

PK EQUATIONS TO KNOW FOR NAPLEX

CLcr equation (units of sCr = mg/dL or mg/100 mL or mg%)

IBW equation Conversion of pounds to kg and vice versa

$$F = \frac{AUC_{po}}{AUC_{iv}} \cdot \frac{D_{iv}}{D_{po}}$$

$$K = \frac{CL}{Vd} \quad K = \ln(C1/C2) / \Delta T \quad T_{1/2} = \frac{0.693}{K}$$

$$C_{ss,avg} = \frac{D/\tau \cdot F \cdot S}{CL} \quad \text{or} \quad C_{ss} = \frac{K_o \cdot S}{CL} \quad \text{and all rearrangements}$$

$$LD_{slow} = \frac{(C_{peak} - C_{"on board"}) \cdot Vd}{F \cdot S} \quad \text{and all rearrangements}$$

$$\text{Amt in body} = Vd \cdot C$$

Alternative loading dose: if $\tau = T_{1/2}$, LD should be 2 x maintenance dose
(Since accumulation factor is 2)

$$C_t = C_0 \cdot e^{-Kt} \quad \ln C_t = \ln C_0 - Kt$$

e^{-Kt} = "fraction remaining after time t"

50% after 1 half-life; 25% after 2; 12.5% after 3; 6.25 % after 4; 3.125% after 5

$1 - e^{-Kt}$ = "fraction removed after time t" or "fraction of SS attained after time t"

50% after 1 half-life; 75% after 2; 87.5% after 3; 93.75% after 4; 96.875% after 5