**Intravenous (IV) Antibiotic Administration – Quick Reference Guide**

- **Antibiotics** are critical medicines and should be given within 1 hour of sepsis diagnosis.
- Please endeavor to take **blood cultures** before IV antibiotics are administered.

**BOLUS possible:** Amoxicillin, Benzylpenicillin (only 1.2g dose), Ceftriaxone (only 1g dose), Cefuroxime, Co-amoxiclav, Flucloxacillin, Gentamicin, Teicoplanin

<table>
<thead>
<tr>
<th>Antibiotic Name</th>
<th>Dose</th>
<th>Bolus IV injection</th>
<th>IV Infusion</th>
<th>Allergy Key</th>
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</table>
| Amoxicillin     | 1g    | BOLUS Reconstitute with 20mL WFI | Add required volume of reconstituted solution to 100mL sodium chloride 0.9% Give over 30 minutes | **Red** – penicillin allergy. **CONTRAINDICATED**
|                 |       |                    |             | This is a penicillin Check allergy status! |
|                 | 2.4g  | **DO NOT BOLUS** – IV infusion only |                     |             |
| Benzylpenicillin| 1.2g  | BOLUS Reconstitute with at least 8ml WFI or sodium chloride 0.9% Withdraw contents of vial and further dilute to final volume of 20ml Give over 5 minutes | Reconstitute each 1.2g vial with at least 8ml WFI Add required volume of reconstituted solution to 100mL sodium chloride 0.9% Give over 30 – 60 minutes | **Red** – penicillin allergy. **CONTRAINDICATED**
|                 |       |                    |             | This is a penicillin Check allergy status! |
|                 | 2.4g  |                     |                     |             |
| Ceftriaxone     | 1g    | BOLUS Reconstitute 1g vial with 10ml sodium chloride 0.9% Give over 5 minutes | Use 20ml of infusion fluid to reconstitute the 2g vial Add the reconstituted solution back to the bag of 100mL sodium chloride 0.9% Give over 30 – 60 minutes | **Green** – penicillin allergy. Considered safe

**Key:** WFI = Water For Injection

- **Red** – penicillin allergy. **CONTRAINDICATED**
- **Amber** – penicillin allergy. Avoid if serious allergy. Use with caution if non-severe allergy and no alternative
- **Green** – penicillin allergy. Considered safe

References: Injectable Medicines Guide (Medusa), Summary of medicine Products Characteristics (SmPC, accessed via medicines.org.uk)

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<td></td>
<td>Over 3 - 5 minutes (unless stated otherwise)</td>
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| Cefuroxime     | 1.5g | BOLUS Reconstitute with 15ml WFI | • Add the reconstituted solution to 100ml sodium chloride 0.9%  
• Give over 30 – 60 minutes | Cross reactivity with penicillins  
If true severe allergy – DO NOT GIVE |
| Ciprofloxacin   |      | **DO NOT BOLUS** – IV infusion only (via large peripheral vein) | • Available as ready to use infusion  
• Give 400mg (200ml) over 60 minutes  
• Give 200mg (100ml) over 30 minutes | AVOID IN EPILEPSY  
can lower seizure threshold |
| Clarithromycin  |      | **DO NOT BOLUS** – IV infusion only (via large peripheral vein) | • Reconstitute with 10ml WFI  
• **Shake** vial to dissolve contents  
• Add reconstituted solution to 250ml sodium chloride 0.9%  
• Give over 60 minutes | |
| Co-amoxiclav    | 1.2g | **BOLUS** Reconstitute 1.2g vial with 20ml WFI | • Add reconstituted solution to 100ml sodium chloride 0.9%  
• Give over 30 minutes | This is a penicillin Check allergy status! |
| Flucloxacillin  | 1g   | **BOLUS** Reconstitute with 20ml WFI Give over 3 minutes | • Add reconstituted solution to 100ml sodium chloride 0.9%  
• Give over 30 minutes | This is a penicillin Check allergy status! |
|                | 2g   | **BOLUS** Reconstitute with 40ml WFI Give over 6 minutes | • Add reconstituted solution to 100ml sodium chloride 0.9%  
• Give over 30 – 60 minutes | |

Key: WFI = Water For Injection  
Red – penicillin allergy. CONTRAINDICATED  
Green – penicillin allergy. Considered safe  
Amber – penicillin allergy. Avoid if serious allergy. Use with caution if non-severe allergy and no alternative

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<td>Gentamicin</td>
<td>All doses* Click [HERE](Aintree site) Click [HERE](Royal site) for the gentamicin dosing calculator <em>Maximum 450mg once daily</em></td>
<td>BOLUS Can administer undiluted or dilute with 10 – 20ml sodium chloride 0.9%</td>
<td>• Add required dose to 100ml sodium chloride 0.9% • Give over 20 – 30 minutes</td>
<td>Gentamicin MUST NOT be used in patients with Myasthenia Gravis (MG)</td>
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<tr>
<td>Levofloxacin</td>
<td>DO NOT BOLUS – IV infusion only (via large peripheral vein)</td>
<td></td>
<td>• Available as ready to use infusion • Give 500mg (100ml) over 60 minutes • Give 250mg (50ml) over 30 minutes</td>
<td>AVOID IN EPILEPSY Can lower seizure threshold</td>
</tr>
<tr>
<td>Meropenem</td>
<td>IV infusion preferred BOLUS possible Reconstitute 1g vial with 20ml WFI Shake vial to dissolve contents (until solution is clear) Give over 5 minutes</td>
<td></td>
<td>• Reconstitute 1g vial with 20ml WFI • Shake vial to dissolve contents • Add reconstituted solution to 100ml sodium chloride 0.9% • Give over 15 – 30 minutes</td>
<td>Cross reactivity with penicillins If true severe allergy – DO NOT GIVE</td>
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<tr>
<td>Metronidazole</td>
<td>DO NOT BOLUS – IV infusion only</td>
<td></td>
<td>• Available as ready to use infusion (100ml) • Give over 20 – 30 minutes</td>
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| Piperacillin/ tazobactam (Tazocin) | IV infusion preferred | BOLUS (unlicensed use): Reconstitute with 20ml WFI. Swirl until dissolved. Give over 5 minutes | • Reconstitute with 20ml WFI  
• Swirl until dissolved.  
• Add reconstituted solution to 100ml sodium chloride 0.9%  
• Give over 30 minutes | Green – penicillin allergy. Considered safe |
| Teicoplanin | 200mg – 1200mg doses* | BOLUS | • Slowly add ampoule of WFI provided to vial  
• Gently roll vial to dissolve. Avoid foam formation.  
• DO NOT shake. If solution becomes foamy to stand for 15 mins to allow foam to subside.  
• Add reconstituted solution to 100ml sodium chloride 0.9%  
• Give over 30 minutes | Patient needs a twice daily loading dose for 2 days before once daily maintenance dose CLICK HERE for dosing advice |
| | Above 1200mg | DO NOT BOLUS – IV infusion only | | |
| Tigecycline | DO NOT BOLUS – IV infusion only | | • Reconstitute each 50mg vial with 5.3mL sodium chloride 0.9%  
• Add reconstituted solution to 100ml sodium chloride 0.9%  
• Give over 30 – 60 minutes | Loading dose (100mg) needed, followed by 50mg twice daily |

**Flushing advice:** all the antibiotics listed above are to be flushed with sodium chloride 0.9% or glucose

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