

Amikacin Guidelines

Answer these 4 questions in order and follow the arrows:

1. Does your patient have any degree of renal impairment?

NO

YES

DOSE: 10mg/kg (use ideal body weight if child is obese)
LEVELS:

- Take PEAK LEVEL one hour after FIRST dose
- TROUGH and HOLD at 24 hrs.
- Hold until the trough level is below 10mg/L.
- Dosing interval should be adjusted according to levels - discuss with pharmacy or microbiology for advice
- Repeat levels daily or as necessary.

AIM FOR: TROUGH <10mg/L
PEAK 20-30mg/L
ADMIN: slow iv bolus over 5 minutes

2. Is your patient an infant* $\leq 2\text{kg}$ OR ≤ 4 weeks of life?

NO

YES

* Corrected age is not required as dosing is according to weeks of life

DOSE: <2kg & <4 weeks of life: 10mg/kg ONCE DAILY
<2kg & >4 weeks of life: 15mg/kg ONCE DAILY
>2kg & <4 weeks of life: 15mg/kg ONCE DAILY
LEVELS:

- TROUGH and PEAK at 24 hrs.
- Repeat trough and peak every 3 days.
- Do NOT hold dose while waiting for trough.

AIM FOR: TROUGH <10mg/L for 10mg/kg dose
TROUGH < 5mg/L for 15mg/kg dose
PEAK 20-30mg/L
ADMIN: slow iv bolus over 5 minutes

3. Is your patient on amikacin for post-surgical prophylaxis?

NO

YES

DOSE: 10mg/kg TWICE DAILY (use ideal body weight if child is obese)
LEVELS:

- If surgical prophylaxis is for 48 hrs or less then levels are NOT required.
- If treatment is continued beyond 48 hrs then measure TROUGH and PEAK, and consider changing to ONCE DAILY dosing (20mg/kg) depending on levels - discuss with pharmacy / microbiology for advice.

ADMIN: slow iv bolus over 5 minutes

4. Does your patient have Cystic Fibrosis?

NO

YES

DOSE: 30mg/kg (max 1.5g) ONCE DAILY
LEVELS:

- TROUGH and GIVE at 24 hrs.
- Repeat trough level weekly.
- Do NOT hold dose while waiting for trough.

AIM FOR: TROUGH < 5mg/L
Peak levels are NOT required.
ADMIN: Infuse over 30 minutes

5. All other patients > 2kg AND > 4 weeks of life:

DOSE: 20mg/kg (max 1.5g) ONCE DAILY
Use ideal body weight if child is obese
LEVELS:

- TROUGH and GIVE at 24 hours.
- Repeat trough level every 3 days.
- Do NOT hold dose while waiting for trough.

AIM FOR: TROUGH < 5mg/L
Peak levels are NOT required
ADMIN: Infuse over 30 minutes

ADMINISTRATION:

SEE INDIVIDUAL REGIME ABOVE FOR RATE OF ADMINISTRATION

Administer in glucose 5% or sodium chloride 0.9%.
Actual volume is not important.
May be given either centrally or peripherally.

REMEMBER: ALWAYS RECORD THE TIMES THAT LEVELS ARE TAKEN AND DOSES GIVEN ON THE FORM.

TIMING OF LEVELS: Trough levels should be taken immediately before the next dose; peak levels should be taken one hour after a bolus dose has been given. Levels should be taken from finger prick/ peripheral venepuncture and must NOT be taken from any lumen of any line through which amikacin has ever been given.

MICROBIOLOGY CUT-OFF TIMES: Routine antibiotic assays are run twice daily at 1030 and 1530 Monday to Sunday. Levels will be available on the pathology system at approximately 1130 for samples received before 1030, and at 1630 for samples that are received before 1530. Any samples missing the 1530 run will not routinely be processed until 1030 the following morning unless required urgently; assays will be run out-of-hours if urgent but this MUST be arranged with the microbiology team.

If in any doubt, contact your WARD PHARMACIST, MEDICINES INFORMATION (ext 8608), or after-hours the ON-CALL RESIDENT PHARMACIST (bleep 0714) OR ON-CALL MICROBIOLOGIST for advice.