

Penicillins & Related Antibiotics

		β-LACTAMASE-SUSCEPTIBLE					β-LACTAMASE-RESISTANT														
		Nonantipseudomonal		Antipseudomonal			Antistaphylococcal				Others										
		AMOXICILLIN	AMPIRICILLIN	PENICILLIN G	PENICILLIN V	AZLOCILLIN	MEZLOCILLIN ^a	PIPERACILLIN ^a	TICARCILLIN ^a	CLOXA CILLIN	DICLOXA CILLIN	METHICILLIN	Nafcillin	Oxacillin	AMOXICILLIN/CLAVULANATE	AMPIRICILLIN/SULBACTAM	PIPERACILLIN/CLAVULANATE	TICARCILLIN/CLAVULANATE	AZTREONAM	IMIPENEM/CLASTATIN (CARBAPENEM)	Carbapenems
GRAM-POSITIVE AEROBES	Cocci	Staphylococcus aureus:	non-penicillinase-producing	2	2	1	1	3	3	2	2	2	2	2	2	2	2	2	2	2	2
			penicillinase-producing <i>MSSA</i>							1	1	1	1	1	2	2	2	2	2	2	2
			methicillin-resistant ^b <i>MRSA</i>							1	1	1	1	1	2	2	2	2	2	2	2
		Staphylococcus epidermidis:	non-penicillinase-producing	2	2	1	1	3	3	3	2	2	2	2	2	2	2	2	2	2	2
			penicillinase-producing							1	1	1	1	1	2	2	2	2	2	2	2
			methicillin-resistant ^b																		
	Bacilli	Streptococcus group A (<i>S. pyogenes</i>)	2	2	1	1	2	2	2	3	3	3	3	3	2	2	2	2	2	2	2
		Streptococcus group B	1	1	1	1	1	1	2						2	2	2	2	2	2	2
		Streptococcus enterococcal (eg, <i>E. faecalis</i> ^b)	1	1	2		2	2							3	2	2	2	2	2	2
		group D: nonenterococcal (eg, <i>S. bovis</i>)	2	2	1	1	3	3	3						2	2	3	3	2	2	2
		Streptococcus pneumoniae	2	2	1	1	2	2	3						2	2	2	3	2	2	2
GRAM-NEGATIVE AEROBES	Cocci	Streptococcus viridans	2	2	1	1	3	3	3	3	3	3	3	3	2	2	3	3	2	2	2
		Bacillus anthracis					1	1													
		Corynebacterium diphtheriae ^c					2	2													
		Corynebacterium jeikeium																			
		Listeria monocytogenes ^d				1	1								2	2					
	Enteric bacilli	Moraxella (Branhamella) catarrhalis													1	1	2	2	2	2	2
		Neisseria gonorrhoeae ^e	1	1	1	3		2	2	2					1	1	2	2	2	2	2
		Neisseria meningitidis	2	2	1										2	2	2	2	2	2	3
		Citrobacter sp. ^f						2	2	2							2	2	2	2	1
		Enterobacter sp. ^g						2	2	2							2	2	2	2	1
Other bacilli	Enteric bacilli	Escherichia coli	2	2			2	2	2						2	2	2	2	2	2	2
		Klebsiella pneumoniae					3	3	3						2	2	2	2	2	2	2
		Morganella morganii					2	2	2						2	2	2	2	2	2	1
		Proteus mirabilis	1	1			2	2	2						2	2	2	2	2	2	2
		Proteus vulgaris					2	2	2						2	2	2	2	2	2	1
		Providencia stuartii					2	2	2						2	2	2	2	2	2	1
		Salmonella sp.	1	1											1	1	2	2	2	2	2
		Salmonella typhi	2	2											2	2					
		Serratia sp.					2		2	2					2		2	2	2	2	1
		Shigella sp.					2									2					
	Other bacilli	Yersinia enterocolitica						2	2	2	2				3	2	2	3	1		
		Acinetobacter sp.						2	2	2	2					2		2		2	
		Aeromonas hydrophila						2	2	2	2										
		Bordetella pertussis	2	2											2						
		Brucella sp. ^h																			
ANAEROBES	Gram +	Campylobacter jejuni			3																
		Francisella tularensis ⁱ																			
		Gardnerella vaginalis	2	2											2						
		Hemophilus ducreyi													2						
		Hemophilus influenzae ^j	1	1			3	3	3						1	1	2	2	2	2	2
	Gram -	Legionella pneumophila																			
		Pasteurella multocida	2	2	1	1	2		2						2						
		Pseudomonas aeruginosa ^k					1	1	1	1							2	2	2	2	2
		Pseudomonas cepacia						3							2		3				
		Pseudomonas (Xanthomonas) maltophilia															2				
Actinomycetes	Acid-fast	Vibrio cholerae																			
		Clostridium difficile ^l																			
		Clostridium perfringens					1	1	2	2	2					2	2	2	2	2	2
		Clostridium tetani					1	1	2	2	2					2	2	2	2	2	2
		Peptococcus sp.	2	2	1	1	2	2	2							2	2	2	2	2	2
	Chlamydia	Peptostreptococcus sp.	2	2	1	1	2	2	2							2	2	2	2	2	2
		Bacteroides fragilis						2	2	2					1	1	1	1	1	1	
		Bacteroides sp. ^m						3	3	3					1	1	1	1	1	1	
		Fusobacterium sp.					1			2					1	2	2	2	1		
		Mycobacterium avium-intracellulare ⁿ																			
Mycoplasma Rickettsia	Actinomycetes	Mycobacterium tuberculosis ^m																			
		Actinomyces israelii	1	1	1										3						2
		Nocardia sp.		2																	
		Chlamydia psittaci ^o																			
		Chlamydia pneumoniae (TWAR) ^p																			
	Mycoplasma Rickettsia	Chlamydia trachomatis ^q																			
		Mycoplasma pneumoniae ^r																			
		Ureaplasma urealyticum ^s																			
		Rickettsia sp.																			
		Borrelia burgdorferi (Lyme disease)	2	2	1	1															
Spirochetes	Spirochetes	Borrelia recurrentis			2	2															
		Leptospira sp.			1	1															
		Treponema pallidum			1	1															

