

Neonatal Parenteral Nutrition Overview

Preterm gestation <28/40 & weight <750g		
Day 1	<u>10% Sodium Free Bag (2.27g)</u>	Aqueous 78ml/kg/day *max rate on day one* Lipid 12ml/kg/day (0.5ml/kg/hour) Total 90ml/kg/day
Day 2	<u>10% Sodium Free Bag (2.27g)</u>	Aqueous 108ml/kg/day Lipid 12ml/kg/day (0.5ml/kg/hour) Total 120ml/kg/day
Day 3	12.5% Standard Bag (2.88g)	Aqueous 125ml/kg/day *max rate* Lipid 18ml/kg/day (0.75ml/kg/hour) Total 143ml/kg/day
Day 4	12.5% Standard Bag (2.88g)	Aqueous 125ml/kg/day max rate Lipid 20ml/kg/day (0.83ml/kg/hour) Total 145ml/kg/day
Preterm gestation <28/40 & weight 750-1500g		
Day 1	<u>10% Sodium Free Bag (2.27g)</u>	Aqueous 63ml/kg/day *max rate on day one* Lipid 12ml/kg/day (0.5ml/kg/hour) Total 75ml/kg/day
Day 2	<u>10% Sodium Free Bag (2.27g)</u>	Aqueous 88ml/kg/day Lipid 12ml/kg/day (0.5ml/kg/hour) Total 100ml/kg/day
Day 3	12.5% Standard Bag (2.88g)	Aqueous 107ml/kg/day Lipid 18ml/kg/day (0.75ml/kg/hour) Total 125ml/kg/day
Day 4	12.5% Standard Bag (2.88g)	Aqueous 125ml/kg/day *max rate* Lipid 20ml/kg/day (0.83ml/kg/hour) Total 145ml/kg/day
Preterm gestation ≥28/40 & weight 750 – 1500g		
Day 1	12.5% Standard Bag (2.88g)	Aqueous 63ml/kg/day *max rate on day one* Lipid 12ml/kg/day (0.5ml/kg/hour) Total 75ml/kg/day
Day 2	12.5% Standard Bag (2.88g)	Aqueous 88ml/kg/day Lipid 12ml/kg/day (0.5ml/kg/hour) Total 100ml/kg/day
Day 3	12.5% Standard Bag (2.88g)	Aqueous 107ml/kg/day Lipid 18ml/kg/day (0.75ml/kg/hour) Total 125ml/kg/day
Day 4	12.5% Standard Bag (2.88g)	Aqueous 125ml/kg/day *max rate* Lipid 20ml/kg/day (0.83ml/kg/hour) Total 145ml/kg/day
Preterm gestation ≥28/40 & weight > 1500g		
Day 1	12.5% Standard Bag (2.88g)	Aqueous 48ml/kg/day *max rate on day one* Lipid 12ml/kg/day (0.5ml/kg/hour) Total 60ml/kg/day
Day 2	12.5% Standard Bag (2.88g)	Aqueous 68ml/kg/day Lipid 12ml/kg/day (0.5ml/kg/hour) Total 80ml/kg/day
Day 3	12.5% Standard Bag (2.88g)	Aqueous 82ml/kg/day Lipid 18ml/kg/day 0.75ml/kg/hour) Total 100ml/kg/day
Day 4	12.5% Standard Bag (2.88g)	Aqueous 100ml/kg/day Lipid 20ml/kg/day (0.83ml/kg/hour) Total 120ml/kg/day
Day 5	12.5% Standard Bag (2.88g)	Aqueous 125ml/kg/day *max rate* Lipid 20ml/kg/day (0.83ml/kg/hour) Total 145ml/kg/day

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Term ≥37/40 gestation		
Day 1	12.5% Standard Bag (2.88g)	Aqueous 48ml/kg/day *max rate on day one* Lipid 12ml/kg/day (0.5ml/kg/hour) Total 60ml/kg/day
Day 2	12.5% Standard Bag (2.88g)	Aqueous 68ml/kg/day Lipid 12ml/kg/day (0.5ml/kg/hour) Total 80ml/kg/day
Day 3	12.5% Standard Bag (2.88g)	Aqueous 80ml/kg/day *max rate* Lipid 18ml/kg/day (0.75ml/kg/hour) Total 98ml/kg/day
Day 4	12.5% Standard Bag (2.88g)	Aqueous 80ml/kg/day *max rate* Lipid 20ml/kg/day (0.83ml/kg/hour) Total 100ml/kg/day
If indicated the 10% Sodium Free (2.27g) can be used in term babies at maximum aqueous rate of 110ml/kg/day.		

If indicated the 16% Central bag (3.1g) can be used at these max rates		
Preterm	16% Central Bag (3.1g)	Aqueous 100ml/kg/day *max rate* Lipid 20ml/kg/day (0.83ml/kg/hour) Total 120ml/kg/day
Term	16% Central Bag (3.1g)	Aqueous 80ml/kg/day *max rate* Lipid 20ml/kg/day (0.83ml/kg/hour) Total 100ml/kg/day

Weaning SMOF lipid solution	
When enteral nutrition volume is:	Reduce SMOF lipid solution to:
30ml/kg	18ml/kg/day (0.75ml/kg/hr)
60ml/kg	12ml/kg/day (0.5ml/kg/hr)
90ml/kg	6ml/kg/day (0.25ml/kg/hr)

Important notes:

- Triglyceride's should be checked after 72 hours of starting lipids and then again 48 hours after starting 3.5g fat/kg/day (0.83ml/kg/hour SMOF lipid) for preterm infants or 3g fat/kg/day (0.75ml/kg/hour SMOF lipid) which is maximum for term infants. Once stable triglycerides should be checked weekly.
- Potassium additions can not exceed 4mmol/100ml peripherally.
- There are now two emergency out of hours PN bags available for use out of hours - 10% Sodium Free bag will be the emergency bag for babies < 28 weeks and the 12.5% Standard bag will also be available if needed. Extra care will be needed when removing the correct PN from the NNU fridge.
- Emergency aqueous out of hours bags can be continued for 48 hours if the correct giving set (containing the 0.2µ filter) is used, if there is adequate volume and if there is no clinical reason to make a change.