

Neonatal Enteral Nutritional Supplements

Individual supplements

Drug	Calcium (Calvive) 1000mg effervescent tablets
Route	Oral, NG
Dosage	0.25mmol/kg 6 hourly Refer to calcium gluconate monograph for parenteral use.
Uses	Hypocalcaemia at serum calcium <1.6mmol/L. Some hypocalcaemia in the first 2 weeks of life is physiological. If it persists, investigate cause
Administration	Prescribe at separate times at least 2 hours apart from oral phosphate supplements.
Adverse and side effects	Mild GI intolerance and diarrhoea by oral route.
Comments	Dissolve 1 tablet in 45mL of water for injection (this will take a few minutes) to give 50mL of a 0.5mmol/mL solution (after displacement). Monitor serum calcium daily initially then alternate days and then weekly. Each table contains 2263mg of calcium lactate gluconate and 1750mg of calcium carbonate (equivalent to 1000mg or 25mmol of calcium).
Drug	Phosphate solution 1mmol/ml
Route	Oral, NG
Dosage	0.5mmol/kg 12 hourly prescribed as Phosphate Solution Refer to phosphate monograph for parenteral use. Use oral route whenever possible.
Uses	<ul style="list-style-type: none"> • Serum phosphate <1mmol/L. • Predominantly breast fed babies with serum phosphate <1mmol/L or AP>1000 units/L <p>Rarely, supplements at discharge will be needed, discuss with consultant.</p>
Administration	Prescribe at least 2 hours apart from oral calcium supplements
Adverse and side effects	

Comments	Monitor serum Ca, PO4 and AP. Check serum Ca and PO4 24hr after starting to check for hypocalcaemia then monitor weekly. Check urinary creatinine and phosphate after 2 weeks if serum phosphate is still low or AP >1000 units/L. Urine phosphate:creatinine ratio <2 implies phosphate deficiency. Store opened bottle in the refrigerator, discard after 12 months.
References	2,4,6
Drug	Potassium chloride 7.5% (1mmol/ml) solution (Kay-Cee L)
Route	Oral, NG
Dosage	1-1.5mmol/kg 12 hourly. Refer to potassium monograph for parenteral use.
Uses	Hypokalaemia with serum potassium <3mmol/L.
Administration	
Adverse and side effects	Mild GI intolerance such as vomiting and oesophageal irritation.
Comments	Monitor U/Es daily for 1-2 days initially then if serum potassium is increasing repeat weekly. Store in refrigerator once opened. Discard 1 month after first opening.
References	4.
Drug	Sodium Chloride solution 1mmol/ml
Route	Oral, NG
Dosage	1mmol/kg 6 hourly. Refer to clinical guidelines for parenteral use.
Uses	Hyponatraemia at serum sodium <132mmol/L.
Administration	Wean sodium supplements before stopping over 1 week
Adverse and side effects	Hypernatraemia
Comments	Monitor U/Es and body weight for 1-2 days daily. If serum sodium is increasing, check weekly thereafter. Store opened bottle in refrigerator and discard 1 week after first opening.
References	4. Link to Sodium Chloride patient group direction (PGD2)
Drug	Sodium Feredetate 5.5mg iron/ml
Route	Oral, NG
Dosage	Do not prescribe iron for babies on SMA BMF. Commence on iron at 0.2ml (1.1mg Fe)/kg once daily in <35 weeks gestation or 1.8kg at birth once receiving full enteral feeds (and SMA BMF is discontinued) and at least 6 weeks old.