Carbapenems

Meropenem

Er-tazepenem

Cephalosporins

		1st GENERATION	2nd GENERATION	3rd GENERATION		4th GEN		
GRAM-POSITIVE AEROBES	Cocci	Staphylococcus aureus: non-penicillinase-producing	1 1 1 1 1 1 1	2 2 2 2 3 3 3	2 2 2 2 2 2 2	2 2 2 2 2 2 2		
		penicillinase-producing <i>MSSA</i>	1 1 1 1 1 1 1	2 2 2 2 3 3 3	2 2 2 2 2 2 2	2 2 2 2 2 2 2		
		methicillin-resistant ^a <i>MRSA</i>	1 1 1 1 1 1 1	2 2 2 2 3 3 3	2 2 2 2 2 2 2	2 2 2 2 2 2 2		
	Streptococcus epidermidis: non-penicillinase-producing	1 1 1 1 1 1 1	2 2 2 2 3 3 3	3 2 2 2 3 2 2	3 2 2 2 3 2 2			
		penicillinase-producing	1 1 1 1 1 1 1	2 2 2 2 3 3 3	3 2 2 2 3 2 2	3 2 2 2 3 2 2		
		methicillin-resistant ^a	1 1 1 1 1 1 1	2 2 2 2 3 3 3	3 2 2 2 3 2 2	3 2 2 2 3 2 2		
		Streptococcus group A (<i>S. pyogenes</i>)	2 2 2 2 2 2 2	2 2 2 2 2 2 2	2 2 2 2 2 2 2	2 2 2 2 2 2 2		
		Streptococcus group B	2 2 2 2 2 2 2	2 2 2 2 2 2 2	2 2 2 2 2 2 2	2 2 2 2 2 2 2		
	Streptococcus group D: nonenterococcal (eg, <i>S. bovis</i>)	2 2 2 2 2 2 2	2 2 2 2 2 2 2	2 2 2 2 2 2 2	2 2 2 2 2 2 2			
		enterococcal (eg, <i>E. faecalis</i>)	2 2 2 2 2 2 2	2 2 2 2 2 2 2	2 2 2 2 2 2 2	2 2 2 2 2 2 2		
Streptococcus pneumoniae	2 2 2 2 2 2 2	2 2 2 2 2 2 2	2 2 2 2 2 2 2	2 2 2 2 2 2 2				
	Streptococcus viridans	2 2 2 2 2 2 2	2 2 2 2 2 2 2	2 2 2 2 2 2 2	2 2 2 2 2 2 2			
GRAM-NEGATIVE AEROBES	Bacilli	Bacillus anthracis						
		Corynebacterium diphtheriae ^c						
		Corynebacterium jeikeium						
		Listeria monocytogenes ^d						
	Cocci	Moraxella (Branhamella) catarrhalis		2 2 2 2 2 2 2	2 2 1 1 2 2 1	1 2 1 1 2 2 1	1 2 1 1 2 1	
		Neisseria gonorrhoeae ^e		2 2 2 2 1 1 2	2 2 1 1 2 2 1	1 2 2 2 1 1 2	1 1 2 2	
		Neisseria meningitidis			2	2	2	2
		Citrobacter sp. ^f					1 1 1 1 1 1 1	1
		Enterobacter sp. ^g					2 2 2 2 2 2 2	1
		Escherichia coli	2 1 2 1 1 1 1	1 1 1 1 1 1 1	1 1 1 1 1 1 1	1 1 1 1 1 1 1	U 1 1 1 1 1 1	1 1 1 1 1 1 1
Enteric bacilli	Klebsiella pneumoniae	2 1 2 1 1 1 1	1 1 1 1 1 1 1	1 1 1 1 1 1 1	1 1 1 1 1 1 1	3 1 1 1 1 1 1	1 1 1 1 1 1 1	
	Morganella morganii		2	2 3	3 1 1	1 1 1 1 1 1 1	1 1 1 1 1 1 1	
	Proteus mirabilis	2 1 2 1 1 1 1	2 2 2 2 2 2 2	2 2 2 2 2 2 2	2 2 2 2 2 2 2	2 2 2 2 2 2 2	2 2 2 2 2 2 2	
	Proteus vulgaris		2	2 2	2 1 1	1 1 1	1 1 1	
	Providencia stuartii		1	1 1	2 1 1	1 1 1	1 1 1	
	Salmonella sp.						2	
	Salmonella typhi						2	
	Serratia sp.		2	2 3	2 1 1	1 1 1	1	
	Shigella sp.						2	
	Yersinia enterocolitica		2	2	2	2	2	
Other bacilli	Acinetobacter sp.				3 3	2 3 3	2	
	Aeromonas hydrophila		3	3 3 2	2 1	2 1 1	1	
	Bordetella pertussis							
	Brucella sp. ^h							
	Campylobacter jejuni							
	Francisella tularensis ⁱ							
	Gardnerella vaginalis							
	Hemophilus ducreyi					2	1	
	Hemophilus influenzae ^j	3 3 3 3 3 3 2	2 2 2 2 2 2 2	1 2 1 1 1 1 1	2 2 2 2 2 2 2	1 1 1 1 1 1 1	2 1 1 1 1 1 1	
	Legionella pneumophila							
ANAEROBES	Pasteurella multocida	3 3 3	2 2	2 1	2 2	2 2	2	
	Pseudomonas aeruginosa ^k				2 3	1 3 3	1	
	Pseudomonas cepacia				2	2		
	Pseudomonas (Xanthomonas) maltophilia				3	3		
	Vibrio cholerae							
	Clostridium difficile ^l							
	Clostridium perfringens							
	Clostridium tetani	2	2	2 2 2	3 2	3 2	2	
	Peptococcus sp.	2	2	2 2 2	3 2	3 2	2	
	Peptostreptococcus sp.	2	2	2 2 2	3 2	3 2	2	
Gram -	Bacteroides fragilis		2	2 2	3	3	2	
	Bacteroides sp. ^l		2	3 2	3	3		
	Fusobacterium sp.		2	2 2	3	3		
Acid-fast	Mycobacterium avium-intracellulare ^m						3	
	Mycobacterium tuberculosis ^m							
Actinomycetes	Actinomyces israelii				2			
	Nocardia sp.							
Chlamydia	Chlamydia psittaci ⁿ							
	Chlamydia pneumoniae (TWAR) ⁿ							
	Chlamydia trachomatis ⁿ							
Mycoplasma	Mycoplasma pneumoniae ⁿ							
	Ureaplasma urealyticum ⁿ							
Rickettsia	Rickettsia sp.							
	Borrelia burgdorferi (Lyme disease)				1	1		
Spirochetes	Borrelia recurrentis							
	Leptospira sp.							
	Treponema pallidum						2	

Aminoglycosides, Macrolides, Quinolones & Other Antibiotics

		AMINO-GLYCOSIDES				MACRO-LIDES		QUINO-LONES			OTHER ANTIBIOTICS				UTI AGENTS									
		AMIKACIN	GENTAMICIN	NETILMICIN	STREPTOMYCIN	TOBRAMYCIN	AZTHROMYCYIN	CLARITHROMYCYIN	ERYTHROMYCYIN	CIPROFLOXACIN ^{b,p}	ENOXACIN ^{b,q}	LOMEFLOXACIN ^{c,p}	NORFLOXACIN ^{c,p,q}	OFLOXACIN ^{c,p}	CHLORAMPHENICOL	CLINDAMYCIN	METRONIDAZOLE	RIFAMPIN	SULFONAMIDES	TETRACYCLINES ^{d,e}	TRIMETHOPRIM-SULFAMETHOXAZOLE	VANCOMYCIN	INDANYL CARBENICILLIN	NITROFURANTOIN
GRAM-POSITIVE AEROBES	Cocci	Staphylococcus aureus:	non-penicillinase-producing	3		3	2	2	2	2	2	U	2	2	2	2	2	2	3	2	2	U	U	
			penicillinase-producing MSSA	3		3	2	2	2	2	2	U	2	2	2	2	2	2	3	2	2	2	1	
			methicillin-resistant ^a MRSA	2						3	3	U	3					2	2	2	2	2		
		Staphylococcus epidermidis:	non-penicillinase-producing	3		3				2	U	2	U	2				2	2	2	2	2		
			penicillinase-producing	2						2	U	2	U	2				2	2	2	2	2		
			methicillin-resistant ^a	2						3	3	U	3					2	2	2	2	2		
		Streptococcus group A (S. pyogenes)			2	2	2	3			3	3	3		2				2	2	U	U		
		Streptococcus group B			2	2	2	3			3	U	3		2				2	2	U	U		
		Streptococcus group D:	enterococcal (eg, E. faecalis) ^b	3	1	2	2			3	3	U	3	3					1	U	U	U		
			nonenterococcal (eg, S. bovis)	3	3	3	3											2	2	U	U	U		
		Streptococcus pneumoniae			2	2	2	3			3	3	3	2				2	2	2	2	2		
		Streptococcus viridans			2	2	2	3			3	3	3	3				2	2	2	2	2		
GRAM-NEGATIVE AEROBES	Bacilli	Bacillus anthracis						2	2									2						
		Corynebacterium diphtheriae ^c							1								3	3						
		Corynebacterium jeikeium		2	2	2	2		2	3		3	3							1				
		Listeria monocytogenes ^d		2	2	2	2	2	2					2				2	2	2	2			
		Moraxella (Branhamella) catarrhalis			2	2	2	1		2	1		1					2	1					
		Neisseria gonorrhoeae ^e			2	2	3	2		U	2	U	2					3	2					
		Neisseria meningitidis						2	2	2	2						3	3	2					
		Citrobacter sp. ^f	1	1	1	1				1	3	U	1						2	U	U	U		
		Enterobacter sp. ^g	1	1	1	1				1	U	1	U	1				U	2	U	U	U		
		Escherichia coli	2	2	2	2		2		1	U	1	G	1				U	3	2	U	U		
		Klebsiella pneumoniae	2	2	2	2		2		1	U	1	U	1				U	2			U		
		Morganella morganii	2	2	2	2				1	1	U	1					U	3	2		U		
GRAM-NEGATIVE AEROBES	Enteric bacilli	Proteus mirabilis	2	2	2	2				1	U	1	U	1				U	2	1	U	U		
		Proteus vulgaris	2	2	2	2				1	U	1	U	1				U	2	1	U	U		
		Providencia stuartii	1	2	2	2				1	3	U	1					1	1	U				
		Salmonella sp.	3	3	3	3				2	2	G	2	2			2	1						
