

Parameter	Number of NICU Nurses who answered				
	Donor Human Milk (from Milk Bank) (%)	Donor Human Milk (PHBM - 70 Calorie) (%)	Bovine milk-based feeds (formula) (%)	TPN (IV Nutrition) (%)	Not Sure (%)
Nurses opinion on the best feeding option when Mother's Own Milk is not available.	66 (43.4)	71 (46.7)	7 (4.6)	7 (4.6)	1 (0.7)

**Fortification of breast milk in preterm infants:** 84.9% (n=129) of the participants stated that HMDF - Mother's Milk Fortifier (MMF) is the best option for the fortification of breast milk in preterm infants (Table 3).

**Table 3: Nurses opinion on the best option for the fortification of breast milk for preterm infants.**

Parameter	Number of Nurses who preferred	
	Human milk-based fortifier (MMF) (%)	Bovine milk-based fortifier (HMF) (%)
Nurses opinion on the best option for the fortification of breast milk for preterm infants.	129 (84.9)	23 (15.1)

**Safety and Tolerance of 100% human milk-based products like PHBM - 70 calorie and Human milk-based fortifier:**

96% (n=146) participants reported that they were satisfied with the safety and tolerance of 100% human milk-based products like PHBM - 70 calorie and HMDF (NeoLact MMF) (Table 4).

**Table 4: Safety and Tolerance of 100% human milk-based products like PHBM - 70 calorie and Human milk-based fortifier (MMF) for preterm infants.**

Parameter	Number of Nurses who answered			
	Very satisfied (%)	Satisfied(%)	Neither satisfied nor dissatisfied (%)	Dissatisfied(%)
Nurses satisfaction with the Safety and Tolerance of 100% human milk-based products like PHBM - 70 calorie and Human milk-based fortifier (MMF) for preterm infants	71 (46.7)	75 (49.3)	6 (3.9)	0 (0)

## Discussion

One of the vital responsibilities of a neonatal nurse is to make the parents understand and appreciate the exceptional benefits of human milk to the infants. NICU nurses should be able to explain mothers the need and benefits of exclusive breastfeeding and providing 100% human milk diet for the infants along with necessary education and training about the breastfeeding, hygiene, expression and proper storage of breast milk, fortification of expressed breast milk and ensure its implementation during the stay in hospital and after discharge [11].

Hallowell et al. in their study reported that only 13% of the neonatal nurses had provided breastfeeding support in their previous shift, which provides evidence for the lower implementation of EHMD in western countries [12].

As 100% human milk diet becomes crucial for the growth and development of premature infants, it is important that the neonatal nurses should implement lactation support and breastfeeding education into their day to daycare in hospitals which will help the infants to receive human milk diet. NICU nurses need to be empowered with the scientific and evidence-based knowledge about the science of human milk and the concept of 100% human milk diet by utilizing exclusively human milk-derived nutritional products [11].

Hair et al. studied the effect of EHMD by utilizing mother’s own milk, donor human milk, and a human milk-derived fortifier in 104 preterm infants with birth weight ≤1250 grams, the results of the study demonstrated that EHMD approach was not only safe but also provided optimal growth [13].

In the present survey, a very high percentage of NICU nurses have reported that 100% human milk diet has good safety, better feed tolerability with

Optimal growth in preterm infants, which correlates with the results observed in many scientific studies.

Research has provided evidence on the benefits of trophic feeds for preterm infants, wherein early initiation of trophic feeds had reduced feed intolerance episodes and fastened the weight gain as compared to the infants who had delayed initiation of trophic feeds [14-16]. A meta-analysis by Tyson et al demonstrated that infants who had trophic feeds had reached full feeds faster by 2.6 days, with 3.1 lesser days of feed interruptions and 11.4 lesser days of hospital stay when compared with infants without trophic feeds [17].

