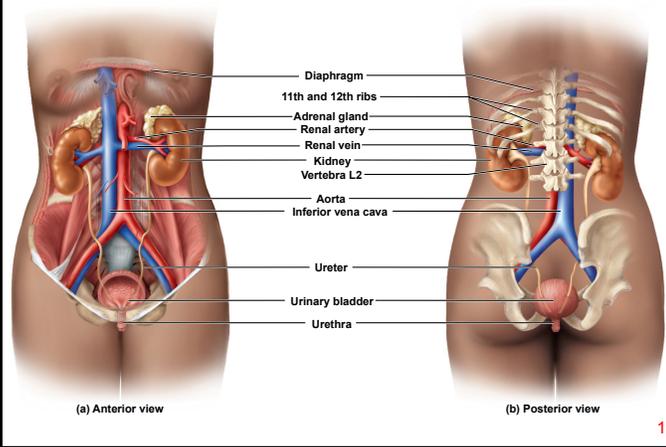


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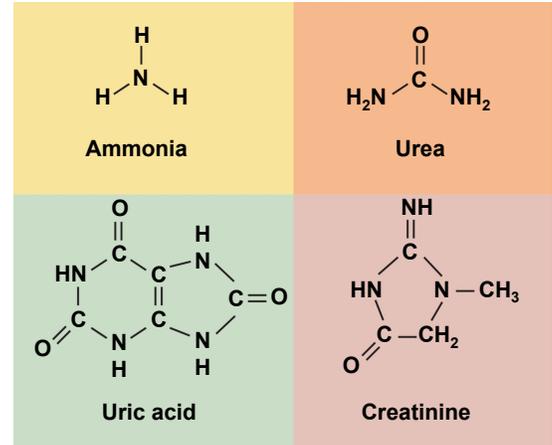
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Fig. 23.2

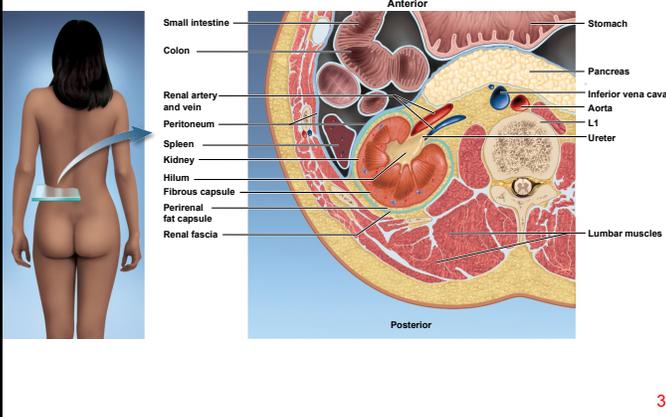
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Fig. 23.3

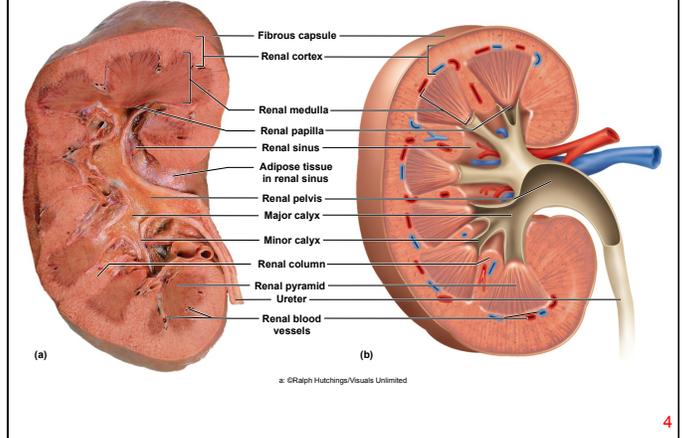
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Fig. 23.4

