

Fosfomycin

Antibiotic Class:

Phosphonic acid derivative

Antimicrobial Spectrum:

Gram-positive: *Staphylococcus spp.*, *Enterococcus spp.*

Gram-negative: *E. coli*, *Enterobacter spp.*, *Citrobacter spp.*, *Klebsiella spp.*, *Proteus spp.*, *Providencia spp.*, *P. aeruginosa*

Mechanism of Action:

Irreversibly attaches to pyruvyl transferase, an important enzyme in the early step of bacterial cell wall synthesis

Pharmacodynamics:

No data

Pharmacokinetics:

C_{max} : 26.2±8.1mcg/ml; Half-life: 3.6±0.44 (hr); T_{max} : 2.5±0.8 (hr); Table 2

Adverse Effects:

GI: diarrhea, nausea, abdominal pain

Other: vaginitis, headache, dizziness

Dosage:

PO: Powder for reconstitution

UTI in children < 5 years old: 2g once

UTI in Adults: 3g once

Disease state based dosing:

Renal failure: Dosing adjustments not necessary

Hepatic failure: Dosing adjustments not necessary

Contraindications/Warnings/Precautions:

Precautions: Food delays absorption – administer on an empty stomach

Drug Interactions:

Cisapride: decreased urinary concentrations of fosfomycin

Metoclopramide: decreased urinary concentrations of fosfomycin

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

Monitoring Requirements:

Therapeutic: Culture and sensitivities, signs and symptoms of infection

Toxic: None

Brand names/Manufacturer: