RENAL SYSTEM PHYSIOLOGY

CORE FUNCTIONS

- Waste Excretion (Urea, Creatinine)
- Osmolarity Regulation
- Blood Pressure Regulation (RAAS)
- Erythropoietin Production

KEY PARAMETERS

Normal GFR: **125 mL/min**
Daily Urine Output: **1.5 - 2.0 L**

Nephron Segment	Primary Process	Substances Handled
Glomerulus	Filtration	Water, Electrolytes, Glucose, Amino Acids
Proximal Tubule	Bulk Reabsorption	65% Na+, 100% Glucose, HCO3-, H2O
Loop of Henle	Countercurrent Multiplier	Descending: H2O; Ascending: Na+, K+, Cl-
Distal Tubule	Fine Tuning	H+ Secretion, Ca2+ Reabsorption
Collecting Duct	Hormonal Regulation	ADH-mediated Water Reabsorption