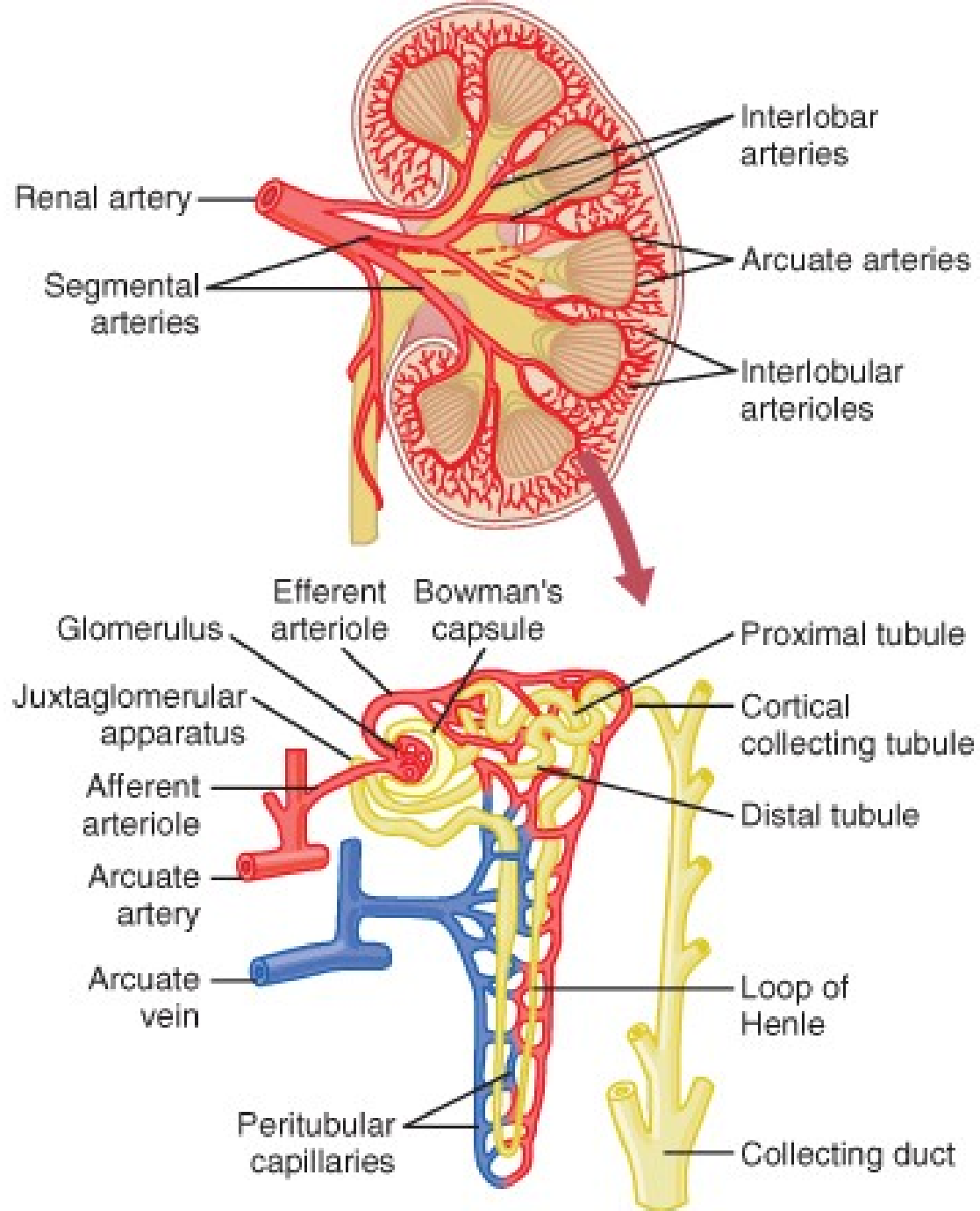
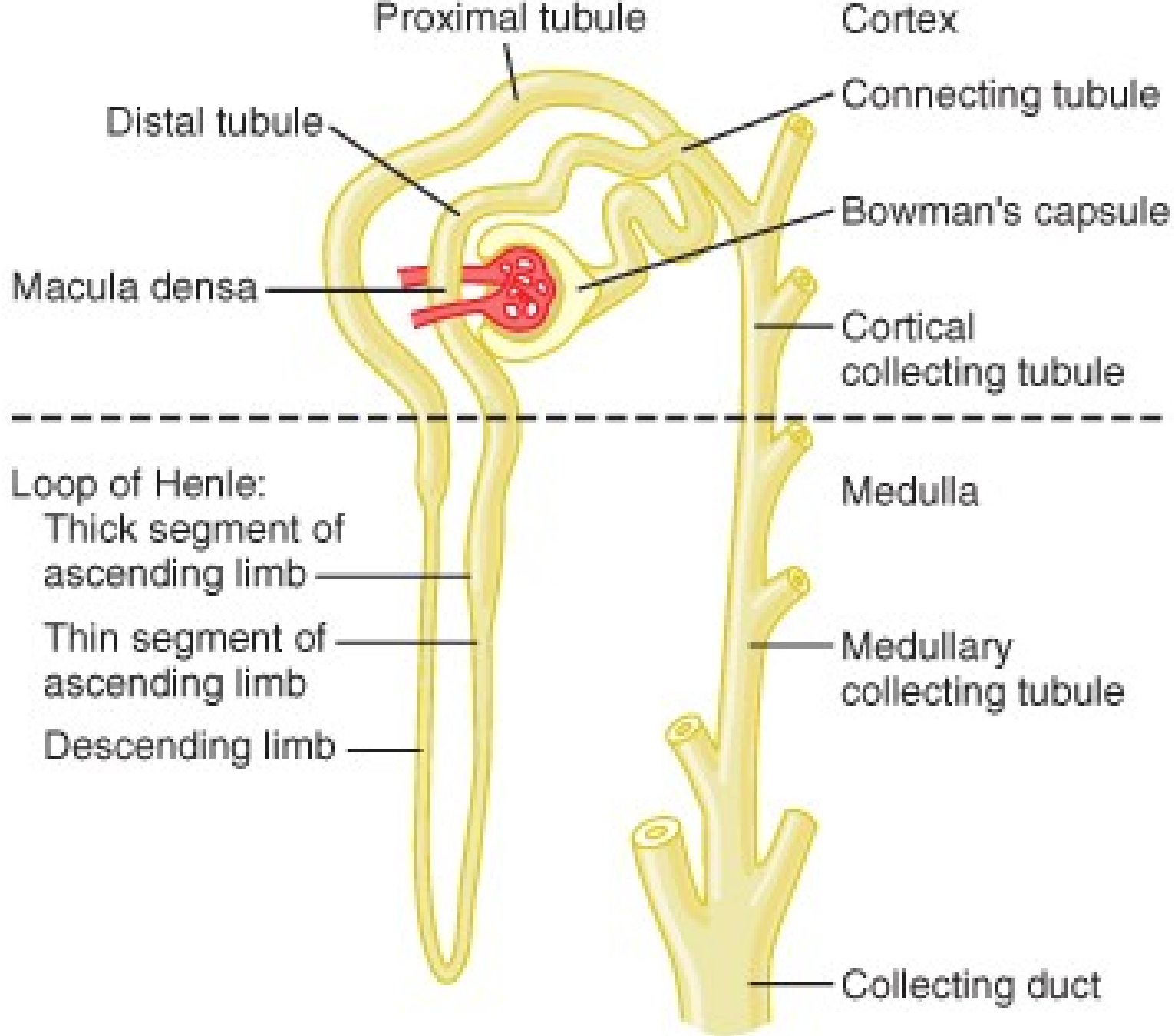


