CONTROL OF BODY FLUID
OSMOLALITY AND VOLUME

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Antidiuretic Hormone; Vasopressin (ADH)

- Osmotic control
- Hemodynamic Control
Renal Sympathetic Nerves

- The afferent and efferent arterioles are constricted

- Renin secretion is stimulated by cells of the afferent arterioles

- NaCl reabsorption along the nephron is directly stimulated
Renin-Angiotensin-Aldosterone System

- Perfusion pressure
- Sympathetic nerve activity
- Delivery NaCl to the macula densa
Stimulation of aldosterone secretion by the adrenal cortex

Arterior vasoconstriction, which increases blood pressure

Stimulation of ADH secretion and thirst

Enhancement of NaCl reabsorption by the proximal tubule, thick ascending limb of Henle’s loop, the distal tubule, and the collecting duct

Increase of Na–Cl symporter
(early portion of distal tubule)

Increase of Na channel
(principle cells)

Increase of Na–K ATPase