

## SULPHAMETHOXAZOLE AND TRIMETHOPRIM (Oral) (previously known as cotrimoxazole)

<b>Trade Name</b>	Deprim® Remedica Ltd. (distributed by AFT Phamaceuticals)
<b>Class</b>	Antibiotic, sulphonamide derivative + folate antagonist
<b>Mechanism of Action</b>	Sulfamethoxazole interferes with bacterial folic acid synthesis and growth. Trimethoprim inhibits enzymes in the folic acid pathway.
<b>Indications</b>	<b>Indication 1:</b> Infections sensitive to sulphamethoxazole/trimethoprim <b>Indication 2:</b> Prophylaxis / treatment of <b>Pneumocystis carinii</b>
<b>Contraindications</b>	Jaundice - increases risk of kernicterus. Sulfamethoxazole competes for protein binding sites usually available to bilirubin. G6PD deficiency - increased risk of haemolytic anaemia
<b>Supplied As</b>	Paediatric suspension: 240mg/5mL (200mg sulfamethoxazole and 40mg trimethoprim in 5mL)
<b>Dilution</b>	N/A
<b>Dosage / Interval</b>	All dose references in this profile relate to the combined product rather than the trimethoprim content and must be charted as the combination of Sulphamethoxazole and Trimethoprim  <b>Indication 1: Infections sensitive to Sulphamethoxazole / Trimethoprim</b> 24mg/kg/dose every 12 hours  <b>Indication 2: Pneumocystis carinii</b> <b>Prophylaxis:</b> 450mg/m <sup>2</sup> (max 960mg) twice a day for 3 days of the week <b>m<sup>2</sup> = (0.05 x wt(kg)) + 0.05</b> <b>Treatment:</b> 60mg/kg 12 hourly for 14 days May be given IV (see IV protocol)
<b>Administration</b>	Oral – shake well before use and give dose with a feed
<b>Compatible With</b>	N/A
<b>Incompatible With</b>	N/A
<b>Interactions</b>	Sulfamethoxazole increases serum concentrations of medicines metabolised by 2C9 and 2C19 eg. phenytoin, warfarin. Concurrent use of trimethoprim with spironolactone may cause hyperkalaemia. Sulfamethoxazole with trimethoprim reduces renal clearance of zidovudine.

<b>Monitoring</b>	Renal function, Full blood count														
<b>Stability</b>	6 months after opening or manufacturer's expiry whichever is shorter.														
<b>Storage</b>	Store below 25 °C, protect from light														
<b>Metabolism</b>	Eliminated in the urine. Protein binding 68%.														
<b>Adverse Reactions</b>	Skin rashes, stop at first sign of rash due to risk of Stevens Johnson Syndrome. Vomiting, cough, blood dyscrasias, hepatitis														
<b>Metabolism</b>	Bioavailability = 90-100% Time to peak concentration 1-4 hours Half-life: sulfamethoxazole = 9-12hrs; trimethoprim = 6-11hrs Hepatic metabolism via 2C9, oxidation, hydroxylation, acetylation and glucuronidation pathways. Excreted by the kidneys														
<b>Comments</b>	Intravenous administration not used in newborn infants except on consultant advice for treatment of Pneumocystis carinii  Excipients in Deprim®: colour (e124), raspberry flavour E_0026934, carmellose sodium, citric acid, dispersible cellulose, glycerol, sodium citrate, polysorbate 80, purified water, syrup and preservative: sodium propyl hydroxybenzoate and sodium methylhydroxybenzoate.														
<b>References</b>	<ol style="list-style-type: none"> <li>1. BNF for Children 2010-11</li> <li>2. Medicines for Children, RCPCH, 1999</li> <li>3. Neofax, 2009</li> <li>4. <a href="http://www.medsafe.govt.nz">www.medsafe.govt.nz</a></li> <li>5. <a href="http://www.nzfc.nz">www.nzfc.nz</a></li> <li>6. <a href="http://www.anmfonline.org">www.anmfonline.org</a></li> </ol>														
<b>Updated By</b>	<table> <tr> <td>Dr D Gray</td> <td>May 2000</td> </tr> <tr> <td>P Schmidt, B Robertshawe</td> <td>February 2006</td> </tr> <tr> <td>A Lynn, B Robertshawe</td> <td>Oct 2007, June 2010</td> </tr> <tr> <td>A Lynn, B Robertshawe</td> <td>June 2012 (re-order profile)</td> </tr> <tr> <td>A Lynn, M Wallenstein, B Robertshawe</td> <td>September 2020 update name</td> </tr> <tr> <td>A Lynn, B Robertshawe</td> <td>July 2023 (routine update)</td> </tr> <tr> <td>A Lynn</td> <td>Aug 2023 (remove renal prophylaxis)</td> </tr> </table>	Dr D Gray	May 2000	P Schmidt, B Robertshawe	February 2006	A Lynn, B Robertshawe	Oct 2007, June 2010	A Lynn, B Robertshawe	June 2012 (re-order profile)	A Lynn, M Wallenstein, B Robertshawe	September 2020 update name	A Lynn, B Robertshawe	July 2023 (routine update)	A Lynn	Aug 2023 (remove renal prophylaxis)
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