

Initiating Aminoglycosides Safely

SPECIFIC AMINOGLYCOSIDES

- Gentamicin and Tobramycin (amikacin not discussed below, see [companion document](#))

SPECTRUM OF ACTIVITY

- Many gram-negative bacteria, including resistant Enterobacteriaceae and Pseudomonas spp.
- Synergistic activity with cell-wall agents against Gram-positive organisms, including staphylococci, streptococci and enterococci

INDICATIONS (Note: Use in combination with other antibiotics for empiric treatment. When possible, ALWAYS use an alternate agent to aminoglycosides for targeted treatment.)

- Febrile Neutropenia ([High-Risk](#) and [Solid Tumor/Lymphoma](#))
- Sepsis with potential for resistant pathogens
- Ventilator-associated pneumonia with septic shock
- True β -lactam allergy and treatment of:
 - [Intra-abdominal infections](#)
 - Gynecologic infections
 - [Complicated UTI/Pyelonephritis](#)
- [Surgical prophylaxis](#)
- Synergy for some Gram-positive infections (i.e. endocarditis due to organisms listed above)

CONTRAINDICATIONS

- Myasthenia Gravis
- Caution: known auditory or vestibular disease

DOSING: (Note: informed consent should be obtained for therapy of > 3 days duration)

1. Once daily dosing (ODD) preferred, contraindicated in:

- | | | |
|-----------------------|--------------------------------------|-------------------------|
| ○ Pregnancy | ○ Renal Failure
(eGFR < 40ml/min) | ○ Burns > 20% BSA |
| ○ Significant Ascites | ○ Surgical Prophylaxis | ○ Gram-positive Synergy |

Dose: 5mg/kg of actual body weight (ABW)*

Interval: generally q24h, give first dose and consult clinical pharmacist and see [companion document](#)

*Obesity: If >30% above ideal body weight (IBW), use Dosing Weight

IBW (Men): 50kg + 2.3kg(x inches above 60 in)
 IBW (Women): 45.5kg + 2.3kg(x inches above 60 in)

Dosing Weight = IBW + 0.4(ABW – IBW)

2. Multiple daily dosing (MDD)/conventional dosing – see [companion document](#)
3. Gram-positive synergy dosing (infective endocarditis) – see [companion document](#)