

# URINARY SYSTEM PHYSIOLOGY

Organ/Structure	Primary Physiological Function
<b>Kidneys</b>	Filters blood, regulates pH, maintains ion balance, and produces erythropoietin.
<b>Ureters</b>	Transports urine from the renal pelvis to the urinary bladder via peristalsis.
<b>Urinary Bladder</b>	Hollow muscular sac that stores urine; expands via rugae and transitional epithelium.
<b>Urethra</b>	Thin-walled tube that conveys urine out of the body; controlled by internal/external sphincters.

## Nephron Filtration Process

<b>1. Filtration</b> Glomerulus â†’
<b>2. Reabsorption</b> Proximal Tubule â†’
<b>3. Concentration</b> Loop of Henle â†’
<b>4. Secretion</b> Distal Tubule â†’
<b>5. Excretion</b> Collecting Duct

## Hormonal Regulation

ADH	Increases water reabsorption
Aldosterone	Increases sodium/water retention

ANP Promotes sodium/water excretion

### **Normal Urine Composition**

Water 95%

Solutes Urea, Creatinine, Uric Acid

pH Range 4.5 - 8.0 (Average 6.0)

Urinary System Physiology Quick Reference Guide ~~â€~~ Modern Clinical Template