

SULFAMETHOXAZOLE AND TRIMETHOPRIM (IV)**(previously known as cotrimoxazole) This drug must be guardrailed**

Trade Name	Sulfamethoxazole and Trimethoprim Concentrate Injection BP Bactrim® Bactrimel® (Section 29)																		
Class	Antibiotic, sulphonamide derivative + folate antagonist																		
Mechanism of Action	Sulfamethoxazole (SMX) interferes with bacterial folic acid synthesis and cell growth. Trimethoprim (TMP) inhibits enzymes in the folic acid pathway.																		
Indications	Indication 1: Pneumocystis carinii prophylaxis Indication 2: Pneumocystis carinii treatment																		
Contraindications	Jaundice - increases risk of kernicterus as sulfamethoxazole competes for protein binding sites usually available to bilirubin. G6PD deficiency - increased risk of haemolytic anaemia																		
Supplied As	Sulfamethoxazole and Trimethoprim Concentrate Injection BP containing 400mg of sulfamethoxazole and 80mg of trimethoprim per 5mL ampoule (480mg/5mL)																		
Dilution	<p>Shake the ampoule well before use then dilute:</p> <table border="1"> <thead> <tr> <th>Drug</th> <th>5% Glucose Added</th> <th>Final Volume</th> <th>Concentration</th> </tr> </thead> <tbody> <tr> <td>96mg (1mL)</td> <td>29mL</td> <td>30mL</td> <td>3.2mg/mL</td> </tr> </tbody> </table> <p>If the patient is fluid restricted:</p> <table border="1"> <thead> <tr> <th>Drug</th> <th>5% Glucose Added</th> <th>Final Volume</th> <th>Concentration</th> </tr> </thead> <tbody> <tr> <td>96mg (1mL)</td> <td>14mL</td> <td>15mL</td> <td>6.4mg/mL</td> </tr> </tbody> </table> <p>This solution is not stable and any remaining portion should be discarded immediately after use.</p> <p>In severe fluid restriction: Sulfamethoxazole/trimethoprim may be given undiluted via a central line (480mg/5mL = 96mg/mL) Ensure the dose volume is at least 0.5ml for accurate administration</p>			Drug	5% Glucose Added	Final Volume	Concentration	96mg (1mL)	29mL	30mL	3.2mg/mL	Drug	5% Glucose Added	Final Volume	Concentration	96mg (1mL)	14mL	15mL	6.4mg/mL
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Dosage / Interval *Must chart guardrail and use Alaris pump*	<p>All dose references in this profile relate to 'cotrimoxazole' but must be charted as the combination of sulphamethoxazole and trimethoprim</p> <p>Indication 1: Prophylaxis 450mg/m² up to a maximum dose of 960mg m² = (0.05 x wt(kg)) + 0.05</p> <p>Indication 2: Treatment - 60mg/kg/dose</p>																		

Guardrail	Concentration: Min – 3.2mg/mL Max – 96mg/mL Soft Alert Min: 30mg/kg/hr Hard Alert Max: 60mg/kg/hr Soft Alert Max: 40mg/kg/hr Default Setting: 40mg/kg/hr
Interval	Indication 1: Twice a day for 3 days of the week Indication 2: 12 hourly for 14 days
Administration	Indication 1: Prophylaxis is usually given orally so use suspension and see oral sulfamethoxazole +trimethoprim, drug profile Indication 2: Treatment can be given orally (see oral sulfamethoxazole +trimethoprim, drug profile) or iv infusion over 60 minutes
Compatible With	5% and 10% glucose, 0.45% and 0.9% sodium chloride, glucose/sodium chloride combinations and Hartman's Solution.
Incompatible With	Do not mix with other medications. (NICU tend to use relatively high concentrations and there's no data on compatibility with other medicines available)
Monitoring	Nil
Stability	Prepare solutions immediately before use and commence infusion within 30 minutes of preparation Discard any remaining solution after 24 hours. (NB: concentrated solutions should be discarded immediately after use)
Storage	Store below 30 C, protect from light, Do Not Refrigerate. Do not use any solution that is cloudy or has visible precipitate
Adverse Reactions	Skin rashes, stop at first sign of rash due to risk of Stevens Johnson Syndrome. Blood dyscrasias, hepatitis, vomiting, cough, breathing difficulties
Metabolism	Eliminated in the urine. Protein binding 68%.
Comments	Intravenous administration is not to be used in treatment of newborn infants except on advice of a consultant for management of Pneumocystis carinii . pH of injection = approx 10, sodium content = 37mg/5mL
References	1. BNF for Children 2006 2. NZHPA Notes on Injectable Drugs 5 th Edition 2004 3. Medicines for Children, RCPCH, 1999 4. Neofax, 1999 5. BNF for Children 2007

Updated By	P Schmidt, B Robertshawe February 2006 A Lynn, B Robertshawe Oct 2007 A Lynn, B Robertshawe, F Robertson May 2009 (new pumps) A Lynn, B Robertshawe September 2009 A Lynn, B Robertshawe July 2012 (re-order profile) M Wallenstein, A Lynn, B Robertshawe September 2020 (update) A Lynn, B Robertshawe February 2022
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