

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 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
Preterm gestation <28/40 & weight 750-1500g		
Day 1	<u>10% Sodium Free Bag (2.27g)</u>	Aqueous 63ml/kg/day 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 Lipid 18ml/kg/day (0.75ml/kg/hour) Total 143ml/kg/day
Preterm gestation >28/40 & weight 750 – 1500g		
Day 1	12.5% Standard Bag (2.88g)	Aqueous 63ml/kg/day 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 Lipid 18ml/kg/day (0.75ml/kg/hour) Total 143ml/kg/day
Preterm gestation >28/40 & weight > 1500g		
Day 1	12.5% Standard Bag (2.88g)	Aqueous 48ml/kg/day 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 18ml/kg/day (0.75ml/kg/hour) Total 118ml/kg/day
Day 5	12.5% Standard Bag (2.88g)	Aqueous 125ml/kg/day (max rate) Lipid 18ml/kg/day (0.75ml/kg/hour) Total 143ml/kg/day

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Term gestation		
Day 1	12.5% Standard Bag (2.88g)	Aqueous 48ml/kg/day 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 80ml/kg/day (max rate) Lipid 18ml/kg/day (0.75ml/kg/hour) Total 98ml/kg/day
If indicated the 10% Sodium Free (2.16g) 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 Lipid 18ml/kg/day (0.75ml/kg/hour) Total 118ml/kg/day
Term	16% Central Bag (3.1g)	Aqueous 80ml/kg/day Lipid 18ml/kg/day (0.75ml/kg/hour) Total 98ml/kg/day

Weaning Lipids is based on aqueous volume as follows:

Weaning SMOF lipid solution	
When aqueous parenteral nutrition volume is:	SMOF lipid solution should be:
≥90ml/kg	18ml/kg/day (0.75ml/kg/hr)
≥60ml/kg	12ml/kg/day (0.5ml/kg/hr)
≥30ml/kg	6ml/kg/day (0.25ml/kg/hr)
<30ml/kg	Stop lipid

Adjusting Lipids based on triglyceride levels:

Triglyceride Level (mmol/l)	Action
<3	Continue current prescription
>3 – 4	Reduce lipid by 0.25ml/kg/hour (e.g. if on 0.75ml/kg/hour, reduce to 0.5ml/kg/hour). Recheck triglyceride in 24 hours.
>4	Hold lipid for 24 hours and repeat triglyceride level. Once triglyceride level <2.7mmol/l, restart lipids at 0.25ml/kg/hour and gradually increase by increments of 0.25ml/kg/hour. Repeat triglyceride level to ensure lipids are well tolerated.