

Organism susceptibility to antibacterials: cephalosporins

The following table provides a guide to clinical antibacterial susceptibilities. The table is not intended to supplant management advice from clinical microbiologists or infectious diseases specialists but rather to assist empirical selection of antibacterials in the absence of laboratory confirmation of susceptibility. Data should be considered with knowledge of local susceptibility patterns.

The designation of susceptibility used in the table is 75%. Thus in most situations, 3 out of 4 patients with infections caused by listed pathogens can be expected to respond. Conversely, up to 1 in 4 patients may require alternative treatment due to antibacterial resistance. When in doubt seek specialist advice.

Organism	Cephalosporins							
	Moderate spectrum			Broad spectrum				
	cefalexin, cefalotin, cefazolin	cefaclor, cefuroxime	cefroxitin	cefotaxime, ceftriaxone	cefepime	ceftaroline	ceftazidime	ceftolozane with tazobactam
Gram-negative								
<i>Acinetobacter</i> spp.								
<i>Aeromonas</i> spp.				1	1	1	1	
<i>Burkholderia cepacia</i>								
<i>Burkholderia pseudomallei</i>						2		
<i>Campylobacter jejuni</i> and <i>coli</i>								
<i>Citrobacter freundii</i>				1	1	1	1	
<i>Enterobacter</i> spp.				1	1	1	1	
<i>Escherichia coli</i>								
<i>Haemophilus influenzae</i>								
<i>Klebsiella</i> spp.								
<i>Moraxella catarrhalis</i>								
<i>Morganella</i> spp.				1	1	1	1	
<i>Neisseria gonorrhoeae</i>								
<i>Neisseria meningitidis</i>								
<i>Pasteurella multocida</i>								
<i>Proteus mirabilis</i>								
<i>Proteus vulgaris</i>				1	1	1	1	
<i>Providencia</i> spp.				1	1	1	1	
<i>Pseudomonas aeruginosa</i>								
<i>Salmonella</i> spp.								
<i>Serratia</i> spp.				1	1		1	
<i>Shigella</i> spp.								
<i>Stenotrophomonas maltophilia</i>								
<i>Yersinia</i> spp.								
¹	use of broad-spectrum cephalosporins may result in emergence of resistance and treatment failure							
²	sensitive <i>in vitro</i> , insufficient or limited clinical data							
³	ceftriaxone used with amoxicillin for synergistic effect							
⁴	MRSA: implies resistance to all beta-lactams (except ceftaroline)							
⁵	includes <i>Staphylococcus epidermidis</i>							
⁶	can be used if sensitive to beta-lactam antibacterial							
⁷	cefaclor is resistant							
⁸	may be used with other agents							
Legend								
	sensitive							
	resistant							
	no data available or antibacterial not recommended							

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Gram-positive								
<i>Corynebacterium jeikeium</i>								
<i>Enterococcus faecalis</i>				3		2		
<i>Enterococcus faecium</i>								
<i>Listeria</i> spp.								
<i>Staphylococcus aureus</i>								
<i>Staphylococcus aureus</i> (MRSA) ⁴								
<i>Staphylococcus saprophyticus</i>								
Coagulase-negative staphylococci ⁵	6				6			
<i>Streptococcus</i> - group A, B, C, G								
<i>Streptococcus anginosus</i>								
<i>Streptococcus pneumoniae</i>								
Viridans streptococcus group		7						
Anaerobes								
<i>Actinomyces</i>								
<i>Bacteroides fragilis</i> group								
<i>Clostridium difficile</i>								
<i>Clostridium perfringens</i>								
<i>Fusobacteria</i> spp.						2		
<i>Peptostreptococcus</i> spp.						2		
<i>Prevotella melaninogenica</i>								
<i>Propionibacterium</i>								
Miscellaneous								
<i>Chlamydomphila, Chlamydia</i> spp.								
<i>Legionella</i> spp.								
<i>Mycobacterium avium</i> complex								
<i>Mycobacterium tuberculosis</i>								
<i>Mycoplasma pneumoniae</i>								
<i>Nocardia</i> spp.				8				
¹ use of broad-spectrum cephalosporins may result in emergence of resistance and treatment failure ² sensitive <i>in vitro</i> , insufficient or limited clinical data ³ ceftriaxone used with amoxicillin for synergistic effect ⁴ MRSA: implies resistance to all beta-lactams (except ceftaroline) ⁵ includes <i>Staphylococcus epidermidis</i> ⁶ can be used if sensitive to beta-lactam antibacterial ⁷ cefaclor is resistant ⁸ may be used with other agents								
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