Trophic feeds can be initiated in hemodynamically stable preterm infants if there are no contraindications to enteral feeding. In sick premature infants, trophic feeds can be initiated by day 2 or day 3. MOM is the best option for trophic feeding, if MOM is unavailable donor human milk can be used. Bovine milk-based commercial formulas should be avoided for trophic feeding [18].

In this survey, the majority (67.1%) of the NICU nurses stated that trophic feeds would usually be started within 24 hours of the birth of a premature infant in NICU, which according to the scientific literature can result in reaching the full feeds faster along with early discharge from NICU. The advantages of early initiation of trophic feeding for premature infants must be emphasized to nurses in NICU by creating medical education programs or certification courses on the subject matter.

In the present study, the majority of the NICU nurses reported that the usual trophic feed volume was between 10 to 20 ml/kg/day, and many others reporting on a varied range between 5 to 60 ml/kg/day. Having a national consensus on the feeding protocol in NICU for preterm infants would be helpful for the nursing staff which can be optimized as per each NICU’s preferences.

Almost all the NICU nurses stated that MOM is the best option for providing trophic feeds to preterm infants. A majority (n=67) of the nurses reported that donor human milk is also a good option in the absence of mother's own milk, whereas half of the participants (50.65%) said that formula feeds cannot be used as trophic feeds and the other half of NICU nurses (49.35%) were of the opinion that formula feeds can be used as trophic feeds for preterm infants. As many authors have suggested that it is incorrect to provide formula feeds as trophic feeds as it lacks many essential bioactive proteins and immunoglobulins which is required for a premature infant not only for the maturation of the gut but also to protect against infections. It is of vital importance that the trophic feeds must be only the human milk i.e., mother's own milk if unavailable donor human milk (70 calorie PHBM) can be used. Continuing medical education focusing on the trophic feeds with human milk is required to be conducted on a regular basis for the nurses.

If MOM is not available or the mother has insufficient lactation, it is recommended to use pasteurized donor human milk as the best alternative feeding option for the preterm infants [19-21]. Sachdeva et al. reported that there are gaps in the practice of milk banking system in India which includes reduced financial support, a paucity of technicians as well as infrastructure and more important gap in demand and supply of pasteurized donor human milk. There are about 30 reported human milk banks in India, which are unable to meet the demand of donor human milk requirements in the country. Pasteurized donor human milk both standard (NeoLacta PHBM) and calorified (NeoLacta 70 Calories) is now made available in India which can be utilized in NICU for preterm infants when MOM is unavailable [22].

In the present survey, 46.7% of the nurses suggested that PHBM-70 calorie is the best suitable option for feeding preterm infants in the absence of mother's own milk. Preterm mother's milk contains higher energy which is around 70 kcal/100 ml, which is a requirement for growth and development of a preterm infant. Hence it becomes pertinent to provide donor human milk which provides 70 calories in the absence of MOM [23].

Cristofalo et al. reported in their study that there was a significant reduction in the number of days of parenteral nutrition in the HMDF group as compared to the formula-fed group which had more days in parenteral nutrition and four cases of surgical NEC

[8].

In the present survey, the majority (84.9%) of the NICU nurses have stated that HMDF - MMF as the best option for the fortification of breast milk and only a limited (15.1%) nurses have opined in favor of bovine milk-based fortifier (HMF), which signifies that 100% human milk diet with donor human milk and its derived products are preferably better compared to the bovine milk-based products for feeding preterm infants in NICU nurses opinion.

The availability of nutritional products derived exclusively from human milk like HMDF (MMF) or NeoLact 70 in sachet form has made the implementation of 100% human milk diet possible to provide the benefits of EHMD to the preterm infants in NICU and after discharge.

This study has limitations in having a limited sample size which even though has representations from across all the major cities across India but is majorly confined to private institutions. A bigger study with a larger sample size is required to get a better understanding of the NICU nurses' perspectives from both government and private institutions across India.

