



**Doncaster and Bassetlaw
Teaching Hospitals**
NHS Foundation Trust

AFFIX LABEL HERE IF AVAILABLE

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D.o.B:

**EXTENDED-INTERVAL GENTAMICIN
PATHWAY**

Gentamicin Prescribing – Important Points:

- ✓ **ALWAYS** check the patient’s height when calculating the dose.
- ✓ **ALWAYS** use the lowest weight (from IBW /ABW) to calculate the dose.
- ✓ **ALWAYS** calculate **Creatinine Clearance** before prescribing (GFR will overestimate renal function in older people & at extremes of weight).
- ✓ **ALWAYS** inform nursing staff that gentamicin has been commenced.
- ✓ **ALWAYS** arrange for a level to be taken following the initial dose (6 – 14 hours after administration).
- ✓ **ALWAYS** enter the correct dose and level times on ICE for blood samples.
- ✓ **ALWAYS** handover to your colleagues if patients require levels taking and/or further doses prescribing.
- × **NEVER** use a gentamicin chart to prescribe the dose (these are no longer in use).

Exclusions From The Policy:

- Pregnant women;
- Children <16 years, surgical prophylaxis;
- ANY patient who has ascites, a limb amputation, cystic fibrosis, endocarditis, major burns;
- Renal impairment - CrCl < 40ml/min OR suspected/confirmed AKI OR renal transplant.

STEP 1 → Record the following details and tick appropriate dose:

Actual Body Weight (ABW): (kg) Ideal Body Weight (IBW): (kg)
Height: (m) Creatinine: umol/L

STEP 2 → Calculate the Creatinine Clearance (use lowest weight from ABW/IBW)

$$CrCl = \frac{\boxed{1.23 \text{ or } 1.04^*} \times (140 - \boxed{age}) \times \boxed{weight (kg)}}{\boxed{serum creatinine (micromol/l)}} = \boxed{}$$

* Ref: Male = 1.23 Female = 1.04

STEP 3 → If CrCl is above 40ml/min; continue and select dose from table using lowest weight from ABW/IBW. If CrCl is 40ml/min or less, then gentamicin is not appropriate – consult antibiotic guidelines for alternative. If the stated alternative is not appropriate contact Microbiology for advice.

Male (≥ 16 years of age)				Female (≥ 16 years of age)			
Height	IBW (kg)	Gentamicin dose (mg)	ABW (kg) (use if less than IBW)	Height	IBW (kg)	Gentamicin dose (mg)	ABW (kg) (use if less than IBW)
6'3" (1.9m) +	84.5	<input type="checkbox"/> 560	75 to 82	6'3" (1.9m) +	79.5	<input type="checkbox"/> 520	72 to 77
6'2" (1.88m)	82.2			6'2" (1.88m)	77.2		
6'1" (1.85m)	79.9			6'1" (1.85m)	74.9		
6' (1.82m)	77.6	<input type="checkbox"/> 520	72 to 77	6' (1.82m)	72.6	<input type="checkbox"/> 480	66 to 71
5'11" (1.8m)	75.3			5'11" (1.8m)	70.3		
5'10" (1.78m)	73			5'10" (1.78m)	68		
5'9" (1.75m)	70.7	<input type="checkbox"/> 480	66 to 71	5'9" (1.75m)	65.7	<input type="checkbox"/> 440	60 to 65
5'8" (1.72m)	68.4			5'8" (1.72m)	63.4		
5'7" (1.7m)	66.1			5'7" (1.7m)	61.1		
5'6" (1.67m)	63.8	<input type="checkbox"/> 440	60 to 65	5'6" (1.67m)	58.8	<input type="checkbox"/> 400	55 to 59
5'5" (1.65m)	61.5			5'5" (1.65m)	56.5		
5'4" (1.62m)	59.2			5'4" (1.62m)	54.2		
5'3" (1.6m)	56.9	<input type="checkbox"/> 400	55 to 59	5'3" (1.6m)	51.9	<input type="checkbox"/> 360	49 to 54
5'2" (1.57m)	54.6			5'2" (1.57m)	49.6		
5'1" (1.55m)	52.3			5'1" (1.55m)	47.3		
5' (1.52m) or under	50	<input type="checkbox"/> 360	49 to 54	5' (1.52m) or under	45	<input type="checkbox"/> 320	43 to 48

STEP 4 → Prescribe a single STAT dose:

- For drug cards use the 'Once Only' section on the front.
- On JAC use the Treatment Protocol called GENTAMICIN IV - Initial Dose Items.
- Or prescribe as a single dose on Symphony.

Full guidance on how to prescribe gentamicin using JAC can be found in the JAC Guide Appendix I.

STEP 5 → Ensure a level is taken between 6 and 14 hours following the start of the initial dose infusion.

STEP 6 → Prescribe a maintenance dose of gentamicin, at a frequency of 24, 36 or 48 hourly, according to the Microbiologist recommendation available on the pathology report (ICE).

- The administration time of the initial dose MUST be checked to ensure the correct interval between the initial and maintenance dose.
- **DO NOT** prescribe maintenance doses as STAT doses, as these will not be visible on the patients prescription following administration.

Full guidance on how to prescribe gentamicin using JAC can be found in the JAC Guide Appendix I.

STEP 7 → Review the prescription for IV Gentamicin at 48-72hrs and switch to an oral agent where possible; or ensure a stop date is added to the prescription. Continue to monitor renal function and gentamicin levels as per Microbiology advice (on ICE).

ALL MEDICAL AND NURSING STAFF

PLEASE ENSURE APPROPRIATE HANDOVER IS GIVEN WHEN PATIENTS ARE TRANSFERRED TO ANOTHER CLINICAL AREA.

Including:

1. If and when a level is due to be taken.
2. Whether any further doses need to be prescribed.

Print name: Signature:
 Designation: Date: Time: