



Topic Expert Group: Nutrition

Establishment of enteral feeding in preterm infants

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Target group

Preterm infants and parents

User group

Healthcare professionals, neonatal units, hospitals, and health services

Statement of standard

Early enteral feeding is established, based on a standard protocol, preferably with mother's own breast milk.

Rationale

The goal is to provide an appropriate nutrient supply, support gut adaptation and health, and reduce the risk of growth faltering.

Early enteral feeds are an important component to establishing good nutrition, particularly with mother's own breast milk (MOM). (see TEG Nutrition) However, there are too few data from high-quality trials to determine the exact day on which this should be started. (1–3) In high-risk groups there is no advantage to delaying the first feed to day six, compared to day two. (4,5) Most neonatal units start oral or enteral feeds in an otherwise stable infant before 48-72 hours. Many start feeds with MOM in the first 24 hours, sometimes with small amounts of maternal colostrum or MOM placed inside the cheek ('buccal colostrum'), whilst lactation is established. If MOM is not available, it is not clear whether the type of milk available, e.g. donor or formula, impacts on the optimal timing of first feed.

In infants <32 weeks of gestation, there was no difference in the incidence of sepsis or risk of necrotising enterocolitis between infants randomised to 30 mls/kg/day compared to 18 mls/kg/day at the point that clinicians were happy to start increasing feeds. (6) Faster increases are associated with shorter duration of parenteral nutrition, with its associated risks. (7) Data on whether it is better overall to use bolus or continuous feeds are currently uncertain, but units should adopt a consistent approach.

Benefits

Short-term benefits

- Reduced duration of parenteral nutrition and associated complications (6) and costs (consensus)
- Reduced risk of serious morbidities such as sepsis, or necrotising enterocolitis with human milk (8)
- Improved nutritional status (including growth) at discharge (consensus)

Long-term benefits

- Improved neurodevelopmental and other health outcomes (7,9)



Components of the standard

Component	Grading of evidence	Indicator of meeting the standard
For parents and family		
1. Parents are informed by healthcare professionals about the importance of early enteral feeding and they are encouraged to provide breast milk. (see TEG Nutrition, see TEG Care procedures)	A (Low quality) B (High quality)	Patient information sheet ¹
For healthcare professionals		
2. A unit guideline on infant nutrition, including early enteral feeding, preferably with mother's own milk (MOM) is adhered to by all healthcare professionals. (see TEG Nutrition)	A (Low quality) B (High quality)	Guideline
3. Training on infant nutrition, including early enteral feeding, preferably with MOM, is attended by all responsible healthcare professionals.	B (High quality)	Training documentation
For neonatal unit		
4. A unit guideline on infant nutrition, including early enteral feeding, preferably with MOM, is available and regularly updated.	B (High quality)	Guideline
5. Adherence to the unit guideline is monitored.	A (Low quality)	Audit report
For hospital		
6. Training on infant nutrition, including early enteral feeding, preferably with MOM, is ensured.	B (High quality)	Training documentation
For health service		
7. A national guideline on infant nutrition, including early enteral feeding, preferably with MOM, is available and	B (High quality)	Guideline

¹ The TEG Nutrition very much supports the need of good communication with families and regular sharing of key information, but it is not in favour of sharing information on each standard by a „parent information sheet“, which is term chosen by the Chair Committee. In our view, sharing multiple parent information sheets bears the risk of overloading families with a plethora of written information during a stressful time period, which may not be very helpful. We suggest to consider other means of sharing information.



regularly updated.

Where to go – further development of care

Further development	Grading of evidence
For parents and family N/A	
For healthcare professionals N/A	
For neonatal unit N/A	
For hospital N/A	
For health service	
<ul style="list-style-type: none">Support research to investigate the optimum starting day and rate of advancement of feeds.	A (Low quality)

Getting started

Initial steps
For parents and family
<ul style="list-style-type: none">Parents are verbally informed by healthcare professionals about the importance of enteral feeding and breast milk.
For healthcare professionals
<ul style="list-style-type: none">Attend training on infant nutrition, including the importance of early enteral feeding, preferably with mother's own milk (MOM).
For neonatal unit
<ul style="list-style-type: none">Develop and implement a unit guideline on infant nutrition, including early enteral feeding, preferably with MOM.Develop information material for parents on early enteral feeding, preferably with MOM.Develop a nutrition support team.
For hospital
<ul style="list-style-type: none">Support healthcare professionals to participate in training on infant nutrition, including early enteral feeding, preferably with MOM.
For health service
<ul style="list-style-type: none">Develop and implement a national guideline on infant nutrition, including early enteral feeding, preferably with MOM.

Source

1. Morgan J, Young L, McGuire W. Delayed introduction of progressive enteral feeds to prevent necrotising enterocolitis in very low birth weight infants. Cochrane Database Syst Rev. 2014;(12):CD001970.



2. Morgan J, Young L, McGuire W. Slow advancement of enteral feed volumes to prevent necrotising enterocolitis in very low birth weight infants. *Cochrane Database Syst Rev*. 2015 Oct 15;(10):CD001241.
3. Morgan J, Bombell S, McGuire W. Early trophic feeding versus enteral fasting for very preterm or very low birth weight infants. *Cochrane Database Syst Rev*. 2013 Mar 28;(3):CD000504.
4. Leaf A, Dorling J, Kempley S, McCormick K, Mannix P, Linsell L, et al. Early or delayed enteral feeding for preterm growth-restricted infants: a randomized trial. *Pediatrics*. 2012;129(5):e1260-8.
5. Senterre T. Practice of enteral nutrition in very low birth weight and extremely low birth weight infants. *World Rev Nutr Diet*. 2014;110:201–14.
6. SIFT Investigators Group. Early enteral feeding strategies for very preterm infants: current evidence from Cochrane reviews. *Arch Dis Child Fetal Neonatal Ed*. 2013 Nov;98(6):F470-472.
7. Stephens BE, Walden RV, Gargus RA, Tucker R, McKinley L, Mance M, et al. First-week protein and energy intakes are associated with 18-month developmental outcomes in extremely low birth weight infants. *Pediatrics*. 2009 May;123(5):1337–43.
8. Bhatia J. Human milk and the premature infant. *Ann Nutr Metab*. 2013;62 Suppl 3:8–14.
9. Cester EA, Bloomfield FH, Taylor J, Smith S, Cormack BE. Do recommended protein intakes improve neurodevelopment in extremely preterm babies? *Arch Dis Child Fetal Neonatal Ed*. 2015 May;100(3):F243-247.

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