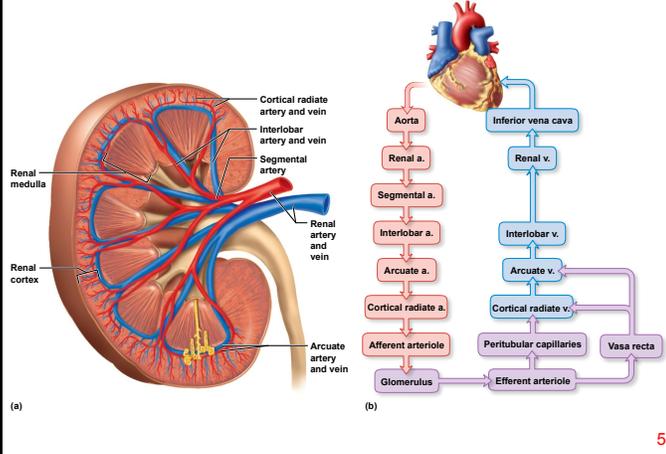
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Fig. 23.5

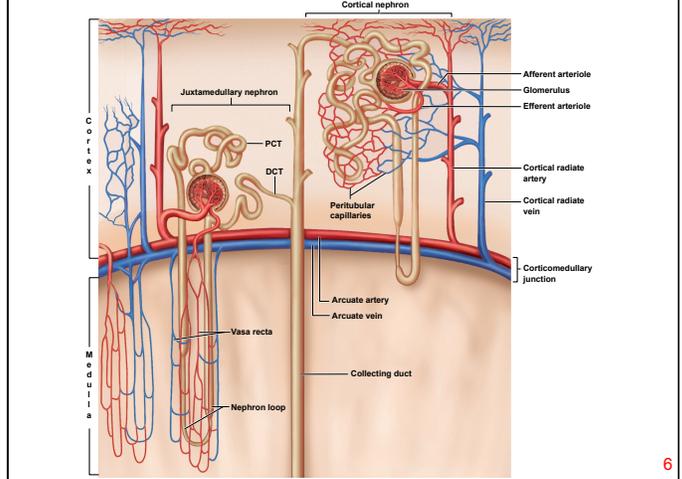
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Fig. 23.6

