

IV DRUG CALCULATION FORMULAS

1.	Basic IV Flow Rate (pump): $\text{ml/hr} = \frac{\text{volume (ml)}}{\text{total time (hr)}}$
2.	Basic IV Flow Rate (gtt/min): $\text{gtt/min} = \frac{\text{total volume (ml)} \times \text{drop factor (gtt/ml)}}{\text{total time (minutes)}}$ $\text{gtt/min} = \frac{\text{rate (ml/hr)} \times \text{drop factor (gtt/ml)}}{60 \text{ (min/hr)}}$
3.	Heparin & Insulin Drips: 1. Calculate drug concentration = $\frac{\text{amount of drug in solution (units)}}{\text{amount of solution (ml)}}$ 2. $\text{ml/hr} = \frac{\text{dose (units/hr)}}{\text{concentration (units/ml)}}$
4.	Steps for IV Drug Calculations: 1. Change weight to kg: Divide weight in lbs. by 2.2 1. Calculate drug concentration = $\frac{\text{amount of drug in solution (mg)}}{\text{amount of solution (ml)}}$ 3. Convert "mg" to "mcg": Multiply by 1000 4. Plug in the correct formula
5.	IV Drug Calculation Formulas: 1. $\text{mcg/kg/min} = \frac{\text{concentration (mcg/ml)} \times \text{infusion rate (ml/hr)}}{\text{wt (kg)} \times 60 \text{ (min/hr)}}$ 2. $\text{mcg/min} = \frac{\text{concentration (mcg/ml)} \times \text{infusion rate (ml/hr)}}{60 \text{ (min/hr)}}$ 3. $\text{ml/hr} = \frac{\text{wt (kg)} \times \text{dose (mcg/kg/min)} \times 60 \text{ (min/hr)}}{\text{drug concentration (mcg/ml)}}$