

# Therapeutic Drug Monitoring

	Start monitoring	Samples required		Repeat monitoring for maintenance dose, and assuming normal renal function	Therapeutic Range <sup>1</sup>	
		Trough immediately before dose	Peak		Trough	Peak
Vancomycin	3 <sup>rd</sup> – 5 <sup>th</sup> dose	✓		every 3 – 5 days	5-10 mg/L	
Gentamicin Once daily dosing Three times daily dosing	2 <sup>nd</sup> – 3 <sup>rd</sup> dose	✓	n/a	every 3 – 5 days	<1 mg/L	n/a
	3 <sup>rd</sup> – 5 <sup>th</sup> dose	✓	✓ 1 hour after start of dose	every 3 – 5 days	<2 mg/L	5 – 10 mg/L
Tobramycin Once daily dosing (non-CF) Three times daily dosing (non-CF)  Once daily dosing (CF)	2 <sup>nd</sup> – 3 <sup>rd</sup> dose	✓	n/a	every 3 – 5 days	<1 mg/L	n/a
	3 <sup>rd</sup> – 5 <sup>th</sup> dose	✓	✓ 1 hour after start of dose	every 3 – 5 days	<2 mg/L	5 – 10 mg/L
	Refer to CF protocol					

	Start monitoring	Timing of sample	Therapeutic range <sup>2</sup>
Carbamazepine	3 days	immediately before dose (Trough)	20 – 40 micromol/mL
Phenytoin	5 – 7* days	immediately before dose (Trough)	40 – 80 micromol/mL
Phenobarbitone	5 – 7* days	immediately before dose (Trough)	60 – 120 micromol/mL
Sodium valproate	2 – 3 days	1 – 3 hours after dose (Peak)	0.3 – 0.7 mmol/L

<sup>1</sup> Clara

<sup>2</sup> Paediatric Pharmacopoeia  
(13<sup>th</sup> edition)

\* If loading dose is given, levels should be taken earlier to show therapeutic range reached or to avoid toxicity.

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**c: word/ others**