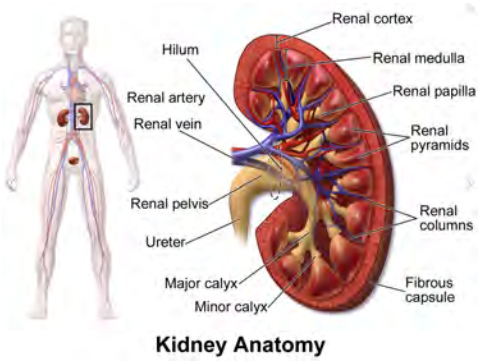
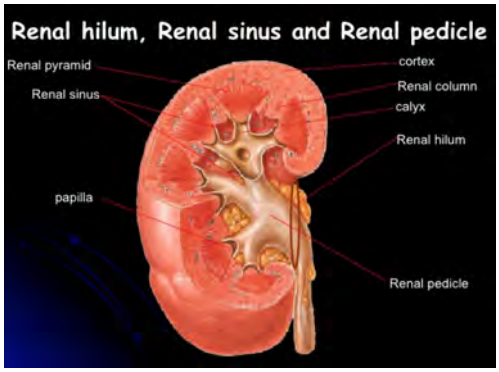
glomerulus

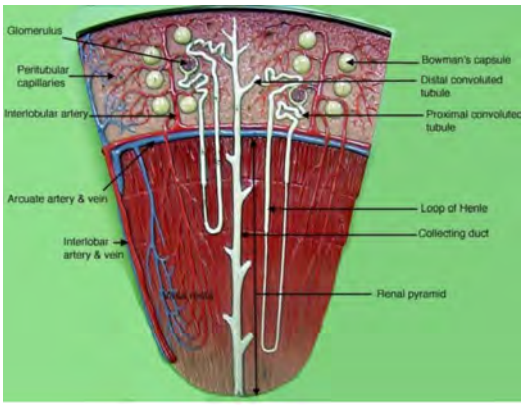
Cardiac output is typically 5 liters/min at rest. If the left ventricle contracts 70 times per minute and ejects 70 ml of blood across the aortic valve with each stroke, then the heart delivers a pulsatile volume flow rate of **5 L/min**. The kidneys receive 20% of this volume, about **1 L/min**.

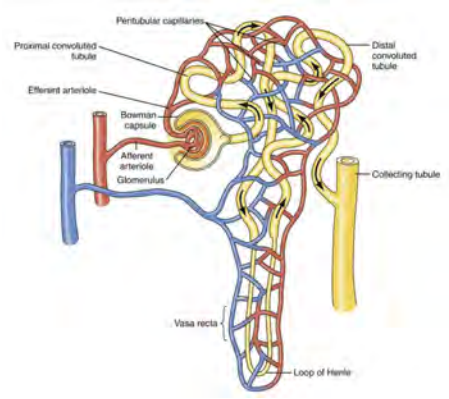


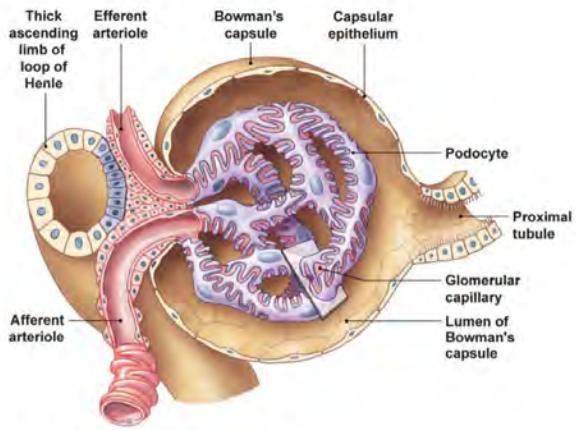
Kidney Anatomy



As each renal artery enters the kidney it branches into segmental arteries, then arterioles, ultimately delivering flow to over ***1,000,000 nephrons*** in each kidney. Each renal arteriole terminates in a tuft of capillaries in a structure known as a ***glomerulus***.







(a) The epithelium around glomerular capillaries is modified into podocytes.

The external links on the ***glomerulus*** webpage give understanding to the importance of the kidneys, which receive ***1/5*** of the total systemic arterial flow.