

# Penicillin Allergies



Cross sensitivity, how to avoid it without avoiding all beta lactams.

**10%** of the US population reports a penicillin allergy.

**99%** of these allergies do not correspond with a true IgE allergy.

Resulting in decreased use of beta lactam antibiotics



Increased incidence of antimicrobial resistance, treatment failures, and higher healthcare costs

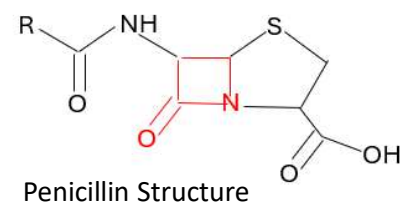


Most beta lactams do not share R side chains and can be used as alternative agents in the face of true allergy. For example: cephalosporins can often be used in a penicillin allergic patient.

Desensitization can be done for patients with true allergies and no alternative agents.

True penicillin allergies are considered IgE mediated Type I hypersensitivity reactions: anaphylaxis, angioedema, etc.

While the beta lactam ring, highlighted in red, is shared by many antibiotics, the cross reactivity is thought to be related to antibodies formed against the R<sub>1</sub> side chains.



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