

Montefiore Medical Center Department of Pharmacy Vancomycin Dosing Guidance

Updated 3/2025

Dosing Table					
**Patients in AKI or CrCl <30 ml/min, consider dosing vancomycin by level					
Select Initial Dose Based on Patient's Weight				Goal	Monitoring
<50 kg	500 mg IV			Trough level: 10-15 ug/ml	Obtain trough level prior to the 4 th dose Refer to 'Dose Modifications for Standing Regimens' for adjustments
50-64.9 kg	750 mg IV				
65-84.9 kg	1000 mg IV				
85-99.9 kg	1250 mg IV				
100-130 kg	1500 mg IV				
Select Initial Interval Based on CrCl					
≥100 ml/min	Q8H				
65-99 ml/min	Q12H				
30-64 ml/min	Q24H				
<30 ml/min	Dose by random level; Re-dose when level <15				
<p>Trough levels must be checked for patients on standing vancomycin regimens</p> <ul style="list-style-type: none"> • Must be obtained at steady state (within 30 minutes before 4th or 5th dose) • If already at steady state and dose is adjusted, obtain new trough before 3rd dose of new regimen <p>Therapeutic Trough Target: 10-15 ug/ml for all infection types</p> <ul style="list-style-type: none"> • We no longer endorse targeting trough goals of 15-20 ug/ml • 10-15 ug/ml correlates to an AUC:MIC goal of 400-600 and is associated with less nephrotoxicity <p>Random levels are checked for patients:</p> <ul style="list-style-type: none"> • On dialysis • With renal insufficiency (CrCl <30 ml/min) but not on dialysis, or • With elevated vancomycin trough levels >15 ug/ml 					
Intermittent Hemodialysis (iHD)	Initial Dose	Maintenance Dose		Random pre-HD level: <20 ug/ml	Obtain random level PRIOR to HD
	Dose based on weight as above	Weight (kg)	Post-HD Dose		
		<70	500 mg IV		
		70-100	750 mg IV		
≥100	1000 mg IV				
Continuous Renal Replacement Therapy (CRRT)	10-15 mg/kg Q24H – round to the nearest 250 mg increment For morbidly obese patients, consider Q12H		Random level: <15 ug/ml	Obtain random level within 12-24 hours	
Peritoneal Dialysis (PD) (Max dose is 2000 mg)	Intermittent IP	30 mg/kg IP every 5-7 days		Random level: 10-15 ug/ml	Obtain random level every 3-5 days
	Continuous IP (all exchanges)	Load (x1)	1000 mg/L IP		
		Maintenance	25 mg/L IP		
Intermittent IV	15 mg/kg IV x 1 dose				

Dose Modifications for Standing Regimens

- For 500 mg Q12H doses, recommend switching to 1000 mg Q24H, for ease of administration
- For 750 mg Q12H doses, recommend switching to 1500 mg Q24H, for ease of administration
- Ensure trough concentrations are obtained appropriately before adjusting regimen (at steady state and within 30 minutes of next dose)

Trough (ug/ml)	Dose Adjustment	Example
<5	Increase frequency	Change from q12h to q8h, but maintain same dose
5-10	Increase dose by 25%	Increase from 1000mg to 1250mg, but maintain same dosing interval
10-15	Maintain current dose and interval	-
15-20	Decrease dose by 25%	Decrease from 1000mg to 750mg, but maintain same dosing interval
>20	Hold dose and check random concentrations	-

- Once therapeutic level reached, repeat trough levels weekly if renal function remains stable; check sooner if acute changes in renal function or urine output

Intermittent Hemodialysis (iHD)

- Follow **Dosing Table – Intermittent Hemodialysis (iHD)** for 'Initial' and 'Maintenance' doses
- Random pre-dialysis levels are recommended to ensure efficacy and prevent toxicity
 - If a pre-dialysis level cannot be obtained, a post-dialysis level can be drawn but must be drawn at least 4 hours after completion of hemodialysis to account for drug distribution
 - Daily random levels are not recommended
- **REDOSE** if random pre-dialysis level <20 ug/ml
 - Redose vancomycin post-dialysis because dialysis removes 30-40%
- **Maintenance Dose:**
 - Typical maintenance regimens for iHD patients include:
 - 500mg post-HD, M-W-F or T-Th-S
 - 750mg post-HD, M-W-F or T-Th-S
 - 1000mg post-HD, M-W-F or T-Th-S
 - Pre-dialysis levels may be drawn weekly to ensure not >20 ug/ml

Continuous Renal Replacement Therapy (CRRT)

- Follow **Dosing Table – Continuous Renal Replacement Therapy (CRRT)**
 - Recommendations are based on dialysate flow/ultrafiltration rates of 1-2 L/hour and minimal residual renal function. and should not supersede clinical judgment
- Check random levels within 12-24 hours of dosing (consider 12 hours in morbidly obese patients)
 - **REDOSE** if <15 ug/ml
- If CRRT is discontinued, ensure standing vancomycin orders are discontinued as well to avoid accumulation and toxicity

Peritoneal Dialysis (PD)

- Follow **Dosing Table – Peritoneal Dialysis (PD)**

- General Information on Vancomycin Dosing in PD
 - Intraperitoneal (IP) is the preferred route of vancomycin administration for treatment of PD catheter-related infections and peritonitis in PD patients
 - IP vancomycin will be absorbed into systemic circulation so random levels must be monitored
 - IV vancomycin is recommended when there is concern for systemic infections
 - Patients should NOT receive concomitant IV and IP vancomycin
 - When transitioning from IV to IP route of administration, or vice versa, first vancomycin dose of new route should only be administered after ensuring serum vancomycin random level <15 ug/ml
- **Definitions:**
 - **Continuous ambulatory peritoneal dialysis (CAPD):** Dieneal exchanges performed manually 4-5x/day, longest dwell time is overnight. This PD modality is used for inpatients at Montefiore.
 - **Intermittent IP dosing:** A large dose of vancomycin is instilled into the peritoneum and left to dwell for a longer period (at least 6 hours for maximal efficacy). Patients are dialyzed as usual and vancomycin is not re-dosed until serum random levels are <15 ug/ml
 - **Continuous IP dosing:** Vancomycin is added to dialysate fluid based on concentration, and is instilled in the peritoneum and left to dwell at every exchange (which are done multiple times per day)

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