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Fig. 23.7

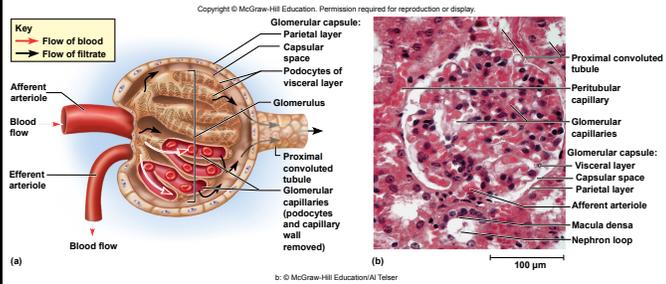


Fig. 23.8

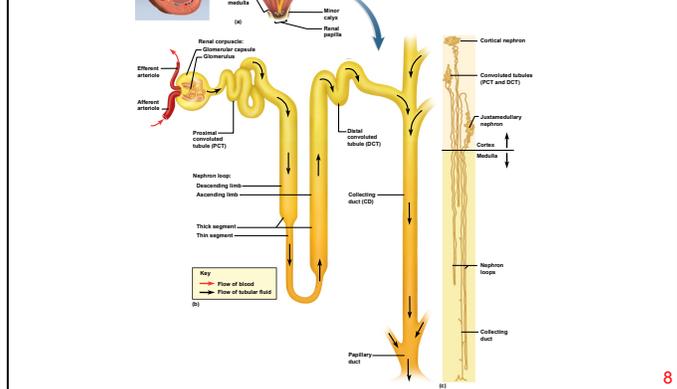


Fig. 23.9

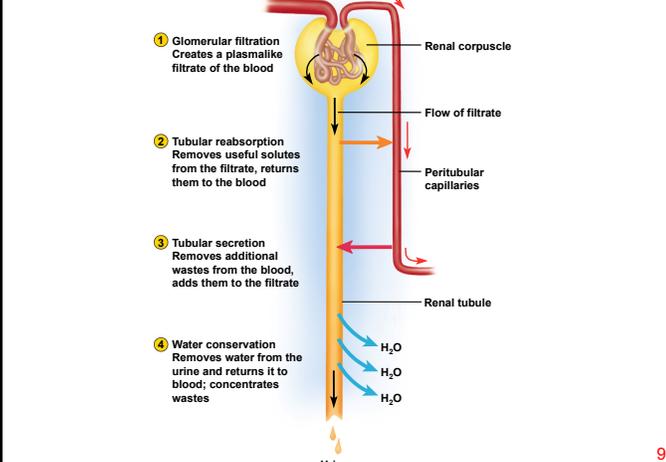


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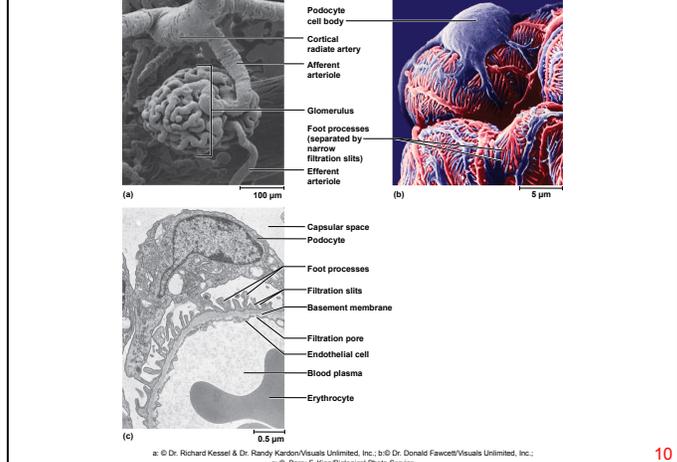


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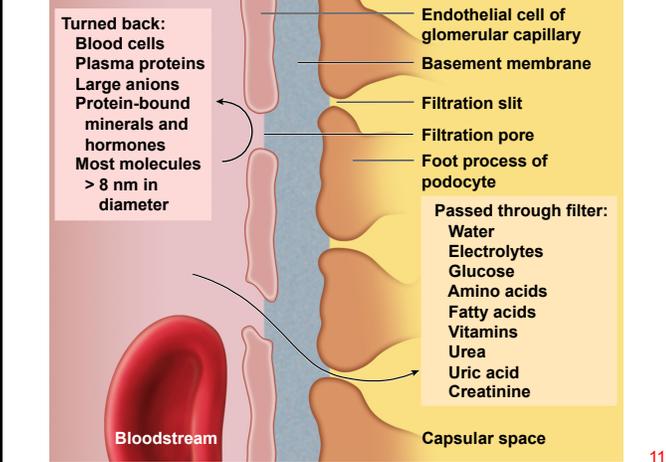


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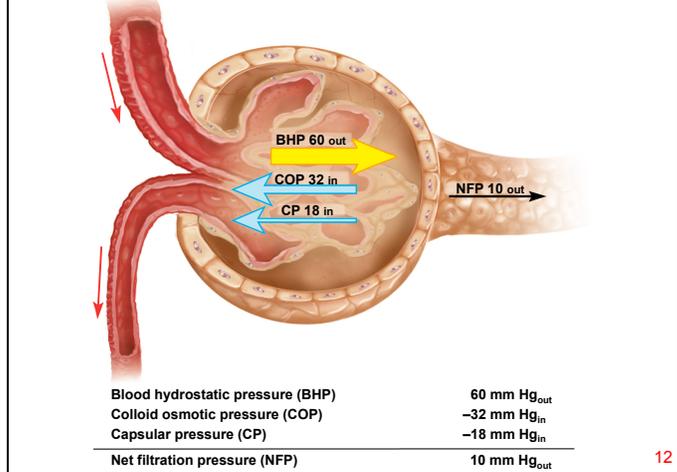
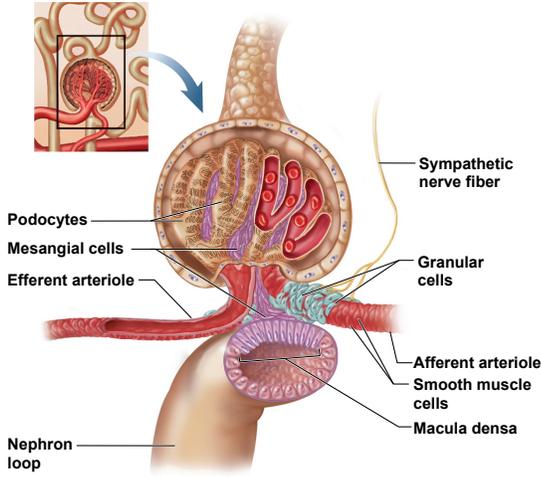


