

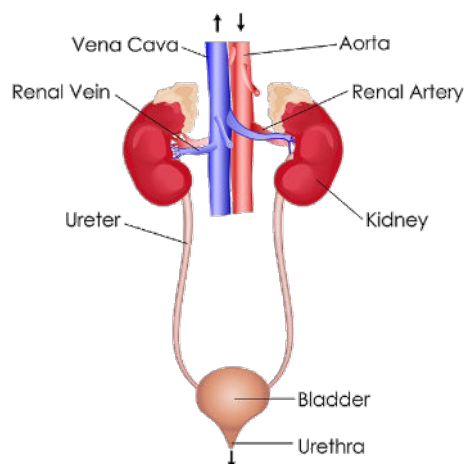
Human Body - Part 2

Section 2: The Excretory System

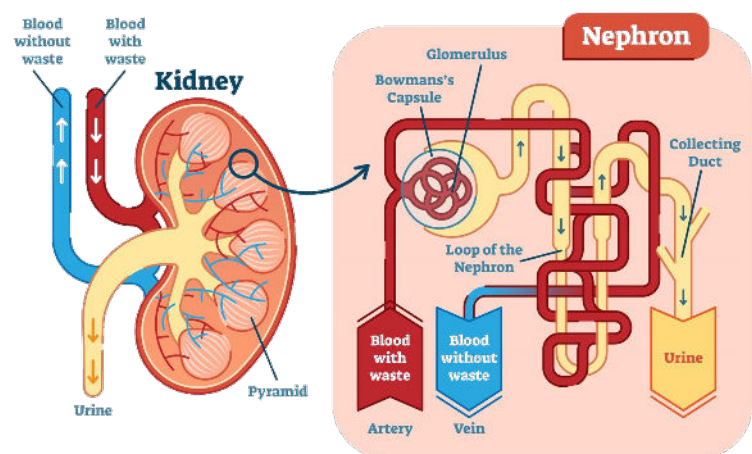
The **excretory system** is responsible for removing wastes produced by the body. Excretion is the process of eliminating these wastes in the form of solids, liquids, or gases. Removing waste is important because the buildup of harmful substances can damage cells and disrupt the body's internal balance. Several organs work together in the excretory system, including the kidneys, lungs, skin, and liver.

The **kidneys** are the primary organs of the excretory system because they filter the blood and regulate the balance of water, salts, and other substances. Each kidney contains about one million tiny filtering units called nephrons. **Nephrons** remove waste products from the blood while returning useful materials to the bloodstream. As blood enters the kidneys, it flows through clusters of capillaries inside the nephrons. Surrounding these capillaries is a cup-shaped structure where water, urea, glucose, salts, and other small substances are filtered from the blood.

As the filtered fluid moves through the nephron, the body reabsorbs many useful substances, including most of the water and glucose, back into the bloodstream. The remaining waste products and excess water form urine. **Urea**, one of the main wastes found in urine, is produced when proteins are broken down in the body. Once urine is formed, it leaves the kidneys through narrow tubes called **ureters**. The ureters carry urine to the **urinary bladder**, a muscular sac-like organ where urine is stored. When the bladder becomes partially full, nerve signals are sent to the brain, creating the urge to urinate. During urination, urine leaves the body through a small tube called the urethra.



Nephron Anatomy



Review:

1. What is the job of the excretory system?
2. Explain the purpose of the kidneys.
3. What are nephrons?