



NEONATAL

ERYTHROPOIETIN (Epoetin Alpha)




This document should be read in conjunction with this [DISCLAIMER](#)

Highly Restricted: Requires Neonatologist or Haematologist approval before commencing

Presentation	Prefilled Syringe: 1000 units/0.5mL Neonatal dose – to be prepared in Pharmacy
Classification	Human Recombinant Erythropoietin (EPO) Erythropoietin agonist EPO is an endogenous glycoprotein that stimulates red blood cell production normally produced by the kidney
Indication	<ul style="list-style-type: none"> To decrease the need for PRBC transfusions in extremely low birth weight babies For the treatment of anaemia of prematurity in selected patients
Dose	<p><u>Subcut/IV:</u> 200units/kg/dose on alternate days OR 100 units/kg once a day</p> <p>Maximum dose range 600 units -1400 units/ kg / WEEK Duration : 2-6 weeks of therapy <i>For further dosing regimens – contact haematology</i></p> <p>Vitamin supplementation should be initiated concurrently:</p> <ul style="list-style-type: none"> Ferrous sulphate Oral: 0.5mL to 1mL /kg/dose every 12 hours Vitamin E Oral: 10-15 units once day Folic Acid Oral: 50-100microg once a day

Monitoring	<p>Monitor (at start of treatment and then weekly):</p> <ul style="list-style-type: none"> • Full blood count with differential, reticulocyte count and platelet count • Neutrophils (risk of neutropenia), granulocytes , haematocrit • Continuous cardio-respiratory monitoring • Blood pressure
Guidelines & Resources	Anaemia and Bleeding
Compatible Fluids	Do not mix epoetin alpha with any other medications or solutions
Preparation	<p>Use solution prepared by the Pharmacy Department</p> <p>Do not shake.</p> <p>Stored in the fridge – allow the syringe to stand for 15 minutes to reach room temperature prior to use.</p>
Administration	<p>Subcut: (<i>preferred</i>)</p> <p>As per neonatal subcutaneous protocol</p> <p>Rotate Site of Injection</p> <p>IV:</p> <p>Slowly over 3-5 minutes</p>
Adverse Reactions	Neutropenia, hypertension , seizures, thrombocytosis, severe skin reactions
Storage	Store at 2 to 8 °C. Do not freeze. Protect from light
Interactions	Do not dilute or mix with other drugs
Notes	<p>Erythropoietin will not stimulate sustained red blood cell production if iron deficiency develops</p> <p>Routine iron supplementation should be given in conjunction with erythropoietin.</p> <p>DO NOT give INTRAMUSCULARLY</p> <p>Subcutaneous route is as effective as intravenous</p> <p>Although data are conflicting, erythropoietin may be associated with retinopathy of prematurity (ROP). The risk may be reduced for stage greater than 3 ROP if erythropoietin is initiated before 8 days of age</p>

References	<p>Australian Medicines Handbook. Erythropoietin. In: Australian Medicines Handbook [Internet]. Adelaide (South Australia): Australian Medicines Handbook; 2019 [cited 2019 Apr 08]. Available from: https://amhonline.amh.net.au/</p> <p>Lexicomp: Pediatric and Neonatal Dosage Handbook. American Pharmacists Association. 24th edition; 2019 [cited 2019 April 08].</p> <p>Society of Hospital Pharmacists of Australia. Erythropoietin. In: Australian Injectable Drugs Handbook [Internet]. [St Leonards, New South Wales]: Health Communication Network; 2019 [cited 2019 April 08]. Available from: http://aidh.hcn.com.au</p> <p>Australian Medicines Handbook Children's Dosing Companion. Erythropoietin. In: Australian Medicines Handbook [Internet]. Adelaide (South Australia): Australian Medicines Handbook; 2019 [cited 2019 Apr 08]. Available from: https://amhonline.amh.net.au/</p> <p>MIMS Australia. Erythropoietin. In: MIMS Online [Internet]. St Leonards (New South Wales): MIMS Australia; 2016 [cited 2019 Apr 08]. Available from: https://www.mimsonline.com.au</p> <p>Ohlsson A , Aher SM. Early erythropoiesis stimulating agents in preterm or low birth weight infants. Cochrane Database Syst Rev Nov 16, 2017; 2017 (11): CD004863</p>
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