**QUICK REFERENCE GUIDE:**

Parenteral Nutrition for infants <32 w Gestation or if enteral feeding is likely to be delayed

### <27 w GA

**Starter Pack (≤ 80 mL/kg/d):**
- 5% glucose
- 2.5 g amino acids/100 mL bag

### ≥27 w GA

**Starter Pack (≤ 80 mL/kg/d):**
- 8% glucose
- 2.5 g amino acids/100 mL bag

### PN volume ≤140 mL/kg/d:

**Glucose:** usually 4% to 12% (maintain blood glucose at 4-8 mmol/L)
**Amino Acids:** 2.5 g/100 mL bag (target 3.5-4.2 g protein/kg/d)
**Lipid with vitamins (17%):** 12 mL/kg/d (target 2 g lipid/kg/d)

### PN volume ≤140 mL/kg/d:

**Glucose:** usually 4% to 12% (maintain blood glucose at 4-8 mmol/L)
**Amino Acids:** 3 g/100 mL bag (target 3.5-4.2 g protein/kg/d)
**Lipid with vitamins (17%):** 18-20 mL/kg/d (target 3-3.4 g lipid/kg/d)

### Standard additions to Glucose and AA PN

**Electrolytes:**
- Sodium: 4.0 mmol/100 mL
- Potassium: 1.0 mmol/100 mL
- Calcium: 0.75 mmol/100 mL
- Magnesium: 0.25 mmol/100 mL
- Phosphate: 0.75 mmol/100 mL
- Chloride: 3.25 mmol/100 mL
- Acetate: 3.0 mmol/100 mL

**Heparin:** 0.5 units/mL
**Trace elements:** 1.0 mL/kg

### Standard addition to Lipid Syringe

*KEMH NCCU:* Both fat (Solvit) and water (Vitalipid) soluble vitamins are added to the syringes of lipid emulsion resulting in a 17% lipid emulsion. Therefore, 6 mL of lipid emulsion containing vitamins provides 1 g lipid; and 20 mL/kg/d of fat emulsion containing vitamins delivers 3.4 g Lipid/kg/d – the optimum dose of daily vitamins.

**Monitoring PN** in preterm infants at KEMH includes:
- Na, K, Cl, HCO₂ and glucose daily in the first week, alternate days thereafter
- Ca and P twice a week until stable;
- Urea daily to twice weekly;
- Plasma TG aiming at 150-250mg/dl (2.8mmol/l) optional and when lipaemic serum noted;
- Liver function tests fortnightly;
- Bone bloods monthly (AlkPhos, Ca, P);
- Weight daily or alternate days; and head circumference weekly. Length at admission and discharge.
- If CVL, twice weekly CRP for catheter-related sepsis.


48 hour bags of PN will be supplied unless otherwise ordered. All daily orders should be sent to pharmacy by 1130 hours.

Alterations to the standard formulae are discouraged, but may be made for unstable infants (e.g. 1 g amino acids per 100 mL/bag).

Orders should specify concentration of glucose, amino acids and the hourly infusion rate required.

A pre-prepared solution of 2.5 g amino acids/100 mL bag & 8% glucose with standard electrolytes may be offered when workload is high.