

Once Daily iv Tobramycin: 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 use [Ideal Body Weight and obese dose Body Weight calculator](#) * (NOTE: Do not use calculator if patient is under 5ft or 152.5cm in height.) Obese dose body weight can also be known as adjusted dose body weight
- age
- renal function – calculating Creatinine clearance ([online calculator](#))

	CrCl above 50ml/min	CrCl of 20-50ml/min	CrCl less than 20ml/min
Age 65 and over	3mg/kg* iv od	2mg/kg* iv od	Do not use tobramycin
Age under 65 years	5mg/kg* iv od	3mg/kg* iv od	Do not use tobramycin

*Use ideal body weight rather than actual body weight (ABW) as tobramycin 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:

$$\text{Adjusted/Obese Dosing Body Weight} = \text{IBW} + 0.4 \times (\text{ABW} - \text{IBW})$$

Ideal body weight (IBW)

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)

Round dose up or down to the nearest 20 mg

Exclusions

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

- ★ Major burns
- ★ Ascites
- ★ Age less than 18 years
- ★ Myeloma patients
- ★ Myasthenia gravis
- ★ Dialysis patients
- ★ Cystic fibrosis (higher doses needed)

Avoid in renal impairment (CrCl less than 20ml/min):
See above – more details in full policy on intranet for dosing in renal impairment.

Monitoring

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

Send sample to **CHEMICAL PATHOLOGY**.

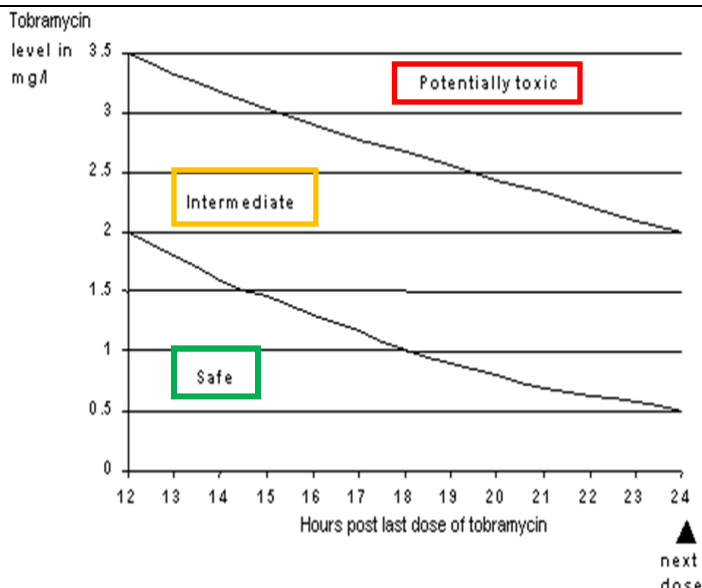
Electronic order requests for serum tobramycin levels should include the following information:

- Date and time of drug administration
- Date and time of blood sampling
- Dose given
- Dosing regime (e.g. daily dosing)

Target serum tobramycin level:

12 hours post dose = <2mg/L

18 hours post dose = <1mg/L



Intermediate area - Formula to re-calculate tobramycin dose:

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

(round new dose to the nearest 20mg)

Serum tobramycin levels should be rechecked 12 to 18 hours after administration of the new dose.

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

Toxic range – If level in toxic range, omit the next dose and consider if safe to re-start. Discuss with microbiology if necessary.

For further advice please contact **PHARMACY / Medicines Information** CGH ext. 3030 GRH ext. 6108 or **Duty MICROBIOLOGIST** CGH ext. 4430, GRH ext. 5054 (contact details for during normal working hours). Full version of Once Daily iv Tobramycin Administration and Monitoring in Adults Policy is available on the intranet (via EOLAS).