Fig. 23.13

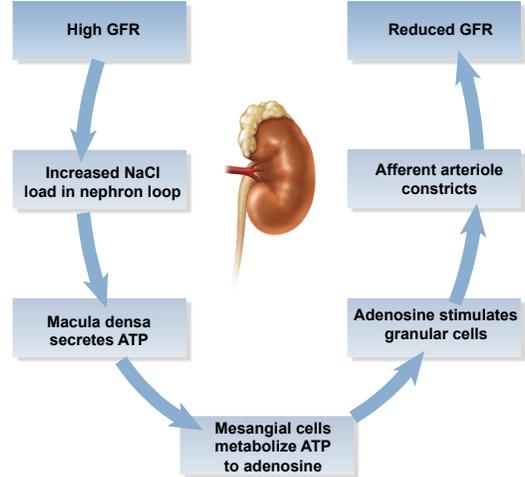
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Fig. 23.14

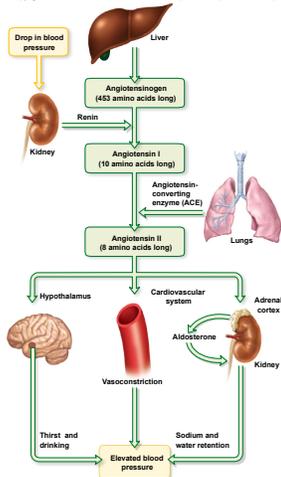
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Fig. 23.15

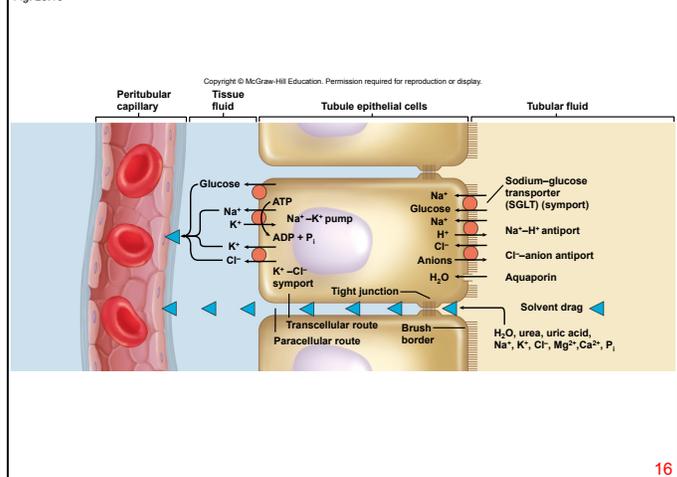
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Fig. 23.16

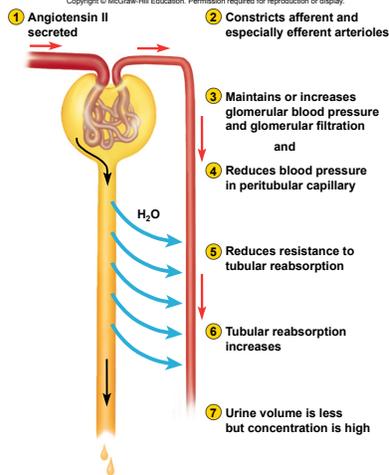
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Fig. 23.17

