

PATHOPHYSIOLOGY AND SYMPTOMATOLOGY OF KIDNEY DISEASES

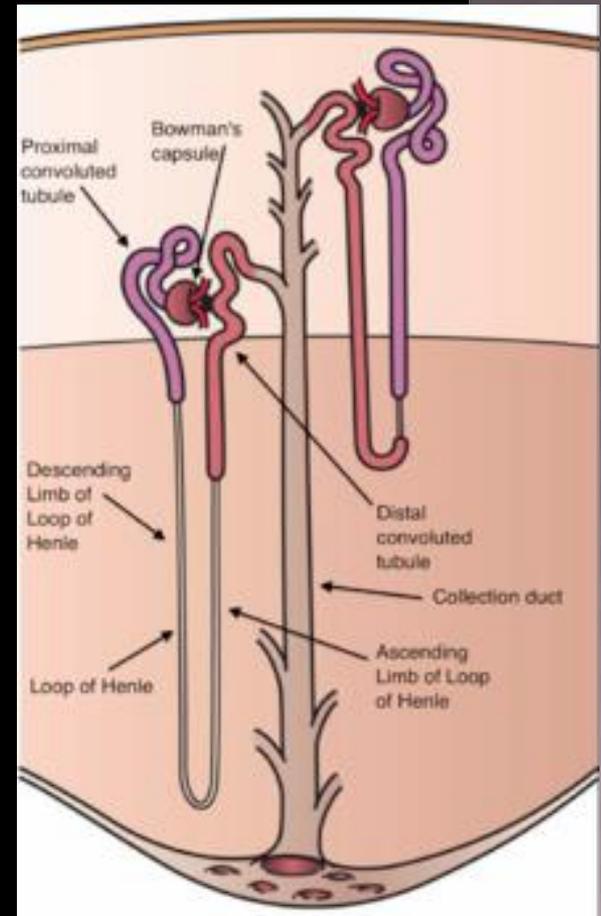
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KIDNEYS

- ◉ Paired organ
- ◉ Retroperitoneal
- ◉ Consist of cortex and medulla
- ◉ Nephron is a functional part of the kidney

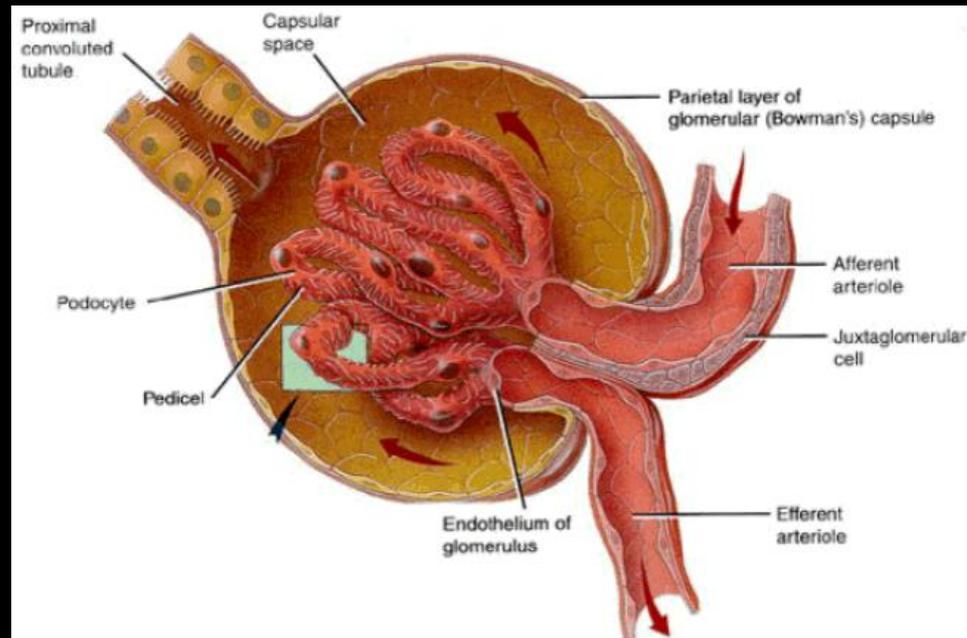
NEPHRON

- Kidney glomeruli
- Kidney proximal tubule
- Loop of Henle
- Kidney distal tubule
- Kidney collecting duct
- Interstitium
- Renal arteries and their branches



GLOMERULI

- ◉ Kidney glomerulus parietal cell
- ◉ Kidney glomerulus podocyte
- ◉ Mesangium



KIDNEY TUBULES

- ⦿ Proximal tubule- reabsorption
- ⦿ Henle loop- urine concentration
- ⦿ Distal tubule- H and K secretion and Na reabsorption

KIDNEY FUNCTION

- Excretion

- Homeostasis

1. Water
2. Ions
3. Acid/ base

- Hormone secretion

1. Erythropoetin
2. Renin
3. Vitamin D Hydroxylation

SYMPTOMATOLOGY

○ Secondary to excretion dysfunction

1. Nausea
2. Vomiting
3. Loss of appetite
4. Fatigue and weakness
5. Itching
6. Platelet dysfunction
7. Insuline resistance
8. Muscle protein catabolism
9. Cramps
10. Serositis

SYMPTOMATOLOGY

- Secondary to dysfunction of homeostatic role
 1. Hyperkalemia
 2. Acidosis
 3. Water retention

SYMPTOMATOLOGY

- Secondary to endocrine secretion dysfunction
 1. Vitamin D deficiency- secondary hyperparathyroidism and tertiary hyperparathyroidism
 2. Hypertension
 3. Anaemia

SYMPTOMATOLOGY

- ◉ Secondary to injury to nephrons
 1. Erythrocyturia
 2. Proteinuria

TRICKY QUESTION

- ◉ What are the first symptoms of chronic kidney disease?

THANK YOU!

