# Paediatric Dose Calculation Formulas

**1. Total Daily Dose (mg/day)**

Daily Dose = Patient Weight (kg) × Standard Dose per kg (mg/kg/day)

2. Per Dose (mg)

Per Dose = Daily Dose (mg/day) ÷ Number of Doses per Day

3. Dose per Hour (mg/hr)

Dose per Hour = Daily Dose (mg/day) ÷ Duration (hours)

4. mg per kg per Dose (mg/kg/dose)

mg per kg per Dose = Per Dose (mg) ÷ Patient Weight (kg)

5. Volume per Day (mL/day)

Volume per Day = Daily Dose (mg/day) ÷ Concentration (mg/mL)

6. Volume per Dose (mL/dose)

Volume per Dose = Per Dose (mg) ÷ Concentration (mg/mL)

7. mL per kg per Dose (mL/kg/dose)

mL per kg per Dose = Volume per Dose (mL/dose) ÷ Patient Weight (kg)

8. Infusion Rate (mL/hr)

Infusion Rate = Total Volume to Infuse (mL) ÷ Duration (hours)

9. Total Volume (mL)

Total Volume = Volume per Dose × Number of Doses per Day

10. Diluent Volume (mL)

Diluent Volume = Infusion Rate (mL/hr) × Duration (hr)

## Example Calculation

Patient Weight: 15 kg

Standard Dose: 7.5 mg/kg/day

Dose Frequency: Twice a day (BD) -> 2 doses/day

Concentration: 15 mg/mL

1. Daily Dose (mg/day): 15 kg × 7.5 mg/kg = 112.5 mg/day

2. Per Dose (mg/dose): 112.5 mg/day ÷ 2 = 56.25 mg/dose

3. Volume per Dose (mL/dose): 56.25 mg ÷ 15 mg/mL = 3.75 mL/dose

4. Infusion Rate (mL/hr): (3.75 mL × 2 doses/day) ÷ 24 hr = 0.31 mL/hr