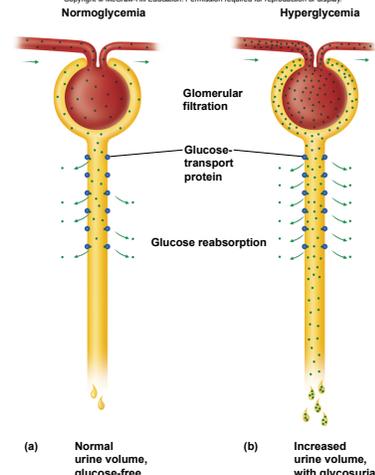
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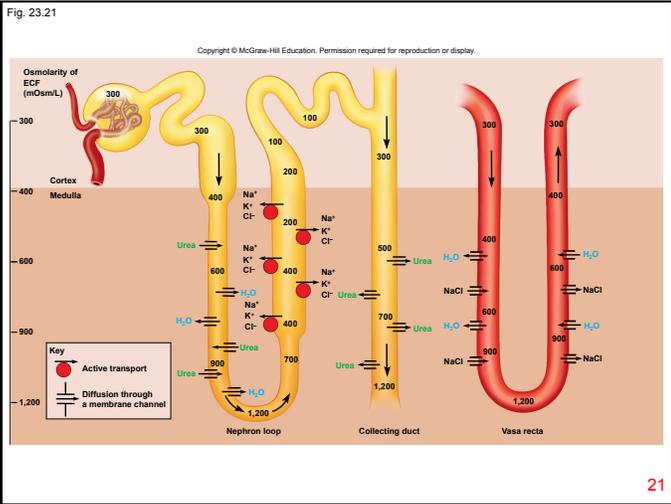
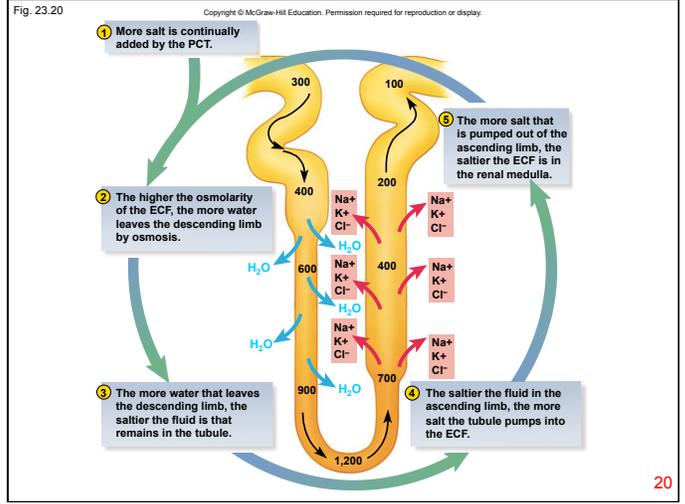
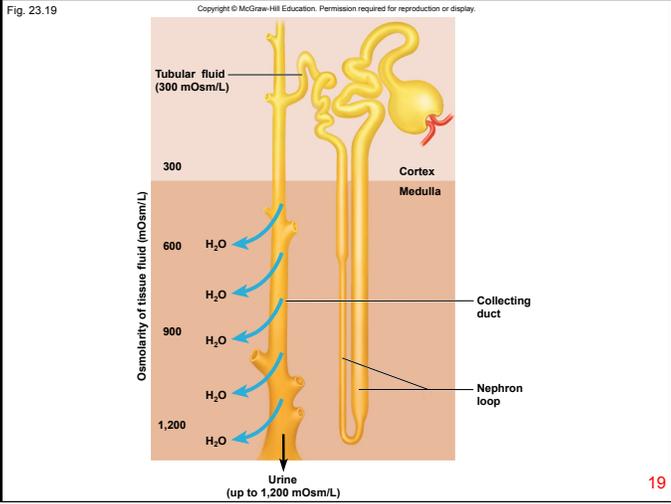