		Salmonella typhi	3	3	3	3				1	1	1	1					2						
		Serratia sp.	1	1	1	2				1	1	U	1					2			U			
		Shigella sp.	3	3						1	1	G	1	2			2	2	1					
		Yersinia enterocolitica	2	2	2	2				1	2	G	1					2	1					
		Acinetobacter sp.	1	1	2			1			2	3		2								U		
		Aeromonas hydrophila	1	1	2		2			1	1	G	1	2				2	1					
ANAEROBES	Other bacilli	Bordetella pertussis					2	2	1		1	1	1	1				3	2					
		Brucella sp. ^h	2	1	1	1				1	1	1	1	1				1	1	1	2			
		Campylobacter jejuni	2	2	2	2	2	2	1	1	1	G	1	2				2						
		Francisella tularensis ^h	1	1	1	1	1							2				2						
		Gardnerella vaginalis								2	3		2		2	1								
		Hemophilus ducreyi	2	2	2	2	2	2	1	1	1	1	1	2				2	2	1				
		Hemophilus influenzae ⁱ					2	2		1	1	1	1	2				3	2	1				
		Legionella pneumophila					2	2	1	2	2	2	2					2						
		Pasteurella multocida						2	2	3	2	2	2	2				2	2	2				
		Pseudomonas aeruginosa ^j	1	1	1	1				1	U	3	U	2								U		
Gram +	Gram +	Pseudomonas cepacia	2	2	2	2				3	3	U	3	2					1					
		Pseudomonas (Xanthomonas) maltophilia	2	2	2	2				2	3		2	2					1					
		Vibrio cholerae								2	2	2	2					1	2					
		Clostridium difficile ^k													1				1					
		Clostridium perfringens								3	3	3			2	2	2	3						
Gram -	Gram -	Clostridium tetani								3	3	3			2	2	2	2						
		Peptococcus sp.								3	3	3			2	2	3	2						
		Peptostreptococcus sp.								3	3	3			2	2	3	2						
		Bacteroides fragilis													2	2	1	3						
Acid-fast	Actinomycetes	Bacteroides sp.													2	2	1	3						
		Fusobacterium sp.													2	2	1	3						
		Mycobacterium avium-intracellulare ^m	2							1	1	2		2			3							
Chlamydia	Mycoplasma	Mycobacterium tuberculosis ^m	3	3	2					3	3	3												
		Actinomyces israelii								2					3	3		2						
		Nocardia sp.	2	2	2	2				2							1	2	1					
Rickettsia	Spirochetes	Chlamydia psittaci ⁿ								2					2				1					
		Chlamydia pneumoniae (TWAR)								2									1					
		Chlamydia trachomatis ⁿ								1	2	1	3		3	2		3	1					
Mycoplasma	Rickettsia	Mycoplasma pneumoniae ⁿ								2	2	1	3		3	3		1						
		Ureaplasma urealyticum ⁿ								2	2	1	3		3	U	3		2					
		Rickettsia sp.									3				3	2			1					
Rickettsia	Spirochetes	Borrelia burgdorferi (Lyme disease)								2	2								1					
		Borrelia recurrentis									1				2				1					
		Leptospira sp.																2						
Spirochetes		Treponema pallidum								3	3	3						2						

