

# Dicloxacillin

## Antibiotic Class:

Penicillin (penicillinase-resistant penicillin)

## Antimicrobial Spectrum:

*Staphylococcus spp.*, *Streptococcal spp.*

## Mechanism of Action:

Exerts bactericidal activity via inhibition of bacterial cell wall synthesis by binding one or more of the penicillin binding proteins (PBPs). Exerts bacterial autolytic effect by inhibition of certain PBPs related to the activation of a bacterial autolytic process.

## Pharmacodynamics:

Penicillins produce time-dependent killing

## Pharmacokinetics:

Cmax: 10-17mcg/ml; Oral bioavailability: 37% ; Half-life: 0.8 hours; Table 6

## Adverse Effects:

Hematologic: agranulocytosis, eosinophilia, hemolytic anemia, neutropenia, inhibition of platelet aggregation

Renal: interstitial nephritis

CNS: seizures

Other: Jarisch-Herxheimer Reaction (fever, chills, sweating, tachycardia, hyperventilation, flushing, and myalgia)

## Dosage:

Adults: 125-250 mg po q6h

Pediatric: > 1 month and < 40 kg: 12.5 - 25 mg/kg/day po in 4 divided doses

≥ 40 kg: usual adult dose

Staphylococcal osteomyelitis: 50-100 mg/kg/day in 4 divided doses

Disease state based dosing:

Renal failure: not necessary

## Contraindications/Warnings/Precautions:

Contraindications: Anaphylaxis to dicloxacillin or other penicillins

Precautions: Cephalosporin hypersensitivity

## Drug Interactions:

Dicloxacillin is an inducer of the cytochrome P450 3A4 isoenzyme. Caution should be exercised and monitoring is suggested when concomitantly administering dicloxacillin with drugs that have narrow therapeutic windows and are substrates of the CYP3A4 enzyme.

Contraceptives - decreased contraceptive effectiveness

Live Typhoid Vaccine - decreased immunological response to the typhoid vaccine  
Probenecid - increased dicloxacillin levels  
Warfarin - decreased anticoagulant effectiveness

**Pregnancy:**

Category B: No evidence of risk in humans but studies inadequate.

**Monitoring Requirements:**

Therapeutic: Culture and sensitivities, signs and symptoms of infection

Toxic: Periodic CBC, urinalysis, BUN, Creatinine, AST and ALT

**Brand names/Manufacturer:**