

# PENICILLIN

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Its trade name is bicillin C-R •  
It is one of the natural penicillin •

# *Mechanism of action*

Inhibit bacterial cell wall synthesis by • binding to one or more of the penicillin binding proteins (PBPS); which in turn inhibits final transpeptidation step in of peptidoglycan synthesis in bacterial cell wall , thus inhibit cell wall biosynthesis .

## *Contraindication and caution*

Hypersensitivity to penicillin or any •  
component

We should use it with caution in patient •  
with impaired renal function , impaired  
cardiac function or seizer disorder

# Drug Interaction

- Aminoglycosides: may be synergistic against selected organism •
- Oral contraceptive: the effect may be reduced •
- Probenecid , disulfiram: may increase penicillin level •
- Tetracycline :may decrease penicillin effectiveness •
- Warfarin:increase the effect of it •

# *Side effect*

- Convulsions •
- Hemolytic anemia •
- Positive coombs reaction •
- Acute interstitial nephritis •

# *pharmacokinetic*

It can cross placenta, appears in breast •  
milk and can penetrate BBB

It will metabolite in the liver (30%)to •  
penicilloic acid

Child and adult half life is 20-50 min and •  
end-stage renal disease ;3.3-5.1hours

# Dosage

It is available as potassium , benzathine •  
and procaine salt .

As potassium salt are

- less than 30 lb; 600000 units in single dose
- 30-60 lb ;900000 units to 1.2 million units  
in single dose
- more than 60 lb: 2.4 million units in single  
dose



Thank you •