

## INTRAVENOUS ANTIBIOTIC DOSING FOR ADULT PATIENTS

DRUG	DOSE (grams)		INTERVAL (hours)		
	Usual Dose	High Dose	<65y.o., with CrCl>50	>65y.o., renal compromise	CrCl<10
Ampicillin (meningitis: 2gms q 4h)	1-2	2	6	8 (CrCl<20)	12
Azithromycin ( <i>Zithromax</i> )	500		24	24	24
Aztreonam ( <i>Azactam</i> )	1	2	6	12 (CrCl<30)	24
Cefazolin ( <i>Ancef</i> )	1		8	12 (CrCl<30)	24
Cefepime ( <i>Maxipime</i> )	1	2	12	24 (CrCl<30)	24
Cefotaxime ( <i>Claforan</i> ) (meningitis: 3gms q6h)	1	2	8	12 (CrCl<20)	24
Ceftazidime ( <i>Fortaz</i> )	1	2	8	12 (CrCl<50)	24
Ceftriaxone ( <i>Rocephin</i> ) (meningitis: 2gms q12h)	1	2	24	24	24
Ciprofloxacin ( <i>Cipro</i> )	0.2 - 0.4		12	24 (CrCl<30)	24
Imipenem/Cilastatin ( <i>Primaxin</i> )	0.5 - 1	1	6	12 (CrCl<30)	24
Levofloxacin ( <i>Levaquin</i> )	0.25 - 0.5		24	48 (CrCl<50)	48
Piperacillin/Tazobactam ( <i>Zosyn</i> )	3.375	4.5	6	8 (CrCl<30)	12
Ticarcillin/Clavulanate ( <i>Timentin</i> )	3.1		6	8 (CrCl<30)	12
Trimethoprim/Sulfamethoxazole ( <i>Bactrim</i> )	2 - 2.5	3.75 - 5	6	8-12	12-24
Vancomycin	1		12	24 (CrCl<50)	168 (1 wk)

CICr calculated by:  $(140 - \text{age}) \times (\text{Ideal wt in kg.})$   
 (Multiply result by 0.85 for females)  $(72) \times (\text{SeCr})$

**Legend:**

CAP = Community Acquired Pneumonia  
 HAP = Hospital Acquired Pneumonia  
 MIC = Minimal Inhibitory Concentration  
 CrCl = Creatinine Clearance  
 SeCr = Serum Creatinine

## NEW / OTHER AGENTS

1. **Cefepime:** this 4th generation cephalosporin covers a wider spectrum than other cephalosporins. Its gram negative activity is comparable to ceftazidime but also includes *Enterobacter* spp., and its gram positive activity has been compared to ceftriaxone. Its anaerobic activity is weak especially against *B. fragilis*.

2. **Levofloxacin:** this 3rd generation fluoro-quinolone is indicated for the treatment of mild to moderate infections due to many gram positive, gram negative and atypical organisms. It is marketed for use in CAP and other moderate infections. Based on MIC, its activity is less against *Pseudomonas* than ciprofloxacin.

3. **Aztreonam:** this monobactam is mainly indicated for the treatment of gram negative infections in patients allergic to beta-lactam antibiotics. Its spectrum is comparable to an aminoglycoside and may be used in situations where an aminoglycoside is considered risky. When combined, a drug with a different mechanism of action should be used.

4. **Quinupristin / Dalfopristin (Synercid):** this streptogramin combination antibiotic is bacteriostatic against *E. faecium* and bactericidal against methicillin-susceptible and methicillin-resistant *Staphylococci*. The drug is ineffective against *E. faecalis*. Synercid should be reserved for cases of resistant gram positive infections, including VRE and MRSA. The drug is cleared primarily via biliary/fecal elimination, so dose adjustment is not recommended in renal dysfunction. Synercid is a major inhibitor of the cytochrome P450-3A4 isoenzyme and interactions should be expected with drugs metabolized via this pathway.

5. **Linezolid (Zyvox):** this oxalodione antibiotic is bacteriostatic against *Enterococci* and *Staphylococci*, and bactericidal against *Streptococci*. Linezolid is 100% orally bioavailable and is marketed in IV and PO formulations. The drug is primarily cleared via hepatic metabolism, and while renal dysfunction does not affect the parent drug, its metabolites may accumulate in such patients. Linezolid should be reserved for resistant organisms such as VRE and MRSA.

YOUR HOSPITAL  
WASHINGTON, D.C.

# SYSTEMIC ANTIBIOTIC SUSCEPTIBILITY REPORT

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## BLOOD ISOLATES

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CDC Vancomycin Usage Guidelines	xxxx Hospital Washington, D.C.	PERCENT SUSCEPTIBLE																		
<p>1. For treatment of infections caused by beta-lactam resistant organisms.</p> <p>2. For treatment of gram positive infections in patients with serious beta-lactam allergies.</p> <p>3. For treatment of antibiotic induced colitis which is unresponsive to metronidazole.</p> <p>4. AHA recommended endocarditis prophylaxis in high risk patients.</p> <p>5. As prophylaxis for major surgical procedures involving prosthetic devices.</p> <p>☞ For indications not in CDC guidelines, 48 hours of drug will be dispensed. Proof of appropriate indication is needed for continued dispensing.</p> <p><b>MICROBIOLOGY SENSITIVITY REQUESTS</b> Cefepime, Levofloxacin* &amp; Aztreonam are not available on the Rapid Microscan Panel. Microorganisms can be tested against these antibiotics, but require an additional 24-72 hours for lab processing.</p> <p>🔊 Request additional antibiotics at culture &amp; sensitivity request time. Rapid Panel will be reported in the normal timeframe; additional antibiotics 24 hours later. Microorganisms are kept in lab for 12 hours (for sensitivity reporting) and then discarded (usually by 10am next morning). All efforts will be made to honor additional antibiotics requests submitted after the Rapid Microscan Panel has been reported.</p> <p>** Gentamicin is 1st choice (due to economics &amp; susceptibility patterns) unless C+S dictates otherwise. *** Piperacillin is not on formulary; Piperacillin / Tazobactam (Zosyn) are &amp; have broader spectrum.</p> <p>☞ See Back panel for more antibiotic information.</p>	Antibiotic Susceptibility Report Blood Isolates 1/1/2000 to 12/31/2000 MICROORGANISMS	Number of Isolates	Vancomycin	Penicillin	Erythromycin	Clindamycin	Oxacillin / Nafcillin	Amoxicillin / Clavulanate	Ampicillin	Ampicillin / Sulbactam	Ticarcillin / Clavulanate	Cefazolin	Cefotaxime	Ceftazidime	Imipenem / Cilastatin	Ciprofloxacin	Gentamicin	Levofloxacin	Tobramycin	Ceftriaxone
	Staphylococcus aureus	304	100	12	41	64	56	56				55				49	83	47		
	Staphylococcus coagulase negative	340	100	8	29	61	28	28				27				38	62	52		
	Enterococcus spp.	70	89	76	16				81						92	30		14		
	Escherichia coli	91							65	66	96	97	99		100	98	99	100		99
	Klebsiella pneumoniae	40							3	50	93	93	100		98	98	98	100		100
	Klebsiella oxytoca	1									100	100	100		100	100	100			100
	Enterobactercloacae	3										33		33	100	33	33	100		33
	Enterobacter aerogenes	2									100	50	100		100	100	100	100		50
	Pseudomonas aeruginosa	25									43		8	68	65	44	56	40	76	8