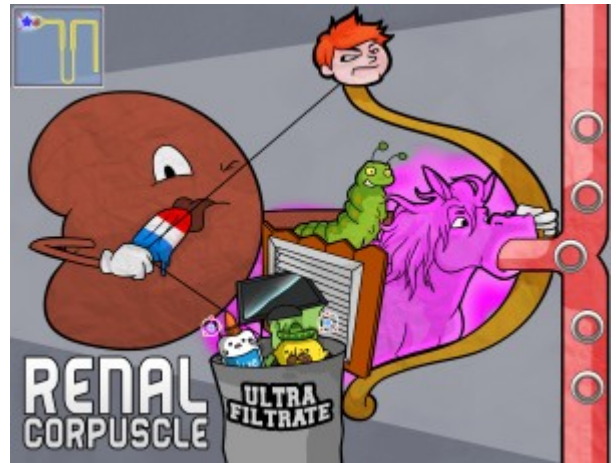# Renal Corpuscle

The renal corpuscle is the first site of filtration in the nephron. Here, arterioles bring blood from the body into the kidney for filtration. The glomerulus is a cluster of capillaries derived from those arterioles that feed into the nephron. There are fenestrations in the endothelial cells of the glomerulus that have large pores. This is designed to filter the blood and allow plasma solutes and large proteins to be secreted as ultrafiltrate. However, red blood cells cannot be filtered and are maintained in the blood. Smaller molecules enter the nephron to be reabsorbed or secreted, depending on physiological conditions. Encapsulating the glomerulus is Bowman's capsule, which is the location of ultrafiltration. From here, filtrate enters the nephron.

PLAY PICMONIC

Characteristics

Arterioles
Artery-O's
Afferent arterioles bring blood from the body into the glomerulus of the kidney to be filtered.

Glomerulus
Glow-mare
The glomerulus is a cluster of capillaries that are derived from afferent arterioles and perform the first filtration of blood. Here, waste products are filtered from the blood.

Capillaries
Caterpillar
The glomerulus is a cluster of capillaries leading to the nephron. It is the first site of filtration in the kidney.

Fenestrations
Fence
Fenestrations are pores in the endothelial cells of glomeruli that allow for smaller substances to be filtered, but prevent red blood cells from leaving the blood.

Plasma Solutes and Other Small Molecules Become Ultrafiltrate
Plasma-TV, glucose-glue, amigo-lemon and ions secreted into Ultra-filtrate bucket
Glucose, amino acids, salts, and urea are pushed by high pressure into the filtrate that enters the nephron. This process is called ultrafiltration.

Bowman's Capsule Encapsulates Glomerulus
Bow-man Encapsulating Glow-mare
Bowman's capsule is the site of ultrafiltration, and serves as the border between blood and filtrate. It surrounds the glomerulus so that all the blood passing through the capillaries can be filtered.