

**<1500 g Admission Phase (DOL 0 and Feeding Day 1)**

- IVF: Start 1<sup>st</sup> Day TPN and IL (1 g/kg) on admission
- TF goal:
  - < 750g: 100 ml/kg/day
  - 750-999g: 90 ml/kg/day
  - 1000-1499g: 80 ml/kg/day
- Access: Central line recommended for < 1250 g
- Feeds: Order “EBM if available” on admission; goal to start by 6-12 hours of life if stable; feeding volume based on chart on back
- DBM: Get consent if < 1500 OR <34 wks gestation
- Labs: BMP at 24 hours



**<1500 g Early Advancement (DOL 1-3 & Fdg Day 2-3)**

- Order routine TPN/IL
  - Protein: begin at 2.5g/kg (peripheral) or 3g/kg (central); advance by 1 g/kg Q day to goal of 4g/kg
  - Dextrose: minimum 7 g/kg/day; advance by 3 g/kg/day daily to goal of 18 g/kg/day. Max 20 g/kg/day
  - Cysteine: hold if base excess more than -6
  - No Na & K in TPN for 1<sup>st</sup> 24 hours; remember to count Na in line fluid
  - Ca/Phos: Start Ca at 2 (advance by 0.5 q 1-2 days to goal 3); start phos at 1.2 (will need either Na or K to give; advance by 0.2 Q 1-2 days to goal 2); goal Ca:Phos ratio is 1.7:1
  - Mg: consider holding if mom on mg PTD
  - Ace: Cl ratio: based on labs; 1:1 if no labs
  - IL: increase by 1 g/kg daily to goal of 3g/kg
- TF goal: **Increase by 10 ml/kg/day** unless lab and/or clinical data indicate otherwise
- Access: ck UVC placement Q 2-3 days; consider PICC
- Feeding: Advancement per chart on reverse
- Labs: Lytes at least twice in first week if < 1500
  - OK to skip BUN/Cr if no renal concerns; only check trig if on max IL > 1 week
  - Check Mg on DOL 3 if held due to mat. mg

**≥ 1500 g Admission Phase (DOL 0 and Feeding Day 1)**

- IVF: Clear IVF (with Ca if cardiac or IDM)
- TF goal:
  - 1500-1799g: 80 ml/kg/day
  - 1800-2500g: 70 ml/kg/day
  - >2500g: 60 ml/kg/day
- Access: PIV if stable; central line if indicated
- Feeds: Order “EBM if available” on admission; goal to start by 6-12 hours of life if stable; feeding volume based on chart on back
- EBM preferred; SSC if preterm; Sim advanced if term
- Labs: BMP at 24 hours



**≥ 1500 g Early Advancement (DOL 1-3; Fdg Day 2-3)**

- Order routine TPN/IL if NPO > 3 days
  - Protein: begin at 2.5g/kg (peripheral) or 3g/kg (central); advance by 1 g/kg Q day to goal of 4g/kg if preterm or 3.5 g/kg if term
  - Dextrose: minimum 7 g/kg/day; advance by 3 g/kg/day daily to goal of 18 g/kg/day. Max 20 g/kg/day
  - Cysteine: hold if base excess more than -6
  - No Na & K in TPN for 1<sup>st</sup> 24 hours; remember to count Na in line fluid
  - Ca/Phos: Start Ca at 2 (advance by 0.5 q 1-2 days to goal 3 if preterm or 2.5 if term); start phos at 1.2 (will need either Na or K to give; advance by 0.2 Q 1-2 days to goal 2); goal Ca:Phos ratio is 1.7:1
  - Mg: consider holding if mom on mg PTD
  - Ace: Cl ratio: based on labs; 1:1 if no labs
  - IL: start at 2 g/kg; increase by 1 g/kg daily to goal of 3g/kg
- TF goal: **Increase by 20 ml/kg/day** unless lab and/or clinical data indicate otherwise
- Access: ck UVC placement Q 2-3 days if present; consider PICC if NPO for extended period
- Feeding: Advancement per chart on reverse
- Labs: Lytes as clinically indicated; check mg on DOL 3 if held due to mat. mg

Weaning TPN as Enteral Feeds Advance

| Feeds                       | 0-20 | 20-40 | 40-60 | 60-80 | 80-100 | OFF! |
|-----------------------------|------|-------|-------|-------|--------|------|
| Max TPN protein             | 4    | 4     | 3.5   | 3     | 2      |      |
| Max TPN dextrose            | 18   | 15    | 13    | 10    | 8      |      |
| Max intralipids             | 3    | 3     | 2.5   | 2     | 1      |      |
| Ca in Preterms (mEq/kg)#    | 3    | 3     | 3     | 2.5   | 1.8    |      |
| Phos in Preterms (mmol/kg)# | 1.2  | 1.2   | 1.2   | 1     | 0.7    |      |
| Ca in Terms (mEq/kg)#       | 2.5  | 2.5   | 2.5   | 2     | 1.5    |      |
| Phos in Terms (mmol/kg)#    | 1.2  | 1.2   | 1.2   | 0.8   | 0.6    |      |

