

Penicillin allergy reported

Obtain History:

- Symptoms
- How long ago did reaction occur
- Onset of symptoms following drug administration
- Was treatment required for allergy
- Prior allergy testing

History ruling out or low suspicion of IgE-mediated reaction:

- Maculopapular or morbilliform rash
- Isolated pruritus
- GI intolerance (nausea, vomiting, or diarrhea)
- Headache
- Family member experienced allergy to penicillin
- Unknown reaction > 10 years ago

Eligible for all cephalosporins

History suggestive of IgE-mediated reaction or recent unknown reaction:

- Full body hives/urticarial reaction
- Positive PCN allergy test
- Unknown reaction < 10 years ago

Eligible for cefazolin or cephalosporin with different side chain

Life-threatening delayed hypersensitivity reaction:

- Blistering disorders such as Stevens-Johnsons Syndrome, Toxic Epidermic Necrolysis or Erythema Multiforme
- Interstitial nephritis
- Hemolytic anemia
- DRESS
- Organ Involvement

Recommend non beta-lactam antibiotic

- Cefazolin shares no side chains with penicillin, penicillin-like, or other cephalosporin antibiotics, which are primary driver of Ig-E mediated cross-reactions
- The risks vs benefits of using alternative antibiotics (clindamycin, vancomycin, fluoroquinolones) for surgical prophylaxis should be determined on a case-by-case basis
- Cefazolin can be considered in patients with non life-threatening allergic reactions to other cephalosporins due to lack of side chain similarity
- Patients with anaphylaxis, throat swelling, angioedema, wheezing, or hypotension to penicillin can be considered for cefazolin or cephalosporin with different side chain on a case-by-case basis

Beta-Lactam Cross-Reactivity		Penicillins					Cephalosporins											Mono
		Penicillin	Oxacillin	Amoxicillin	Ampicillin	Piperacillin	Cefadroxil	Cephalexin	Cefazolin	Cefuroxime	Cefoxitin	Cefdinir	Ceftriaxone	Cefotaxime	Ceftazidime	Cefepime	Ceftaroline	Aztreonam
Penicillins	Penicillin			+	+		+	+										
	Oxacillin																	
	Amoxicillin	+			+		X	+										
	Ampicillin	+		+		+	+	X										
	Piperacillin				+		+	+										
Cephalosporins	Cefadroxil	+		X	+	+		+										
	Cephalexin	+		+	X	+	+											
	Cefazolin																	
	Cefuroxime										X		+	+	+			
	Cefoxitin									X								
	Cefdinir																	
	Ceftriaxone								+					X	+	X	+	
	Cefotaxime								+				X		+	X	+	
	Ceftazidime								+				+	+			+	X
	Cefepime												X	X			+	
	Ceftaroline												+	+	+	+		
	Aztreonam														X			
Mono																		



Cross reaction likely



Cross reaction less likely



Cross-reaction unlikely