### Alert
Nil

### Indication
To facilitate weaning from assisted ventilation and improve lung function in infants at risk of chronic lung disease.
To facilitate extubation.

### Action
Long acting glucocorticoid with potent anti-inflammatory action.
No significant mineralocorticoid activity.

### Drug Type
Adrenal steroid hormone.

### Trade Name
- **IV:** Dexamethasone sodium phosphate DBL, dexamethasone sodium phosphate Alphapharm.
- **Oral:** Compounded in-house.

### Presentation
- **IV:** 4 mg/mL.
- **Oral:** 0.5 mg/mL suspension.

### Dosage/Interval

<table>
<thead>
<tr>
<th>Protocol</th>
<th>Dosage/Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DART protocol</strong></td>
<td>0.075 mg/kg/dose 12 hourly for 3 days then, 0.05 mg/kg/dose 12 hourly for 3 days then, 0.025 mg/kg/dose 12 hourly for 2 days then, 0.01 mg/kg/dose 12 hourly for 2 days then cease.</td>
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<tr>
<td><strong>High dose protocol</strong></td>
<td>e.g., for term neonates with chronic lung disease 0.25 mg/kg/dose 12 hourly for 3 days then, 0.15 mg/kg/dose 12 hourly for 3 days then, 0.1 mg/kg/dose 12 hourly for 3 days then, 0.05 mg/kg/dose 12 hourly for 3 days then, 0.025 mg/kg/dose 12 hourly for 6 days then cease.</td>
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<tr>
<td><strong>Extubation protocol</strong></td>
<td>0.25 mg/kg 8 hourly. Commence 4 hours before extubation.</td>
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</tbody>
</table>

### Maximum daily dose
0.75 mg/kg

### Total cumulative dose
- **DART protocol:** 0.89 mg/kg
- **High dose protocol:** 3.6 mg/kg
- **Extubation protocol:** 0.75 mg/kg

### Route
IV, oral.

### Preparation/Dilution
- **IV:** Draw up 0.5 mL (2 mg) and add 9.5 mL sodium chloride 0.9% to make a final volume of 10 mL with a concentration of 0.2 mg/mL.

### Administration
- **IV:** Administer over 3–5 minutes.
- **Oral:** Administer with feeds to minimise gastric irritation.

### Monitoring
- Blood glucose levels (BGLs) at least daily. When on oral feeds measure BGL only if there is glucose in urine.
- Blood pressure at least daily.
- Electrolytes.

### Contraindications
Systemic infections.

### Precautions
Use with caution in patients with renal impairment, hypothyroidism, cardiac disease and peptic ulcer disease.
Use with extreme caution in neonates receiving non-steroidal anti-inflammatories for PDA treatment.

### Drug Interactions
Barbiturates, phenytoin and rifampicin may increase the metabolism of dexamethasone.
Antithyroid agents may decrease the metabolism of dexamethasone.

### Adverse Reactions
- Hyperglycaemia, glycosuria, hypertension, hypokalaemia, hypernatraemia, oedema, vomiting, diarrhoea, GI bleeding, irritability, myocardial hypertrophy, neutrophilia.
- Decreased resistance to infection – may mask symptoms of infection.
Acute withdrawal after use > 7 days can result in acute adrenal insufficiency with fever, hypotension, hypoglycaemia and shock.
Prolonged use – osteoporosis, retarded bone growth, muscle wasting, delayed wound healing.
Increase in triglycerides.
Impaired wound healing.

**Compatibility**
Fluids: Glucose 5%, sodium chloride 0.9%
Y-site: Amino acid solutions, aciclovir, amifostine, amikacin, anidulafungin, aztreonam, bivalirudin, cisatracurium, dexamethasone, fentanyl, filgrastim, fluconazole, foscarine, granisetron, heparin sodium, hydrocortisone sodium succinate, hydromorphone, linezolid, methadone, morphine sulfate, pethidine, piperacillin-tazobactam, potassium chloride, remifentanil, zidovudine.

**Incompatibility**
Fluids: No information.
Y-site: Calcium chloride, calcium gluconate, caspofungin, chlorpromazine, ciprofloxacin, dobutamine, erythromycin, esmolol, gentamicin, glycopyrrolate, haloperidol lactate, labetalol, levomepromazine, magnesium sulfate, midazolam, mycophenolate mofetil, pentamidine, phenolamine, promethazine, protamine, rocuronium, tobramycin.

**Stability**
IV: Diluted solution is stable for 24 hours at 2–8°C
Oral: As per Pharmacy department.

**Storage**
Ampoule: Store below 25°C. Protect from light.
Oral: Store in the fridge.

**Special Comments**
Nil

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