



## The Excretory System

### Definition:

Excretion is the process of removing waste products from the body. The main system responsible for excretion is the Urinary System, which eliminates most of the waste in the form of urine.

### Main Excretory Organs and Their Functions:

#### Urinary System:

- I. The primary system for excretion in the body.
- II. Consists of kidneys, ureters, urinary bladder, and urethra.
- III. Removes waste products and excess water in the form of urine.

#### Skin:

Removes waste in the form of sweat, which contains water, salts, and other waste substances.

#### Lungs:

Expel carbon dioxide ( $\text{CO}_2$ ), a gaseous waste product of respiration.

### The Urinary System

#### Main Components and Their Functions:

##### Kidneys:

- Two bean-shaped organs.
- Filter blood to remove waste and excess water.
- Separate useful substances from waste and reabsorb them.
- Convert the remaining waste into urine.

##### Ureter:

- A tube-like structure that carries urine from the kidney to the urinary bladder.

##### Urinary Bladder:

- A muscular sac that temporarily stores urine.
- When full, it signals the body to expel urine.



### **Urethra:**

A tube through which urine exits the body.

### **Process of Urine Formation and Excretion:**

**Filtration:** Blood passes through the kidneys, where waste and excess water are separated.

**Reabsorption:** The kidneys reabsorb useful substances like water and nutrients back into the bloodstream.

**Formation of Urine:** The remaining waste and excess water form urine.

**Transport of Urine:** Urine moves from the kidneys to the urinary bladder via the ureters.

**Storage:** The urinary bladder stores urine until it reaches a certain level.

**Excretion:** Urine exits the body through the urethra.

