

FERROUS SULPHATE (IRON)

Trade Name	Ferodan Syrup (this is the currently subsidised brand) Ferro-Liquid														
Class	Iron Supplement														
Mechanism of action	Replaces iron found in haemoglobin, myoglobin and other enzymes; allows oxygen transport via haemoglobin.														
Indications	<p>Indication 1: Babies with demonstrated iron deficiency or significant blood loss</p> <p>Indication 2: Babies <37 weeks or <2500g</p>														
Contraindications	<p>Avoid use in patients with haemolytic anaemia or known hypersensitivity to iron</p> <p>Use with caution in patients with peptic ulcer, ulcerative colitis, ileostomy, colostomy or a family history of iron allergy</p>														
Supplied as	<p>Ferrous Sulphate 30 mg/mL solution = 6 mg/mL elemental iron Use elemental iron concentration for prescribing the dose</p>														
Dilution	N/A														
Dosage	<p>Indication 1: 4mg/kg/day (0.66mL/kg/day) elemental iron (range 3 – 6 mg/kg/day)</p> <p>Indication 2: 3mg/kg/day (0.5mL/kg/day) elemental iron from D28 Delay starting for 2wks if receive a RBC transfusion between week 2-4 but ensure all start by 6 weeks No need to withhold iron if receive further transfusions after starting iron Delay starting until FM85 milk fortifier is stopped Treat until 12 months of age Stop if transitions to Preterm formula in NICU Stop at discharge if on full formula of any type Max daily dose 2mL daily as usually not tolerated at higher volumes. No need to weight adjust after discharge</p>														
Discharge Dosing for <36 weeks or <2500g	<p>If already on iron then prescribe 3mg/kg/day using current weight If iron has not started before discharge, use the growth chart to predict the weight range at 4 wks and prescribe as below:</p> <table border="1"> <thead> <tr> <th>Predicted Weight at 4wks</th> <th>Dose (mL)</th> <th>Dose (mg/kg/day)</th> </tr> </thead> <tbody> <tr> <td><3 kg</td> <td>1mL</td> <td>2-3mg/kg/day</td> </tr> <tr> <td>3-4 kg</td> <td>1.5mL</td> <td>2.2-3mg/kg/day</td> </tr> <tr> <td>>4-5 kg</td> <td>2mL</td> <td>2.4-3mg/kg/day</td> </tr> </tbody> </table>			Predicted Weight at 4wks	Dose (mL)	Dose (mg/kg/day)	<3 kg	1mL	2-3mg/kg/day	3-4 kg	1.5mL	2.2-3mg/kg/day	>4-5 kg	2mL	2.4-3mg/kg/day
Predicted Weight at 4wks	Dose (mL)	Dose (mg/kg/day)													
<3 kg	1mL	2-3mg/kg/day													
3-4 kg	1.5mL	2.2-3mg/kg/day													
>4-5 kg	2mL	2.4-3mg/kg/day													

Interval	Usually once a day. Can be given in divided doses up to three times daily.
Administration	Oral
Compatible with	N/A – do not mix with other medicines
Incompatible with	N/A - do not mix with other medicines
Interactions	Ferrous sulphate may reduce the absorption of fluoroquinolone antibiotics (eg ciprofloxacin). Vitamin C may promote absorption of iron Food, milk and antacids (gaviscon, ranitidine, omeprazole) may reduce the absorption of iron. (If possible give 2 hours before or 4 hours after antacids)
Monitoring	Ferritin levels are no longer routinely required. Some babies on Preterm formula may still require additional Fe supplementation after review by dietician
Stability	Manufacturer's expiry or 6 months after date of opening, whichever comes first.
Storage	Room Temperature
Adverse Reactions	Gastrointestinal upset, discolouration of the urine, dark stools, cramping, constipation
Metabolism	Iron is absorbed in the duodenum and upper jejunum; time to onset of action is approximately 3 -10 days; iron is excreted in urine, sweat and sloughing of mucosal surfaces
Comments	At discharge, ensure that all parents of babies who require iron therapy are given a copy of the information sheet for parents on iron supplementation.
References	1. Lacy CF et al Drug information Handbook 10 th Edition 2002 2. Neonatal Handbook 2004 3. New Zealand Pharmaceutical Schedule August 2005
Updated by	P Schmidt, B Robertshawe - August 2005 A Lynn, B Robertshawe - June 2012 (re-order profile) A Lynn, N Austin, B Robertshawe- Feb 2013 (simplify dosing) Aug 2014 clarify dosing for milk types A Lynn, N Austin, B Robertshawe, H Little July 2017 (change to 3mg/kg for all, stop Ferritin levels, FM85 info, treat 12mths) A Lynn, B Robertshawe, H Little -Nov 2017 (simplify discharge dosing) April 2020 (align GA to <37 wks with Vit D) A Lynn, B Robertshawe- Aug 2020 (label change re concentration) A Lynn, M Wallenstein, B Robertshawe March 2021 (routine review)