

APPENDIX 1: SWITCH OF INTRAVENOUS TO ORAL ANTIBIOTIC THERAPY (cont'd)

Antibiotics that may be switched to oral

- Many of these antibiotics have good oral bioavailability and are substantially less expensive than IV formulations.
- Most antibiotics are switched to the oral formulation of the same antibiotic, except cefuroxime (see table)
- Some antibiotics (*) have excellent oral bioavailability and should nearly always be administered by the oral route, except when the patient has impaired gastrointestinal absorption or is unable to take oral medicines.
- Certain infections require treatment with agents only available as intravenous preparations. Liaise with microbiology regarding appropriate length of treatment and potential oral options.

Examples of appropriate oral antibiotics:

IV antibiotic	Typical IV dose	Oral antibiotic	Typical oral dose
Amoxicillin	1g 6-8 hourly	Amoxicillin	500mg-1g tds
Co-amoxiclav	1.2g tds	Co-amoxiclav	625mg tds
Benzympenicillin	600mg- 2.4 qds	Amoxicillin	500mg – 1g tds
Flucloxacillin	500mg-2g qds	Flucloxacillin	500mg-1g qds
Cefuroxime [#]	750mg-1.5g tds	Co-amoxiclav	625mg tds
Clarithromycin	500mg bd	Clarithromycin	500mg bd
Erythromycin	500mg -1g qds	Erythromycin OR Clarithromycin	500mg-1g qds 500mg bd
*Ciprofloxacin	400mg bd	Ciprofloxacin	500mg-750mg bd
*Metronidazole	500mg tds	Metronidazole	400mg tds
Piperacillin-tazobactam	As no oral piperacillin-tazobactam available, seek advice. If no positive microbiology, co-amoxiclav 625mg tds po may be an option.		
*Moxifloxacin	400mg od	Moxifloxacin	400mg od

[#]Cefuroxime iv is mainly used for surgical prophylaxis. Oral cefuroxime is rarely indicated for treatment of infections and has poor bioavailability. Co-amoxiclav is a suitable alternative. Seek advice for alternative in penicillin allergic patients.

*Antibiotics with excellent oral bioavailability – use orally whenever possible.

APPENDIX 2: AMINOGLYCOSIDE MONITORING IN ADULTS

Gentamicin, tobramycin and amikacin levels should be monitored to minimise risk of renal toxicity or ototoxicity. In general, once daily aminoglycosides are recommended. Exceptions are for endocarditis, cystic fibrosis, major burns and pregnancy, where multiple daily dosing is recommended^{1,2}.

	Gentamicin / tobramycin OD	Amikacin OD	Gentamicin and tobramycin BD/TDS
Dose	5-7mg/kg iv once daily. Ideally given at 12 noon or earlier. Dose should not exceed 500mg per day. Use equation below on p53 for dosing in obese patients.	15mg/kg iv once daily, ideally given at 12 noon or earlier. Max 1.5g q24h. (Max cumulative dose 15g).	Endocarditis: gentamicin 1mg/kg q8-12h iv Tobramycin: 1-1.7mg/kg q8h iv
Reference range	Once daily gentamicin and tobramycin: pre-dose level $\leq 1\text{mg/L}$	Amikacin once daily dosing: pre-dose level $\leq 5\text{mg/L}$ Amikacin BD dosing: pre-dose level $\leq 10\text{mg/L}$	BD/ TDS gentamicin and tobramycin: Pre-dose level $\leq 2\text{mg/L}$ Post dose level 5-12mg/L Endocarditis gentamicin target levels: Pre-dose: $\leq 1\text{mg/L}$ Post-dose: 3-4mg/L
Administration	In 100mls NaCl over 1 hr	Dilute to 2.5mg/ml with NaCl, infuse over 30 min	iv bolus over 3-5 mins or infuse over 30 mins
When to monitor levels	Monitor pre- dose (trough) level: taken at least 18 hours after dose, or within 6 hours of next dose due. Initially monitor pre-dose level after first dose then every 48 hours or daily if renal function is poor.		Monitor pre-dose levels taken just prior to dose and post-dose levels taken one hour post dose. Initially monitor pre and post dose levels at 3 rd or 4 th dose, then monitor every 48 hours, or more often if renal function is poor.
Taking the sample	Send blood to microbiology, with the following information <ul style="list-style-type: none"> Name of antibiotic and prescribed dose Time and date level was taken (The sample will be meaningless without this information). The time and date of previous dose Whether it is a pre-dose or post-dose level 		
Interpreting results	<ul style="list-style-type: none"> You DO NOT need to wait for the result before administering the next dose unless specifically advised or patient has impaired renal function. <p>If result is high, first check that the level was taken at the correct time. In general, if the result is high, reduce the dose or increase the dosing interval. If in doubt, seek advice from Microbiology or Pharmacist</p>		