

## GENTAMICIN (SEE FULL PROTOCOL FOR AUC AND OTHER DRUGS)

### DOSE

**Ensure that the patient has not had IV gentamicin / tobramycin / amikacin in the last 24 hours (check charts from A&E / theatres / critical care)**

**Non-obese:** Use patient's ideal body weight. **Obese:** If >120% ideal body weight, use dose determining weight (DDW)

$$\text{DDW (kg)} = \text{IBW} + 0.4 (\text{Actual weight} - \text{IBW}) \quad [\text{Max 100kg dosing weight}]$$

Dosing in stable CrCl (inc chronic kidney disease)		Dosing in Acute Kidney Injury	
CrCl (mL/min) (As determined in step 2)	Dosage Regime	CrCl is inaccurate in AKI	Dosage Regime
> 40 mL/min	5mg / kg once daily <b>MAX 500mg</b>	<b>AKI 2<sup>o</sup> to sepsis</b> (Baseline CrCl > 40ml/min or unknown)	5mg/kg stat <b>MAX 500mg</b>
20 - 40 mL/min <i>or endocarditis</i>	3mg / kg once daily	<b>Acute on CKD 2<sup>o</sup> to sepsis</b> (Baseline CrCl <40ml/min)	3mg/kg stat
< 20mL/min	3mg / kg STAT, then discuss with ID/Micro	AKI and <b>NO</b> sepsis	<b>AVOID</b> if possible (or 3mg/kg stat)

**Administration:** Intravenous infusion in 100mL of sodium chloride 0.9% or glucose 5% over 30 to 60 minutes

**Round** the dose up or down to the nearest 20mg increment e.g. 320mg or 340mg

### LEVEL

Recommended Range	First Level due
Pre-dose level (target < 1mg/L)	<b>0 - 4 hours before the next dose</b> If <b>impaired renal function or AKI</b> the result <b>MUST</b> be taken and <u>checked</u> prior to administering the 2nd dose.

### ACTION

Returned level result:	Action:	Future monitoring:
<1mg/L AND renal function stable	<b>Continue</b> on current dosing regimen.	Twice weekly pre-dose levels advised (more frequent if unstable GFR)
<b>High levels (&gt;1mg/L) - Check to see if level taken at appropriate time (0-4 hours pre-dose)</b>		
1 – 1.5mg/L AND renal function stable	<b>Delay next dose by 12 hours</b> (A repeat level is <b>not</b> needed). – Then resume dosing at <b>q24h</b>	Take a level pre-dose and wait for level (target < 1mg/L) before giving each dose
>1.5mg/L AND renal function stable	<b>If level = 1.5 – 3mg/L: Repeat the level in 12 hours</b> - Once level <1mg/L resume dosing at <b>q48h</b>	Take a level pre-dose and wait for level (target < 1mg/L) before giving each dose
	<b>If level &gt;3mg/L: Repeat the level in 24 hours</b> – Discuss repeated result with antimicrobial pharmacist or consider stopping	Take a level pre-dose and wait for level (target < 1mg/L) before giving each dose
<b>Any</b> unstable renal function	Minimise aminoglycoside treatment duration wherever possible (discuss with microbiology for alternatives)	Take a level pre-dose and wait for level (target < 1mg/L) before giving each dose (if treatment still needed).