

Percentage concentrations

- ✓ **Weight in volume (w/v):** grams of drug in 100 mL of solution
- ✓ **Volume in volume (v/v):** milliliters of drug in 100 mL of solution
- ✓ **Weight in weight (w/w):** grams of drug in 100 g of the total dosage form

Pediatric dosing

- ✓ **Clark's rule:** $\text{dose} = \frac{\text{weight (lb)}}{150} \times \text{adult dose}$
- ✓ **Young's rule:** $\text{dose} = \frac{\text{age}}{\text{age} + 12} \times \text{adult dose}$
- ✓ **Fried's rule:** $\text{dose} = \frac{\text{age (months)}}{150} \times \text{adult dose}$

Body surface area (BSA)

- ✓ $\text{BSA (m}^2\text{)} = \frac{1}{6} \sqrt{W \times H}$
- ✓ W is body weight in kilograms, H is height in meters

IV infusion rate

- ✓ $\frac{\text{total IV volume}}{\text{time}} = \text{mL per hour or minute}$
- ✓ $\frac{\text{total IV volume}}{\text{time (minutes)}} \times \text{drop factor} = \text{drops per minute}$

Alligation

- ✓ **Alligation ratio** = $H : L$, to make a desired concentration m from a higher h and a lower l
- ✓ $H = m - l$ parts of the higher; $L = h - m$ parts of the lower

Dilution

- ✓ $M_1 V_1 = M_2 V_2$
- ✓ M is molarity (mol/L) and V is volume. For v/v or w/v concentrations, use the concentrations in place of M

Dose equations

- ✓ **Days' supply** = $\frac{\text{number of doses in the prescription}}{\text{number of doses per day}}$
- ✓ **Number of tablets** = $\frac{\text{desired dose}}{\text{stock strength}}$
- ✓ **Amount of solution to give** = $\frac{\text{desired dose}}{\text{stock strength}} \times \text{stock volume}$