ANTIBIOTIC GENERIC / BRAND NAMES

Amoxicillin (Amoxil) – PO

Amoxicillin / Clavulanate (Augmentin) - PO

Ampicillin / Sulbactam (Unasyn) – IV

Piperacillin / Tazobactam (Zosyn) – IV

Imipenem / Cilastatin (Primaxin) – IV

Meropenem (Merrem) – IV

Ertapenem (Invanz) – IV

Cefazolin (Ancef) – IV

Cephalexin (Keflex) – PO

Cefotetan (Cefotan) – IV

Cefoxitin (Mefoxin) – IV

Cefuroxime (Zinacef) – IV

Cefuroxime Axetil (Ceftin) – PO

Ceftazidime (Fortaz) – IV

Ceftriaxone (Rocephin) – IV

Cefepime (Maxipime) – IV

Gentamicin (Garamycin) – IV

Tobramycin (Nebcin) – IV

Erythromycin (Erythrocin) – IV & PO

Clarithromycin (Biaxin) – PO

Azithromycin (Zithromax, Z-Pak) – IV & PO

Ciprofloxacin (Cipro) – IV & PO

Levofloxacin (Levaquin) – IV & PO

Clindamycin (Cleocin) – IV & PO

Metronidazole (Flagyl) – IV & PO

Trimethoprim / Sulfamethoxazole (Bactrim, Septra) – IV & PO

Vancomycin (Vancocin) – IV & PO (oral → C. diff)

ANTIVIRALS

Acyclovir (Zovirax) – IV & PO

Oseltamivir (Tamiflu) - PO