

# RENAL ANATOMY & FUNCTION CHART

STRUCTURE	PRIMARY FUNCTION	KEY SUBSTANCES REABSORBED/SECRETED
<b>Glomerulus</b>	High-pressure filtration of blood; formation of ultrafiltrate.	Water, electrolytes, glucose, amino acids, urea (Filterable).
<b>Proximal Convoluted Tubule</b>	Massive reabsorption; active transport of solutes.	65% Water, 100% Glucose/Amino Acids, Na <sup>+</sup> , K <sup>+</sup> , HCO <sub>3</sub> <sup>-</sup> .
<b>Loop of Henle (Descending)</b>	Concentration of tubular fluid via water removal.	High permeability to H <sub>2</sub> O; Low permeability to ions.
<b>Loop of Henle (Ascending)</b>	Dilution of tubular fluid; establishment of medullary gradient.	Active transport of Na <sup>+</sup> , K <sup>+</sup> , Cl <sup>-</sup> ; Impermeable to H <sub>2</sub> O.
<b>Distal Convoluted Tubule</b>	Fine-tuning of electrolyte balance and pH.	Variable Na <sup>+</sup> , Cl <sup>-</sup> , Ca <sup>2+</sup> reabsorption; K <sup>+</sup> and H <sup>+</sup> secretion.
<b>Collecting Duct</b>	Final water reabsorption regulated by ADH.	H <sub>2</sub> O (via Aquaporins), Urea, Na <sup>+</sup> (via Aldosterone).

Reference Template: Nephron Function Overview • For Educational Use Only