Topic 2 — Enteral Nutrition

AA 17. When to start enteral feeding after birth, recommended type (breastmilk, formula etc), route, method, starting feed volume and frequency of enteral feeding

Source recommendation			Back to question list
Source guideline title and developer	ESPGHAN 2022 Enteral Nutrition in Preterm Infants: ESPGHAN/ESPEN/ESPR/CSPEN Guidelines 2022, Koletzko et al. https://onlinelibrary.wiley.com/doi/10.1097/MPG.0000000000003642		
Existing guidelines recommendation	Initiate minimal enteral feeding (trophic feeding) within the first 24 hours of life in stable preterm infants. Use mother's own milk where possible, followed by donor breastmilk, and preterm formula if no breastmilk is available. Use gastric route and intermittent bolus feeding. Start with 10–20 mL/kg/day and increase daily by 15–25 mL/kg/day depending on tolerance.		
Year published	2022		
Search updated/assessment of new evidence	August 2025. No new evidence was identified.		
Strength and direction of recommendation	Strong recommendation for early initiation of breastmilk feeds using gastric bolus method.		
GRADE certainty of evidence	Moderate		
Were EtD and SoF available?	Yes https://cdn-links.lww.com/permalink/mpg/c/mpg_1_1_2022_11_28_embleton_228_sdc1.pdf		
Is the recommendation recent and credible	Yes AGREE II score: 67%		
Assessment of suitability for adolopment			
Is the recommendation relevant to local setting (population/ intervention/comparator)?	Yes – aligns with national priorities for preterm infant nutrition and promotion of breastmilk use.		
Are the judgements in the source EtD acceptable without modification?	Generally, yes but the speed of feed advancement is slower than is current practice in Aotearoa New Zealand units.		
Are any local contextual factors different (e.g. cost, equity, feasibility)?	Yes – access to donor milk and lactation support services varies between regions. Some units may face staffing or training limitations that could impact implementation.		
EtD Criterion	**Summary of local evidence or context**	**Judgement**	**Notes**
Problem	Delayed enteral feeding remains a challenge in some neonatal units due to variability in protocols and clinical caution.	Yes	
Desirable effects	Aotearoa New Zealand neonatal units increasingly support early feeding with mother's milk and donor milk availability is expanding but variable in access.	Favourable	Early feeding reduces reliance on parenteral nutrition.
Undesirable effects	Some clinicians remain concerned about feeding intolerance and necrotising enterocolitis, particularly in extremely preterm or growth-restricted infants.	Manageable	Careful advancement mitigates risks.

Certainty of evidence	Evidence from local audits aligns with international trials; early feeding is safe when breastmilk is used and volume advancement is standardised.	Moderate	
Values and preferences	Families strongly value early use of expressed breastmilk. Clinical teams are motivated by reduced infection risk and shorter hospital stays.	Possibly some variation	
Balance of effects	Neonatal teams generally agree that benefits outweigh risks when standardised protocols are followed.	Favourable	
Resources required	Lactation consultant services and access to donor milk varies regionally.	Small	
Certainty of resource evidence	Moderate certainty	Moderate	
Cost-effectiveness	No available studies. Reductions in central line days, infections and parenteral nutrition duration with earlier full enteral feeding offer cost savings.	Favourable	
Equity	Māori and Pacific infants may have reduced access to lactation support and donor milk.	Concern	Regional variation in resource access.
Acceptability	Use of breastmilk and early feeding is highly acceptable to parents when communicated well and with cultural values at the center of the conversation.	High	
Feasibility	Implementation is feasible in tertiary centres. Regional units require support with protocols, training and donor milk access.	High	

Judgement criteria for EtD	
Decision Type	☐ Adopted as is ☑ Adapted ☐ De novo recommendation required
Explanation of adaptation	Speed of feed advancement adapted to match recent evidence and our own systematic review (see link XXX). Wording changed to remove reference to “stable” infants and “trophic /minimal” enteral feeding.
Final Recommendation	
Recommendation statement (adapted)	Initiate enteral feeding within the first 24 hours after birth. Use mother's own milk where possible, followed by donor breastmilk and preterm formula if no breastmilk is available. Use gastric route and intermittent bolus feeding. Start with 10–20 mL/kg/day and increase by 24 to 30 mL/kg/day depending on tolerance.
Strength	Conditional
Certainty of evidence	Moderate
Basis for decision	Based on widely adopted international guidance with modifications for current clinical practice in Aotearoa New Zealand.
Subgroup Considerations	Extremely preterm infants may require lower initial rates and more gradual escalation due to an immature gastrointestinal tract
Implementation Considerations	Protocols for standardised initiation and feed advancement are needed.
Monitoring and Evaluation	Monitor compliance with feeding protocols and time to full enteral feeds.
Research Priorities	High-quality trials comparing different feed initiation strategies in the first 48 hours after birth in preterm infants.