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Hormones Affecting Renal Function		
Hormone	Renal Targets	Effects
Aldosterone	Nephron loop, DCT, CD	Promotes $\text{Na}^+$ reabsorption and $\text{K}^+$ secretion; indirectly promotes $\text{Cl}^-$ and $\text{H}_2\text{O}$ reabsorption; maintains blood volume and reduces urine volume
Angiotensin II	Afferent and efferent arterioles, PCT	Reduces water loss, stimulates thirst and encourages water intake, and constricts blood vessels, thus raising blood pressure. Reduces GFR; stimulates PCT to reabsorb $\text{NaCl}$ and $\text{H}_2\text{O}$ ; stimulates aldosterone and ADH secretion
Antidiuretic hormone	Collecting duct	Promotes $\text{H}_2\text{O}$ reabsorption; reduces urine volume, increases concentration
Natriuretic peptides	Afferent and efferent arterioles, collecting duct	Dilate afferent arteriole, constrict efferent arteriole, increase GFR; inhibit secretion of renin, ADH, and aldosterone; inhibit $\text{NaCl}$ reabsorption by collecting duct; increase urine volume and lower blood pressure
Calcitonin	DCT	Weak effects similar to those of parathyroid hormone
Calcitriol	DCT	Weak effects similar to those of parathyroid hormone
Epinephrine and norepinephrine	Juxtaglomerular apparatus, afferent arteriole	Induce renin secretion; constrict afferent arteriole; reduce GFR and urine volume
Parathyroid hormone	PCT, DCT, nephron loop	Promotes $\text{Ca}^{2+}$ reabsorption by loop and DCT; increases phosphate excretion by PCT; promotes calcitriol synthesis

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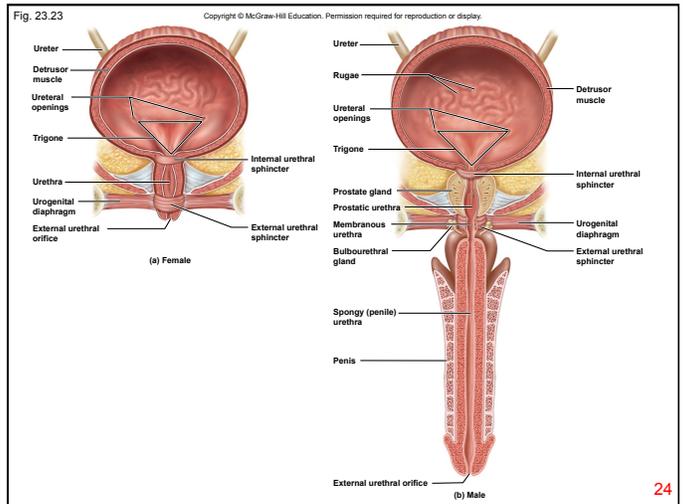
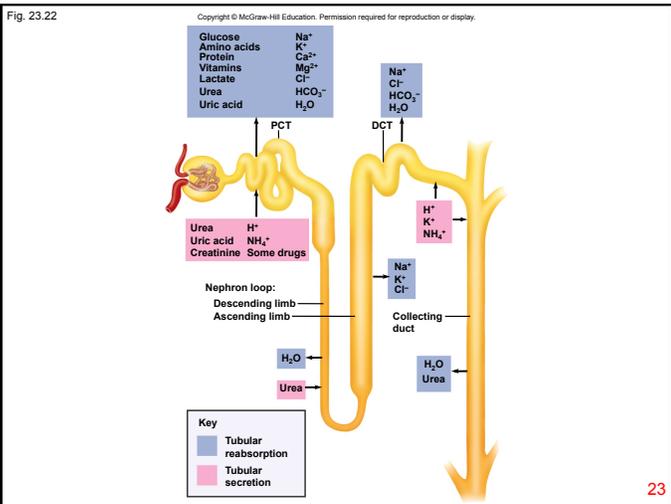


Fig. 23.24

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