

Beta-lactam Antibiotic Cross-Allergy Chart

Beta-lactams	AMOXICILLIN*	AMPICILLIN	CLOXACILLIN	PENICILLIN	PIPERACILLIN*	CEFADROXIL	CEFAZOLIN	CEPHALEXIN	CEFOXITIN	CEFPROZIL	CEFUROXIME	CEFIXIME	CEFOTAXIME	CEFTAZIDIME	CEFTRIAXONE	CEFEPIME	ERTAPENEM	IMIPENEM	MEROPENEM
AMOXICILLIN*	Black	X ¹	X ⁵	X ⁴	X ⁵	X ¹	✓	X ¹	✓	X ²	✓	✓	✓	✓	✓	✓	✓	✓	✓
AMPICILLIN	X ¹	Black	X ⁵	X ⁴	X ⁵	X ²	✓	X ²	✓	X ²	✓	✓	✓	✓	✓	✓	✓	✓	✓
CLOXACILLIN	X ⁵	X ⁵	Black	X ⁵	X ⁵	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
PENICILLIN	X ⁴	X ⁴	X ⁵	Black	X ⁵	✓	✓	✓	X ³	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
PIPERACILLIN*	X ⁵	X ⁵	X ⁵	X ⁵	Black	X ³	✓	X ³	✓	X ³	✓	✓	✓	✓	✓	✓	✓	✓	✓
CEFADROXIL	X ¹	X ²	✓	✓	X ³	Black	✓	X ¹	✓	X ²	✓	✓	✓	✓	✓	✓	✓	✓	✓
CEFAZOLIN	✓	✓	✓	✓	✓	✓	Black	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
CEPHALEXIN	X ¹	X ²	✓	✓	X ³	X ¹	✓	Black	✓	X ²	✓	✓	✓	✓	✓	✓	✓	✓	✓
CEFOXITIN	✓	✓	✓	X ³	✓	✓	✓	✓	Black	✓	X ²	✓	✓	✓	✓	✓	✓	✓	✓
CEFPROZIL	X ²	X ²	✓	✓	X ³	X ²	✓	X ²	✓	Black	✓	✓	✓	✓	✓	✓	✓	✓	✓
CEFUROXIME	✓	✓	✓	✓	✓	✓	✓	✓	X ²	✓	Black	X ³	X ¹	X ³	X ¹	X ²	✓	✓	✓
CEFIXIME	✓	✓	✓	✓	✓	✓	✓	✓	✓	X ³	✓	Black	X ³	X ³	X ³	X ³	✓	✓	✓
CEFOTAXIME	✓	✓	✓	✓	✓	✓	✓	✓	✓	X ¹	X ³	Black	✓	X ³	X ¹	X ¹	✓	✓	✓
CEFTAZIDIME	✓	✓	✓	✓	✓	✓	✓	✓	✓	X ³	X ³	X ³	Black	X ³	X ³	X ³	✓	✓	✓
CEFTRIAXONE	✓	✓	✓	✓	✓	✓	✓	✓	✓	X ¹	X ³	X ¹	X ³	Black	X ¹	X ¹	✓	✓	✓
CEFEPIME	✓	✓	✓	✓	✓	✓	✓	✓	✓	X ²	X ³	X ¹	X ³	X ¹	Black	✓	✓	✓	✓
ERTAPENEM	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Black	X ⁵	X ⁵
IMIPENEM	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	X ⁵	Black	X ⁵
MEROPENEM	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	X ⁵	X ⁵	Black

* Also applies to beta-lactamase inhibitor combinations (amoxicillin-clavulanate and piperacillin-tazobactam)

AVOID ALL beta-lactam antibiotics if:

- ICU admission related to allergy
- Delayed beta-lactam antibiotic allergy causing:
 - interstitial nephritis
 - hepatitis
 - hemolytic anemia
- Delayed severe skin allergic reactions:
 - Stevens-Johnson syndrome
 - toxic epidermal necrolysis
 - exfoliative dermatitis
 - acute generalized exanthematous pustulosis (AGEP)
 - drug reaction with eosinophilia and systemic symptoms (DRESS)

LEGEND:

Penicillins	
1st Generation Cephalosporins	
2nd Generation Cephalosporins	
3rd Generation Cephalosporins	
4th Generation Cephalosporins	
Carbapenems	
✓	Different structure. CONSIDERED SAFE TO PRESCRIBE
Reaction likely based on side chain:	
X ¹	Same side chain - clinical evidence of cross reaction. AVOID
X ²	Same side chain - Theoretical risk of cross reaction, no clinical studies. AVOID
X ³	Similar side chain - Potential for cross reaction. USE WITH CAUTION: Monitor first dose closely (vital signs at 15, 30, and 60 minutes post-first dose)
Reaction likely based on Beta-lactam ring:	
X ⁴	Clinical evidence of cross reaction. AVOID
X ⁵	Theoretical risk of cross reaction, no clinical studies. AVOID