$$TI = TD_{50} / ED_{50}$$

$$Vd = \frac{\text{Amount of the drug in the body}}{\text{Plasma concentration}}$$

$$\text{Bioavailability} = \frac{\text{Area under the curve (AUC) after oral route}}{\text{Area under the curve (AUC) after L.V. route}} \times 100$$

$$T_{1/2} = 0.7\, V_d / CLs$$

Systemic CLs = Renal clearance (CL_r) + non-renal clearance (CLnr)

$$\text{Loading dose} = Vd \times TC$$

$$\text{Maintenance dose} = CLs \times TC \text{ (concentration)}$$

Clark's rule:

- Child dose= adult dose x child BW (kg)/ 70kg
- BW: body weight in Kg

Young's rule:

- Child dose= adult dose x child age (years)/ (age+12)

- Determination of drug dosage from surface area (SA): (most commonly used approach)
  - Child dose= adult dose x SA child (M^2)/ 1.8
  - SA: surface area (in square meters)