	If discharged home before starting Iron then a supply of Sodium Feredetate will be given to the parents to be given once baby is 6 weeks of age - the starting dose will be 0.5mls once daily regardless of weight of the baby.
Uses	Anaemia of prematurity
Administration	Continue until a full weaning diet at least 9 months corrected age. Be guided by growth and well being of infant. Vitamin C (contained in fruit juices and drink) can increase the absorption of iron when given at the same time.
Adverse and side effects	Mild GI intolerance such as diarrhoea, constipation and possibly vomiting. Stools are darkened.
Comments	If baby has not started oral iron on ward, the discharge prescription must specify the starting date.
References	2,4,5. Link to Sytron patient group direction (PGD2)
Drug	Multivitamin Drops A, B group, C and D (Dalivit or Abidec)
Route	Oral, NG
Dosage	0.6ml daily in infants less than 35 weeks gestation or 1.8kg at birth, once receiving full enteral feeds unless on breast milk fortifier. Additionally infants over 35 weeks who are still inpatients after 2 weeks of age, but not to be prescribed at discharge.
Uses	Vitamins supplementation. Preterm babies have little hepatic reserve of vitamin A and D and are at risk of deficiency.
Administration	Our policy is that parents of preterm babies discharged on Abidec or Dalivit should be advised to continue a vitamin supplement containing vitamin D from the time of discharge from NNU until the age of 5 years.
Adverse and side effects	<p>Toxicity from normal dosages unlikely. Parents must follow dosage.</p> <p>Excess vitamin D can lead to hypercalcaemia and results in vomiting, constipation and growth retardation.</p> <p>Although moderate and regular sunlight defined as exposure of legs and face for no more than 30 minutes a day in summer is advised. Infants should not be placed in direct sunlight where there may be a risk of sunburn by about 15 minutes at midday in summer. These conditions are infrequent in Scotland</p> <p>Dalivit contains more than the required daily amount of vitamin A</p>
Comments	<p>Abidec is the preferred multivitamin A, B group, C and D. Dalivit should only be prescribed when not available.</p> <ul style="list-style-type: none"> Abidec Drops contains: <ul style="list-style-type: none"> 1333 i.u. Retinol as vitamin A 400 i.u. ergocalciferol solution 0.4 mg thiamine hydrochloride 0.8 mg riboflavin 0.8 mg pyridoxine hydrochloride 8 mg nicotinamide

	<p>40 mg ascorbic acid in each 0.6 ml dose</p> <ul style="list-style-type: none"> • Dalivit Drops contains: 5000 i.u. Retinol as vitamin A 400 i.u. ergocalciferol solution 1 mg thiamine hydrochloride 0.4 mg riboflavin 0.5 mg pyridoxine hydrochloride 5mg nicotinamide 50 mg ascorbic acid in each 0.6 ml dose
References	
Drug	Colecalciferol (previously known as calciferol) solution 3000units/ml
Route	Oral, NG
Dosage	<p>Colecalciferol is not to be used routinely for babies. Babies less than 32 weeks gestation or less than 1.5kg at birth may be given 600 units (0.2ml) daily once on full enteral feeds on an individual patient basis. Discuss indications with the attending Consultant. There is no good indication to increase dose to 900 units daily.</p> <p>When maternal milk is fortified with Nutriprem Breast Milk Fortifier (BMF), colecalciferol can be discontinued.</p>
Uses	Prevention of rickets of prematurity
Administration	600 units = 15 microgram
Adverse and side effects	Excess vitamin D can lead to hypercalcaemia and result in vomiting, constipation and growth retardation
Comments	<p>Monitor serum calcium, phosphate and alkaline phosphatase (AP) weekly. Store opened bottle in refrigerator and discard 2 weeks after first opening.</p> <p>Rarely, supplements at discharge will be needed, discuss with consultant</p>

FEED	VITAMIN SUPPLEMENT	IRON SUPPLEMENT
Exclusive formula milk	Yes	Yes, start when 6 weeks old
Fortified Breast Milk (SMA BMF)	No	No
Unfortified Breast Milk	Yes: 0.6 ml Dalivit / day (as per guideline)	Yes, start when 6 weeks old
Breast milk and formula milk (when breast milk supply is low)	Yes: 0.6 ml Dalivit / day (as per guideline)	Yes, start when 6 weeks old