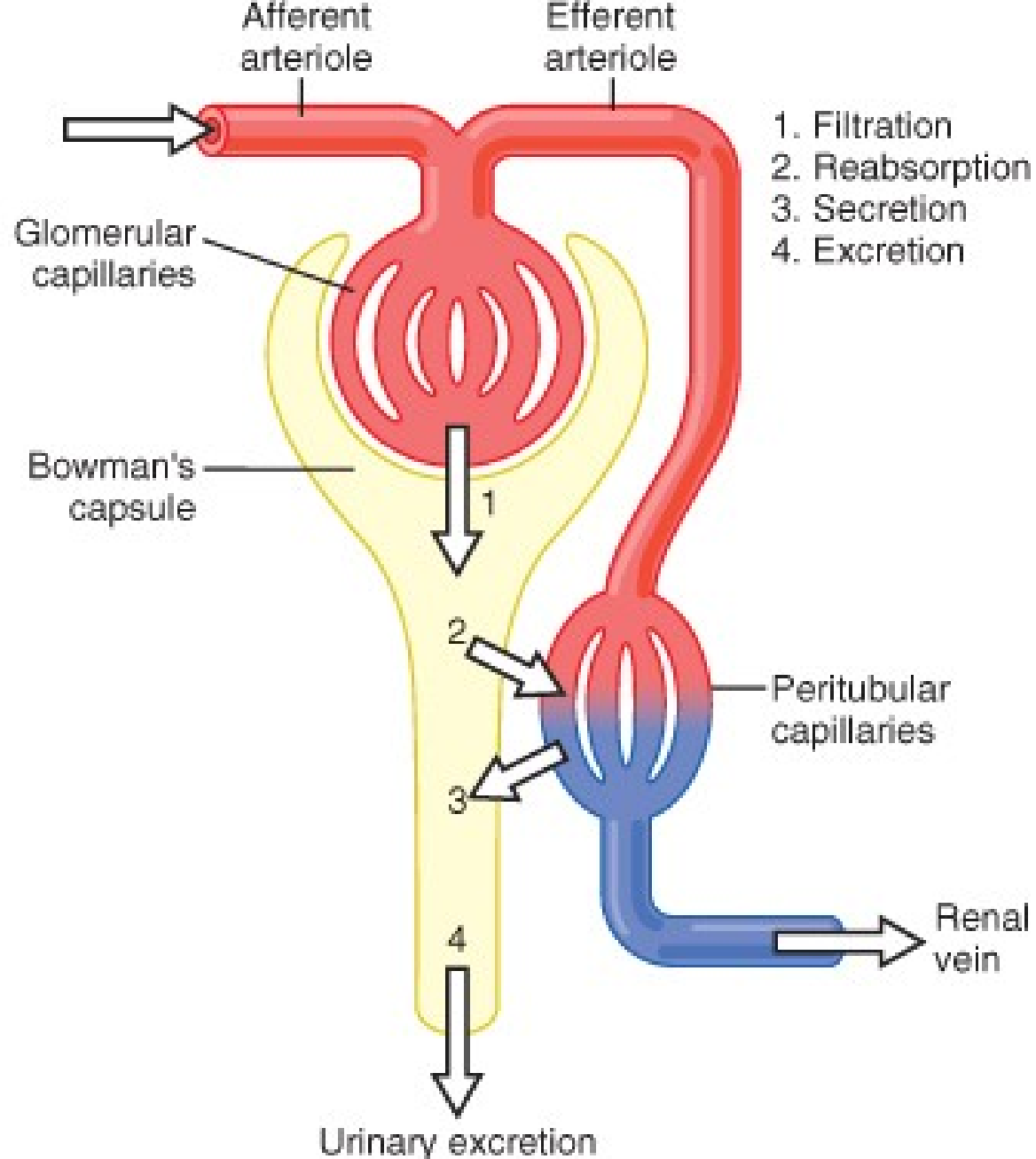
Ledviny

FUNKCE

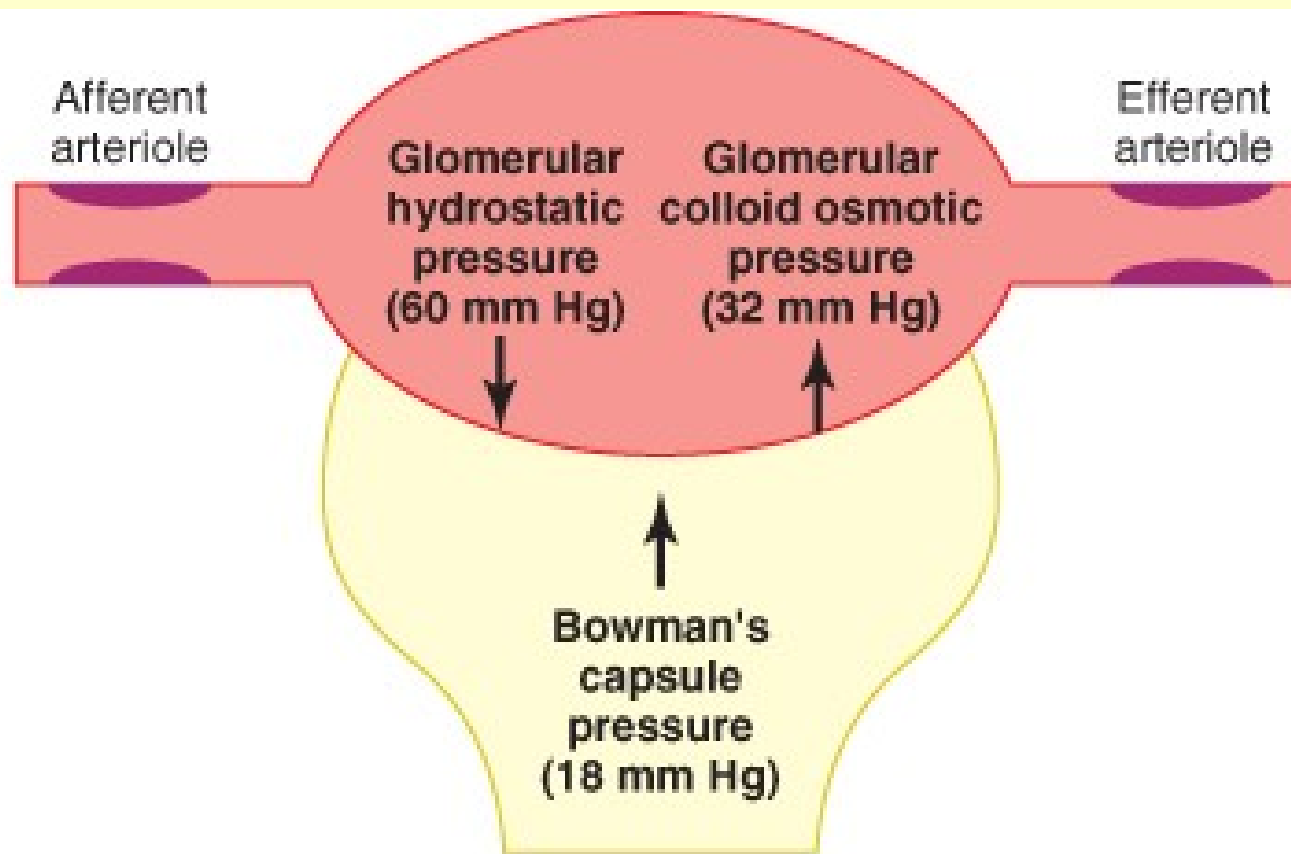
- **Vyloučení dusíkatých látek** (močovina, kreatinin, močová kyselina, xenobiotika)
- **Isoionie** (Na, K, Cl, Mg, Ca, H, HCO₃)
- **Isovolemie** (ECV, objem plazmy)
- **Isotonie** (homeostáza osmotického tlaku)
- **Isohydrie** (homeostáza ACB rovnováhy)
- **Regulace TK** (renin, kininy, prostaglandiny,
- **Metabolismus** (proteiny, peptidy, toxiny, glukoneogeneze)
- **Tvorba hormonů** (calcitriol, erythropoetin, renin)
- **Účinek hormonů** (ADH, aldosteron, adrenalin, parathormon atd.)



