Achievable

PTCE DUMP SHEET

Formulas

Percent weight in volume (w/v)

The number of grams in 100 mL of solution is expressed as %w/v.

Percent volume in volume (v/v)

Is the number of milliliters in 100 mL of solution and is expressed as %v/v.

Percent weight in weight (w/w)

Is the number of grams in 100 grams of total dosage form and is expressed as %w/w

Clark's rule

$$\text{Pediatric dose} = \frac{\text{weight of child (lbs)}}{150} \text{ X adult dose}$$

Young's rule

$$\text{Pediatric dose} = \text{Adult dose X } \frac{\text{Age}}{(\text{Age}+12)}$$

Fried's rule

$$\text{Pediatric dose} = \frac{\text{Age in months}}{150} \text{ X adult dose}$$

Calculating drug dosage based on body surface area

$$\text{BSA } (m^2) = \frac{1}{6} (W*H)0.5$$

where **W** is body weight in kg and H is body height in meters

Rate of the IV infusion

$$\frac{\text{Total IV Volume}}{\text{Time (hour or minute)}} = \text{mL per hour or minute}$$

$$\frac{\text{Total IV Volume}}{\text{Time (minute)}} \text{ X Drops Factor} = \text{Drops per minute}$$

Alligation ratio

Alligation ratio = H/L

Considering "m" as the desired concentration, 'l' is the lower concentration, and "h" is the higher concentration.

H = m - l **L** = h - m

Dilution

Dilution: $M_1V_1 = M_2V_2$

where M1 and M2 are equal to the molarity of the solutions, measured as mol/L or M, and V1 and V2 are equal to the volume of the solutions. Sometimes,concentration is given in v/v or w/v concentrations. In that case substitute M1 and M2 by the respective concentrations.

Dose equations

Days' supply = $\frac{\text{number of doses in the prescription}}{\text{number of doses per day}}$

Number of Tables = $\frac{\text{Desired Dose}}{\text{Stock Strength}}$

Amount of Solution to be given = $\left(\frac{\text{Desired Dose}}{\text{Stock Strength}}\right)$ X Stock Volume