

Initial Vancomycin Dose Determination in ADULTS

Consider loading doses in obese patients:

- Obese = actual body weight > 120% IBW
- Give 1500 mg loading dose for obese patients weighing 85 – 109 kg
- Give 2000 mg loading dose for obese patients weighing > 110 kg

Initial maintenance dose:

Estimated CrCl (ml/min)	Initial dosing regimen
Continuous Renal Replacement (eg. CVVH, CVVHD)	1000mg IV q 24 h
< 20 and/or intermittent hemodialysis	1000 mg dose IV q 72 h
20-29	1000 mg IV q 48 h
30-39	1500 mg IV q 48 h OR 750 mg IV q 24 h
40-55	1000 mg IV q 24 h
56-99	1000 mg IV q 12 h
100-120, age > 65	1000 mg IV q12 h
100-120, age < 65	1250 mg IV q 12 h
≥ 120 and/or hypermetabolic state**	1000 mg IV q 8 h

*Interval determined by

** Hypermetabolic states include trauma and burn patients

Trough Serum Concentration ¹	Dose Adjustment Recommended	Follow-Up/Monitoring ²
<3.5 mg/L	Shorten dose interval to next standard interval:	Draw trough level thirty (30) minutes prior to 3 rd dose of new dosing regimen
	If Q 48 H → Q 24 H	
	If Q 24 H → Q 12 H	
	If Q 12 H → Q 8 H	
3.5-4.9 mg/L	If Q 8 H → Q 6 H	Draw trough level approximately 30 minutes prior to 3 rd dose of new dosing regimen
	Increase dose by 250 mg to 500 mg at same time interval. If improvement in renal function ³ , consider shortening interval.	
5-15 mg/L	No change in therapy ⁴	No further trough levels to be drawn unless : <ul style="list-style-type: none"> • Duration of therapy is >7 days; If therapy >7 days, check trough level every 5 to 7 days • Patient status declines • Serum creatinine increases >0.5 mg/dL from baseline
15.1-19.9 mg/L	Decrease dose by 250 mg at same time interval	Draw trough level approximately 30 minutes prior to 3 rd dose of new dose regimen therapy
≥ 20 mg/L and Dose ≥ 1000 mg	Decrease dose by 500 mg at same time interval OR If decline in renal function ³ , hold dose(s) and check another level in 12-24 hours. When trough is therapeutic, restart at lower dose and/or extend interval, based on patient-specific clearance.	Draw trough level approximately 30 minutes prior to 3 rd dose of new dose regimen therapy
≥ 20 mg/L and Dose < 1000 mg	Extend dose interval to next standard interval	Draw trough level approximately 30 minutes prior to 3 rd dose of new dose regimen therapy
	If Q 6 H → Q 8 H	
	If Q 8 H → Q 12 H	
	If Q 12 H → Q 24 H	
	If Q 24 H → Q 48 H	
	OR If decline in renal function ³ , hold dose(s) and check another level in 12-24 hours. When trough is therapeutic, restart at lower dose and/or extend interval, based on patient-specific clearance	

¹ Higher trough concentrations may be necessary for some types of patients/infections. Examples include, but are not limited to, meningitis, endocarditis, osteomyelitis.

² Serum creatinine levels should also be monitored daily in patients with decreased renal function and/or increased risk of nephrotoxicity.

³ Changes in serum creatinine (SCr) of ± 50% from baseline may signify change in renal function.

⁴ Maximum serum trough level in patients with increased risk for nephrotoxicity is 12mg/L, particularly patients on concomitant nephrotoxins (eg. aminoglycosides, amphotericin B, cisplatin, cyclosporin, foscarnet, ganciclovir, loop diuretics, NSAIDs, radiocontrast dye, tacrolimus, vasopressors).