

## **Vancomycin Dosing Algorithm**

## Adult VANCOMYCIN Dosing Guideline

### 1. Select patient appropriately

- Renal & ototoxicity has been associated with use of vancomycin.
- Monitoring of serum levels is a necessity.
- Administer at a rate not greater than 10mg/min.

### 2. Prescribe dose

**Initial Dose:** Prescribe initial loading dose of 25mg/kg  
Maximum single dose 2g

**Maintenance Dose:** see table below

CrCl	Dose (Round to <u>nearest 50mg</u> )
≥ 60ml/min	15mg/kg BD
30 – 60 ml/min	15mg/kg OD
15 – 30 ml/min	15mg/kg every 48hrs
< 15 ml/min or dialysis	15mg/kg day 1. Only re-dose at 15mg/kg when trough level in target range. Hold dose until level available

- **Maximum Single Dose 2g**
- If anuric, output < 500mls/day, treat as CrCl < 15ml/min

**Actual body weight is used to calculate all doses unless weight > 120% IBW use obese dosing weight.**

### 3. CrCl ≥ 60ml/min: Take FIRST trough level BEFORE 4th dose.

CrCl ≤ 60ml/min: Trough level should be done no later than 48 hours after loading dose.  
Trough must be measured PRE-DOSE

**Doses are NOT to be held whilst awaiting levels unless renal function deteriorating or specifically advised**

**4. Ascertain target level.** Standard target level is **10-15mg/L** but if patient has a serious infection such as endocarditis, osteomyelitis, bloodstream infection, meningitis or hospital-acquired pneumonia caused by S.aureus, target level is **15-20mg/L**.

### 5. Check trough level result and adjust dose accordingly

Target level 10-15mg/L			Target Level 15-20mg/L		
Level (mg/L)	Dose alteration	Recheck pre-dose level	Level (mg/L)	Dose alteration	Recheck pre-dose level
<5 <sup>#</sup>	Increase <b>each</b> dose by 500mg	After adjusted dose given and before following morning dose*	<10 <sup>#</sup>	Increase <b>each</b> dose by 500mg	After adjusted dose given and before following morning dose*
5-10	Increase <b>each</b> dose by 250mg	After adjusted dose given and before following morning dose*	10-15	Increase <b>each</b> dose by 250mg	After adjusted dose given and before following morning dose*
10-15	Maintain dosing regimen	Twice weekly, providing renal function is stable*	15-20	Maintain dosing regimen	Twice weekly providing renal function is stable*
15-20	Reduce <b>each</b> dose by 250mg	After adjusted dose given and before following morning dose*	20-25	Reduce <b>each</b> dose by 250mg	After adjusted dose given and before following morning dose*
>20	Omit next dose and decrease <b>each</b> dose by 500mg	After adjusted dose given and before following morning dose*	>25	Omit next dose and decrease <b>each</b> dose by 500mg	After adjusted dose given and before following morning dose*

**\* Doses are NOT to be held whilst awaiting levels unless renal function is deteriorating or specifically advised**

**# If persistently sub-therapeutic levels, consult pharmacy or microbiology for advice**

### 6. Check serum creatinine regularly

- Ensure patient well hydrated.
- If renal function stable (& level in target range), twice weekly levels are sufficient
- If renal function unstable, check trough level more frequently (e.g. daily or alternate days)