

**AMOXYCILLIN (Parenteral)**

<b>Trade Name</b>	Ibiamox <sup>®</sup> (Douglas Pharmaceuticals)																		
<b>Class</b>	Beta Lactam Antibiotic																		
<b>Mechanism of Action</b>	Binds bacterial cell wall proteins and inhibits bacterial cell wall synthesis.																		
<b>Indications</b>	<p><b>Initial treatment for suspected or confirmed neonatal bacterial sepsis</b> (with aminoglycoside or other antibiotic)  ie: raised CRP, IT ratio, chorioamnionitis, PROM, maternal GBS, respiratory distress</p> <p>First line drug for <i>Listeria monocytogenes</i> and Enterococci.  Active against most <i>Proteus</i> and some <i>E.coli</i>  Little activity against <i>Klebsiella</i>, <i>Enterobacter</i>, <i>Pseudomonas</i>.</p>																		
<b>Contraindications</b>	Known hypersensitivity to penicillins																		
<b>Supplied As</b>	Injection vial 500mg (powder)																		
<b>Dilution</b>	<p><b>IV:</b></p> <table border="1"> <thead> <tr> <th>Vial</th> <th>Water Added</th> <th>Final Volume</th> <th>Concentration</th> </tr> </thead> <tbody> <tr> <td>500mg</td> <td>4.6mL*</td> <td>5mL</td> <td><b>100 mg/ml</b></td> </tr> </tbody> </table> <p><b>IM:</b></p> <table border="1"> <thead> <tr> <th>Vial</th> <th>1% Lignocaine</th> <th>Final Volume</th> <th>Concentration</th> </tr> </thead> <tbody> <tr> <td>500mg</td> <td>1.6mL*</td> <td>2mL</td> <td><b>250 mg/ml</b></td> </tr> </tbody> </table> <p>*500mg of amoxicillin powder displaces 0.4mL of diluent.  <b>Note:</b> there are multiple strengths of amoxicillin injection available.</p>			Vial	Water Added	Final Volume	Concentration	500mg	4.6mL*	5mL	<b>100 mg/ml</b>	Vial	1% Lignocaine	Final Volume	Concentration	500mg	1.6mL*	2mL	<b>250 mg/ml</b>
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<b>Dosage</b>	<p><b>Sepsis:</b> 50 mg/kg/dose  <b>Meningitis:</b> 100 mg/kg/dose  <b>Maximum</b> 200 mg/kg/day in first week</p>																		
<b>Interval</b>	<table border="1"> <thead> <tr> <th>Postnatal Age</th> <th>Interval</th> </tr> </thead> <tbody> <tr> <td>Day 0 - 7</td> <td>12 hourly</td> </tr> <tr> <td>Day 7 onwards</td> <td>8 hourly</td> </tr> </tbody> </table>			Postnatal Age	Interval	Day 0 - 7	12 hourly	Day 7 onwards	8 hourly										
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<b>Administration</b>	<p><b>IV:</b> Slow push over 3- 4 minutes  <b>IM:</b> Inject dose into a large muscle (buttock, thigh)  IM dose volume should be kept between 0.5 -1mL if possible to decrease the pain for the baby  See IM drug guideline in Drugs folder and Handbook</p>																		

<b>Compatible With</b>	<p><b>Solution:</b> Sodium chloride 0.9%, Dextrose 5 and 10%, Lactated ringer's (Hartmanns) Ringer's solution (compound sodium chloride),</p> <p><b>Note:</b> it is preferable to dilute amoxicillin in sodium chloride 0.9% as amoxicillin is less stable in dextrose solutions.</p> <p><b>Y-site:</b> there is very limited information about compatibility of amoxicillin with other medications</p>												
<b>Incompatible With</b>	<p>Incompatible with TPN, lipid and blood products,</p> <p><b>Y site:</b> amikacin*, ciprofloxacin, gentamicin*, imipenem/cilistatin, midazolam potassium chloride, sodium bicarbonate, tobramycin*.</p> <p><b>*Simultaneous administration with aminoglycosides eg: gentamicin may cause inactivation of antibiotic effect, ensure the line is well flushed between antibiotics.</b></p>												
<b>Monitoring</b>	Levels measurable but not required.												
<b>Stability</b>	Prepare immediately before use, use within one hour as antibiotic quickly degrades and loses potency.												
<b>Storage</b>	Store unopened ampoules below 25°C and protect from moisture and light.												
<b>Adverse Reactions</b>	Rash, urticaria, hypersensitivity, diarrhoea, altered bowel flora, seizures with very high doses >>100 mg/kg IV												
<b>Metabolism</b>	Mostly excreted unchanged in urine. Half life 6 - 6.5 hrs before day 7, 2 hours after day 7.												
<b>Comments</b>	Flush with line with sodium chloride 0.9% after the dose. Sodium content of amoxicillin injection = 2.6 mmol per gram.												
<b>References</b>	<ol style="list-style-type: none"> <li>1. J Pharm Sciences Nov 1997, 86(11):1288-1292</li> <li>2. Clin Pharmacokinetic Oct 1990, 19(4): 280-318</li> <li>3. Neofax in <a href="http://www.micromedexsolutions.com">www.micromedexsolutions.com</a></li> <li>4. Waikato drug manual</li> <li>5. <a href="http://www.starship.org.nz">www.starship.org.nz</a></li> <li>6. Trissell IV compatibilities in <a href="http://www.micromedex.com">www.micromedex.com</a></li> <li>7. <a href="http://www.anmfonline.org">www.anmfonline.org</a></li> </ol>												
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