

## Once Daily Gentamicin: Administration and Monitoring in Adults – Summary (excludes patients receiving renal replacement therapy)

### Dosage

The dose will be dependent on:

- weight (ideal body weight (IBW) or obese dose body weight (ODBW) if BMI >30 or >120% of ideal body weight) - see equation below to calculate ODBW or [Ideal Body Weight and Adjusted Body Weight calculator](#) \* (NOTE: Do not use calculator if patient is under 5ft or 152.5cm in height.)
- age
- renal function – calculating Creatinine clearance ([online calculator](#))

	CrCl above 30ml/min	CrCl of 10-30ml/min	CrCl less than 10ml/min
Age 65 and over	3mg/kg* iv od	2mg/kg* iv od	<b>Do not use gentamicin</b>
Age under 65 years	5mg/kg* iv od	3mg/kg* iv od	<b>Do not use gentamicin</b>

\*Use ideal body weight rather than actual body weight as gentamicin distributes poorly in fat. For obese patients (BMI >30 or >120% of ideal body weight) it is recommended that the dose is calculated using the weight obtained from the following formula

**Obese Dosing Body Weight** = IBW + 0.4(ABW – IBW)

Where **ABW = Actual body weight**  
& **IBW = Ideal body weight**

For Male = 50kg + (2.3kg x height in inches over 5 feet)

For Female = 45.5kg + (2.3kg x height in inches over 5 feet)

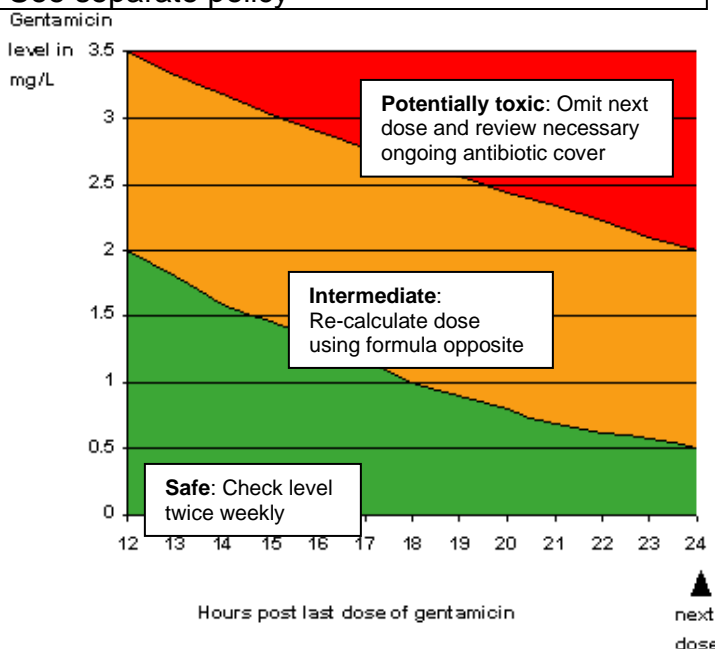
### Exclusions

Once daily gentamicin is inappropriate and should not be used in:

- ★ Endocarditis
- ★ Major burns
- ★ Ascites
- ★ Age < 16\* years
- ★ Myeloma patients
- ★ Myasthenia gravis
- ★ Dialysis patients

Caution in renal impairment (GFR <30):  
See above – more details in full policy on intranet for dosing in renal impairment.

\*See separate policy



### Monitoring

A post-dose level is required. Obtain a single serum sample 12 to 18 hours after the dose.

Send sample to **CHEMICAL PATHOLOGY**.

Electronic blood sample request forms must include:

- Date and time of drug administration
- Date and time of blood sampling
- Dose or dose per kg used (e.g. 5mg/kg)
- Dosing regime (e.g. daily dosing)

**Target serum gentamicin level:**

12 hours post dose = <2mg/L

18 hours post dose = <1mg/L

**Intermediate area - Formula to re-calculate gentamicin dose:**

**New Dose** =  $\frac{\text{Previous dose} \times \text{Target serum level}}{\text{Actual serum level}}$

(round new dose to the nearest 20mg)

Serum gentamicin levels should be rechecked 12 to 18 hours after the new dose.

**If gentamicin levels are within the recommended range, with normal renal function, monitor levels / U&Es twice weekly.**