* **Physiological Regulation of Arterial Blood Pressure**
* Dr Khwaja Amir
* Assistant Professor
* Objectives

***By the end of this session, the student should be able to:***

* Outline the different mechanisms involved in regulation of ABP.
* Discuss the role of reflexes especially baroreceptor reflex in regulation of ABP.
* Discuss the role of renin-angiotensin system in regulation of ABP.
* Discuss the role of renal-body fluid in long-term regulation of ABP.
* **Control of renal NaCl and water excretion**

**Renal Sympathetic Nerves (↑ Activity: ↓ NaCl Excretion)**

↓GFR

↑ Renin secretion

↑ Na+ reabsorption along the nephron

**Renin-Angiotensin-Aldosterone (↑ Secretion: ↓ NaCl Excretion)**

↑ Angiotensin II stimulates reabsorption of Na+ along the nephron

↑ Aldosterone stimulates Na+ reabsorption in the thick ascending limb of Henle's loop, distal tubule, and collecting duct

↑ Angiotensin II stimulates secretion of ADH

**Natriuretic Peptides: ANP, BNP, and Urodilatin (↑ Secretion: ↑ NaCl Excretion)**

↑ GFR

↓ Renin secretion

↓ Aldosterone secretion (indirect via ↓ in angiotensin II and direct on the adrenal gland)

↓ NaCl and water reabsorption by the collecting duct

↓ ADH secretion and inhibition of ADH action on the distal tubule and collecting duct

**ADH (↑ Secretion: ↓ H2O Excretion)**

↑ H2O reabsorption by the distal tubule and collecting duct

* Summary
* Outline the different mechanisms involved in regulation of ABP.
* Discuss the role of reflexes especially baroreceptor reflex in regulation of ABP.
* Discuss the role of renin-angiotensin system in regulation of ABP.
* Discuss the role of renal-body fluid in long-term regulation of ABP.