

Lec . 10 **Urinary System : (Renal System)**

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Urinary system is a excretory system works with skin , intestine and lungs to maintain the balance of chemicals and water in the body .

Functions of urinary system :

1 – Elimination of metabolic products (Urea , Uric Acid , Creatinine) and toxic materials .

2 – Regulate blood volume and blood pressure .

3 - Regulate blood PH .

Formation of Urine in Kidney :

Urine is formed by three steps :

1 – Filtration

2 - Reabsorption

3 - Excretion

Adults eliminate about 2 liters per a day . Urine travels from kidneys through two thin tubes called Ureters and fills the bladder (Urinary bladder) , when is full , a person urinate from urethra to eliminate waste products .

Urinary System :

1 - Paired Kidneys

2 – Ureters

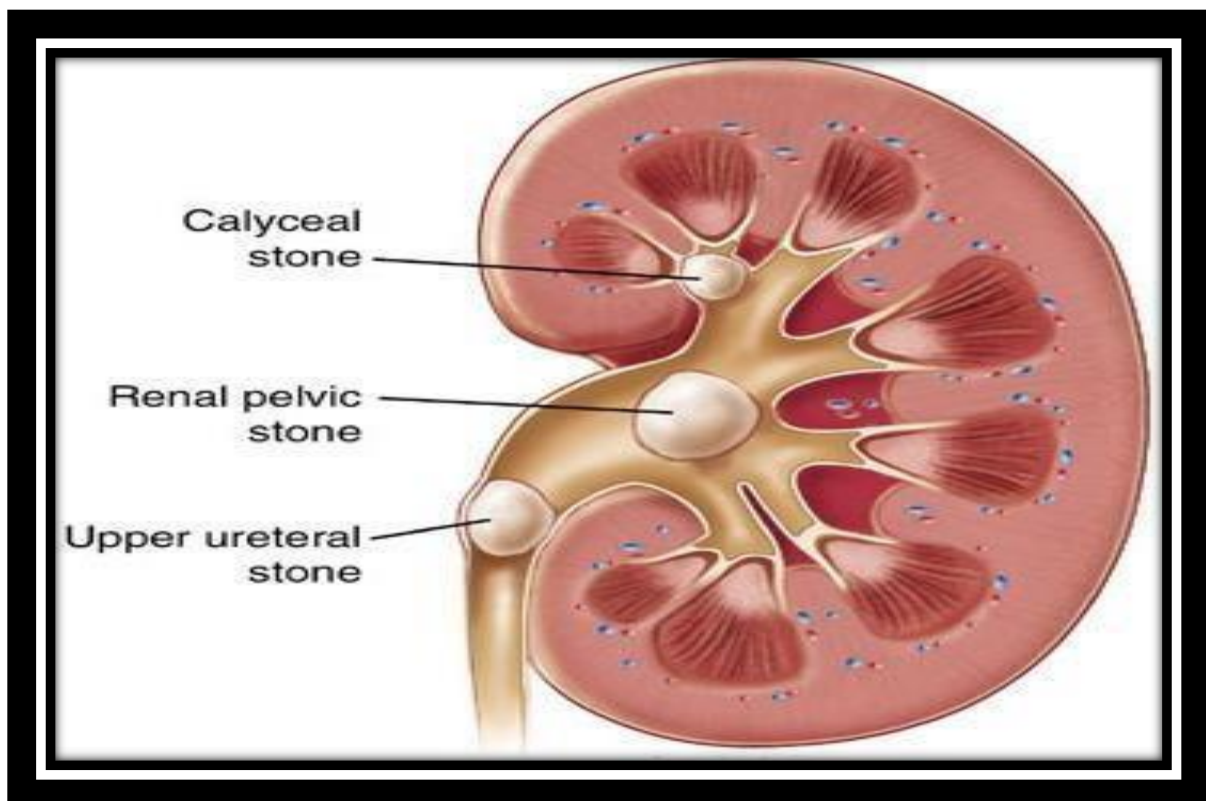
3 - Urinary Bladder

3 - Urethra

The Kidney :

1 - It is bean shape , brown in color , its size about 10 - 12 cm long .

2 - Right kidney is slightly lower than the left . Adrenal gland located over each kidney .

