

70 kg person: 60% $\text{H}_2\text{O} = 42 \text{ L H}_2\text{O}$

2/3 is ICF = 21 L; 1/3 is ECF = 14 L (5 L in blood or 3 L of plasma)

Clearance: $\{(\text{in}) - (\text{out})\} * \text{flow} / [\text{in}]$ or $\{\text{urinary excretion (mg/min)}\} / [\text{plasma}] \rightarrow \text{ml/min}$

Normal creatinine excretion = 1 mg/min; (for creatinine, clearance = GFR)

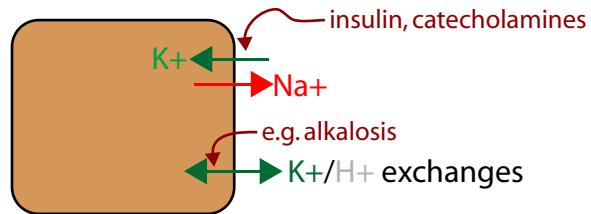
serum Cr = 1 mg/dl $\rightarrow 100 \text{ ml/min}$, 2 mg/dl $\rightarrow 50 \text{ ml/min}$, etc.

$$\text{pH} = 6.1 + \log([\text{HCO}_3^-] / (0.3 * \text{PaCO}_2))$$

$$\text{Plasma Osm} = 2 * \text{Na} + \text{glucose} / 18 + \text{BUN} / 2.8$$

$$\text{FE}_{\text{Na}} = (\text{Urine}_\text{Na} / \text{Plasma}_\text{Na}) / (\text{Urine}_\text{Cr} / \text{Plasma}_\text{Cr})$$

$=>$ if <1% - prerenal ARF, >2% - renal ARF (e.g. ATN)



thiazides \rightarrow increase Ca^{++} absorption
furosemide \rightarrow decrease Ca^{++} absorption