DESCRIPTION	Aztreonam is a monobactam antibiotic, it inhibits bacterial cell wall synthesis by binding to penicillin-binding protein 3 of Gram negative bacteria.[1] Aztreonam is active against the majority of Gram negative aerobes.[1,2]
ChAMP INDICATIONS AND RESTRICTIONS	**IV and inhaled: Category C: Restricted** ChAMP approval is required prior to prescription.
FORMULATIONS	1gram powder for injection vial
DOSAGE	The doses listed below fall within the standard range. Higher doses may be prescribed for certain situations. This should be in consultation with Infectious Diseases or Microbiology consultants. **IV:** **Children 1 month to 2 years:** **Usual dose:** 30mg/kg/dose (to a maximum of 1gram) every 6 to 8 hours.[3,4] **Children 2 to 18 years:** **Usual dose:** 30mg/kg/dose (to a maximum of 2grams) 6 to 8 hourly **Severe infections or Cystic Fibrosis:** 50mg/kg/dose (to a maximum of 2grams) 6 to 8 hourly.[3,4,5] **Inhalation:** Please refer to the separate inhaled aztreonam monograph **Neonates:** Not routinely used in neonates, contact Infectious Disease or Microbiology consultants for advice
DOSAGE ADJUSTMENT	**Dosage adjustment required in renal impairment:** Dosage adjustment may be required in cases of impaired renal function (with creatinine clearance of less than 30mL/min). http://cahs.hdwa.health.wa.gov.au/__data/assets/pdf_file/0003/106986/01_Guidlines_for_calculating_CLcr.pdf A single dose of 30mg/kg or 50mg/kg (to a maximum of 1g or 2g respectively) is required followed by the following adjusted doses: CrCl > 30mL/minute = normal dosing CrCl 10-30mL/minute = 50% dose every 8 to 12 hours CrCl <10mL/minute = 25% dose every 8 to 12 hours.[1,6] **Dosage adjustment required in hepatic impairment:** Aztreonam should be used with caution in patients with hepatic dysfunction and liver function should be monitored. Contact Pharmacy for advice.[3,7]
RECONSTITUTION	**IV:** Reconstitute the 1gram vial with 8.8mL of water for injection and shake vigorously to give a final concentration of 100mg/mL.[8,9]
ADMINISTRATION	**IV bolus:** Dilute to a maximum concentration of 100mg/mL and give via slow IV injection over 3 to 5 minutes.[7,8] **IV infusion:** Dilute with compatible fluid to a concentration of 20mg/mL or weaker and infuse over 20 to 60 minutes.[3,7,8]
MONITORING	Renal, hepatic and haematological function should be monitored weekly with prolonged therapy (i.e. longer than 7 days).[10]
ADVERSE EFFECTS	**Common:** rash, diarrhoea, nausea, vomiting, fever, taste disturbance, transient increases in liver aminotransferases, neutropenia, eosinophilia, thrombophlebitis at injection site.[1,10]

	Rare: headache, dizziness, abdominal cramps and bloating, oral ulceration, anaphylaxis, toxic epidermal necrolysis, *Clostridium difficile*-associated disease, GI bleeding, prolonged bleeding time, thrombocytopenia, hepatitis, jaundice, hypotension, chest pain, dyspnoea and seizures.[1,10]
COMPATIBLE FLUIDS	Glucose 5% and 10% Glucose/sodium chloride solutions Sodium chloride 0.9% Hartmann's Ringer's.[7,8]
PRECAUTIONS	Aztreonam should be used with caution in patients with a history of severe allergy to a penicillin or cephalosporin. Rare cases of immediate hypersensitivity to aztreonam in patients with a penicillin or cephalosporin allergy have been reported.[1] Use with caution in patients with arginase deficiency.[11]
COMMENTS	Each 1gram vial of aztreonam also contains 814mg of L-arginine.[8] On reconstitution, aztreonam solution range in colour from colourless to light straw, to yellow. A slight pink tint may develop on standing; this does not affect potency.[7,8,9]

Please note: The information contained in this guideline is to assist with the preparation and administration of **aztreonam**. Any variations to the doses recommended should be clarified with the prescriber prior to administration

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