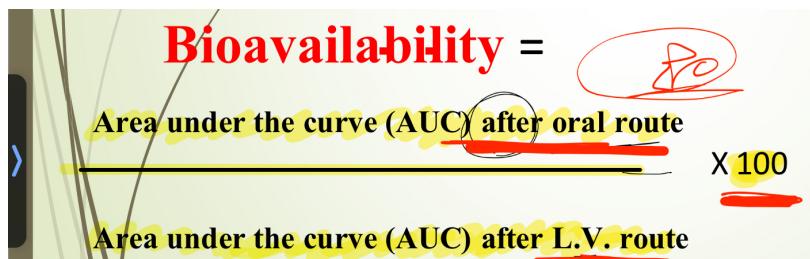


$$TI = TD_{50} / ED_{50}$$

Amount of the drug in the body

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



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

► *Systemic CLs* = Renal clearance (CL<sub>r</sub>) + non-renal clearance (CL<sub>nr</sub>)

$$\text{Loading dose} = V_d \times \boxed{\text{TC}}$$

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

#### Clark's rule:

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

#### Young's rule:

- Child dose = adult dose  $\times$  child age (years) / (age+12)

- Determination of drug dosage from surface area (SA): (most commonly used approach)

- Child dose = adult dose  $\times$  SA child ( $M^2$ ) / 1.8
- SA: surface area (in square meters)