## **What does the study add to the existing knowledge?**

As per our knowledge, there are only a few studies which have depicted the perspectives of NICU nurses on the benefits of 100% human milk diet for preterm infants. This study provides evidence that most of the NICU nurses are aware of the need and the benefits of human milk feeding to preterm infants, though a small percentage of nurses opine that bovine milk-based formula feeds can also be used as trophic feeds or first feeds to preterm infants, which reflects that NICU nurses need to be trained about the human milk feeding on a regular basis, which would eventually increase the breastfeeding rates in India. This study also provides information that the newly available 100% human milk-derived nutritional products such as human milk-derived fortifier and 70 calorie sachets are safe and effective for feeding preterm infants and facilitates in implementing 100% human milk diet in NICU.

## **Conclusion**

Findings from this study suggest that most of the NICU nurses in India are aware of the benefits of

Human milk and 100% human milk diet in preterm infants. Most of the nurses understand the importance of trophic feeds with human milk and the benefits of nutritional products derived exclusively from human milk like HMDF (MMF) and 70 calories for preterm infants. Regular training and CME sessions need to be conducted for NICU nurses on the importance of human milk and implementing a 100% human milk diet which will enforce improved nutritional care of preterm infants.

Further research is needed to confirm and expand these findings with a larger sample size in India. Specific training programs about breastfeeding and implementing EHMD for NICU nurses would be helpful.

## Author's Contribution

**Dr. Mohit Sahni** contributed to the design of the study and methodology and preparation of the manuscript.

**Dr. Prathap Chandra** contributed to the preparation of the manuscript and data analysis.

**Dr. Deepa Mohan Sharma** contributed to the preparation of the manuscript and data analysis.

**Dr. Ranjan Kumar Pejaver** contributed to the design of the survey questionnaire and preparation of the manuscript.

**Ms. Betty Thomas** contributed to data collection and data analysis.

**Ms. Flavia Cardoza** contributed to data collection and data analysis.

**Dr. Vikram Reddy K** contributed to the design of the survey questionnaire, data analysis, and preparation of the manuscript.

## Reference

01. Dicky O, Ehlinger V, Montjoux N, Gremmo-Féger G, Sizun J, Rozé JC, et al. Policy of feeding very preterm infants with their mother's own fresh expressed milk was associated with a reduced risk of bronchopulmonary dysplasia. *Acta Paediatr.* 2017;106(5)755-762. [Crossref]

02. Poindexter B. The direct and indirect influence of own mother's milk on bronchopulmonary dysplasia and costs. *Arch Dis Child Fetal Neonatal Ed.* 2017;102(3)F192-F193. [Crossref]

03. Patel AL, Johnson TJ, Robin B, Bigger HR, Buchanan A, Christian E, et al. Influence of own mother's milk on bronchopulmonary dysplasia and costs. *Arch Dis Child Fetal Neonatal Ed.* 2017;102(3)F256-F261. [Crossref]

04. Viswanathan S, Merheb R, Wen X, Collin M, Groh-Wargo S. Standardized slow enteral feeding protocol reduces necrotizing enterocolitis in micropremies. *J Neonatal Perinatal Med.* 2017;10(2)171-180. [Crossref]

05. Cacho NT, Parker LA, Neu J. Necrotizing Enterocolitis and Human Milk Feeding- A Systematic Review. *Clin Perinatol.* 2017;44(1)49-67. [Crossref]

06. Maffei D, Schanler RJ. Human milk is the feeding strategy to prevent necrotizing enterocolitis!. *Semin Perinatol.* 2017;41(1)36-40. [Crossref]

07. Hallowell SG, Spatz DL, Hanlon AL, Rogowski JA, Lake ET. Characteristics of the NICU work environment associated with breastfeeding support. *Adv Neonatal Care.* 2014;14(4)290-300. [Crossref:Crossref]

08. Cristofalo EA, Schanler RJ, Blanco CL, Sullivan S, Trawoeger R, Kiechl-Kohlendorfer U, et al. Randomized trial of exclusive human milk versus preterm formula diets in extremely premature infants. *J Pediatr.* 2013;163(6)1592-1595. [Crossref]