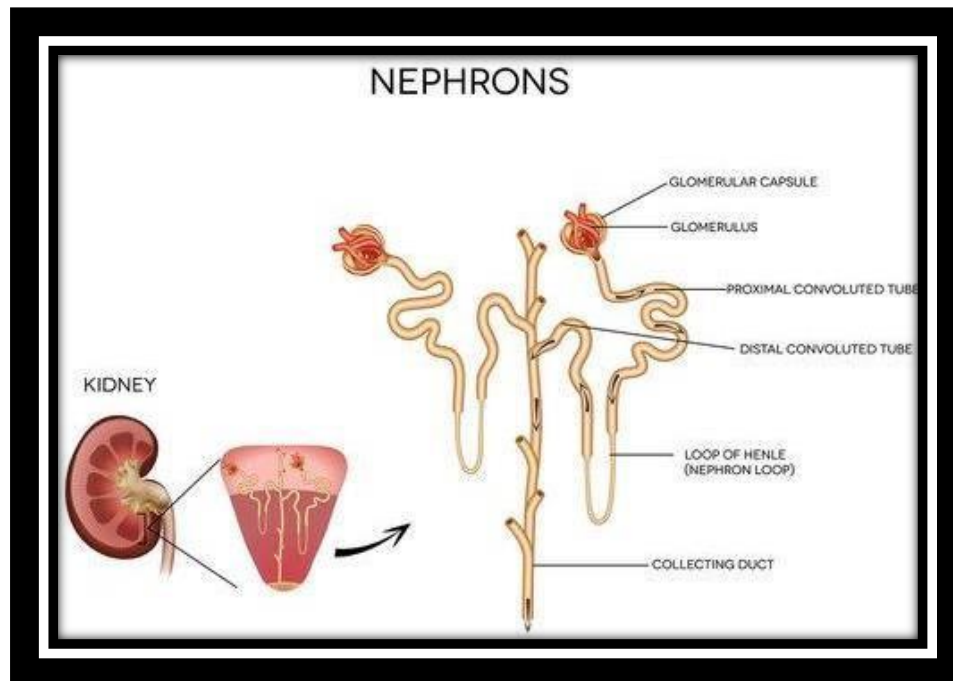


Each kidney consist of three regions :

1 - Renal Cortex

2 – Renal Medulla

3 – Renal pelvis



Nephron :

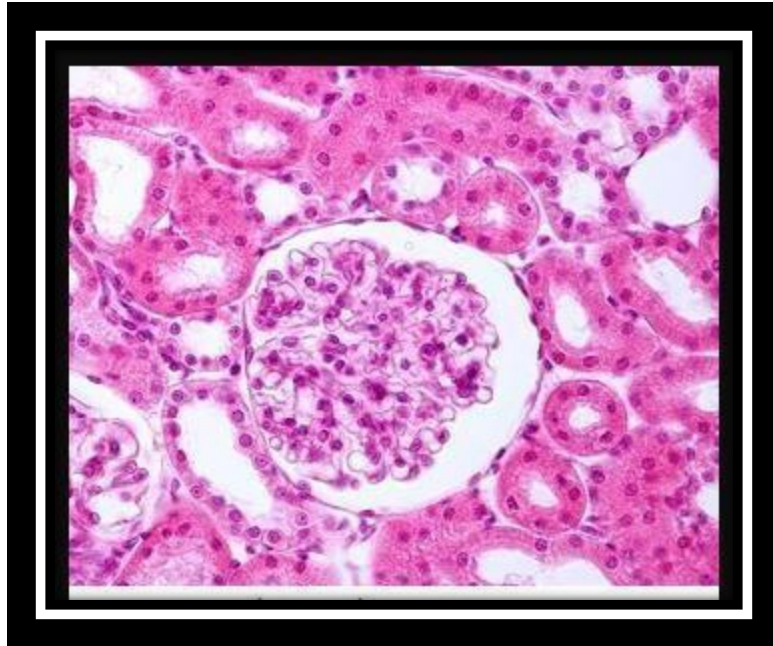
It is the functional unite of the kidney / in each kidney about 1000,000 nephrons .

Nephron consist of :

1 – Renal corpuscle (Glomerulus)

2 – Bowman's capsule (Glomerulus capsule)

3 - Tuft of capillaries



Renal tubules :

1 - Proximal convoluted tubules .

2 – Loop of Henle 3 - Distal convoluted tubules .

4 - Collecting tubules

Ureters :

Fibro – muscular tube (30 – 40 cm length) . Connect kidney with urinary bladder .

Urinary bladder :

It is muscular – elastic organ , its function store the urine to excrete out side .

**It is muscular tube , connect bladder to the out side orie
, its function to remove urine from the body .**