Guideline for advancing enteral feeds in a newborn with a small bowel stoma[1]

Initiate feeds with the agreement of surgical team if stoma is functioning *and* there are no contraindications to enteral feeding[2]

Day 1: Start EBM at ~10 to 20 ml/kg/day

Tolerating enteral feeds?

No

- **Vomiting or aspirates** - refer to Withholding Feeds guideline, Newborn Service website
- **Abdominal distension** **causing clinical concern** - review clinically (do not adjust enteral feeds until review)
- **Blood in stool -** hold enteral feeds until NEC assessment is complete

Yes

Are all of the following present?
- Stoma output <40 ml/kg/day[3]
- Urine output >1 ml/kg/hour and no signs or symptoms of dehydration
- Stable electrolyte and acid base balance

Advance by 10-20 ml/kg/day every 24 hours
- Wean IVN based on fluid volume and weight gain
- Monitor tolerance after each advance until full enteral feeds are reached

Are all of the following present?
- Stoma output 40 to 70 ml /kg/day
- Urine output >1 ml/kg/hour and no signs or symptoms of dehydration
- Stable electrolyte and acid base balance

Continue current rate of feeds

Reassess the next day for possible feed advancement

Is either one of the following present?
- Stoma output >70 ml /kg/day
- Urine output <1 ml/kg/hour and signs of dehydration

Reduce rate or withhold feeds

Reassess the next day for possible feed advancement

If not making consistent progress with advancing enteral feed volumes:
- Consider changing to continuous feeds and /or from EBM to extensively hydrolysed (Pepti Junior) or elemental formula (Elecare or Neocate) depending on stoma location.
- Check reducing substances and if greater than ++ consider changing to a lactose free formula

N.B. Intravenous fluid replacements: When stoma losses reach >40 ml/kg/day commence replacement of losses above 40 ml/kg/day ml for ml with 10 mmol KCL in 500 ml 0.9% NaCl.

1. *Stoma output* is the combined output from all stomas + stool
2. This guideline may be too conservative for more mature babies who have a defunctioning stoma for structural anomalies like anorectal malformation
3. Contraindications to enteral feeding: Ileus, grossly bloody stools or ostomy output, or radiologic changes suggesting intestinal ischaemia; shock/poor perfusion due to cardiac or respiratory insufficiency; bilious and/or persistent vomiting (>3 episodes in 12 hours); clinical suspicion of obstruction or ileus (severe distension, decreased ostomy output and/or radiologic changes suggesting obstruction or ileus).
4. If feeds are withheld for <24 hours, they can be restarted at 75% of previous rate.
5. Monitor urinary sodium weekly. Infants with an ileostomy will require addtional sodium

Adapted from: Brenn M, Gura K, Duggan C. Intestinal failure. In: Manual of Pediatric Nutrition, 5th ed, Sonneville K, Duggan C (Eds), People's Medical Publishing House, Shelton, CT 2013.Graphic 108756 Version 1.0 and Shores DR, Bullard JE, Aucott SW, et al. Implementation of feeding guidelines in infants at risk of intestinal failure. J Perinatol 2015;35:941-8. by Barbara Cormack, Neonatal Dietitian, Starship Child Health, February 2018

Enteral Nutrition Feeding Plan

Feeds can be increased if stoma output is <40 ml/kg/day

Feed type	
Rate	Bolus _____ml q _____hrly Continuous _____ml x 24 hours
Current weight	
Feed increases *Increase feed volume by 1 ml per feed* *BUT only if aspirates are low (as per unit protocol)* *AND stoma output is less than* *40 ml/Kg in previous 24 hours* ⇨	Increase feed if total ostomy output is less than: **ml** per 12 hours
Stoma loss replacement *(tick one)* ☐ *Replace stoma losses in excess of 40 ml/kg in previous 24 hours = 10 ml/kg in previous 6 hours* ⇨ ☐ *Replace ALL stoma output if stoma losses exceed 40 ml/kg*	Replace if stoma output is greater than: **ml** per 6 hours
Monitor	Weight on alternate days Serum sodium Serum potassium
Consider	Urinary sodium (if growth is slow) *(should be >20 mmol/L)* Serum zinc (if output is frequently >40 ml/kg/day)

Feed increases of less than 20 ml/kg/d	
Weight	**Increase feeds by 1 ml per feed every**
500 to 1250 g	q24 hr
1251 to 2000 g	q12 hr
2001 to 2500 g	q8 hr
>2500 g	q6 hr