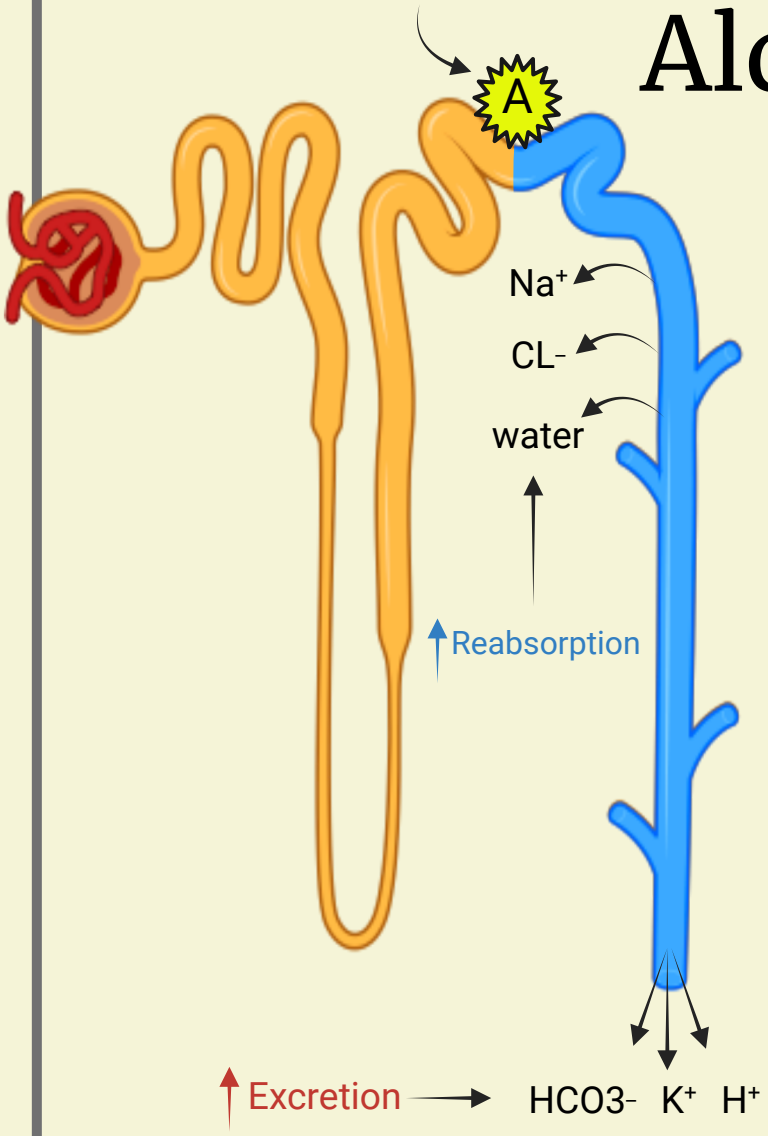
Aldosterone



What: Mineralocorticoid hormone

Where: It is produced in the zona glomerulosa of the adrenal cortex

Function: Primarily to act on the **late distal tubule and collecting duct of the nephron,** favoring sodium and water reabsorption and potassium excretion, as well as contributing to acid-base homeostasis

Half life: < 20 minutes

Process:
- Low blood pressure or low serum sodium triggers the Renin-Angiotensin Aldosterone System (RAAS)
- Renin is secreted by renal juxtaglomerular cells
- Angiotensis is cleaved into Angiotensin I
- Angiotensin I is converted to Angiotensin II via angiotensin-converting enzyme (ACE) in the lungs
- Angiotensin II stimulates the production of aldosterone

When aldosterone is present:
- Increase in reabsorption of sodium
- Increase in water retention
- Increase in potassium excretion
- Increase in hydrogen ion (H^+) excretion
- Increase in bicarbonate ($HCO3^-$) excretion
- Increase in chloride reabsorption

Aldosterone is responsible for the reabsorption of around 2% of sodium filtered in the kidneys.