

TABLE 5 DIALYSIS DOSING

	Hemodialysis (HD)	Continuous Ambulatory Peritoneal Dialysis (CAPD)
Loading Dose	25 mg/kg	Intraperitoneal (IP): 30 mg/kg OR Intravenous (IV): 20 mg/kg
Maintenance Dose	weight < 70 kg: 500 mg QHD weight ≥ 70 kg: 750 mg QHD	IP: 30 mg/kg every 5-7 days OR IV: 20 mg/kg every 4-7 days
When To Draw Level	Pre-second maintenance dose	3-4 days after first dose
Target Vancomycin Level	Pre-HD level: 15-20 mg/L	Trough level: 15-20 mg/L

THERAPEUTIC DRUG MONITORING

Vancomycin serum levels should be ordered in the following situations:

- Pre-vancomycin level on 3rd or 4th dose (within 48 hours) if:
 - a higher level of 15-20 mg/L is desired **OR**
 - patient is at risk for accumulation (e.g. Q6-8H interval) **OR**
 - patient is receiving other nephrotoxic agents **OR**
 - serum creatinine is above normal, renal function is changing or uncertain **OR**
 - patient is obese (>125% IBW), pregnant, pediatric or hypermetabolic (e.g. burn patient, cystic fibrosis)

Repeat at least weekly to ensure pre-vancomycin level is within desired therapeutic range
- Pre-vancomycin level after 7 days of therapy (for prolonged course) if aiming for levels < 15 mg/L **AND** no other risk factors as per above
- Pre-vancomycin level if patient is not responding to therapy
- Pre- and 3 hour post-vancomycin level (target 20-40 mg/L) if calculation of precise kinetic parameters are necessary (e.g. in a case when a target pre-vancomycin level of 15-20 mg/L cannot be achieved while on prolonged therapy, or in an obese, pregnant or pediatric patient, especially when aggressive dosing is required)

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Pharmacy
VANCOMYCIN EMPIRIC DOSING GUIDELINES
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For more information, please contact Pharmacy
Or visit: www.vhpharmsci.com

KEY

- Establish patient age, weight, and serum creatinine.
- Using Table 1, identify initial loading dose and maintenance dose per interval according to patient weight and target pre-vancomycin level.
- Using Table 2, determine target pre-vancomycin level based on clinical indication.
- Using Tables 3 or 4, identify initial dosing interval according to target pre-vancomycin level, age, and serum creatinine.
- Using Table 5, determine dialysis dosing.

TABLE 1 INITIAL DOSE PER INTERVAL

TOTAL BODY WEIGHT	LOADING DOSE (suggested maximum 2500 mg/dose)		MAINTENANCE DOSE
	Target pre-level 10-15 mg/L (20 mg/kg)	Target pre-level 15-20 mg/L (25 mg/kg)	
kg			(15 mg/kg)
40-50	1000 mg	1250 mg	750 mg
51-60	1250 mg	1500 mg	1000 mg
61-70	1250 mg	1750 mg	1000 mg
71-80	1500 mg	2000 mg	1250 mg
81-90	1750 mg	2250 mg	1250 mg
91-100	2000 mg	2500 mg	1500 mg

**TABLE 2 SUGGESTED TARGET PRE-VANCOMYCIN LEVELS
BASED ON INDICATION**

Pre-vancomycin Level 10-15 mg/L	Pre-vancomycin Level 15-20 mg/L
<ul style="list-style-type: none"> • Skin and soft tissue infection • Urinary tract infection (UTI) (if catheter-associated; rule out bacteremia) 	<ul style="list-style-type: none"> • Catheter-associated bacteremia • Central nervous system infection • Deep-seated or sequestered infection (e.g. abscess) • Endocarditis • Osteomyelitis • MRSA bacteremia or pneumonia • MSSA bacteremia (penicillin allergic patient)

**TABLE 3 FOR SKIN AND SOFT TISSUE INFECTION & UTI
LOW-TARGET 10-15 mg/L INITIAL DOSING INTERVAL (hours)**

SCr (mcmol/L)	Age Group (years)					
	20-29	30-39	40-49	50-59	60-69 [^]	70-79 [^]
40-60	8	8	12	12	12	18
61-80	8	12	12	12	18	18
81-100	12	12	12	18	18	18
101-120	12	12	18	18	18	24
121-140	12	18	18	18	24	
141-160	18	24	24	24		
161-180	24	24				
181-200	24					
Above 200						
Dialysis	See TABLE 5 (back of card)					

**TABLE 4 FOR ALL OTHER INDICATIONS (COMPLICATED INFECTIONS)
HIGH-TARGET 15-20 mg/L INITIAL DOSING INTERVAL (hours)**

SCr (mcmol/L)	Age Group (years)						
	20-29	30-39	40-49	50-59	60-69 [^]	70-79 [^]	80-89 [^]
40-60	6	6-8	8	8	8-12*	12	12
61-80	8	8	8-12*	12	12	12	12-18*
81-100	12	12	12	12	12-18*	18	18
101-120	12	12	12-18*	18	18	18	18
121-140	12	18	18	18	18	18-24*	
141-160	18	18	18	18-24*	24		
161-180	18-24*	24	24	24			
Above 180							
Dialysis	See TABLE 5 (back of card)						

[^]In elderly patients with low muscle mass, use clinical judgment as SCr may not reflect renal function accurately.

*If more aggressive therapy is desired, select more frequent dosing interval.

Shaded boxes: These patients have unstable and/or reduced renal function, and the nomogram may not be as predictive.

- For those with an interval stated, patients should receive a loading dose followed by 3 hour and pre-2nd dose serum levels to determine appropriate dosing.
- For those with no dosing interval stated, patients should receive a loading dose followed by 3 hour and 24 hour post-dose serum levels to determine subsequent dosing.
- A clinical pharmacist should be contacted for assistance with dosing and interpretation of levels.