

# Initial Dosing Recommendations for Anti-Infective Agents during Continuous Venovenous Hemofiltration (CVVH)

For adult critically ill patients receiving high-flow CVVH



Medication	Dosing recommendation	Comments
<b>Antibiotics</b>		
Amikacin*	10 mg/kg loading dose followed by 7.5 mg/kg q24–48h maintenance dose	Obtain concentrations at 4 and 12 hours post infusion. Adjust to achieve target plasma concentrations
Ampicillin-sulbactam	3g q8-12h	
Aztreonam	2g q12h	
Cefazolin	1-2g q12h	
Cefepime	2g q12h	
Ceftriaxone	2g q12-24h	
Clindamycin	600-900mg q8h	
Colistin	2.5mg/kg q36h	More aggressive dosing may be required for treatment of MDR organisms in critically ill patients
Daptomycin	6mg/kg q48h	Monitor serum CPK levels May consider higher doses in patients receiving ≥ 6L/hr of ultrafiltrate flow
Doripenem	No data. Low protein binding (8%) and high Vd (16.8L). Significant removal by conventional HD.	
Gentamicin*	3 mg/kg loading dose followed by 2 mg/kg q24–48h maintenance dose OR 1 mg/kg q24–36h for gram positive synergy	Obtain concentrations at 4 and 12 hours post infusion. Adjust to achieve target plasma concentrations
Levofloxacin	500mg initial dose followed by 250mg q24h maintenance dose	
Linezolid	600mg q12h	May consider higher dosing (q8h) in CVVH
Meropenem	1g q12h	
Nafcillin	2g q4h	
Penicillin	4 million units q8h	
Piperacillin-tazobactam	4.5g q8h	Doses up to 4.5g q4h have been reported
Tobramycin*	3 mg/kg loading dose followed by 2 mg/kg q24–48h maintenance dose	Obtain concentrations at 4 and 24 hours post infusion. Adjust to achieve target plasma concentrations
Vancomycin	One time loading dose of 20mg/kg. Obtain concentrations at 4 and 24 hours post infusion. If 24 hour concentration >20mcg/mL, obtain 36 hour concentration. Subsequent doses based on concentrations.	
<b>Antifungals</b>		
Amphotericin B Deoxycholate	0.4-1mg/kg q24h	
Liposomal Amphotericin B	3mg/kg q24h	6mg/kg for presumed or confirmed meningitis
Fluconazole	400-800mg q24h	
Voriconazole	4mg/kg q24h	PO doses due to IV diluent accumulation
<b>Antivirals</b>		
Acyclovir	5-7.5mg/kg q24h	

\*Refer to Clinical Pharmacokinetics Service and Anticoagulation Guidelines (<http://www.hosp.uky.edu/pharmacy/cps/PKmanual.html>)

Limited clinical data exists; these suggestions should not supersede clinical judgment.

**References:**

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