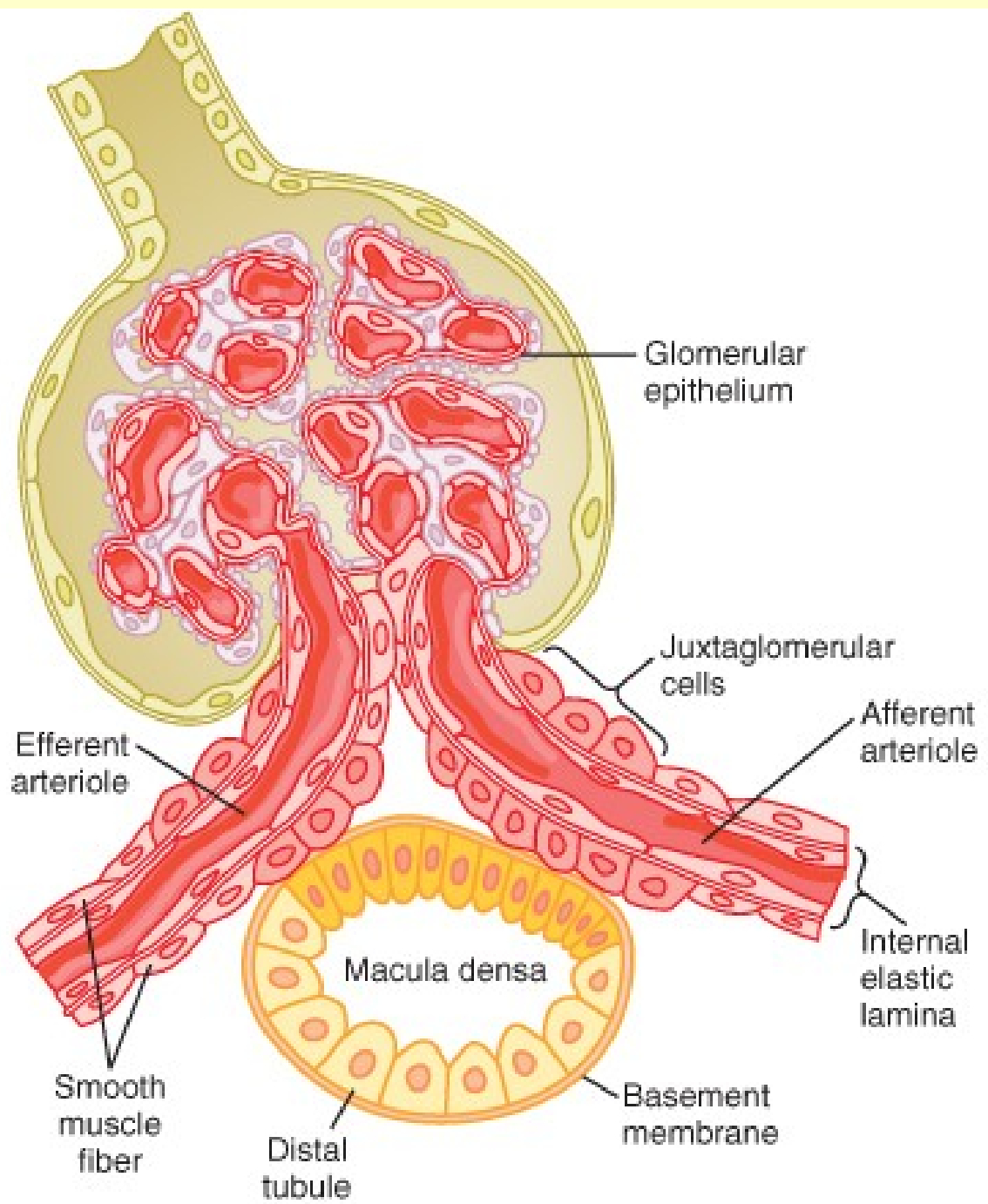


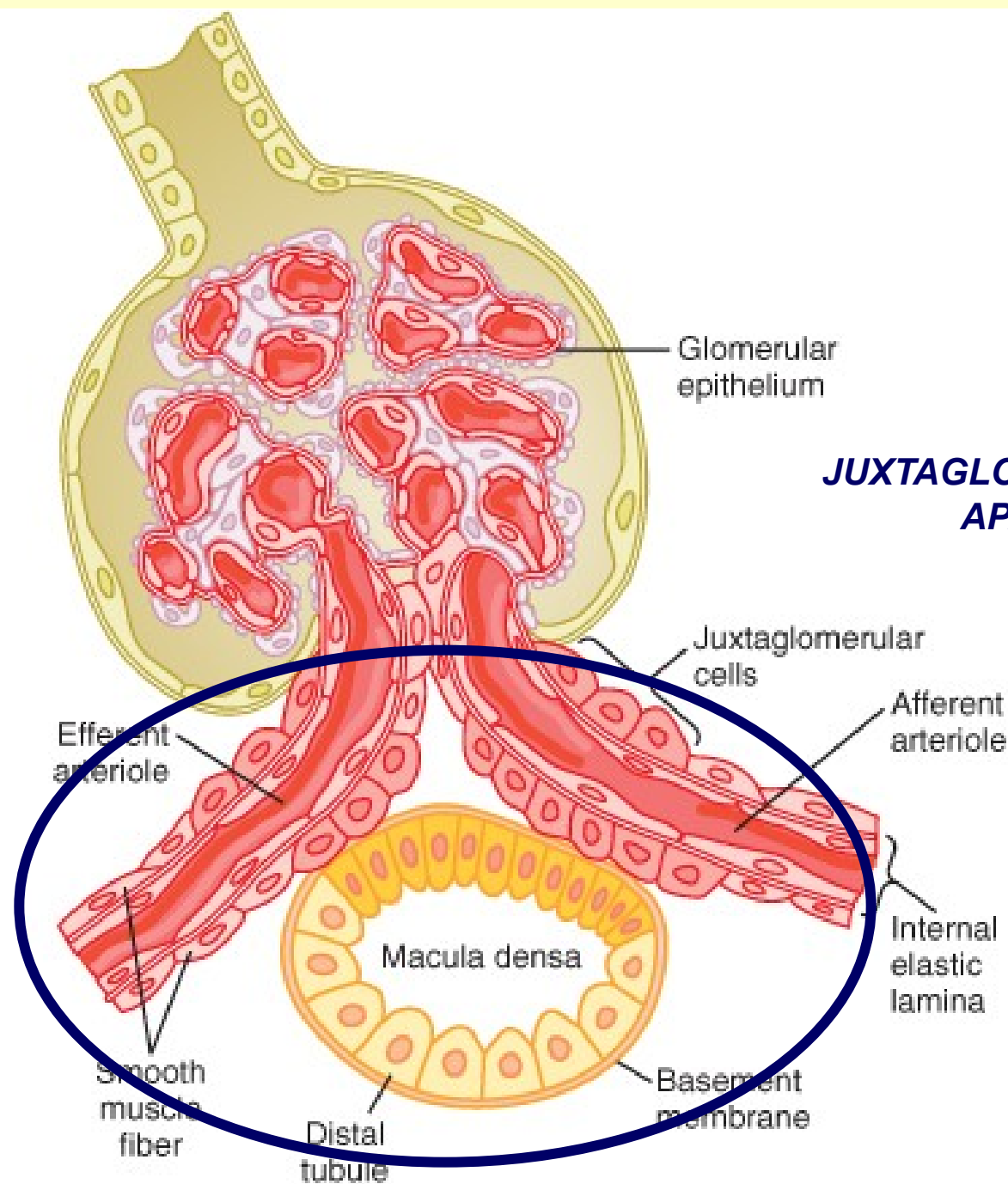


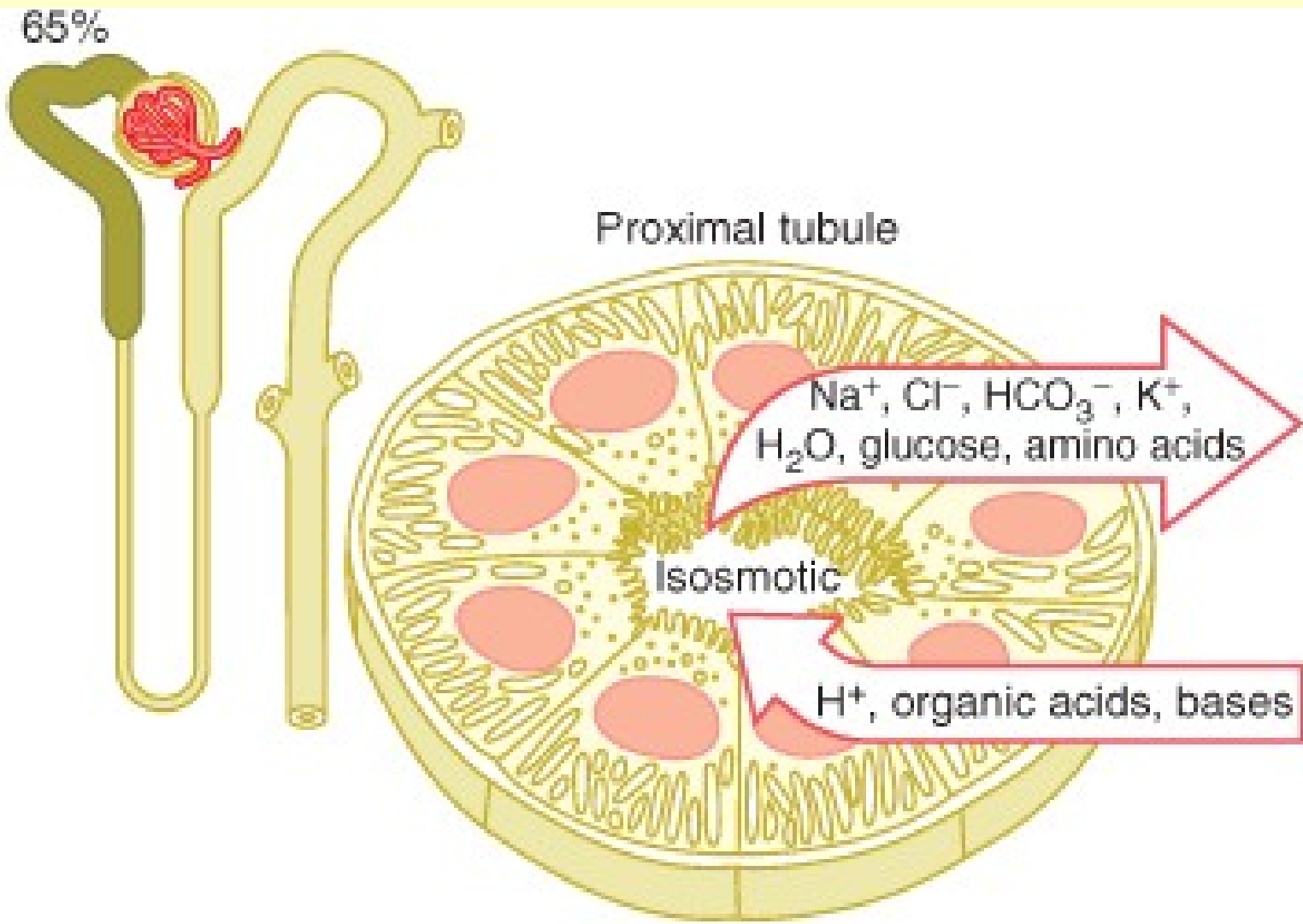
$$\text{Excretion} = \text{Filtration} - \text{Reabsorption} + \text{Secretion}$$

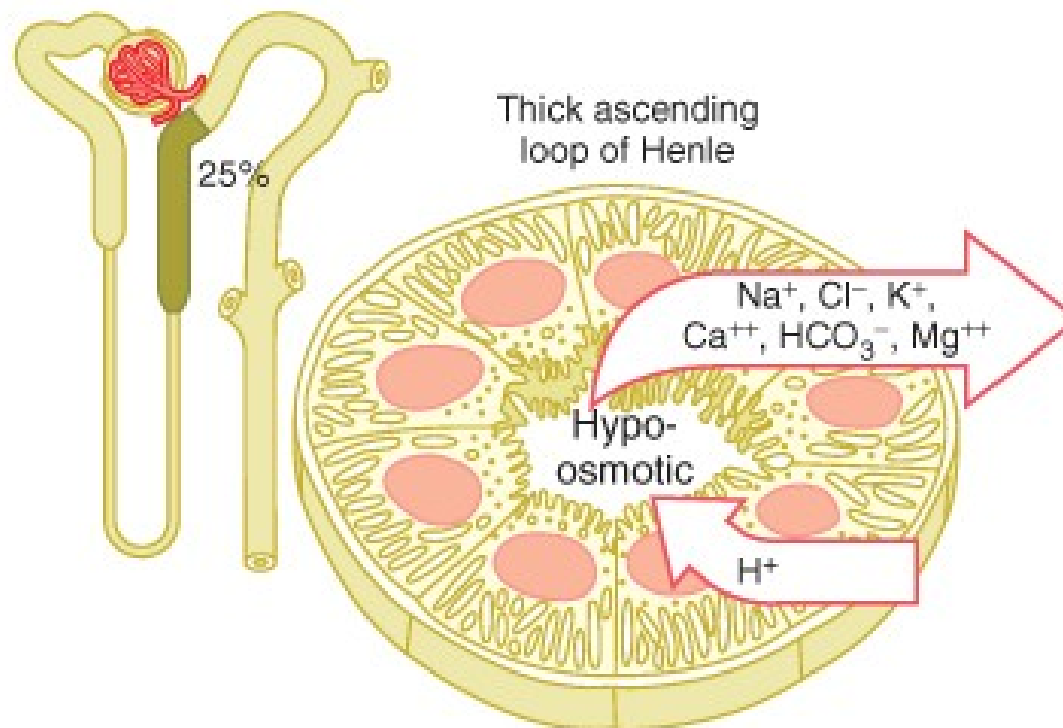
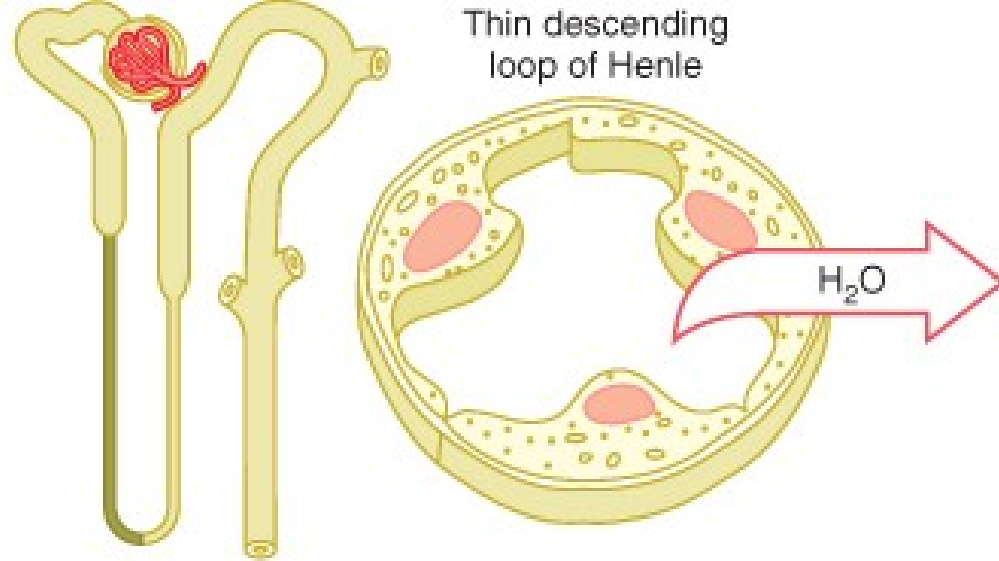


