AMOXICILLIN

Read in conjunction with Disclaimer

Formulary: Unrestricted	
Presentation	**Vial (powder for reconstitution):** 1 g = 1000 mg **Oral suspension:** 100 mg/mL **(KEMH)** 250 mg/5 mL **(PCH)**
Drug Class	Moderate spectrum penicillin antibiotic.
Indication	Directed treatment of infections caused by susceptible gram positive (including *Streptococcus species*, *Enterococcus faecalis* and *Listeria monocytogenes*) and susceptible gram negative bacteria.
Special Considerations	• In renal impairment, the excretion of amoxicillin will be delayed. In infants with severe renal impairment, it may be necessary to reduce the total daily dose. Contact paediatric infectious diseases (ID) or microbiology. • Contraindicated in patients with hypersentivity to penicillin (unlikely to be an issue in neonates). • Use caution in patients with hypersensitivity to cephalosporins (unlikely to be an issue in neonates). • Rapid administration of large intravenous doses may result in CNS excitation or seizure activity.
Monitoring	Monitoring is not usually required. Follow paediatric ID/microbiology advice in case of poor therapeutic response.
Compatibility	**Fluids:** Sodium chloride 0.9%, glucose 5%, water for injection. Refer to KEMH Neonatal Medication Guideline: Y-Site IV Compatibility in Neonates.
Incompatibility	IV aminoglycoside antibiotics, including gentamicin, are inactivated by IV penicillins. Ensure lines are adequately flushed between antibiotics.
Side Effects	**Common:** Vomiting, diarrhoea, skin rash, hypersensitivity , angioedema, phlebitis at injection site, superinfection with resistant organisms during prolonged therapy.
	Uncommon/Rare/Serious: Neurotoxicity (too rapid injection rate), urticaria, purpurae, anaemia, thrombocytopenia, black tongue, electrolyte disturbances e.g. hypernatraemia or hypokalaemia due to sodium content of parenteral doses, *C. Difficile*-associated disease, crytalluria (high IV doses).
Storage & Stability	**Oral Suspension** **100 mg/mL Solution:** Store at room temperature, below 25°C. • Reconstituted solution is stable for 14 days at room temperature or if refrigerated (refrigeration is preferred). **250 mg/5 mL Solution:** Refrigerate, do not freeze. • Reconstituted solution is stable for 14 days refrigerated.
	Vial: Store at room temperature, below 25°C. Protect from light. • Reconstituted solution should be admistered immediately; discard unused portion.

Comments	• Clearance is primarily by the renal route. Clearance increases with increasing gestational age and postmenstrual age. Serum half-life is longer in premature infants and infants younger than 7 days. • Ibiamox® and Amoxil® IV contain 3.3 mmol of sodium per gram. Fisamox® IV contains 2.6 mmol of sodium per gram. • Only use IM route if IV route not available. IM injection can be painful. • If co-prescribed with aminoglycoside, give the antibiotic with shortest duration of administration first (so antibiotic cover commences as soon as possible). ○ Do not mix in the same injection or infusion solution; flush before and after.

ORAL

Presentation (for oral use)

Oral suspension: 100 mg/mL **(KEMH)**
250 mg/5 mL = 50 mg/mL **(PCH)**

Dosage

Infections due to susceptible organisms:

Corrected Gestational Age	Postnatal Age	Dose	Frequency
37 weeks and older	Less than 7 days	50 mg/kg/dose	Every 12 hours
	7 days or greater	50 mg/kg/dose	Every 8 hours

Dose adjustment:

- **Renal impairment:** For infants with severe impairment, it may be necessary to reduce the total daily dose. Contact paediatric ID/microbiology.

Preparation

Reconstitution:

Reconstitute the amoxicillin as per the product information with sterile water as follows:

- Tap bottle until all the powder flows freely
- Add the total volume of water for reconstitution
- Shake vigorously to suspend the powder

Administration

- Shake well before each use.
- Draw prescribed dose into oral/enteral syringe.
- Can be given Oral/OGT/NGT.
- May be given anytime in relation to feeds.
- May be mixed with formula or milk; administer dose immediately after mixing.

INTRAVENOUS INFUSION

Presentation (for IV use)

Vial (powder for reconstitution): 1 g = 1000 mg
Not available from CIVAS

Dosage

Infections due to susceptible organisms:

Gestational Age	Postnatal Age	Dose	Frequency
All ages	Less than 7 days	50 mg/kg/dose	Every 12 hours
	7 days or greater	50 mg/kg/dose	Every 8 hours

Meningitis:

Gestational Age	Postnatal Age	Dose	Frequency
All ages	Less than 7 days	100 mg/kg/dose	Every 12 hours
	7 days or greater	100 mg/kg/dose	Every 8 hours

Dose adjustment:

- **Renal impairment:** For infants with severe impairment, it may be necessary to reduce the total daily dose. Contact paediatric ID/microbiology.

Preparation

Vial (powder for reconstitution): 1 g = 1000 mg

Step 1 Reconstitution:

- Add 9.2 mL of water for injection to the amoxicillin vial.
- Concentration is now 1000 mg/10 mL.

Step 2 Dilution:

- Draw up 500 mg (5 mL) and make up to 10 mL total volume with water for injection.
- Concentration is now **500 mg/10 mL = 50 mg/mL.**

Administration

IV infusion:

- Infuse via syringe driver pump over at least 30 minutes.
- Rapid administration of large IV doses may result in CNS excitation or seizure activity.

INTRAMUSCULAR INJECTION

Presentation (for IM use)	**Vial (powder for reconstitution)**: 1 g = 1000 mg ***Not available from CIVAS***
Dosage	***Only use IM route if IV route not available. IM injection can be painful.***
	Infections due to susceptible organisms:

Gestational Age	Postnatal Age	Dose	Frequency
All ages	Less than 7 days	50 mg/kg/dose	Every 12 hours
	7 days or greater	50 mg/kg/dose	Every 8 hours

Doses of 100 mg/kg/dose may be used for severe infections (i.e. meningitis). Consult paediatric ID/microbiology for patient specific advise.

Dose adjustment:

- **Renal impairment:** For infants with severe impairment, it may be necessary to reduce the total daily dose. Contact paediatric ID/microbiology.

Preparation	**Vial (powder for reconstitution):** 1 g = 1000 mg • Add 3.2 mL of water for injection or lidocaine 1% to the amoxicillin vial. • Shake vigorously. • Concentration is now **1000 mg/4 mL = 250 mg/mL.**
Administration	• Draw up the prescribed dose. • Intramuscular injection as per the Medication Administration Guideline. • **Only use IM route if IV route not available. IM injection can be painful.**

Related Policies, Procedures, and Guidelines

Clinical Practice Guidelines:

Neonatology - Sepsis

Neonatology - Seizures

WNHS Pharmaceutical and Medicines Management Guidelines:

Antimicrobial Stewardship

WNHS Cold Chain Management for Medications and Vaccines

CAHS Medication Refrigerators and Freezers

WNHS Medication Administration Guideline

CAHS Medication Administration Guideline

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