

Susceptibility of  
 **$\beta$ -lactam antibiotics**  
depends on



**FACTORS**

To meet the desired expectation of  $\beta$ -lactam antibiotics, the required **3 FACTORS** are...

- **Binding to the target PBPs** (responsible for the final stages of peptidoglycan biosynthesis)
- **High stability against  $\beta$ -lactamase** especially plasmid mediated  $\beta$ -lactamase enzyme
- **Outer membrane permeability** especially in gram negative bacteria

\*PBP = Penicillin Binding Protein

## Cefuroxime is a classical 2nd generation antibiotic

which exhibits...

- **High affinity to bind PBPs** (PBP1A, PBP1B, PBP3). Inhibition of these proteins leads to bacterial cell elongation & leakage & eventual cell death
- **Not only  $\beta$ -lactamase stability, but also plasmid mediated  $\beta$ -lactamase stability**
- **High affinity to PBPs ensures excellent bacterial membrane permeability**

Thus, Cefuroxime shows broad spectrum coverage against **gram-positive, gram-negative & anaerobic** bacteria



offers



# TIL

Cefuroxime Axetil

250 mg, 500 mg Film Coated Tablet  
& 125 mg / 5 ml PFS

*An antibiotic with  
supreme coverage*

Available as



FDA

Approved

Pregnancy Category B



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