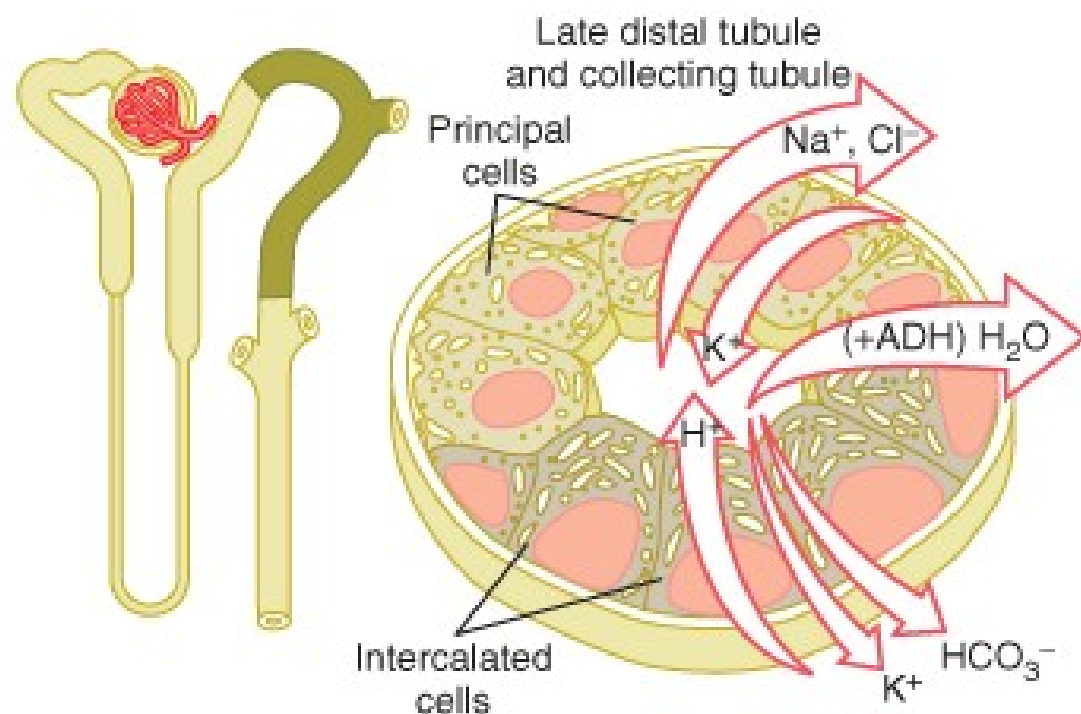
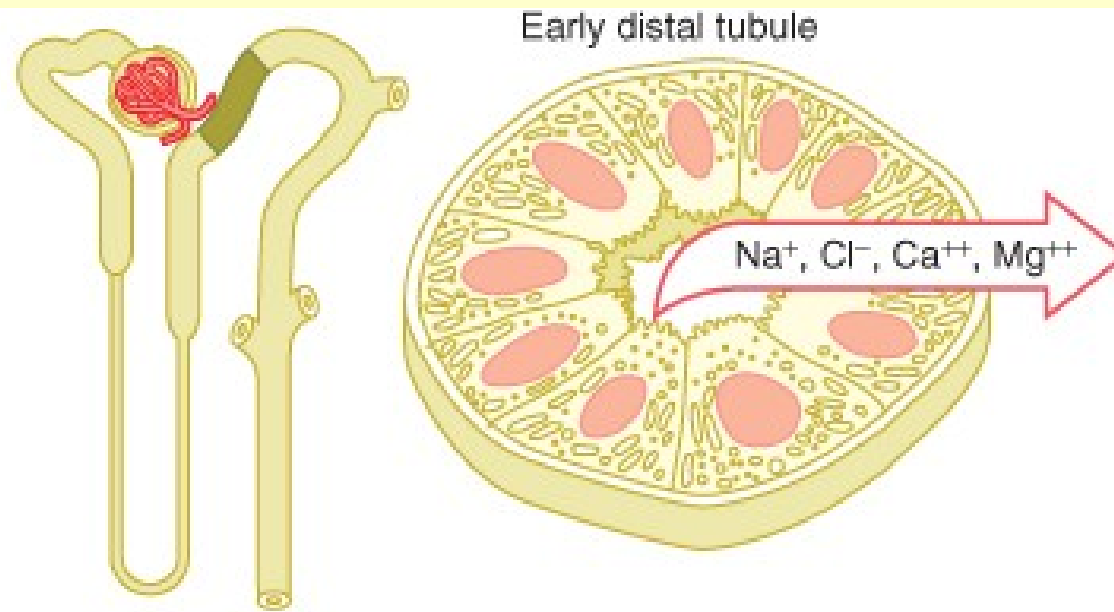
$$\text{Net filtration pressure (10 mm Hg)} = \text{Glomerular hydrostatic pressure (60 mm Hg)} - \text{Bowman's capsule pressure (18 mm Hg)} - \text{Glomerular oncotic pressure (32 mm Hg)}$$

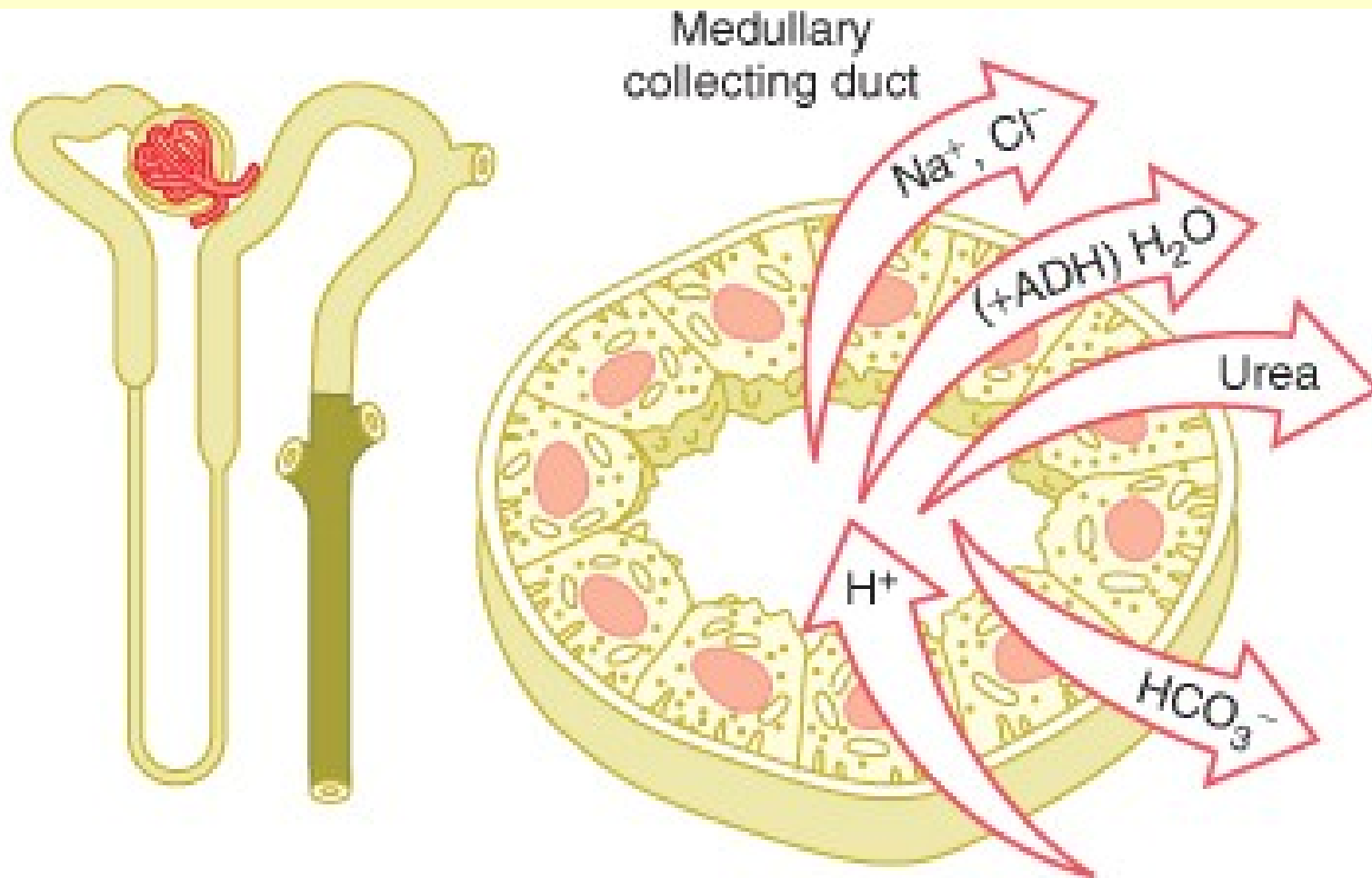




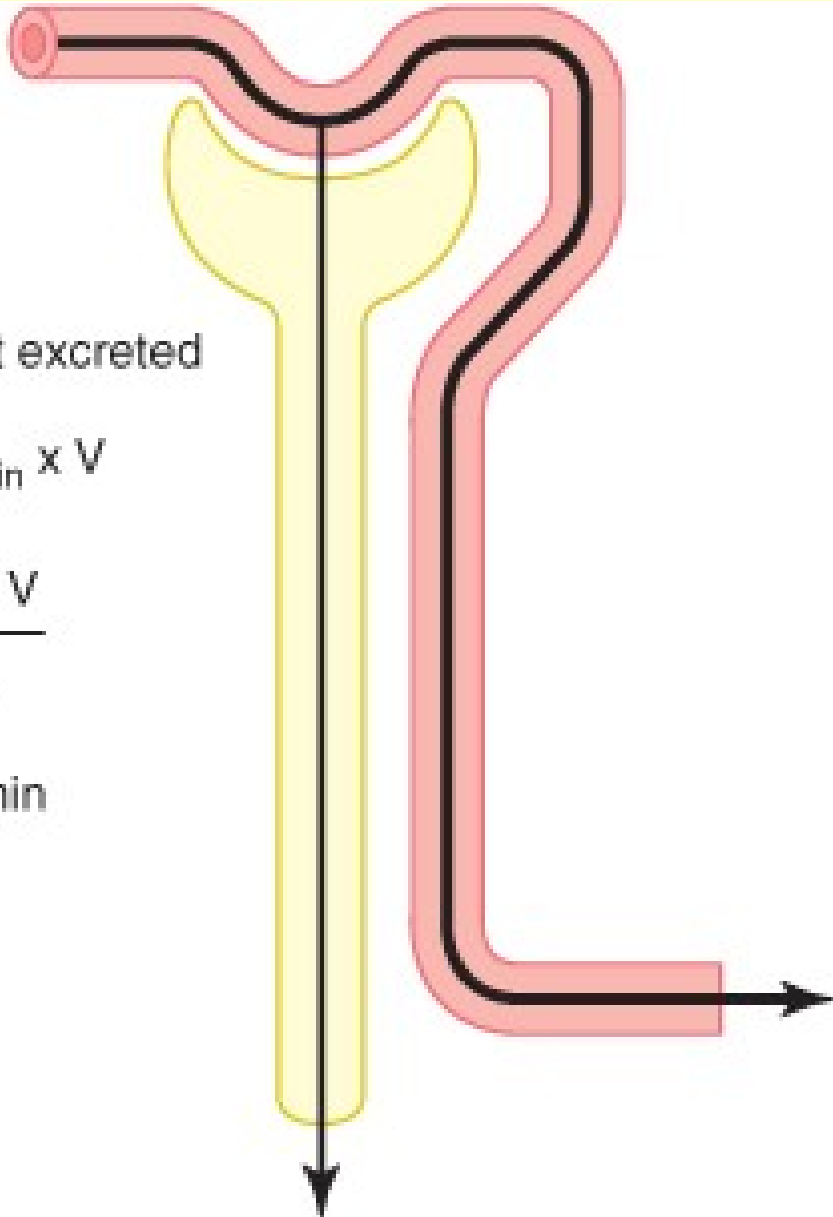








$P_{\text{inulin}} = 1 \text{ mg/ml}$



Amount filtered = Amount excreted

$$\text{GFR} \times P_{\text{inulin}} = U_{\text{inulin}} \times V$$

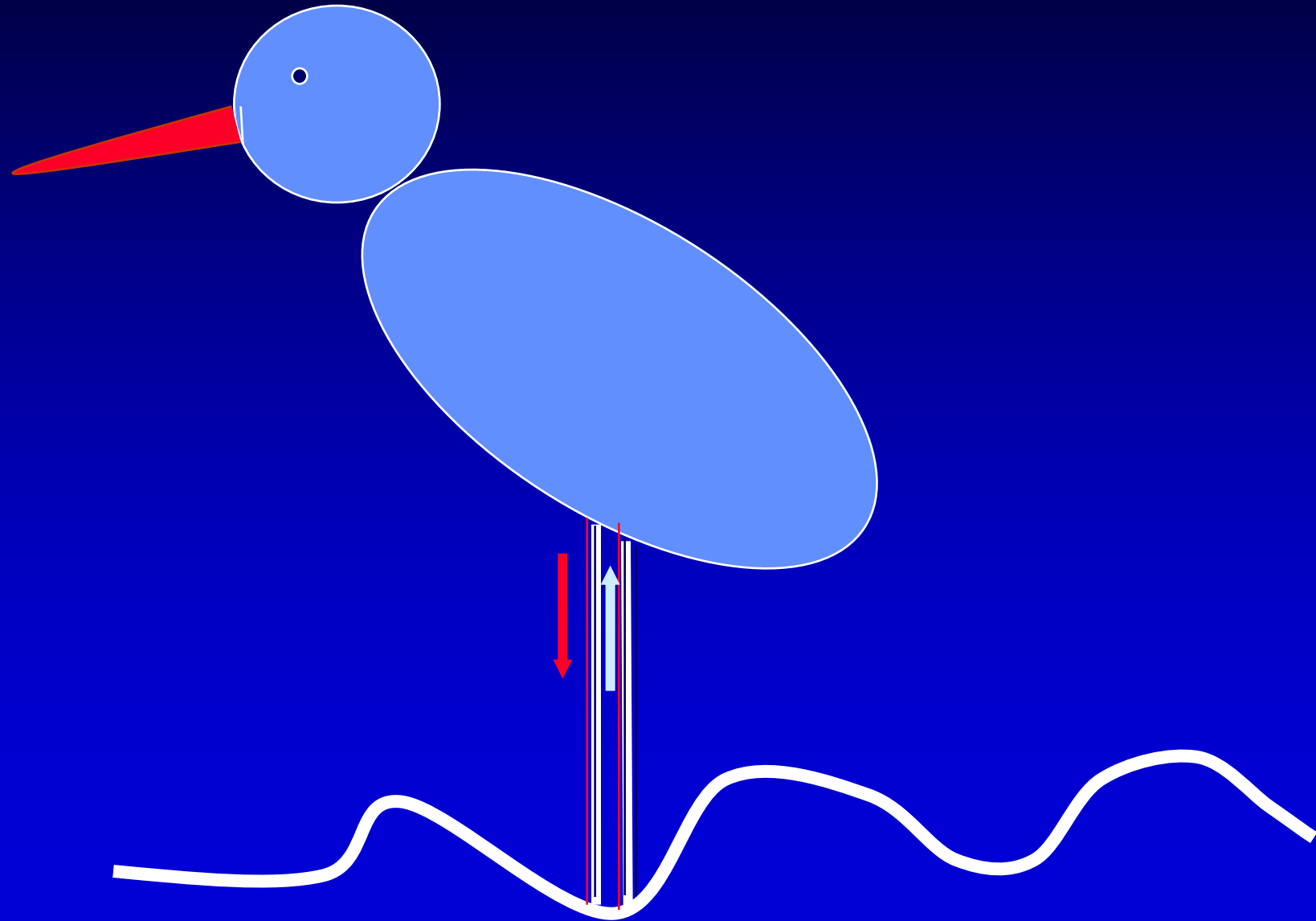
$$\text{GFR} = \frac{U_{\text{inulin}} \times V}{P_{\text{inulin}}}$$

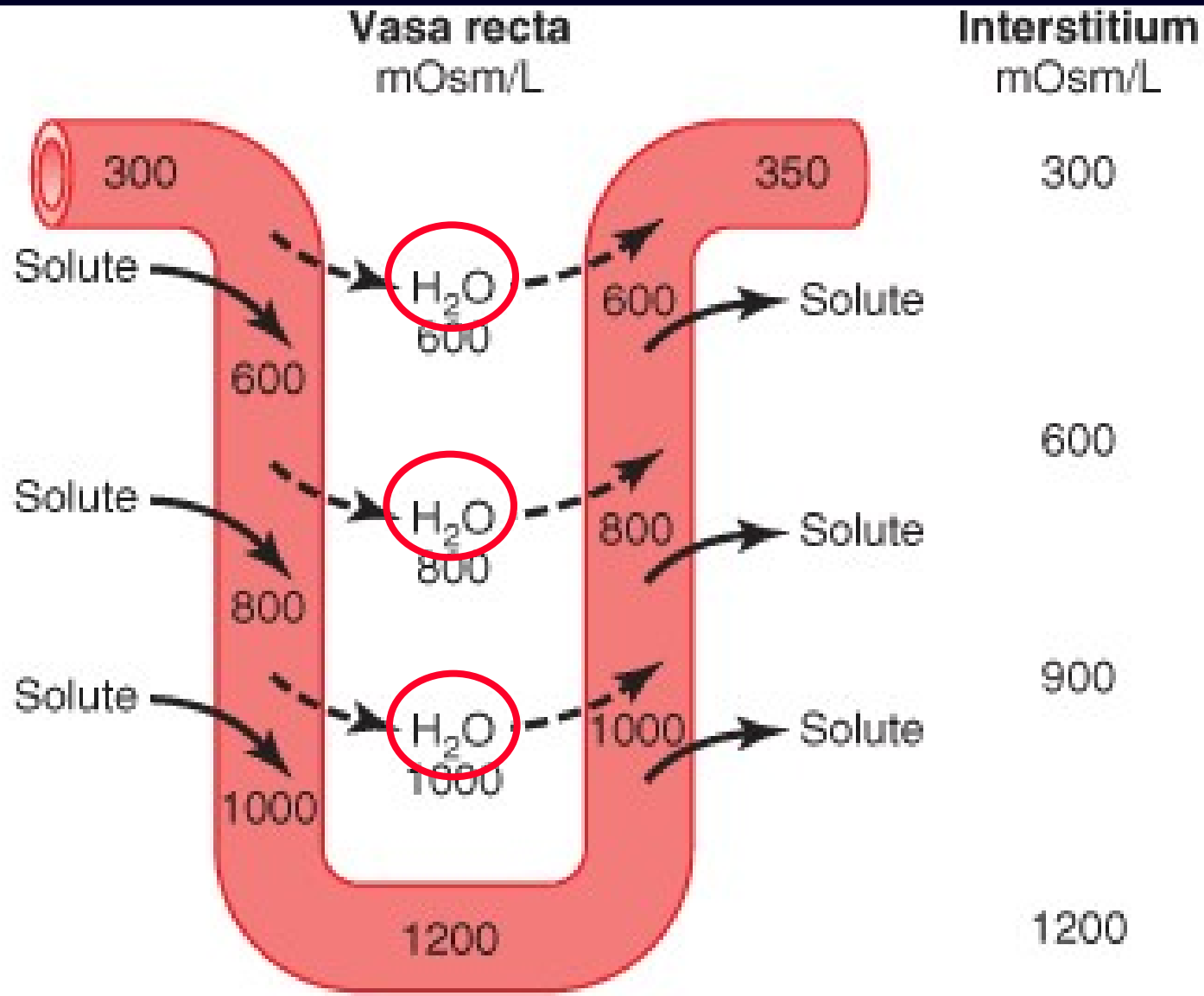
$$\text{GFR} = 125 \text{ ml/min}$$

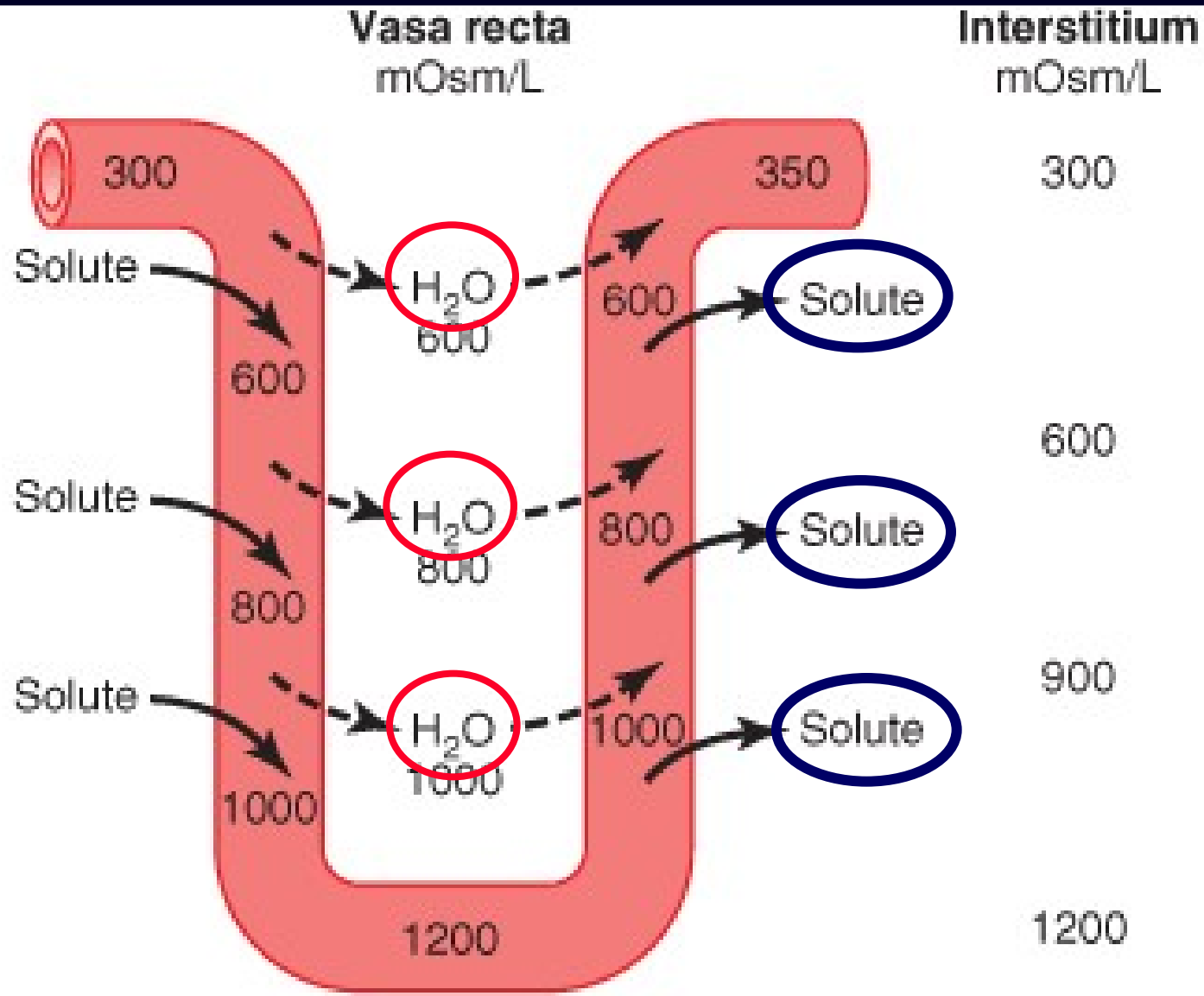
$U_{\text{inulin}} = 125 \text{ mg/ml}$

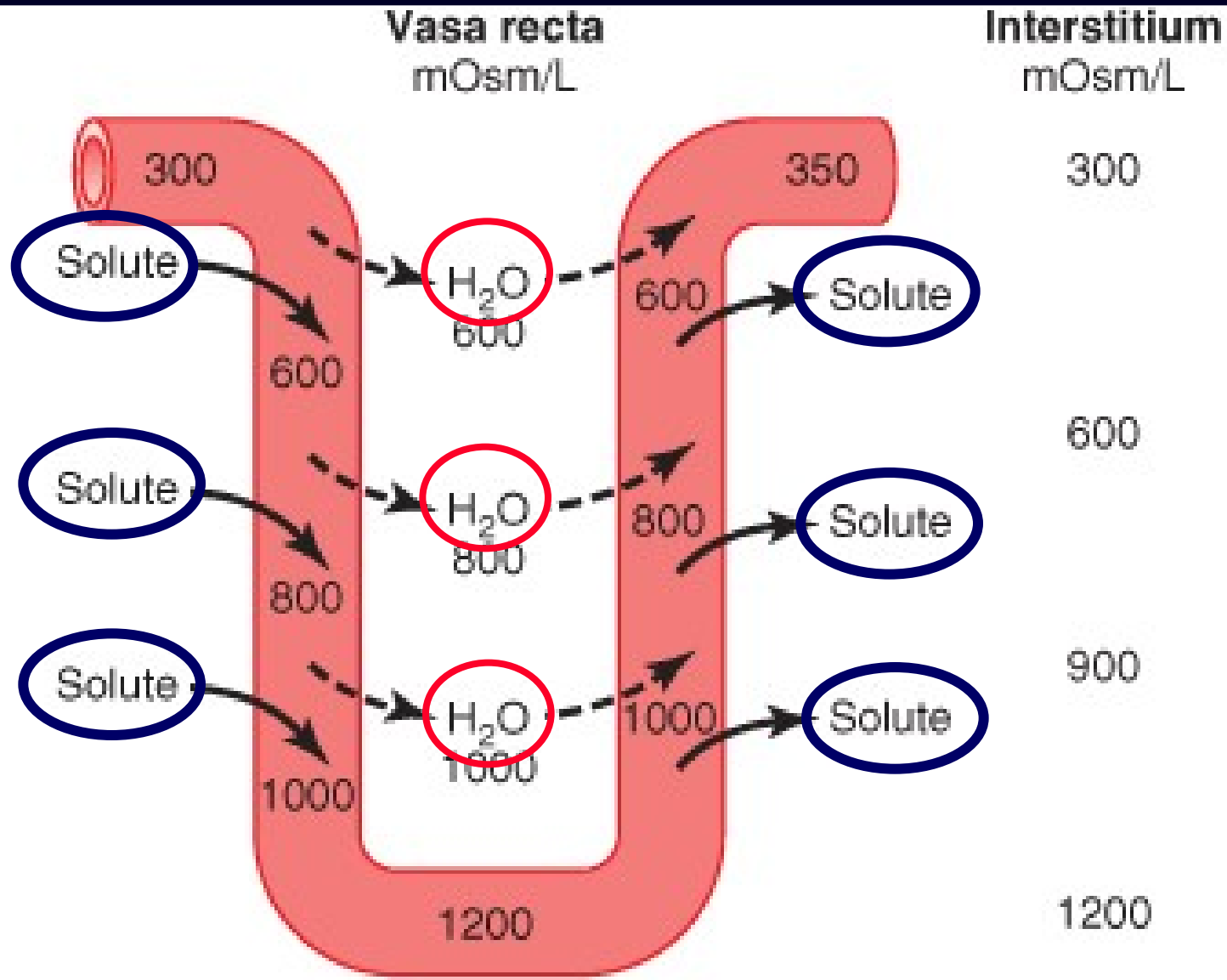
$V = 1 \text{ ml/min}$

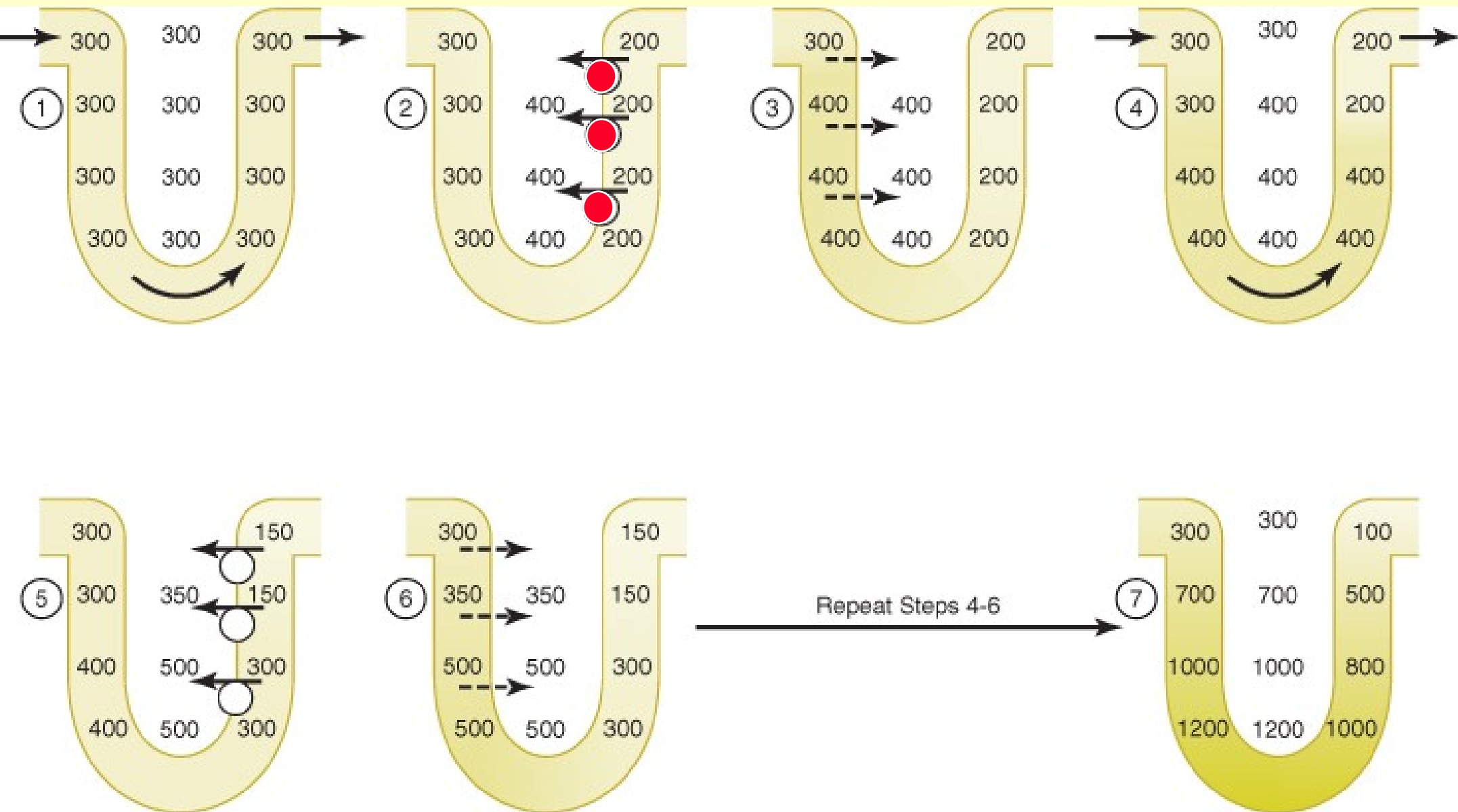
PROTIPROUDNÍ SYSTÉM

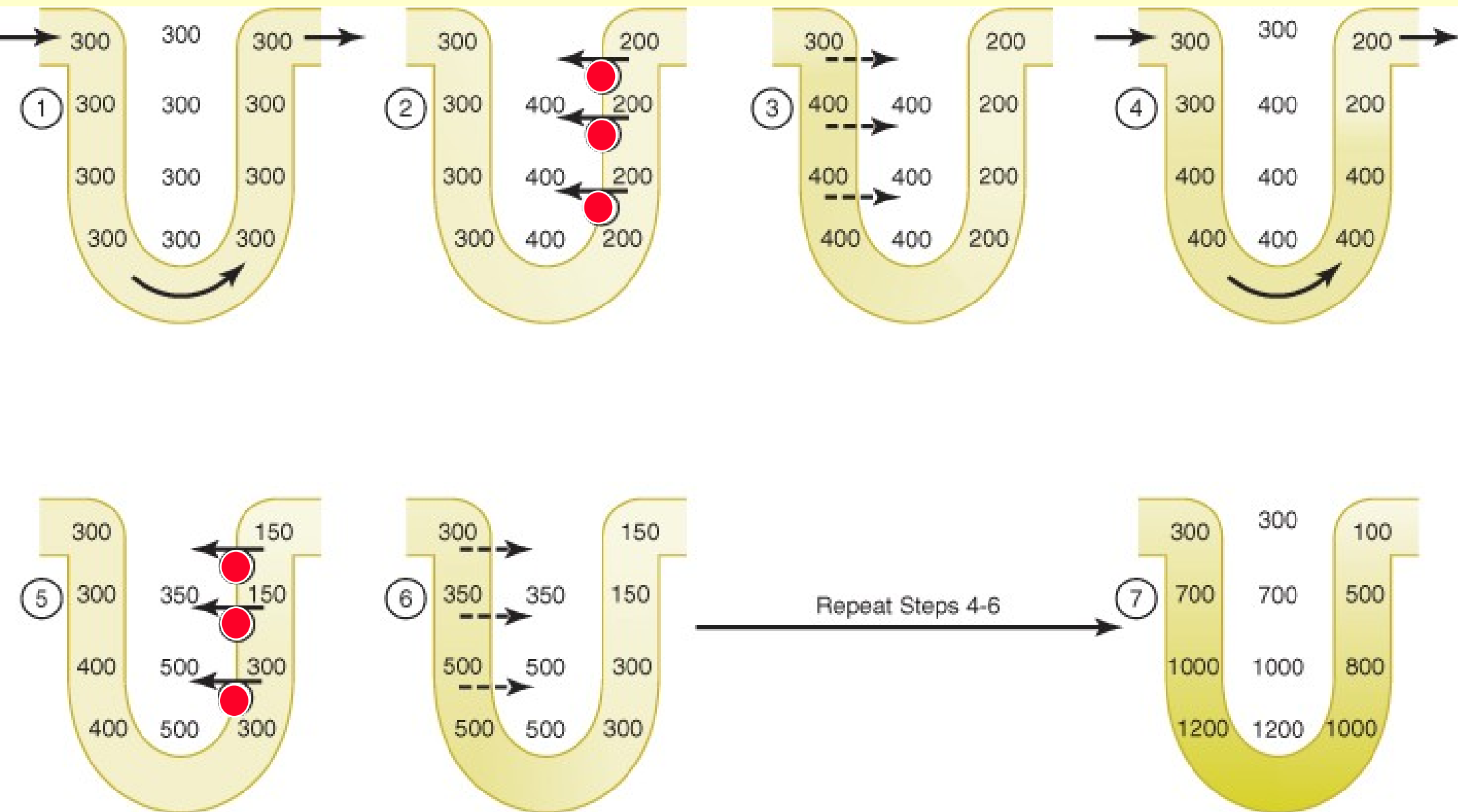


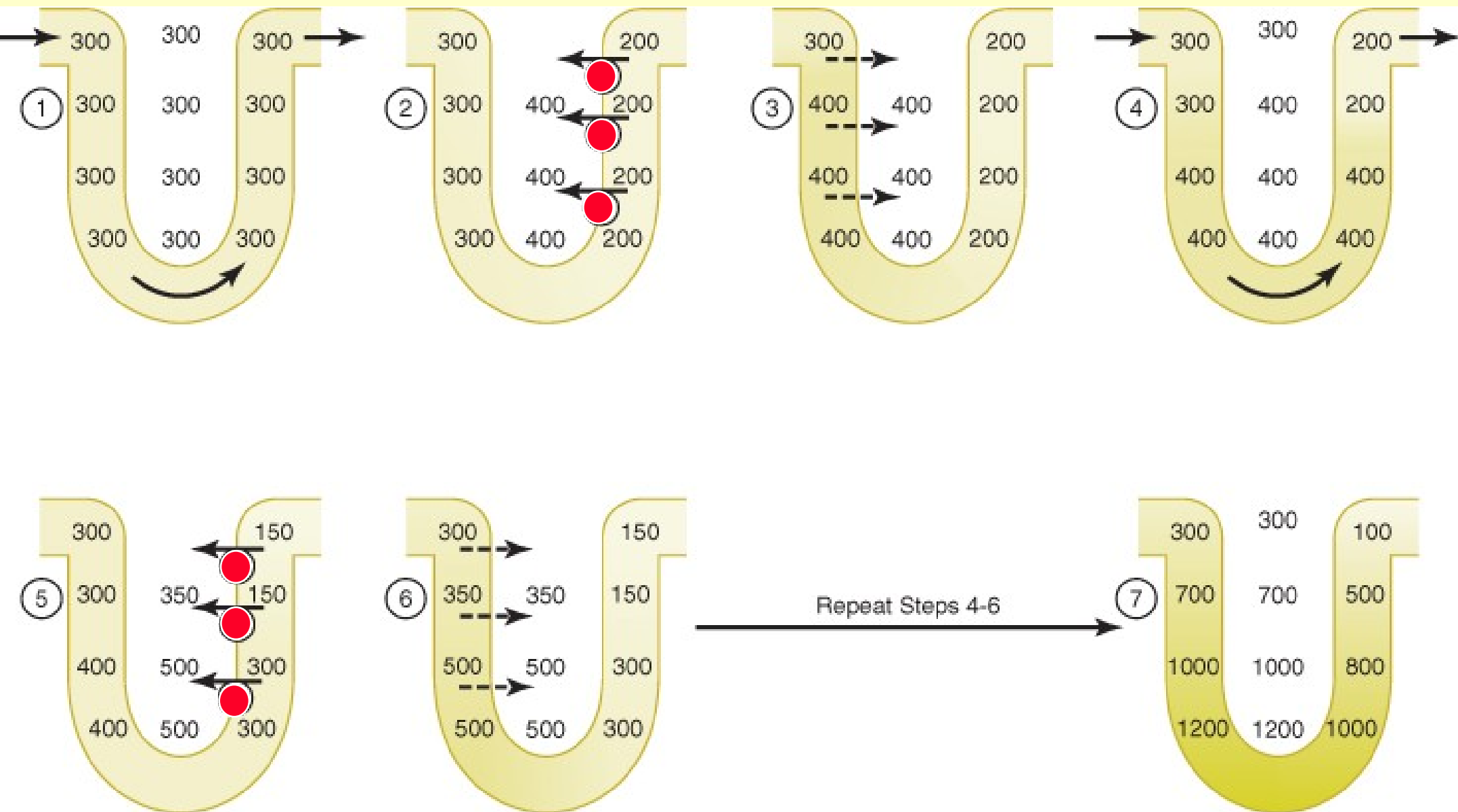


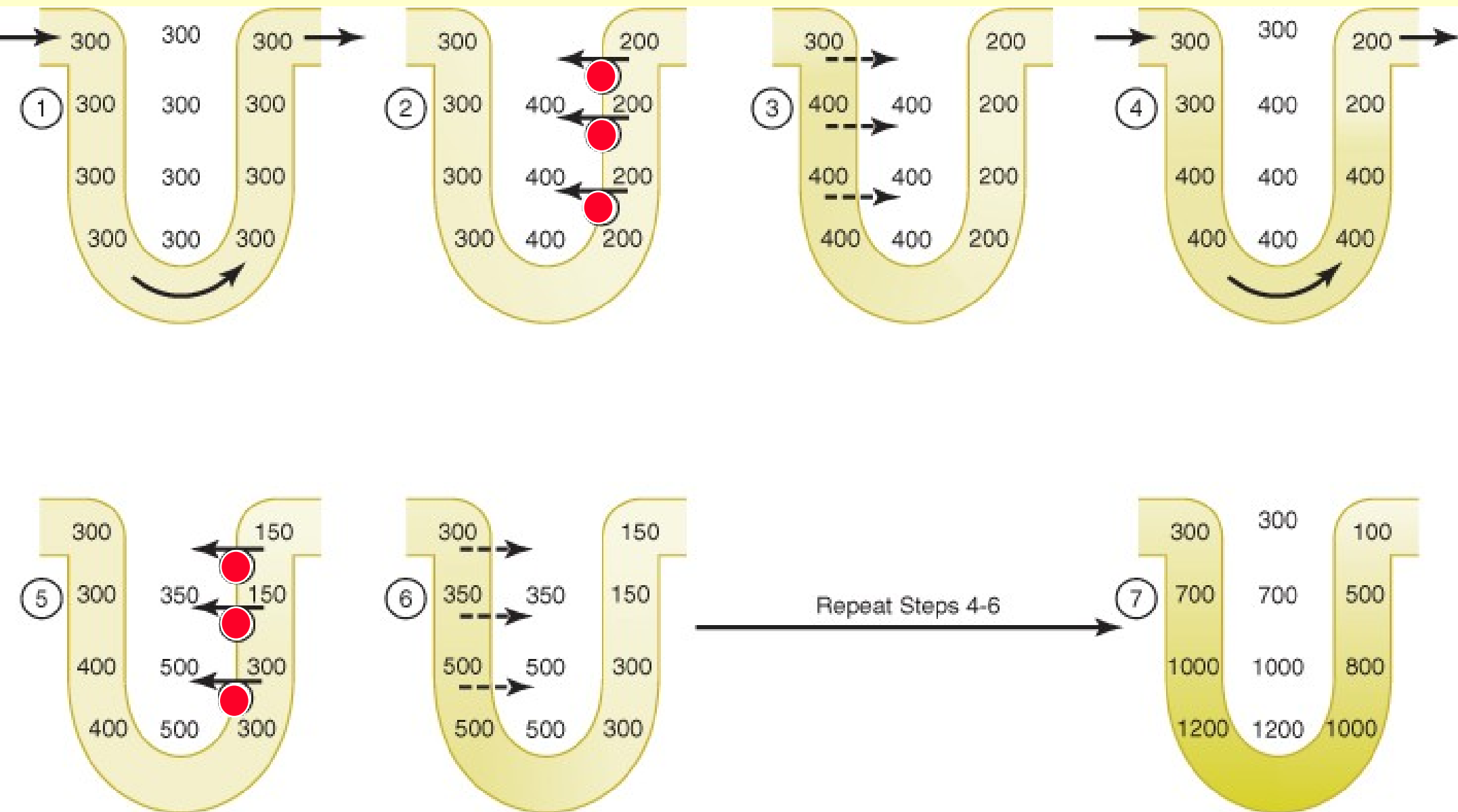


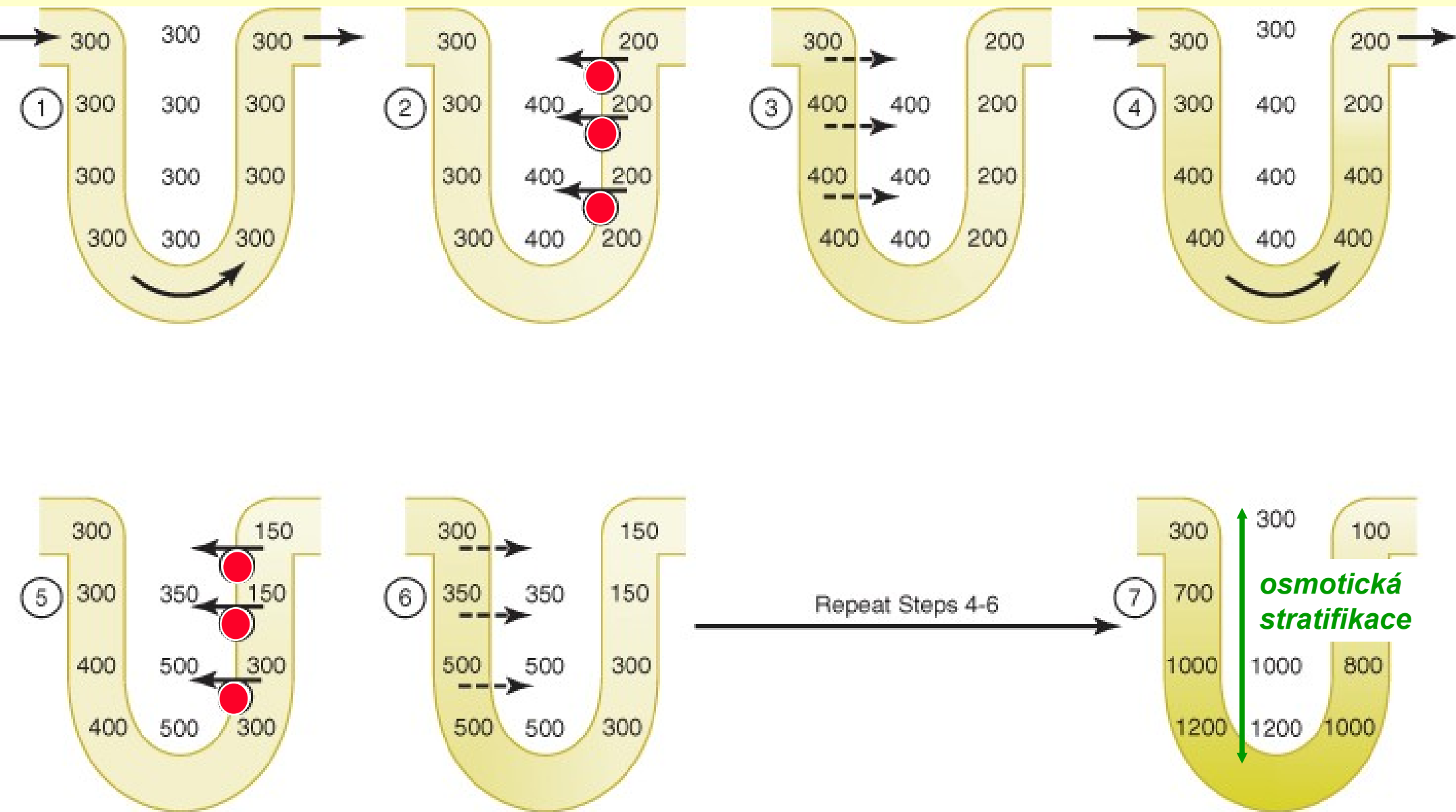


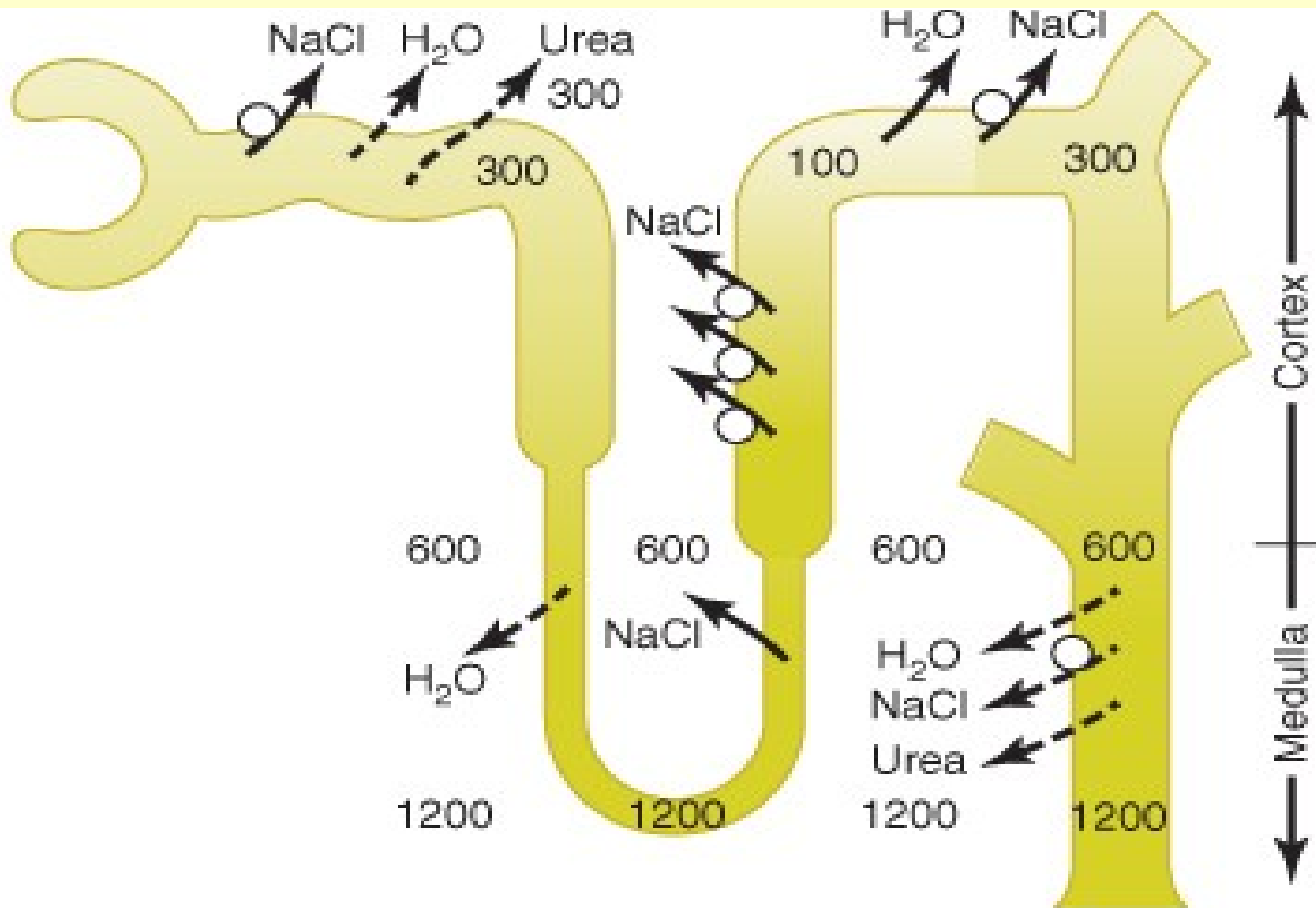


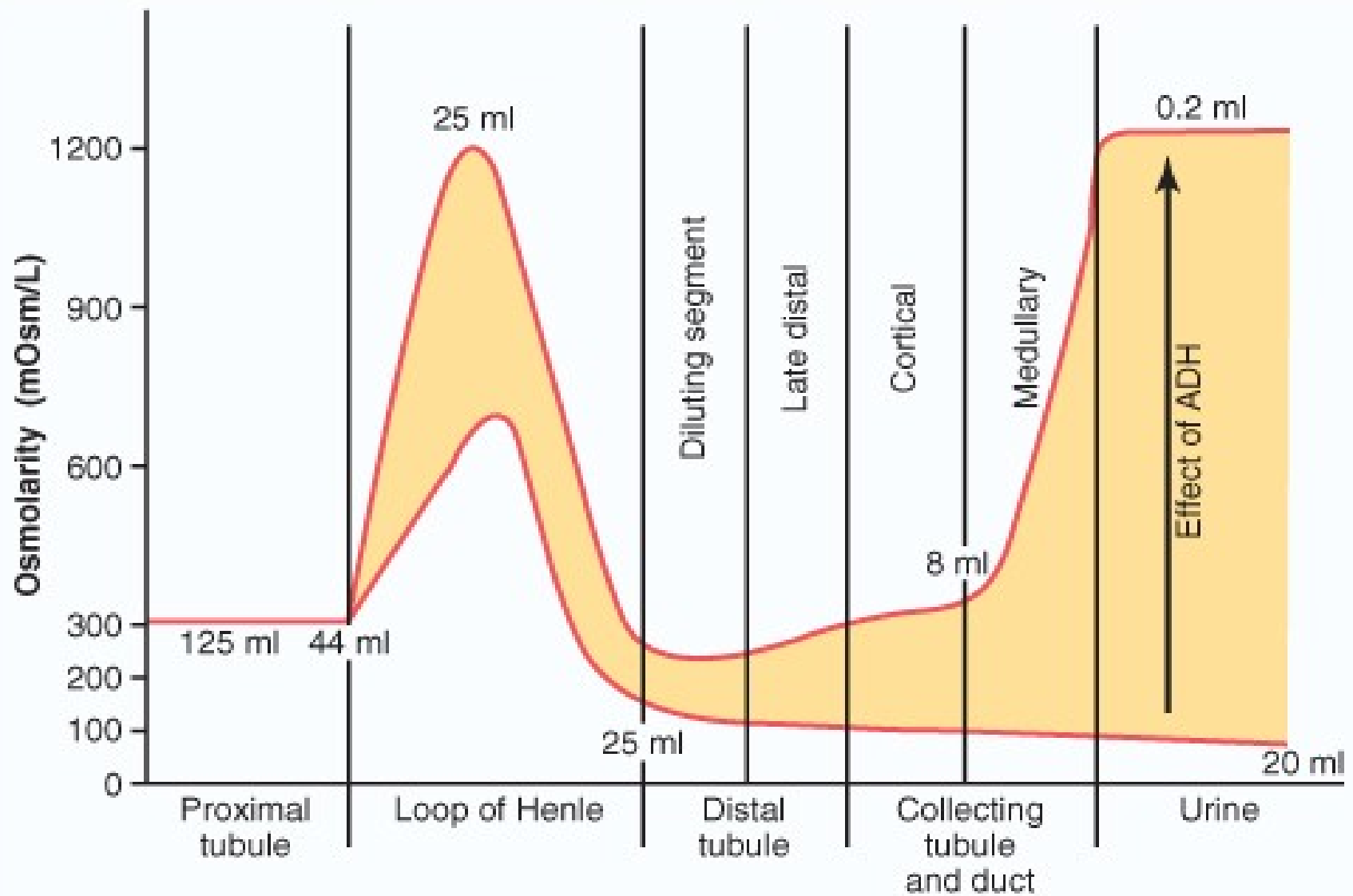












DIALÝZA

