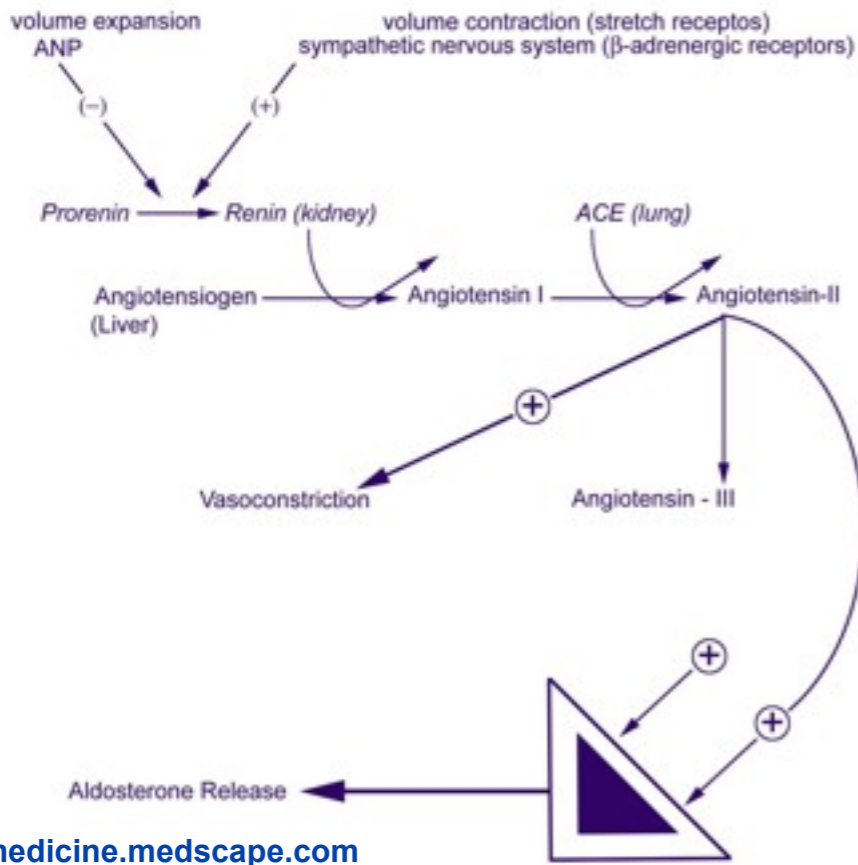
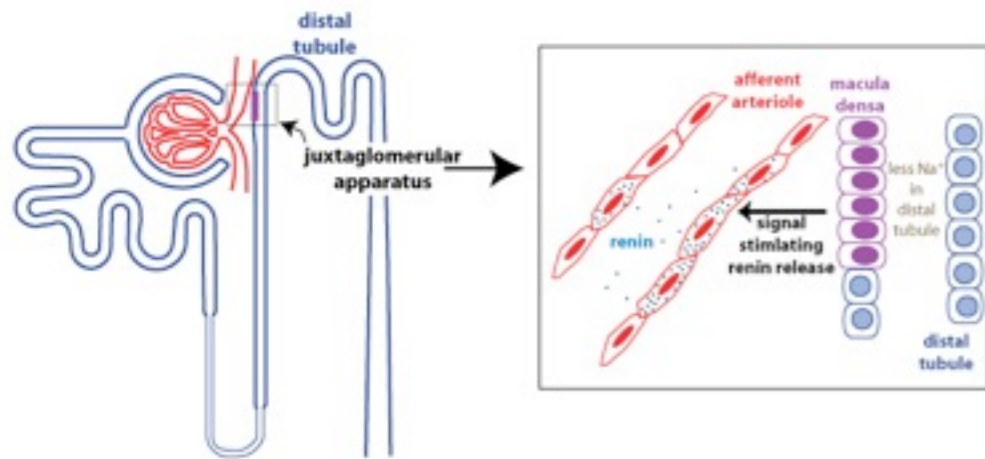


# RAAS regulation

Physiologic Regulation of the Renin-Angiotensin-Aldosterone Axis



[emedicine.medscape.com](http://emedicine.medscape.com)



<http://courses.washington.edu/conj/bess/sodium/sodium.htm>

## RAAS function

regulates **blood volume** -> cardiac output (CO)  
regulates **systemic vascular resistance**-> MAP

## RAAS structure

the system has 3 important components:  
Renin  
Angiotensin  
Aldosterone

## RAAS stimulation (Renin release)

1. **SYMPATHETIC stimulation via beta1 receptors** located on JG cells  
(↑ intracellular Ca-> renin release)

2. ↓ **PRESSURE IN AFFERENT ARTERIOLE**  
(due to ↓ pressure in systemic circulation or renal artery stenosis)

3. ↓ **Na sensed by MACULA Densa in DT**  
(could be related to ↓ pressure in afferent art.-> ↓ GFR-> ↓ Na in DT -> stim. PG E2 & I2 produce renin release)

## RAAS inhibition

1. ↑ **PRESSURE IN AFFERENT ARTERIOLE**  
2. **NATRIURETIC PEPTIDES (ANP&BNP)**  
3. ↑ **in Na sensed by MACULA Densa**

<http://cvphysiology.com/Blood%20Pressure/BP015.htm>