**<1500 g Cont. Advancement (Fdg Day 4 – Full Fdg)**

- Continue TPN/IL until reach 100 ml/kg/day; then clears
  - Protein/Dextrose/Ca/Phos/IL: wean per chart
- Access: Check UVC Q 2-3 days; Check PICC placement Q 14 days; remove when feeds reach 120 cc/kg/day
- Feeding/Fortification/Vit D/Fe
  - Feeding advancement per chart below
  - **Fortify** to 22 cal/oz when feeds reach 60 ml/kg/d then 24 cal/oz the next day
  - **Add LP** next day after reaching 24 cal/oz (use goal feeding volume when using chart below)
  - TF goal 150-160 ml/kg/d for 120-130 kcal/kg/d
  - Aiming for growth velocity of 20-25 g/kg/d
  - **Start Vit D** when feeds reach 80 ml/kg/d; if Alk Phos > 500 then increase to 800 units
  - Start Fe when on full enteral feeds and 14 days old per chart below
  - Transition off DBM at 34 weeks
- Labs:
  - If prolonged TPN > 1 month, follow CMP, Dbili, mag, phos, TG weekly
  - Check lytes after 1-2 days on full BM feeds
  - Check bone labs at DOL 30 if < 1500 g. If normal, do not repeat.

**≥ 1500 g Cont. Advancement (Fdg Day 4 – Full Fdg)**

- Continue TPN/IL until reach 100 ml/kg/day; then clears
  - Protein/Dextrose/Ca/Phos/IL: wean per chart
- Access: Check UVC Q 2-3 days; Check PICC placement Q 14 days; remove when feeds reach 120 cc/kg/day
- Feeding/Fortification/Vit D/Fe
  - Feeding advancement per chart below
  - **Fortify** to 22 cal/oz when feeds reach 60 ml/kg/d then 24 cal/oz the next day if preterm
  - **Add LP** next day after reaching 24 cal/oz (use goal feeding volume when using chart below) if <1800g
  - TF goal 150-160 ml/kg/d for 120-130 kcal/kg/d for preterms; caloric goal 110 kcal/kg for terms
  - Aiming for growth velocity of 20-25 g/kg/d
  - **Start Vit D** when feeds reach 80 ml/kg/d
  - Start Fe when on full enteral feeds and 14 days old per chart below
- Labs:
  - If prolonged TPN > 1 month, follow CMP, Dbili, mag, phos, TG weekly
  - 30 Day bone labs NOT needed

**Feeding Initiation and Advancement**

FYI: Round up to whole numbers when ordering feeds

| Birth Weight | Initiation           | Advancement                        |                                                                                                                                                |
|--------------|----------------------|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| <1000g       | 20 ml/kg/day         | 10mL/kg/day<br>Q 12 hours          | <b>Fortify to 22 cal/oz</b> the day feeds advance to <b>60 ml/kg/day</b> ; fortify to 24 cal/oz the next day; add liquid protein the next day. |
| 1000-1800 g  | 30mL/kg/day          | 15 mL/kg/day<br>Q 12 hours         |                                                                                                                                                |
| > 1800g      | At least 40mL/kg/day | At least 20mL/kg/day<br>Q 12 hours |                                                                                                                                                |

**Addition of LP to Feeds (use goal feeding volume when determining LP – even prior to reaching goal)**

| GOAL feeding volume | HMF HP*    |            | STANDARD HMF |            |            |            |           |
|---------------------|------------|------------|--------------|------------|------------|------------|-----------|
|                     | 22 kcal/oz | 24 kcal/oz | 22 kcal/oz   | 24 kcal/oz | 26 kcal/oz | 28 kcal/oz | 30 cal/oz |
| 120mL/kg/day        | 4.5 ml     | 3 ml       | 5 ml         | 4 ml       | 3 ml       | 3 ml       | 2.5 ml    |
| 130mL/kg/day        | 4 ml       | 2.5 ml     | 5 ml         | 3.5 ml     | 2.5 ml     | 2 ml       | 2 ml      |
| 140mL/kg/day        | 4 ml       | 2 ml       | 5 ml         | 3 ml       | 2 ml       | 2 ml       | 1.5 ml    |
| 150mL/kg/day        | 3.5 ml     | 1.5 ml     | 4.5 ml       | 3 ml       | 1 ml       | 1 ml       | 1 ml      |
| 160mL/kg/day        | 3 ml       | 1 ml       | 4 ml         | 2.5 ml     | 1 ml       | 1 ml       | 0.5 ml    |

\* Use HMF HP for babies with weight <2.5kg and ≤24kcal/oz; use standard HMF if weight >2.5kg or >24 kcal/oz

**Fe Supplementation**

|                        | ≤ 1800 g        | > 1800 g      |
|------------------------|-----------------|---------------|
| Majority BM feeds      | 4-5 mg/kg/day   | 2-3 mg/kg/day |
| Majority formula feeds | 2-2.5 mg/kg/day |               |