09. Sullivan S, Schanler RJ, Kim JH, Patel AL, Trawöger R, Kiechl-Kohlendorfer U, et al. An exclusively human milk-based diet is associated with a lower rate of necrotizing enterocolitis than a diet of human milk and bovine milk-based products. *J Pediatr.* 2010;156(4)562-567,e1. [Crossref]

10. Committee on Nutrition, Section on Breastfeeding, Committee on Fetus and Newborn. Donor human milk for the high-risk infant- Preparation, safety, and usage options in the United States. *Pediatr.* 2017;139(1)e20163440. [Crossref]

11. Abrams SA, Schanler RJ, Lee ML, Rechtman DJ. Prolacta Study Group; Greater mortality and morbidity in extremely preterm infants fed a diet containing cow Milk protein products. *Breastfeed Med.* 2014;9(6)281-285.  
[Crossref]
12. Spatz DL, Edwards TM. The Use of Human Milk and Breastfeeding in the Neonatal Intensive Care Unit- Position Statement 3065. *Adv Neonatal Care.* 2016;16(4)254.  
[Crossref]
13. Perrine CG, Scanlon KS. Prevalence of use of human milk in US advanced care neonatal units. *Pediatrics.* 2013;131(6)1066-1071.  
[Crossref]
14. Hair AB, Hawthorne KM, Chetta KE, Abrams SA. Human milk feeding supports adequate growth in infants £1250 grams birth weight. *BMC Res Notes.* 2013;6(1)459.  
[Crossref]
15. Dunn L, Hulman S, Weiner J, Kliegman R. Beneficial effects of early hypocaloric enteral feeding on neonatal gastrointestinal function, Preliminary report of a randomized trial. *J Pediatr.* 1988;112(4)622-629.  
[Crossref]
16. Slagle Ta, Gross SJ. Effect of early low volume enteral substrate on subsequent feeding tolerance in very low birth weight infants. *J Pediatr.* 1988;113(3)526-531.  
[Crossref]
17. Tyson JE, Kennedy KA. Trophic feedings for parenterally fed infants. *Cochrane Database Syst Rev.* 2005;(3)CD000504.  
[Crossref]
18. Troche B, Harvey-Wilkes K, Engle WD, Nielsen HC, Frantz ID, Mitchell ML, et al. Early minimal feedings promote growth in critically ill premature infants. *Biol Neonate.* 1995;67(3)172-181.  
[Crossref]
19. WHO. Every Newborn- An Action Plan to End Preventable Deaths. Geneva- World Health Organization. 2014.  
Available from:  
=C3B6F4BB283F8EA1A4606F4EE228CB21?sequence=1. Accessed May 8, 2020  
[Article:[https://apps.who.int/iris/bitstream/handle/10665/127938/9789241507448\\_eng.pdf;jsessionid](https://apps.who.int/iris/bitstream/handle/10665/127938/9789241507448_eng.pdf;jsessionid)]  
[Crossref]
20. Arslanoglu S, Corpeleijn W, Moro G, Braegger C, Campoy C, Colomb V, et al. Donor human milk for preterm infants- Current evidence and research directions. *J Pediatr Gastroenterol Nutr.* 2013;57(4)535-542.  
[Crossref]
21. Sachdeva RC, Mondkar J, Shanbhag S, Sinha MM, Khan A, Dasgupta R. Landscape Analysis of Human Milk Banks in India. *Indian Pediatr.* 2019;56(8)663-668.  
[Crossref]
22. Gidrewicz DA, Fenton TR. A systematic review and meta-analysis of the nutrient content of preterm and term breast milk. *BMC Pediatr.* 2014;14;216.  
[Crossref]
23. Berseth CL. Effect of early feeding on maturation of the preterm infants' small intestine. *J Pediatr.* 1992;120(6)947-953.  
[Crossref]